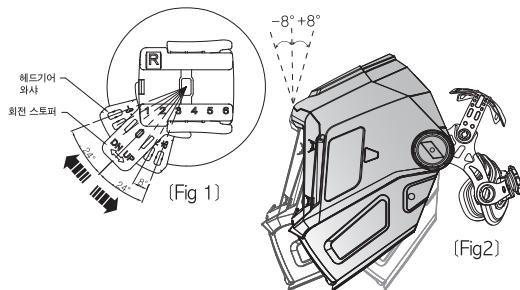


5. How to adjust the dihedral angle (field of view) in 6 steps

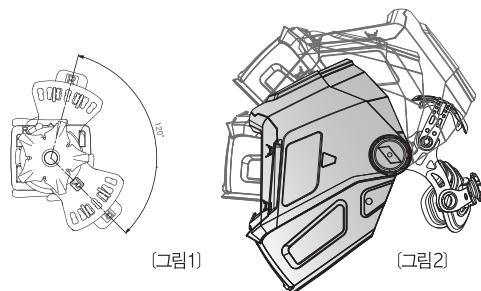


The illustration shows how to adjust the vertical angle of the face (on the right side of the face). The face washer has seven square holes spaced at 8° intervals. (The angle can be adjusted in steps from -3 to +3).

To adjust the angle, rotate the pentagonal nut on the outside of the spherical washer counterclockwise (loosen) about 2 times, and then rotate the rotation stopper part in [Figure 1] in the UP (lift) or DN (lower) direction as shown in the arrow to secure it to the square hole of the spherical washer.

After determining the angle position, lock the pentagonal nut on the outside of the faceplate. Check the comfortable viewing angle before using it with the depth adjustment function of the faceplate.

6. How to adjust the shell angle



The figure on the left shows the angle at which the face can be lifted. It is designed to allow 120° of rotation (raising) at each rotation stopper position. Adjust the weld face to the most comfortable fit for the user and tighten it with the pentagonal nuts. The tightening force of the pentagonal nuts should be smooth when lifting or lowering the face. Inside there is a 15° increments to ensure a smooth motion when lowering the face.

How to Use the Camera Welding Helmet

How to Control Welding Video

• Adjusting the Quality of Video Captures

OTOS provides a program to adjust the quality of the video image of the camera welding helmet.

The provided program has adjustment functions such as brightness of the video image, response speed of the photo sensor, horizontal reversal of the captured image to the left and right, and vertical reversal of the captured image to the top and bottom, and can be set using the program to achieve the image quality that the user prefers.



• WIFI connection to the camera

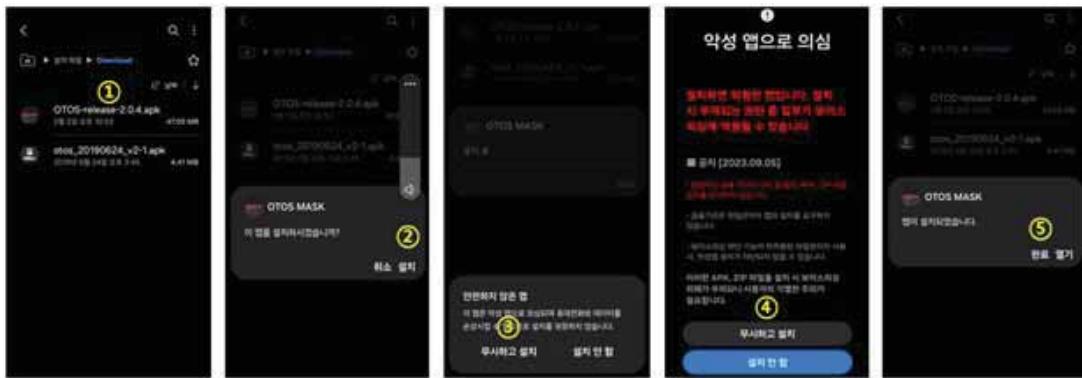
• How to connect using an Android phone

The camera welding surface has a Wifi communication function. You can use the Wifi communication function of your Android phone to easily adjust the video image quality of the camera. You can easily adjust the video image quality of the welding surface.

How to connect Camera Welding Helmet

● Installing the exclusive smartphone program

- 1) We provide an exclusive program for camera welding surface purchasers. (OTOS-release-2.0.4.apk)
- 2) Save the OTOS-release-2.0.4.apk sent to the folder selected by the user.
- 3) When OTOS-release-2.0.4.apk, shown in Fig. 1 ①, is clicked, the screen shown in Fig. 8.2.2 is displayed.
- 4) Touch the install button in Fig. 2 ② to display the screen shown in Fig. 8.2.3.
- 5) Fig. 3 ③, ignore and install, button, the screen shown in Fig. 8.2.4 is displayed.
- 6) Figure 4 ④, touch the ignore and install, button to display the screen shown in Figure 8.2.5.
- 7) Figure 5 ⑤, complete and open, button to complete all the installation process.



[Fig 1]

[Fig 2]

[Fig 3]

[Fig 4]

[Fig 5]

● Setting permissions to access files

- 1) On the mobile phone, you need to set permissions to access information files (photos or video files) received via Wifi communication.
- 2) Figure 1 Click the OTOS MASK icon in ①, and the screen shown in Figure 2 will be displayed.
- 3) Click the setting button in Figure 2 ② to display the screen shown in Figure 3.
- 4) If you click the permission button in [3], the screen shown in [4] is displayed.
- 5) The permit button in Figure 4 ④ allows access to the photo and video files. Click this button to display the screen shown in Figure 5.
- 6) Click the Allow only while using the app button in Figure 5 ⑤ to complete all settings for file access permissions.



[Fig 1]

[Fig 2]

[Fig 3]

[Fig 4]

[Fig 5]

How to Use the Camera Welding Helmet

How to connect Camera Welding Helmet

• Wifi Communication Connection

- 1) The following procedure is required to establish a communication connection between the cell phone and the camera welding surface.
- 2) To set up the Wifi communication connection, click the CONNECT TO MASK button in Figure 1 ①.
- 3) When the CONNECT TO MASK button in Figure 1 ① is clicked, the SSIDs of all peripheral devices currently connected to the mobile phone are displayed as shown in Figure 2.
- 4) SSIDs of all peripherals currently connected to the phone are displayed. Among these SSIDs, you need to navigate to WELD_XX:XX:XX:XX:XX:XX. The SSID of the camera weld is WELD_40:80:E1:CA:6C:03.
- 5) If you click WELD_40:80:E1:CA:6C:03 in Figure 2 ②, Figure 3 will be displayed.
- 6) Enter the password of the camera weld surface provided by AUTOS in Figure 3 ③ (8 digits).
- 7) After entering the password in Figure 3 ③, click the CONNECT button to display Figure 4.
- 8) If you click the Always connection button in Figure 4 ④, the Wifi communication between the cell phone and the camera welding surface is successfully completed.
- 9) When the Wifi connection is successfully completed, the screen shown in Figure 5 appears.



[Fig 1]

[Fig 2]

[Fig 3]

[Fig 4]

[Fig 5]

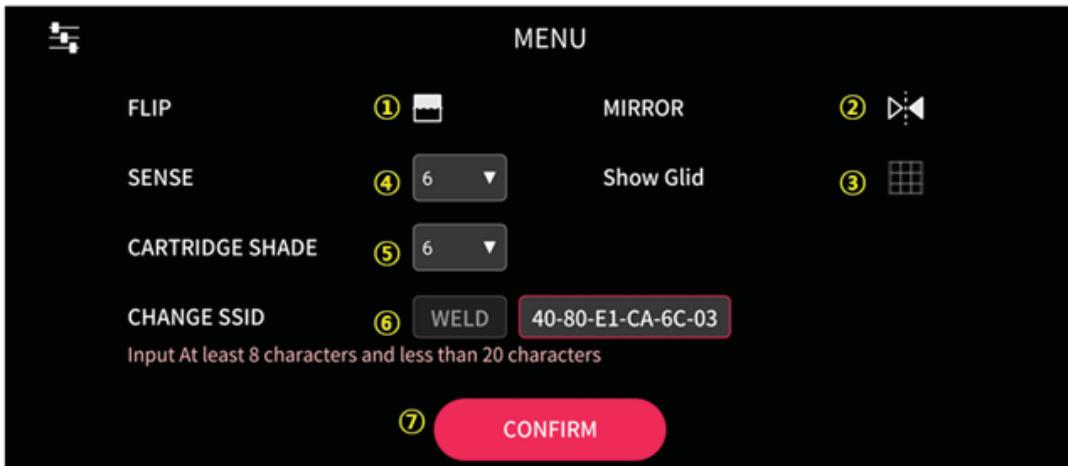
• Mobile phone connection screen



Through the cell phone screen, the user can observe the recording screen of the camera weld in realtime. Click the REC button in ① to save the currently captured video image, and click the REC button again to stop saving. Clicking the icon in ② displays a menu to adjust the quality of the captured video image. ③ shows the SSID of the connected WGC400 welding camera.

How to adjust video quality

- How to adjust the quality of the video image from the camera weld using your mobile phone.

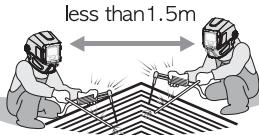
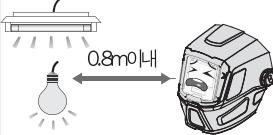
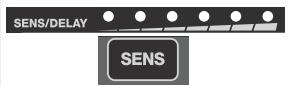


- FLIP – Flips the captured video image vertically up or down
- MIRROR – flips the captured video image horizontally from side to side
- SENSE – Controls the speed at which the photo sensor recognizes when the welding arc is turned on or off. It can be adjusted from 0 to 10, with higher values being more sensitive and lower values being less sensitive.
- Show Grid – helps to adjust the camera's shooting angle so that the captured video image matches the horizontal and vertical of the weld capture zone.
- CARTRIDGE SHADE – Allows you to adjust the brightness of the captured video image. It can be adjusted from 4 to 13, with higher values making the captured video image appear darker and lower values making it appear brighter.

Actions for each type of malfunction

Malfunctions caused by the working environment

- If the welding helmet does not operate smoothly or does not work, check the malfunction according to the measures for each type of malfunction.
- If the problem persists even after checking according to the measures for each type of malfunction, contact the head office or apply for A/S.

Problem	Reason	Solution
When the lens darkens and won't lighten	Is the distance between you and the welder too close?	 Change the direction of the weld slightly. If that doesn't work, keep the distance at least 1.5 meters.
	Are fluorescent or incandescent lights too close together?	 Avoid pointing the sensor at fluorescent or incandescent lights.
	Is the sensitivity adjustment too sensitive?	 Adjust the sensitivity to use it.



Still not working?

If you've tried each of these solutions and there is no change, try lowering the sensitivity to the left (dull) in small increments to match your welding environment.



Actions for each type of malfunction

WG3⁺
Ray[®] Camera Helmet

Problem

When the lens doesn't dim from bright to dark

Reason

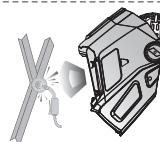
Is the distance between the welding torch and the weld surface too far?



Solution

Keep the distance within 50 centimeters. Especially when welding at low currents (50A or less), try to stay a little closer.

Are the weld light and sensor in line?



Keep the sensor and weld light in line.

Is the welding helmet sensor unobstructed by debris or objects?



Remove any debris from the sensor.

Is there a lot of debris on the lens protector?



Clean or replace the lens protector (see page 19).



Still not working?

If there is no change after following each solution, increase the sensitivity to the right (Sensitive) in small increments to match the welding environment.



SENS/DELAY



Actions for each type of malfunction

Problem	Reason	Solution
The lens is flickering.	Is the weld light and weld surface far apart?	Keep the distance between the welding light and the weld surface within 50 centimeters.
	Is sensitivity desensitized?	Adjust the Sensitivity by moving it one space to the left (Sensitive).
The lens doesn't work at all. (even when I press the reset switch the lens does not blink)	Is the battery not drained?	Replace the battery. Coin type CR 2450/3V

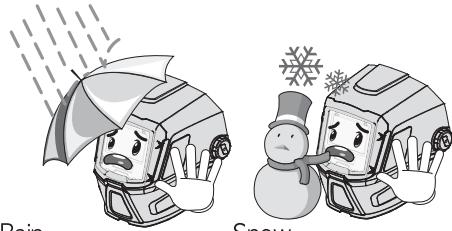
▶ Malfunctions due to inexperience

Problem	Reason	Solution
If the protective vinyl has not been removed	Obstructed vision and sensors do not detect the weld light, and the protective vinyl is pressed down by the heat of the weld, causing malfunctions..	When replacing the lens protector, remove both the inner and outer protective vinyl.

► Malfunctions due to improper storage

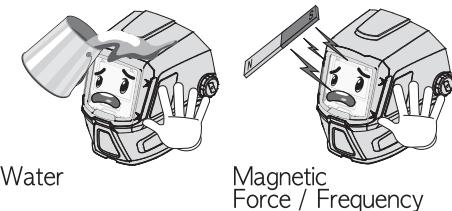
Be careful, as it can cause damage to the following

Use care when storing the cartridge of the camera welding helmet because it consists of electronics and an LCD, which can be damaged by snow, rain, moisture, strong frequencies, and magnetic fields.



Rain

Snow



Water

Magnetic Force / Frequency

Customer Record Card

Product name	WG3+	Production date Cartridge number			
Purchase date		Customer welding type	<input type="radio"/>	ARC, TIG, CO2, MIG, MAG, Plasma welding • Cutting	
Customer Company					
Customer Address		Customer mobile phone		Customer name	

Question (denoted by a v)

1. Did you reviewed 26–29 of the manual yes () no ()

2. Have you ever used a welding helmet yes () no ()

(and if so, which company () which product () you used)

We'll inform you how to use the product the right way

Troubleshooting : If there is anything other than the questions above, please record it. (※ This is required for A/S, so please record it in detail if possible.)

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※ You can also make a copy of the customer record card and fill it out.

Warranty Statement

- ▶ In accordance with the Consumer Protection Act, OTOS provides the following warranty for the product.
- ▶ In the event of a product malfunction, please contact your dealer or OTOS,
[TEL : 02)862-8000, FAX : 02)869-3333]

Product name	Camera Welding Helmet	Model Name	WG3+
purchase date		Cartridge number	
purchasing place		Purchasing amount	

* 카트리지 일련번호는 카트리지 뒷면에 9자리 (예 : 240100001)



▶ Free service

OTOS WG3+ camera welding surface is guaranteed for 24 months from the date of purchase. If the cartridge and camera of the WG3+ camera welding surface do not work according to the principle of operation, we will repair it free of charge for 24 months, but it does not apply to failures caused by consumer error.

▶ Paid Service

1. After the warranty repair period

2. If it is not a malfunction

If you request service for a non-malfunction, you will be charged, so be sure to read the user manual.

3. In case of malfunction due to consumer negligence

– In case of malfunction due to mishandling or improper repair or modification by the consumer.

– When the product is repaired by someone other than AUTOS warranty department.

– In the event of a malfunction or damage caused by dropping during use.

– Failure due to negligent storage, such as exposure to snow, rain, humidity, or heat.

※ The date of manufacture is indicated on the product, but there is no expiration date.

※ This product is recyclable, so please separate it when disposing of it.

※ For product inquiries or other A/S matters, please contact the OTOS website or A/S reception center.

**This warranty card will not be reissued,
so please keep it together with the user manual.**



Realtime Measuring
of Arc length & Welding seam & Weld pool width

WG3⁺
Ray-X Camera Helmet

OTOS

49, Dusan-ro 11-gil, Geumcheon-gu, Seoul, Korea
15-6, Beodeul-ro 1362beon-gil, Paltan-myeon, Hwaseong-si, Gyeonggi-do, Korea

TEL : +82-2-862-8000

OTOS 2024-05

FCC/IC Compliance Statement

This device complies with Part 15 of the FCC Rules and Industry Canada license-exempt RSS standard(s).

Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

CAUTION : Any Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Enonce d'Industrie Canada(IC)

Le present appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisee aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioelectrique subi, meme si le brouillage est susceptible d'en compromettre le fonctionnement.

Tout changement ou modification non expressement approuve par la partie chargee de la mise en conformite peut annuler le droit de l'utilisateur a utiliser l'equipement.