



USER MANUAL

SOLAR POWERED AUTO-DARKENING WELDING HELMET

MODEL NO: UN9000

PART NO: BR9009000



IMPORTANT NOTICE:

Keep these instructions safe for future reference.

Read instructions carefully, follow the safe working practices outlined and heed the warnings. Failure to do so may lead to personal injury or damage the product.

1) Introduction

Auto-darkening welding helmets are designed to protect the eyes and face from sparks, splatter, and harmful radiation under normal welding conditions. The auto-darkening filter (ADF) automatically changes from a light to dark state when an arc is struck and returns to the light state when the welding arc disappears.

The Auto-darkening welding helmet comes ready to use. The only thing you need to do before welding is to adjust the position of the headband and select the correct shade number for your application.

WARNING  PLEASE READ THIS MANUAL CAREFULLY BEFORE USING

2) Safety Warning

- Recommended usage period of 3 years from date of first use. The duration of the helmet depends on various factors such as usage, cleaning, storage and maintenance. Frequent inspections and replacement of damaged components is recommended.
 - Materials that may come into contact with the wearer's skin could cause allergic reactions to susceptible individuals
 - Eye-protectors against high speed particles worn over standard ophthalmic spectacles may transmit impacts, thus creating a hazard to the wearer.
 - If protection against high speed particles at extremes of temperature is required, then the selected eye-protector should be marked with the letter T immediately after the impact letter, i.e. FT, BT or AT. If the impact letter is not followed by the letter T then the eye protector shall only be used against high speed particles at room temperature.
1. This Auto-Darkening filter welding helmet is not suitable for laser welding and Oxyacetylene welding.
 2. Never place this Helmet and Auto-Darkening filter on a hot surface.
 3. Never open or tamper with the Auto-Darkening filter.
 4. Before operating, please make sure that the function-setting switch is set to the suitable location ("WELDING" / "GRINDING"). This Auto-darkening filter welding helmet will not protect against severe impact hazards.
 5. This helmet will not protect against explosive devices or corrosive liquids.
 6. Do not make any modifications to either the filter or helmet, unless specified in this manual.
 7. Should this helmet not darken upon striking an arc, stop welding immediately and contact us.
 8. Do not immerse the filter in water.
 9. Do not use any solvents on filters' screen or helmet components.
 10. Use only at temperatures: -5°C ~ + 55°C (23°F ~ 131°F)
 11. Storing temperature: - 20°C ~ +70°C (-4 °F ~ 158°F)
 12. Protect filter from contact with liquid and dirt.
 13. Clean filters' surfaces regularly; do not use strong cleaning solutions. Always keep sensors and solar cells clean using a clean, lint-free tissue/cloth.
 14. Regularly replace the cracked/scratched/pitted front cover lens.

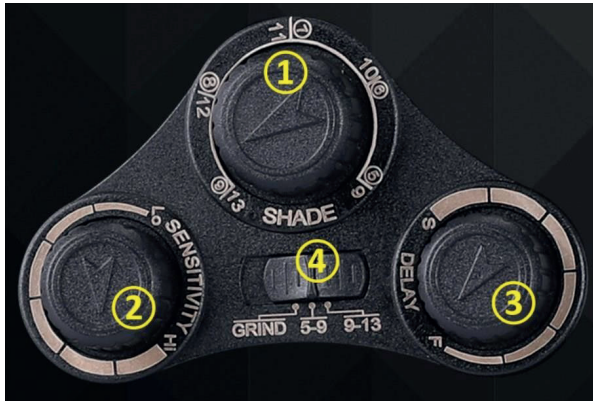
3) Hazard Definitions

Please familiarise yourself with the hazard notices found in this manual. Severe personal injury could occur if the user fails to follow the aforementioned warnings and/or fails to follow the operating instructions.

4) Product Features

- 4.1 The operator can vary the time for the filter to return to the clear state from dark state using knob 3
- 4.2 Sensitivity adjustments can be made while in use for operator convenience using knob 2
- 4.3 Welding/Grinding operations can be selected by slider switch 4.
- 4.4 The helmet utilises a high-performance solar cell as the power supply and has a replaceable 3V lithium battery as power backup. Users can expect the battery to have a lifetime of more than 5000 hours under normal welding conditions
- 4.5 Variable shade from DIN 5 to 13 is adjusted at by turning shade knob 1.
- 4.6 The ultra-high performance of the UV/IR ADF provides full protection for the user's eyes & face against UV/IR radiation during the entire welding process, even in its light state. The UV/IR protection level is up to Shade16(DIN) at all times. This enhances user comfort and safety.

4) Product Features



- 1 - Dark Shade Control: DIN5-9/9-13
- 2 - Sensitivity Control: Lo to Hi
- 3 - Delay Time Control: Slow to Fast
- 4 - Mode Control: Grind, Dark shade DIN5-9, Dark shade DIN9-13

6) Operating Instructions

6.1 Before Welding

- 6.1.1 Ensure that the internal and external protective films are removed from the lenses.
- 6.1.2 Check that the batteries have sufficient power to operate the helmet. The filter cartridge can last for 5,000 working hours powered by the lithium batteries and solar cells. When the battery power is low, the Low Battery LED indicator will light up. The filter cartridge lens may not work correctly. Replace the batteries .
- 6.1.3 Check that the arc sensors are clean and not blocked by dust or debris.
- 6.1.4 Check for headband tightness before each use.
- 6.1.5 Inspect all operating parts before use for signs of wear or damage. Any scratched, cracked, or pitted parts should be replaced immediately before using to avoid severe personal injury.
- 6.1.6 Select the shade number you require at the turn of a shade knob. Finally, be sure that the shade number is the correct setting for your application.

Shade Guide Table

| Welding Type \ Welding Current (A) | 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 / (C02) | | | | | | | | | | | 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 - Shielded Metal Arc Welding.
- TIG GTAW - Gas Tungsten Arc (GTAW)(TIG).
- MIG (Heavy) - MIG on heavy metals.
- SAW Shielded Semi - Automatic Arc Welding.
- MIG (Light) - MIG on light alloys.
- PAC - Plasma Arc Cutting
- PAW - Plasma Arc Welding

6.2 Sensitivity

The sensitivity control is set according to the welding process and ambient light.

- 6.2.1 Low Setting - suitable for high amperage welding and welding in areas with high levels of natural sunlight.
- 6.2.2 Medium Setting - suitable for most indoors and outdoors welding.
- 6.2.3 High Setting - suitable for low amperage welding and welding in areas with low light conditions, especially for low amperage argon-arc welding.

6.3. Self-Check

- 6.3.1 Set the filter shading number anywhere between DIN5-9/9-13.
- 6.3.2 Press the TEST button to see if it switches to the dark state.
- 6.3.3 Release the Test button to check that the filter returns to the bright state.

6.4. Grinding Mode

The welding helmet can also be used to protect the face during grinding. Switching to Grind mode will prevent the filter cartridge from darkening when bright sparks are created.

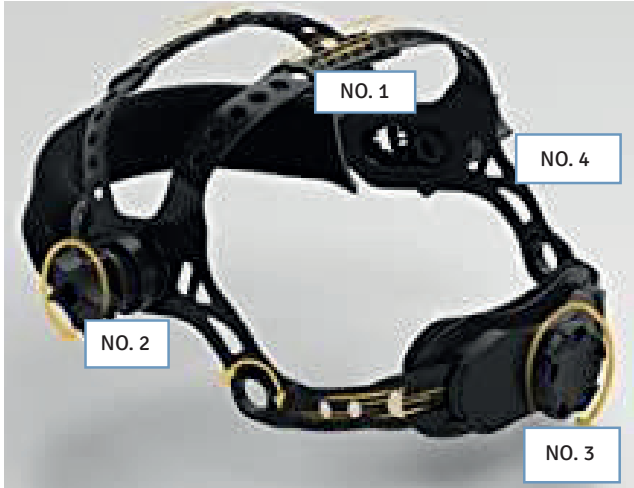
6.5. Delay Time

Delay time refers to the time the cartridge filter is set to change from the dark to bright state after welding stops. The delay can be adjusted up to a one second delay.

- 6.5.1 The minimum delay is set between 0.1 to 0.2 seconds, suitable for spot or short welds.
- 6.5.2 The maximum delay time is set between 0.85 to 1.0 second, suitable for heavy current welding or when visible light is produced.
- 6.5.3 Selections between minimum and maximum are suitable for most indoor and outdoor welding operations.

6. 6.Adjust the Headband

- 6.6.1 Adjust headband for proper position on the head to ensure correct balance and stability. (See No.1).
- 6.6.2 Adjust the distance between the face and the lens. To adjust, turn the positioning screw forward or backward. Screw down the screws. (Both sides must be equally positioned for proper vision, See No.2)
- 6.6.3 Turn the adjusting knob located on the back of the headband left or right to desired tightness.(See No.3)
- 6.6.4 Shift the segmental plate with different positioning hole to adjust the window angle for clear view. (See No.4) Numbers on the adjustment slides indicate set position so both sides can be adjusted equally.



6.7. Replace Battery

When the battery power is low, the Low Battery LED indicator will light up. The filter cartridge lens may not work correctly. Replace the Batteries.

6.8 How to Install the Headgear to Welding Helmet Shell

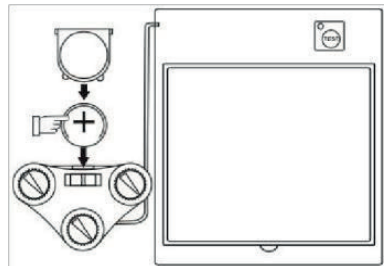


6.9. Maintenance

- 6.9.1. Cleaning and disinfection: Clean filters surfaces regularly; do not use strong cleaning solutions. Always keep sensors and solar cells clean using a clean lint-free tissue/cloth. You can use alcohol and cotton to wipe.
- 6.9.2. Use neutral detergent to clean the welding shell and headband.
- 6.9.3. Replace outer and inner protection plates periodically.
- 6.9.4. Don't immerse the lens in water or any other liquid. Never use abrasives, solvents or oil based cleaners.
- 6.9.5. Do not remove the auto-darkening filter from the helmet. Never try to open the filter.

7) Replacing the Battery

1. To replace the battery, slide the battery pannel up and remove the old battery. Replace with CR2450 lithium battery
2. Be sure Positive (+) side of battery faces up (toward inside of helmet). Reinstall the cover battery plate. press the TEST button. The lens should flash dark once.



8) Technical Specifications

| | |
|---------------------|--|
| Model | BR9009000 |
| Viewing Area | 100 x 97mm |
| Cartridge Size | 133 x 114 x 10mm |
| Light State | DIN4 |
| Dark State | DIN5-9/9-13 |
| Switch Time | 1/25000 S |
| Sensitivity | Variable adjusted by external knob |
| Delay | 0.1S~1.0S Variable adjusted by external knob |
| Arc Sensor | 4 |
| TIG Amps Rated | AC/DC TIG, > 5amps |
| Grind | Yes (DIN4) |
| ADF Self-Check | Yes (TEST Button) |
| Low Battery | Yes (Red LED) |
| Power Supply | Solar cells & Replaceable Lithium battery (CR2450) |
| On/Off | Fully Automatic |
| Sensitivity Control | Variable adjusted by external knob |
| UV/IR Protection | Up to DIN 16 at all time |
| Operate Temp. | -5°C~+55°C (23°F ~ 131°F) |
| Store Temp. | -20°C~+70°C (-4 °F ~ 158°F) |
| Weight | 550g±15g |

9) Troubleshooting

Auto-darkening filter does not darken or flickers

- Outer or inner protection plate is soiled or damaged. (Clean or replace the plate)
- Sensors are soiled. (Clean the sensor's surface)
- Welding current is too low. (Press "SENSITIVITY" then select "High")

Slow response


- Operating temp is too low. (Do not use at temperatures below -5°C or 23°F)

Poor Vision

- Front/inside cover lens and/or filter lens are soiled. (Change the lenses)
- There is insufficient ambient light
- Shade number is incorrectly set. (Reset the shade number)

Welding Helmet Slips

- Headband is not adjusted properly. (Readjust headband)

WARNING  Operator must stop using the auto-darkening filter welding helmet immediately and contact the supplier if the above-mentioned problems cannot be corrected.

10) Replacing the Protective Lens & Parts List

Protective lenses list

| Front Protective Lens | |
|-----------------------|------------------------|
| Part Number | Description |
| BR9009010 | Outside Lens |
| BR9009020 | Inside Lens |
| BR9009030 | CR2450 Lithium Battery |

11) Product Warranty

- 11.1. The manufacture's sole obligation under this warranty is limited to making replacement of repairs, or refund of the purchase price for the products with defects.
- 11.2. This warranty does not cover product malfunctions or damage resulting from products tampering, misuse or abuse. Please follow the operating instructions carefully to maintain this warranty. Failure to do so will void the warranty. The manufacturer shall also not be held liable for any indirect or consequential damages arising out of the use of this product.
- 11.3. This product has a 12 month warranty from the purchase date.

The warranty is in addition to any consumer rights you may have under UK law.

12) Principal Safety Standards

(EU) 2016/425 CE EN166, EN175 & EN379, from DIN CERTCO
Number of the standard: EN 379, EN 175, EN 166



PROTECT THE ENVIRONMENT

When this product reaches the end of its useful/working life it should be recycled in line with local policies and regulations. Take the product to your recycling centre to be disposed of in an environmentally friendly manner

IMPORTANT:

We reserve the right to update our product specification, data and parts with out notice, as part of our continuous improvement policy.

We accept no liability for any incorrect use of this product.

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