

USER'S MANUAL

SCUBADOO

Auto Darkening LCD Filter Welding Mask

**Warning!**

Read and understand all instruction before using! Severe personal injury could occur if the user fails to follow the aforementioned warn- ings, and/or fails to follow the operating instructions.

BEFORE USING

- The **SCUBADOO** welding mask comes ready for use.
- Auto-darkening welding goggles do not provide unlimited eyes, ears and face protection, additional PPE is required for all other areas of exposed skin, like face, neck and head.
- Set up for correct delay time, sensitivity for your application
- Make sure the protection films on both inside & outside protection lens are removed before use.
- Check the front cover lens to make sure that they are clean, and that no dirt is covering the four sensors on the front of filter cartridge. Also check the front/ inside cover lens and the front lens retaining frame to make sure that they are secure.
- Inspect all operating parts before use for signs of wear or damage. Any scratched cracked, or pitted parts should be replaced immediately before using again to avoid severe personal injury.
- Check for light tightness before each use.
- Select the shade number you require at the turn of a shade knob (Seeing the Shade Guide Table.)
- Finally, be sure that the shade number is the correct setting for your application.

WARNING

- Failure to follow these warnings and/or failure to follow all of the operating instructions could result in severe personal injury.
- The welding goggles are not applicable for overhead welding.
- The welding goggles are not applicable for laser welding or laser cutting.
- The recommended operating temperature range for welding lens is -5°C to 55°C (14°F-131°F). Do not use this device beyond these temperature limits.
- Never place these welding goggles and auto-darkening filter on a hot surface.
- Do not immerse the welding goggles in water.
- Do not use any solvents on any lens or mask components.
- Be sure that the dark shade of the welding lens in the welding goggles is the correct shade number for your application.
- Inspect all operating parts before each use for signs of wear or damage. Any scratched, cracked, or pitted parts should be replaced immediately.

- Check the inside & outside protection plates are clean and that no dirt is covering the sensors on the front of the goggles.
- Please ensure goggles are sealing against light before use.
- Do not use any replacement parts other than those specified in this manual.
- Unauthorized modifications and replacement parts will void the warranty and expose the user to the risk of personal injury.
- Please check the power before use.

MARKING

Automatic welding filters:	G30 16321 YXE W3/5-8/9-13 V2
G30	Model Name
3	Light State
5-8/9-13	dark states
YXE	Manufacturer's identification
V2	Angle dependence class
16321	Document Name of Standard

Welding Helmet Shell:	16321 YXE W13 1-M
16321	Document Name of Standard
YXE	Manufacturer's identification
13	Darkest State
1-M	Headform Size

MAINTENANCE

The Welding Goggles need little maintenance. Use a clean, soft piece of cloth, moistened with soap/commercial disinfectant to wipe the inside/outside of the goggles then dry. But the FILTER lens should be cleaned with dry and soft cloth.

OPERATING INSTRUCTION

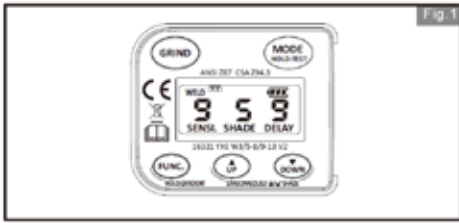
Modes

- Welding Mode(Shade Range 9-13)(see Fig.2)
- Welding Mode (Shade Range 5-8)(see Fig.1)
- Cutting Mode (Shade Range.5-8)(see Fig.3)
- Grinding Mode(see Fig.4)

Press the MODE button, to cycle among WELD, GRIND and CUT mode.

Long-press MODE button,goggles turn into self-check mode.

Press GRIND button with 1.0s, the goggles will be in Grind mode.



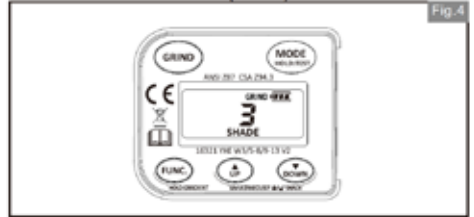
WELD Mode(5-8)



WELD Mode(9-13)



CUT Mode(5-8)



GRIND Mode(3)

VARIABLE SHADE CONTROL

WELD MODE (9-13): Pressing **MODE** button, and **FUNC.** Button, you will see the **SHADE** icon is flashing, then you can adjust the shade by pressing **UP/DOWN** and the number will go from 9-13 .(see Fig.2)

WELD MODE (5-8): Pressing **MODE** button, and **FUNC.** Button, you will see the **SHADE** icon is flashing, then you can adjust the shade by pressing **UP/DOWN** and the number will go from 5-8 .(see Fig.1)

To change the shade in welding and cutting modes, press **MODE** button. The shade can be switched from shade 5 to shade 8, and from shade 9 to shade 13 as well.

Note: Refer to Shade Guide Table if necessary.

SHADE LOCKED MODE

Shade can be locked in any shade number as you need. Press **UP&DOWN** button at one time, the goggle goes into shade lock ode. Then you can adjust the shade by press **UP/DOWN** button to increase/decrease shade.

SENSITIVITY CONTROL

The sensitivity can be set within 0-9 LEVELS by pressing the **FUNC.** and **UP/DOWN** button on the digital control panel and the number will be indicated in the left corner of the digital display.

SENSI. 0: (Low) Suitable for high amp. welding and welding in bright light conditions (lamp light or sun light).

SENSI. 9: (High) Suitable for low amp. welding and welding in poor light conditions.

And suitable for welding with steady arc process such as TIG welding.

DELAY CONTROL

Delay Time can be adjusted from 0-9 levels (0.04-2.0s) .The time delay is for protection of welder's eyes from strong residual rays after welding.

The recovery time intervals are recommended extended when the shade increased.

Short pressing **FUNC.** button, when the **DELAY** is flashing, you can adjust it by pressing **UP/ DOWN** to increase or decrease the delay time.

GRADIENT MODE

Long pressing **FUNC.** button, **GRADIENT** mode is on .It allows shade from dark to light gradually and make welders eye more comfortable.

Level 9: Longest delay time, is 2.0 s, which is suitable for most welding application, especially for high amperage current application and longer welding intervals. Longer delay can also be used in low current TIG welding in order to prevent the filter opening when the light path to sensor is temporarily obstructed by a hand, torch, neighboring welders' arc.

Level 0: Short delay time, is 0.04s, and it is for spot welding application.

GRIND MODE

Press the **MODE** into **GRIND** or keep pressing **GRIND** button with **1.0 s**, you will find **GRIND & SHADE 3** on the LCD screen.

Note: Do not weld in **GRIND** mode, the goggles will not turn dark.

CUT MODE

Press the **MODE** button to cycle into the **CUT** mode, or switch the knob into **CUT**.

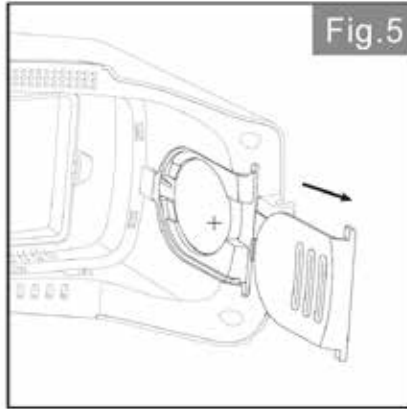
You can change the shade number with pressing **UP/DOWN** button through the different shades (shade 5 -8).

POWER

The power of goggles is provided by a replaceable battery, CR*2450&solar cell.

Battery icon(LED Light) will twinkle when the power is low (with 1 bar) and a replacement is needed. Push the battery cover, take the old battery out and replace with a new one.

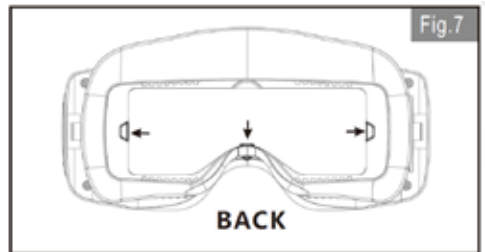
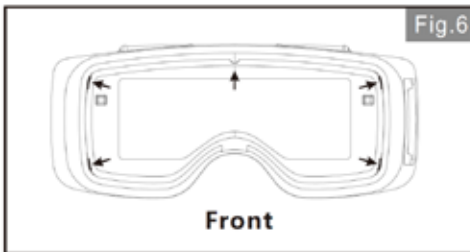
REPLACING BATTERY



Be sure passive side of the battery faces down.

REPLACING THE PROTECTION PLATES

If protection screens are in any way damaged, covered with welding spatter or broken, they must be immediately replaced.



Put your finger into the lens cut out on the ADF and pull the lens outwards and it will come out, and then insert a new one be sure that the tap on the cover lens is securely fastened in the slots.

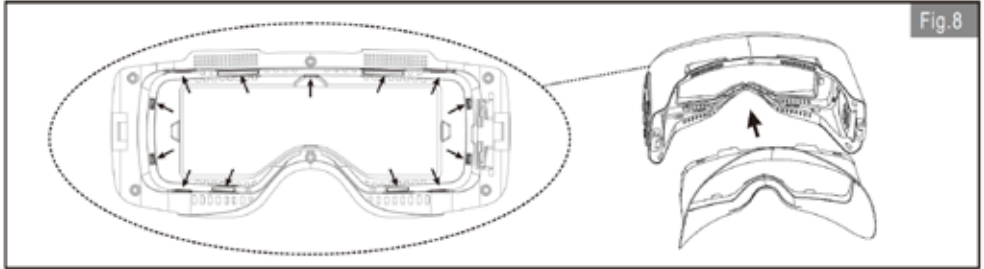
There are 5 slots on the outer cover lens, and 3 slots on the inner cover lens.

REPLACING SILICONE SKIRT

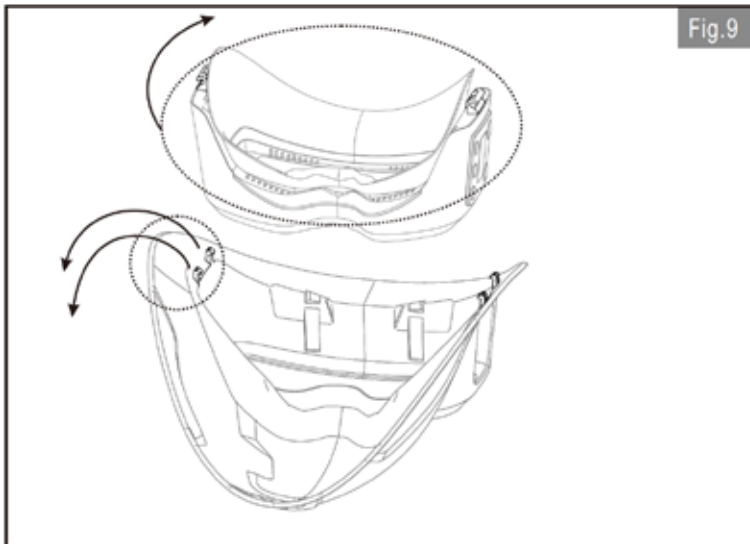
The silicone skirt needs to be replaced if broken, damaged or covered with welding spatter.

Pull the silicone skirt upward in four position, and it will be removed.

Then insert a new silicone skirt into the goggles and locked well. Be sure 13 taps are put in the slots and user must always make sure that the silicone skirt is fitted properly.

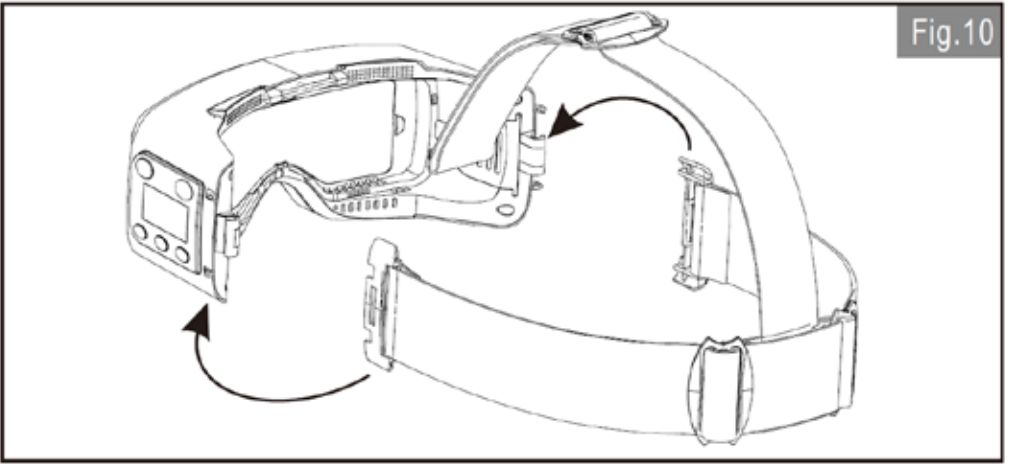


REMOVING THE GOGGLES FROM THE MASK



Press the left part of shell's buckles in the direction showed in the Fig.9, and take the goggle out of the shell from left to right like the way showed in the Fig.9.

REPLACING THE ELASTIC HEADBAND



Pulling the buckle up from the direction showed on fig. 10. and replace a new one.

Insert a new one with pushing the lock catch of buckles on the both side of goggles.

Headband's tightness can be adjusted by buckle on the left.

TECHNICAL DATA

Art Nr.	
Filter Dimension	175x88*x73 mm
Viewing Area	111x39 mm
Arc Sensor	2
Classification	1/1/1/2
Light State	3
Shade Variable	Shade 3/5-8/9-13 External Variable
Grinding Mode	YES
Sensitivity	0-9 Levels External Variable
Delay Time	0-9 levels (0.04-2.0s)
UV/IR	Permanent protect
Low Battery Indicator	Yes/Battery Icon Twinkling
Power Supply	Solar cell&Battery/ 1*CR2450 Replaceable
Operating Temperature	-5°C to 55 °C
Storage Temperature	-20°C to 70 °C
Warranty	2 years

COMMON PROBLEMS AND REMEDIES

- The goggles do not darkening
 1. Stop welding or cutting immediately
 2. Check the mode is on WELD or CUT but not on Grind
 3. Check the battery, if it is twinkling, just change a new one.
 4. Change the lens if there is welding spatter cover the arc sensors.
 5. Check the sensitivity and adjust it according to the recommendation.

- The goggles are flickering

Checking the distance from arc and the sensitivity setting.

Note: Make sure the sensors are clean and facing the area with angles of 45° or more will limit the light to reach the sensors.

- The goggles do not switching

1. Check the power , if it is on, then follow the next step.
2. Check the sensitivity, adjust it to a required level
3. Clean lens covers and sensors of any obstruction.
4. If the lens still wont switch, return to dealer for replacement.

- The goggles remain dark after completing a weld

Check the sensitivity, adjust it to a required level. If the work place is extremely bright, it is recommended to reduce the surrounding light level.

- Slow Response

Operate Temperature is too low
(Do not use at temperature below -10°C or 14°F)

- Poor Vision

1. Change the cover lens/clean filter.
2. Ensure ambient light is not too slow.
3. Ensure the shade number is correctly set.

SHADE SELECTING CHART

Process	Current A																				
	1.5	6	10	15	30	40	60	70	100	125	150	175	200	225	250	300	350	400	450	500	600
Covered electrodes	8				9			10		11			12			13			14		
MAG	8						9		10		11			12			13		14		
TIG	8			9			10		11			12		13							
MIG with heavy metals	9						10		11			12		13		14					
MIG with light alloys	10						11		12		13		14								
Air-arc gouging	10						11		12		13		14		15						
Plasma jet cutting	9						10		11		12			13							
Microplasma arc welding	4	5	6		7	8	9	10		11		12									
	1.5	6	10	15	30	40	60	70	100	125	150	175	200	225	250	300	350	400	450	500	600

Note: The term “heavy metals” applies to steels copper and its alloys. etc. Start with shade that is too dark to see the weld zone. then go to a lighter shade that offers a sufficient vision and never go below the minimum.