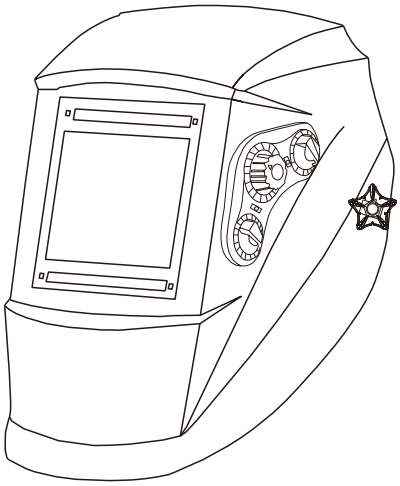
AUTO DARKENING WELDING HELMET

INSTRUCTION MANUAL

YESWELDER®



Pay attention to self-safety and read this manual carefully while installing and operating this product.

Catalog

1.INTRODUCTION

Thank you for your purchase of Auto Darkening Welding Helmet. Please read and understand this instruction manual thoroughly to ensure correct, safe and effective use of the helmet. Failure to do so can result in serious injury. Keep the manual safely.

2.PRODUCT FEATURES

Based on the principle of photo electricity, the LC (Liquid Crystal) valve in the helmet darkens the moment welding operations start, in less than 1/25000-1/30000 s. The shade value can be adjusted between DIN 5 to DIN 13. The helmet includes IR (Infra-Red) and UV (Ultra Violent) filters consisting of reflective coated glass, multi-layer valve and a polarizer. This effectively blocks any ultra violent and infra-red rays, protecting the user's eyes and face, even in the clear state. The auto-darkening helmet has wider applications as compared with conventional welding helmets. It protects the face and neck of the welder from electricity arc, improving safety conditions in work area.

The product is widely used across many industries including Oil & Gas, Shipbuilding, Architecture and Steel Manufacturing.

Working temperature range is from -10℃ to 60℃

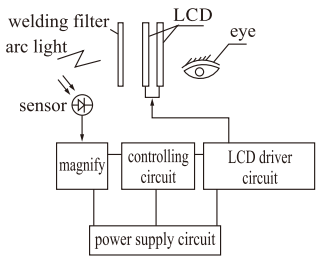
Limited storage temperature range is from -20℃ to 70℃

Relative Humidity range is from 20% to 80%

3. OPERATING PRINCIPLE

The helmet contains an electronic shutter module. The LC valve/shutter darkens/lightens when a voltage is applied. The bright light from electricity arc is converted into an electronic signal. This signal is then magnified and passed to LC circuit control module. The control module then closes (darkens) the LC valve/shutter.

The operating principle of the whole circuit is as follows:



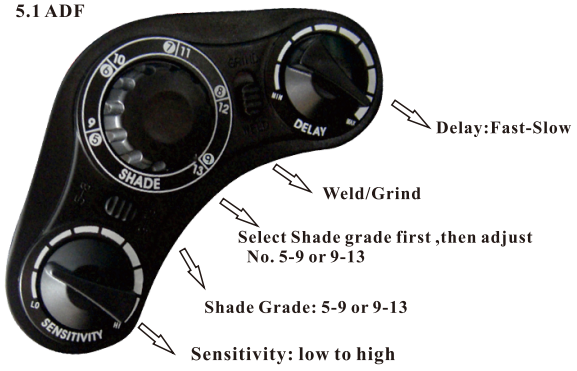
4. TECHNICAL SPECIFICATIONS AND PARAMETERS

View area (mm) ADF	101x94mm
Dark state shade	Clear state: DIN 4
	DIN 5-9 , Stepless Adjustable
	DIN 9-13, Stepless Adjustable
	External or Internal control
Switching time	1/30000s
Staying time	0.1~1.0s, Stepless Adjustable
	External or Internal
Sensitivity control	low to high, Toggle adjustment
	External or Internal
Weld/Grind	Can be ad ustable
UV/IR protection	DIN 16
Other	ADF Self-check, Low Volume Alarm

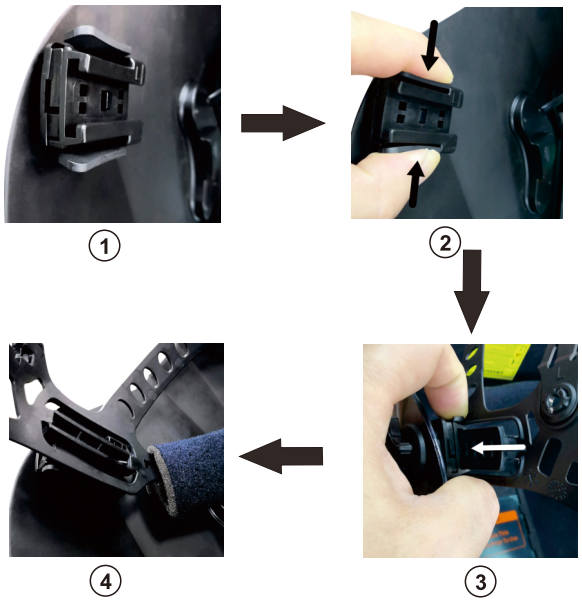
Function is only for reference, Please operate according to the actual function

5. ASSEMBLY AND PART LIST

5.1 ADF



5.2 Headband Install (Left and right)



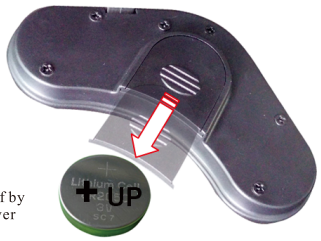
Dual top traps adjustments for increasing stability and reduce pressure on the top of the head.

Pivoting top and back is self-adjusting and conform to different head shapes.

5.3 Battery replaced

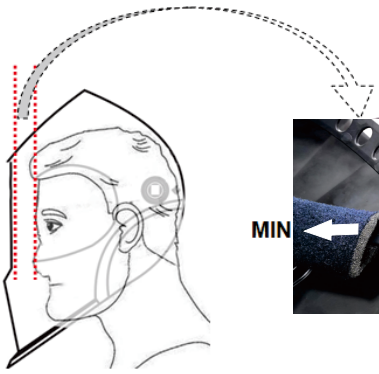
Pls replace lithium battery,When low- volt age indicator get lighted.

Pls classify the used batteries ,disposed of by Local government regulations or hand over to professional organization.



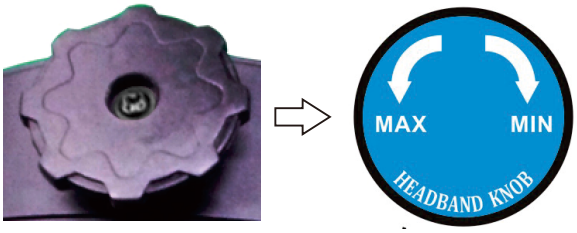
TEST: When press this button, ADF work immediately - from light to dark, Then turn back to light immediately. The device is normal.

5.4 Adjust the distance between nose and ADF



6 settings let your decide the distance between your face the helmet for a better view.

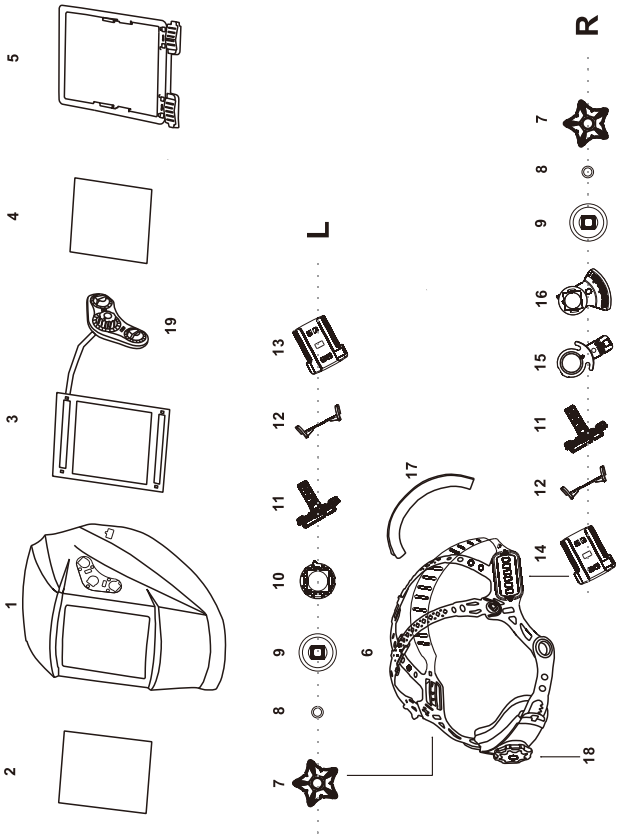
5.5 HEADBAND KNOB



Depending on the size of the head, turn this knob to zoom in or out, Smooth ratchet for precise tightening.

5.6 Parts List and Headband of Assembly Diagram

Part	Description	Qty
1	Shell (Welding Helmet)	1
2	Front Cover Lens (PC)	1
3	Auto-Darkening Filter (ADF)	1
4	Inside Cover Lens (PC)	1
5	ADF fixing bracket	1
6	Headband	1
7-16	Headband accessories	15
17	Sweatband	1
18	Headband djustment Knob	1
19	Shade Control Knob	1



5.7 Lens and Helmet Maintenan Ce

Replace the Front Lens Cover if it is damaged (cracked, scratched, soiled or pitted)

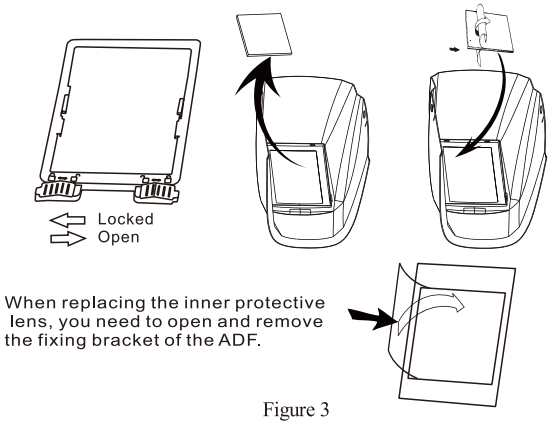


Figure 3

1. To Replace the Cover:

1.1. Remove the Front Lens Cover by gently a. pulling up the central part of the Lens. See Figure 3. If the unit has a frame over the front of the lens, lift up on the tab at the bottom of the frame to access the lens cover.

1.2. Remove the protection film from both b. sides of the new Lens if it comes with a film covering. Place the new Lens into place by bending it slightly and sliding it between the tabs at each side of the lens until it snaps into place.

1.3. Helmet sure that the Lens is securely c. installed. If the unit has a frame, make sure that the frame is snapped securely into place.

2. Clean the Filter Lens with a clean lint-free tissue or cotton cloth.

3. Do not immerse the lens in water or any other liquid. Do not use abrasives,solvents or oil based cleaners.

4. Do not remove the auto-darkening filter from the Auto-Darkening Welding Helmet. Do not try to open the filter.

6. OPERATING INSTRUCTIONS

• Open the package and take out the helmet. Check to make sure that the item is intact and undamaged including the lithium battery, installed on the helmet.

• Do not use the Welding Helmet if the lens is cracked or if the lens is dirty.

• Put the helmet on and adjust the manual knob for the head band to ensure a comfortable fit. Adjust the headband so that the helmet fits on the head as low as possible and close to the

face.

• The knobs on the sides are to loosen the grip for easy removal.

• The angle of the lens can be moved to and fro as required.

• Adjusting the switch sensitivity- The operator can adjust the amount of light required for the lens to darken, depending on working conditions. Reduce sensitivity to avoid interference. When working with a small electric arc, high sensitivity is required. For e.g. Argon arc.

• Adjusting dark to clear delay- The operator can change the time for the filter to return to clear state, depending on working conditions and individual comfort level. When welding is stopped, the filter screen automatically changes from dark to clear state according to the time setting selected. The adjustment can be made with tumble switch, knob switch or touch-tone switch as per the helmet type. Please refer to annexure l for details. (In case of touch-tone switch the light will go off in 2 sec after it has been switched off)

• Adjusting the Shade Range- The operator can select (DIN) variable shades from 9 to 13 at the turn of a shade knob. Refer

to Shade Guide Table in Annexure 2 for shade selection.

• When working in a cramped and crowded site, switch the anti-jamming device on for filter ADF to avoid accidental switch off.

• When welding, wear approved Auto-Darkening Welding Helmet, respirator and hearing protection.

• This helmet provides protection for welding purposes only. It is not suitable for laser welding processes. The Welding Helmet will not protect against severe impact hazards, including fragmenting grinding disks. The Welding Helmet will also not protect against explosive devices or corrosive liquids.

• Use only at temperatures within the operating range for your model as stated on the specifications chart in Annexure 1.

7. MAINTENANCE

A daily maintenance for the helmet and lens is required to ensure reliable protection.

• Clean filter's surfaces regularly. Protect filter from contact with any liquid and dirt. Do not immerse the filter in water.

• Should the Auto-Darkening Welding Helmet not darken

upon striking an arc, stop welding immediately and check if the battery needs replacement. If the lens still does not darken, have the helmet checked by an authorized service technician.

• Replace the Front Lens Cover if it is cracked, scratched or damaged in any way.

• The Auto Darkening Filter must never be placed on a hot surface

8. WARRANTY

The manufacturer provides a warranty of 24 months from invoice date for all manufacturing defects The warranty becomes void stored incorrectly or if not operated according to the instruction manual. The warranty becomes void if the helmet has been remodeled or modified in any way

9. STORAGE

• Remove the battery when the helmet is not in use for a long period of time.

• Storage temperature range is -20℃ ~ 70℃.

SHADE GUIDE TABLE

Welding process	Arc Current(Amperes) 0.5, 1, 2.5, 5, 10, 15, 20, 30, 40, 60, 80, 100, 125, 150, 175, 200, 225, 250, 275, 300, 350, 400, 450, 500							
SMAW	9	10	11	12	13	14		
MIG(heavy)	10	11	12	13	14			
MIG(light)	10	11	12	13	14	15		
TIG,GTAW	9	10	11	12	13	14		
MAG/CO2	10	11	12	13	14	15		
SAW	10	11	12	13	14	15		
PAC	11	12	13					
PAW	8	9	10	11	12	13	14	15

Note:

*SMAW-Shidlded Metal Arc Welding

*MIG(heavy)-MIG on heavy metals

*MIG(light)-MIG on light alloys

*TIG,GTAGas Tungsten Ars Welding(GTAW)(TIG)

*SAW-Shielded Semi-AutomaticArc Welding

*PAC-Plasma Arc Cutting

*PAW-Plasma Arc Welding