



# Auto Darkening Welding Helmet

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## ORIGINAL INSTRUCTIONS

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# SAFETY WARNINGS



The Solar-Powered Auto-Darkening Welding Helmet is suitable for most welding applications. This helmet's 1/25,000-second switch time automatically darkens the lens the moment you start welding. No matter what shade the filter is set to, the UV/IR protection is always present.

## ARC Rays can injure eyes and burn skin



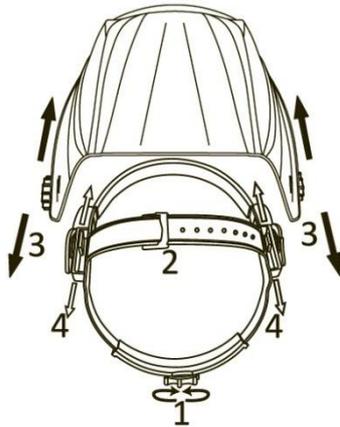
- Before welding, always inspect helmet and auto-darkening filter (ADF) to be sure they are fitted properly and in good condition.
- Keep the sensors, solar cell and filter lens clean. Clean the filter cartridge using a soap water solution and soft cloth. Do not use solvents or abrasive cleaning detergent.
- Do not weld in the overhead position while using this helmet.
- Inspect the filter lens frequently and immediately replace any scratched, cracked, or pitted filter lens or cover lenses.
- Always wear safety glasses or goggles under the welding helmet, and protective clothing to protect your skin from radiation, burns and spatter.

## SPECIFICATIONS

Viewing Area	92×42mm
Cartridge Size	110×90×10mm
Arc Sensor	2
UV/IR Protection	UP to shade DIN 16 at all times
Light State	DIN 4 (Grind)
Dark State	External variable shade, DIN9-13
Sensitivity Control	Low — High adjustment
Switch Time (Light to Dark)	1/25,000S, from Light to Dark
Delay Control (Dark to Light)	0.1-1.0S, adjustment from Dark to Light
Power Supply	Solar cell and replaceable 1×CR2032 lithium battery
TIG AMP Rating	DC≥10, AC≥10
Operating Temperature	-5 °C to +55 °C
Storing Temperature	-20 °C to +70 °C
Other Function	ADF Self-test Button and Low Voltage Indicator

# OPERATION

## Headgear Adjustment



1. Adjust the headgear diameter with the twist knob on the back. The knob is locked until pushed in. Once unlocked, twist clockwise to tighten and counterclockwise to loosen.
2. Adjust the height by snapping the pin into the hole to lock securely in place.
3. To adjust the viewing angle, loosen the knob on both sides of the helmet and change angle locker to the desired tilt position (5 selection and positioned in the middle by default). Once achieved the desired angle, tighten the knobs until snug. The helmet should still swing up, but it should not drift downward when in place for welding.

4. To adjust the distance between the user's face and ADF, loosen the knobs on both sides of the helmet until the headband can move back and forth freely, reposition the headband at one of the 3 slots as desired (The headband is positioned in the middle by default). This should be done one side at a time and both sides should be located at the same position for proper auto-darkening filter operation.

## Self-check

Press the TEST Button anywhere to see if it automatically switches to dark state and release it to check that the filter returns to the light state.

## Shade Control

Select the shade 9 to 13 based upon the welding process you will use by consulting the "Shade Guide Table". The welding helmet can also be used to protect the face when grinding. Grind mode prevents filter lens from auto-darkening.

Shade Guide Table

Welding Process	Arc Current(Amperes)																				
	1.5	6	10	15	30	40	60	70	100	125	150	175	200	225	250	300	350	400	450	500	600
⊕ SMAW					8			9		10		11		12			13		14		
⊕ MAG							8		9		10		11			12			13		14
⊕ TIG	8			9				10			11		12		13						
⊕ MIG(heavy)								9			10		11		12		13		14		
⊕ MIG(light)										10		11		12		13		14			
⊕ PAC									9		10	11	12		13						
⊕ PAW	4	5		6		7	8	9	10	11		12									
Note	★ SMAW-Covered electrodes										★ MIG(light)-MIG with light alloys										
	★ MAG-Metal arc Welding										★ PAC-Plasma jet cutting										
	★ TIG-Gas Tungsten Arc Welding										★ PAW-Microplasma arc welding										
	★ MIG(Heavy)-MIG with heavy metals																				

## Sensitivity Control

The sensitivity can be set to LOW or HIGH by using the dial knob. The LOW setting suits excess ambient light or with another welding machine close by. The HIGH setting suits low amperage welding and welding in areas with low light conditions, especially low amperage argon arc welding. Selections between LOW and HIGH are suitable for most of indoor and outdoor welding operations.

## Delay Control

When welding ceases, the viewing window automatically changes from dark back to light but with a pre-set delay to compensate. The delay time can be set to MIN (0.1 sec) or MAX (1.0 sec), by using the dial knob inside the cartridge. The minimum delay suits spot or short welds. The maximum delay suits heavy current welding and reduces eye fatigue from the arc. Selections between MIN and MAX are suitable for most of indoor and outdoor welding operations.

# MAINTENANCE

## Front Cover Lens Replacement

Replace the front cover lens if it is damaged (cracked, scratched, pitted or dirty). Remove the old front cover lens by pressing two Lock Switches at the bottom of the Retaining Frame and pull the frame and ADF out. Take the old front cover lens out, and remove any protective film before installing the new one.

## Inside Cover Lens Replacement

Replace the inside cover lens if it is damaged (cracked, scratched, pitted or dirty). Place your finger or thumb into the recess and flex the inside cover lens upwards until it releases from one edge. Then remove any protective film before installing the new one.

## Battery Replacement

When low voltage indicator turns red, you have to change the batteries. Rotate cover plates on the ADF, and replace the old battery by CR2032 lithium battery. After that, put on the cover plates of battery and rotate to lock.

## Cleaning and Storing

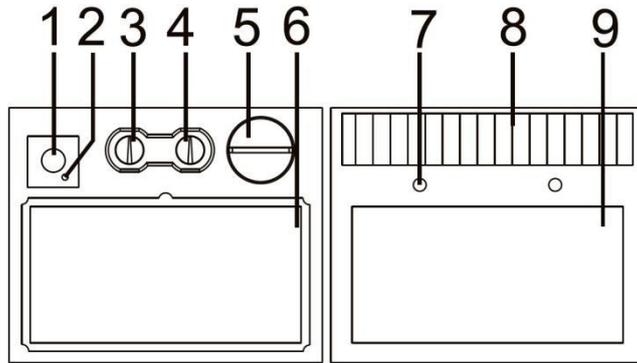
Keep the sensors, solar cell and filter lens clean. Clean filter cartridge and helmet shell by using a soapy water solution and soft cloth. Do not use solvents or abrasive cleaning detergent. Switch the product to Grind Mode and put it in a clean, dry location for storage.

## TROUBLE SHOOTING

PROBLEM(S)	POSSIBLE CAUSE(S)	SUGGESTED SOLUTION(S)
Difficult to see through filter	Protective film on front/inside cover lens not removed	Remove protective film
	Front/inside cover lens dirty	Clean or replace front/inside cover lens
	Filter lens dirty	Clean filter lens
Filter does not darken when arc is struck	Grind Mode Selected	Select Weld Mode and adjust Shade from 9 to 13
	Sensors or Solar Panel blocked	Make sure sensors or solar panel are exposed to weld arc without blocking
	Set Sensitivity to LOW	Adjust sensitivity to required level
	Low Voltage of lithium battery	Replace with new lithium battery if indicator turns red
Filter darkens without arc	Set Sensitivity to HIGH	Adjust sensitivity to required level
Filter remains dark after welding	Set Delay to MAX	Adjust delay to required level

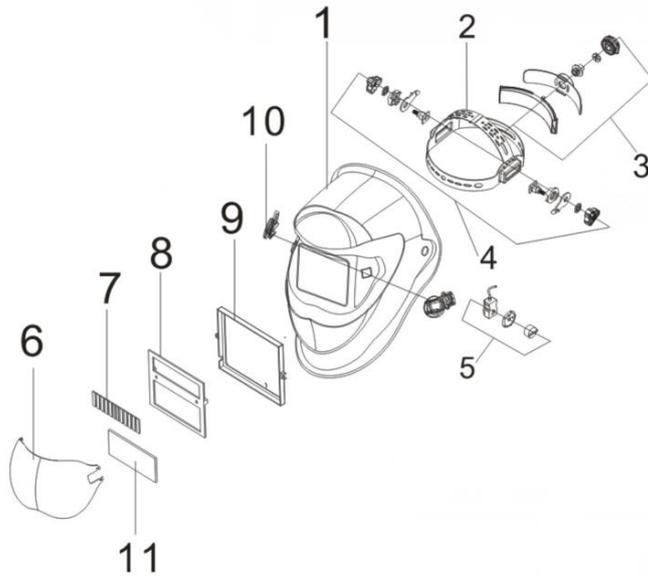
# PARTS BREAKDOWN

## Parts List – ADF



Part #	Description
1	Self-test Button
2	Low Voltage Indicator
3	Delay Control Knob
4	Sensitivity Control Knob
5	Lithium Batteries
6	LCD
7	Arc Sensors
8	Solar Panel
9	UV/IR Filter

## Parts List –



Part #	Description
1	Helmet Shell
2	Headgear
3	Headgear Adjusting Knob
4	Headgear Angle Adjusting Knob
5	Shade No. Adjusting
6	Protective Plate
7	Solar Panel
8	Fixed Plate
9	Press Card
10	Protection Plate Buckle
11	UV/IR Filter