RAZORWELD

AUTO-DARKENING HELMET OPERATION MANUAL

Model: 8000X

2 YEAR PRODUCT WARRANTY

PLEASE READ AND UNDERSTAND THIS MANUAL BEFORE USING YOUR QUALITY WELDING HELMET

INTRODUCTION

The auto-darkening helmet with improved High Definition Filter Optics, delivers a new generation of face and eye protection. Advanced integrated technology, such as LCD, optoelectronics detection, solar power, and microelectronics are coordinated to produce one of the safest, fastest and most reliable auto-darkening helmets available.

The auto-darkening helmet not only can efficiently protect operator's eyes and face from sparks, spatter, and harmful radiation under normal welding conditions, but also can make both hands free and strike arc accurately resulting in increased efficiency and improved quality welds. It may be widely used for various welding, cutting, spraying and arc gouging, etc.

WARNINGS ⚠

- This auto-darkening helmet is not suitable for "overhead" welding, laser welding/cutting, or oxyacetylene welding/cutting applications.
- This helmet will not protect against explosive devices or corrosive liquids. Machine guards or eye splash protection must be used when these hazards are present.
- Impact resistant, primary eye protection, spectacles or goggles that meet current ANSI specifications must be worn at all times when using this welding helmet.
- Avoid work positions that could expose unprotected areas of the body to spark, spatter, direct and/or reflected radiation. Use adequate protection if exposure cannot be avoided.
- Do not make any modifications to either the ADF cartridge or helmet, other than those specified in this manual.
- 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.
- Do not immerse this helmet in water because this model is not waterproof.
- Do not use any solvents on any ADF or helmet components.
- The recommended operating temperature range for this ADF cartridge is -10°C~65°C (14°F~149°F). Do not use this device beyond these temperature limits.

Failure to follow these warnings and/or failure to follow all of the operating instructions could result in severe personal injury.

SPECIFICATIONS

1. ADF cartridge size	114 x 133 x 9.5 mm (4.5" x 5.25")
2. LCD viewing area	102.5 x 102.5 mm (4.04" x 4.04")
3. Light state shade	DIN 3
4. Shade range	Auto Mode:3/7<13M Manual Mode:3/5-13
5. Shade deviation of Auto Shade	±2.0
6. UV/IR Protection	Up to DIN 15 at all times
7. Switching time (light to dark)	0.04ms (ANSI)
8. Delay time (dark to light)	Adjustable (level 1-level 5 for 0.1-0.9s)

9. Sensitivity control	Adjustable (level 1-level 5 for low-high)
10. Lock shade	Yes
11. Auto shade	Yes
12. Arc sensors	4
13. Ambient light sensor	1
14. Grind function	Yes
15. Power Supply	Solar Cell, Replaceable Battery(CR2450*2PCS)
16. Operating Temperature	-10°C~65°C (14°F~149°F)
17. Inside PC lens	108 x 108 x 1 mm (4.25" x4.25")
18. Outside PC lens	114 x 133 x 1 mm (4.5" x5.25")
19. Warranty	2 years

OPERATION INSTRUCTION

BEFORE USE

-Check for light tightness and check the inside & outside protection lens are clean and that no dirt is covering the sensors on the front of the **auto-darkening-filter (ADF)** cartridge.

-Make sure the protection films on both inside & outside protection lens are removed.

-Inspect all operating parts for signs of wear or damage. Any scratched, cracked, or pitted parts should be replaced immediately.

1.AUTO SHADE

At AUTO mode ,ADF will adjust to appropriate shade according to the welding arc automatic.

Press **Shade** button(position 25) on ADF ,ADF will be changed to AUTO mode . .

At **AUTO** mode ,the shade can be corrected up 2 shade(highest is shade 13) and down 2 shade (lowest is 5) if necessary . Clockwise turning the shade knob (Position 8), shade can be corrected up ;anticlockwise tuning the shade knob ,shade can be corrected down . LED display will show the current shade number (Position 24) .

2.Manual SHADE

At Manual mode ,ADF will adjust to appropriate shade by manual control

Press **Shade** button (position 25) on ADF, ADF will be changed to Manual mode from AUTO mode . move the switch (position 33) on potentionmeter ,Shade range will be changed between range 5-9 and range 9-13 .Led display will show the shade range take turns.

At **range 5-9** mode ,the shade can be adjusted from shade 5 to shade 9 by turning the external shade knob. Clockwise turning the shade knob (Position 8), shade can be adjust up ;anticlockwise tuning the shade knob ,shade can be adjusted down .

At **range 9-13** mode ,the shade can be adjusted from shade 9 to shade 13 by turning the external shade knob. Clockwise turning the shade knob (Position 8), shade can be adjusted up ; anticlockwise tuning the shade knob ,shade can be adjusted down .

3.Grind mode

ADF can be adjusted between **welding** and **Grind** mode

At **welding mode** , pressing and holding the external GRIND button 2 sec (Position 7).

ADF will be adjusted to Grind mode ,Grind LED (position 29) will flash.

At **Grind mode** , pressing and holding the external GRIND button 2 sec (Position 7). ADF will be adjusted to welding mode ,Grind LED (position 29) will stop flash.

4.Sensitivity adjustment

Press SENS button (position 26) ,Sensitivity will be adjusted from level 1(low) to level 5(high) circularly. LED display will show the current sensitivity (Position 24) .

5.Delay adjustment

Press **Delay** button (position 27) ,Delay time will be adjusted from level 1(short) to level 5(long) circularly. LED display will show the current sensitivity (Position 24).

6.Lock shade

Press **Delay** button (position 27) and hold for 2s ,ADF will move to Lock shade mode .At Lock shade mode ,ADF will keep darken . Shade number can be adjusted from 5 to 13 by turning the external shade number .

Clockwise turning the shade knob (Position 8), shade can be adjust up ;anticlockwise tuning the shade knob ,shade can be adjusted down

At lock shade mode ,lock shade indicate LED (position 28) will flash .

Press **Delay** button (position 27) and hold for 2s ,ADF will quit Lock shade mode . lock shade indicate LED (position 28) will stop flash

7.Low battery indicator

When the power of the battery is low ,the indicate LED (position 29) will become RED .The battery need to be changed .

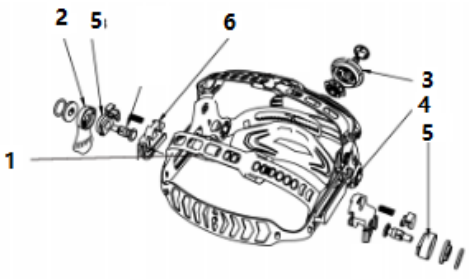
8.Change battery

Remove the battery cover (position 31) ,take old battery out and replace 2 new battery .

Assemble the battery cover **.**

9.HEADGEAR ADJUSTMENTS

Because head shapes vary from person to person, the work positions and the observing angles are different. Operator may adjust the headband in 5 parameters:



1- Select eye level by Headband adjusting buttons (1).
2- Select view angle by Segmental positioning plate (2).
3- Adjust head size perimeter by pushing and turning the Headband tightness adjusting knob (3).
4- Select eyes distance from ADF by adjusting Headgear screws to 1 of the 5 slots on the Headgear slider (4). Make sure both sides are equally positioned for proper vision.
5- Select the height of the headgear by adjusting the Block washers(5) up or down on the Block washer adjustment(6).

TRUE COLOR

The auto-darkening helmet is a True Color welding helmet. With advanced True Color technology, the user can weld with improved clarity due to new complex coating technology, grind with precision while in grind mode and finally see the job performance in the light state in the full spectrum of colors. There is no need to remove the helmet to see clearly! Results are enhanced the weld quality, increased efficiency and improved safety!

MAINTENANCE

The auto-darkening helmet needs little maintenance. Use a clean, soft piece of cloth moistened with soft soap / pure alcohol / commercial disinfectant to wipe the inside and the outside of the helmet. Dry storage.

Note:Do not immerse the helmet or ADF in water directly.

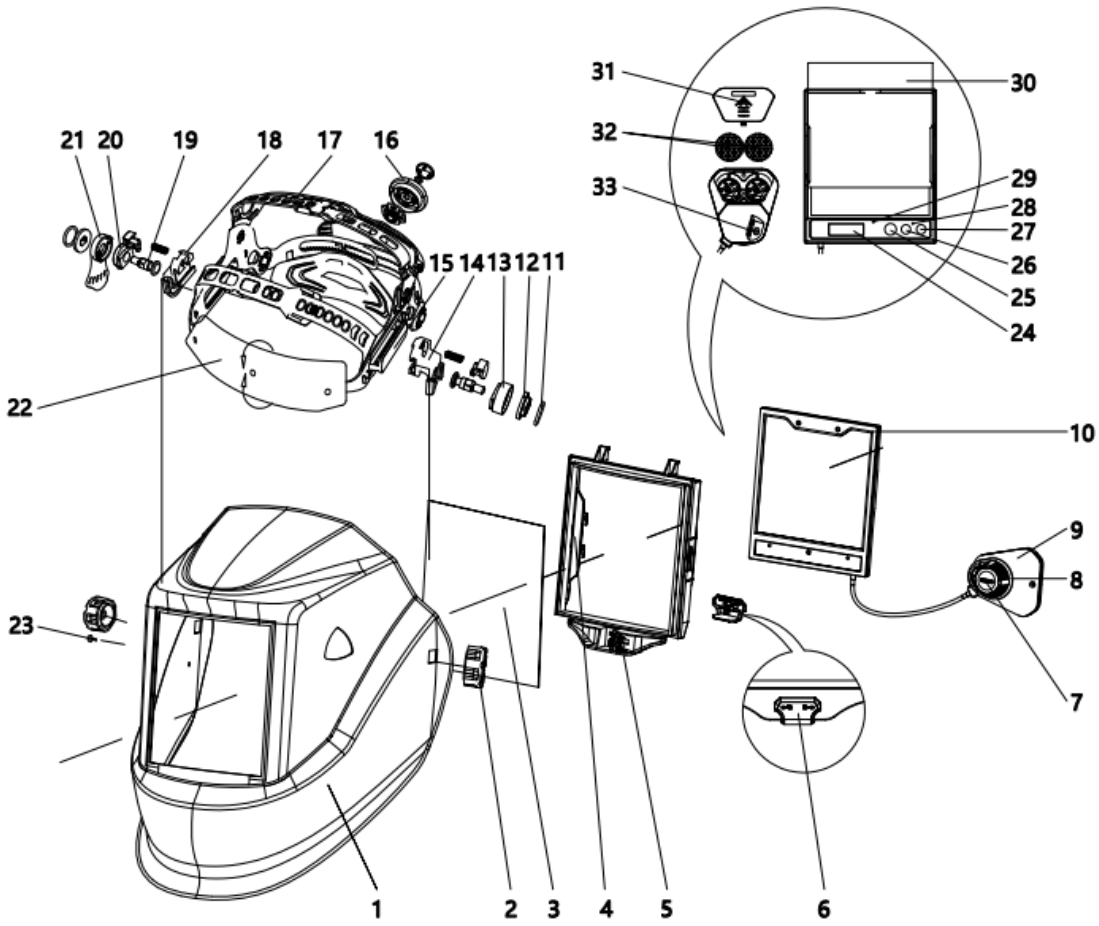
TROUBLE SHOOTING

Trouble Shooting	Remedy
The ADF does not darken when welding.	-Stop welding or cutting immediately. -Make sure the sensors are facing the arc and no obstructions. -Check the mode that is on WELD not GRIND. -Review sensitivity recommendations and adjust sensitivity if possible. -Replace the battery if necessary.
The ADF stays dark after welding or there is no arc present.	-Adjust the sensitivity to the lower level (level 1). -If the welding place is extremely bright, it is recommended to reduce the surrounding light level.
The ADF switching during the welding.	-Increase the sensitivity if possible. -Make sure the sensors are facing the arc and no obstructions. -Increase Delay 0.1 – 0.3 second may also reduce switching.
Inconsistent shade number on the corner of ADF.	-It is a natural feature and will not be dangerous for the eyes. -In order to get a maximum comfort, try to keep an view angle at around 90°.

WARRANTY

The auto-darkening helmets are warranted for **2** years from the date of purchase. The duration of use depends on various factors such as use, cleaning storage and maintenance. Frequently inspections and replacement if it is damaged are recommended.

PARTS LIST(Figure 1)



1. Helmet shell
2. Headgear screw
3. Outer protection lens
4. ADF cradle
5. Magnifying lens holder
6. Cradle lock
7. Grind button
8. shade Knob
9. Battery case
10. ADF
11. O ring
12. headgear side knob cover
13. headgear side knob
14. Block washer adjustment
15. Headgear slider
16. Headband tightness adjusting knob
17. headgear
18. Block washer adjustment
19. headgear screw
20. Block washers
21. Rake adjustment
22. sweatband
23. position nut
24. LCD display
25. Shade button
26. Sensitivity button
27. Delay button
28. Lock shade indicate
29. Low battery/Grind indicate
30. Inner cover
31. battery cover
32. Battery
33. Shade range switch

Table A.3 – Recommended use of the different scale numbers for arc welding

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
Plasma jet cutting										9		10		11			12		13		
Micro- plasma 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, alloy steels, copper and its alloys, etc.

JASIC TECHNOLOGIES AMERICA INC
25503 74th Ave S, Kent, WA 98032
WWW.RAZORWELD.COM