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› SU SAFE-UP Welding Helmet Auto Darkening Solar Powered User Manual

## SU SAFE-UP UNE

# SU SAFE-UP Welding Helmet User Manual

Model: UNE  
Brand: SU SAFE-UP

## INTRODUCTION

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This user manual provides comprehensive instructions for the safe and effective operation, setup, maintenance, and troubleshooting of your SU SAFE-UP Auto Darkening Welding Helmet. Designed for both home and industrial use, this helmet offers advanced eye protection and comfort for various welding applications.

SU SAFE-UP specializes in designing and producing welding helmets and welding machines since 2006, ensuring high-performance products for welding safety.

## SAFETY INFORMATION

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Your safety is paramount. Always read and understand all safety warnings and instructions before using the welding helmet. Failure to do so may result in serious injury.

- **Eye Protection:** The auto-darkening filter switches from light to dark in 1/25000 seconds, providing ultimate eye protection against harmful UV and IR radiation, even in the event of electrical failure. It meets ANSIZ87.1-2010 and EN379 standards.
- **Radiation Protection:** The premium liquid crystal and optical coating protect against UV, IR radiation, and strong light.
- **Proper Use:** Always ensure the helmet is correctly adjusted and functioning before beginning any welding task.
- **Ventilation:** Ensure adequate ventilation in your work area to avoid inhaling welding fumes.
- **Inspection:** Regularly inspect the helmet for any damage, cracks, or loose parts. Do not use if damaged.

## Premium liquid crystal and optical coating protects against UV, IR radiation and strong light



Image: The helmet's lens provides comprehensive protection against various harmful light spectrums, including infrared, ultraviolet, and strong visible light.

### PRODUCT FEATURES AND COMPONENTS

The SU SAFE-UP Welding Helmet is designed with user comfort and safety in mind, incorporating several key features:

- **Auto-Darkening Filter:** Switches from light to dark in 1/25000 seconds.
- **Dual Arc Sensors:** Equipped with two high-sensitive arc sensors for reliable detection.
- **Solar Powered with Battery Backup:** Utilizes solar panel technology and a pro-environment battery for extended service life (up to 5000 hours).
- **True Color View:** Provides a clear 3.62" x 1.65" viewing area with true-color technology for enhanced visibility and color recognition.
- **Adjustable Shade:** DIN9-13 adjustable shade for welding, and DIN4 for light state.
- **Adjustable Delay and Sensitivity:** Settings for adaptability to different environments and task durations.

- **Ergonomic Headgear:** Lightweight design with premium sponge and sweat-absorbing material for double head protection and comfort.

## Key Components Overview



Image: The SU SAFE-UP Auto Darkening Welding Helmet, featuring a distinctive skull design.

 **SAFE-UP™**

# Auto Darkening Welding Helmet

## Solar Powerd Welder Helmets



Simple shift fast/mid/slow  
from 0.1~0.8s

**DELAY**





Switches from light to dark  
in just 1/25000 sec

**SENSITIVITY**

### Solar Cells and Replace Battery

Solar panel technology and pro-environment battery can provide working hours more than 5000 hours



Easy outside control

**GRIND**



4P-18 2012.07.25 CE  
A19: 227.1-2010  
CNS 22443

LOW BATTERY  
TEST

PROTECTIVE

MAX. 10000

CE



Self-testing and  
low battery notice

**TEST**

Image: Internal view highlighting the Delay, Sensitivity, Grind, and Test controls, along with solar cells for power.

## Ergonomic and Light-Weight Headgear



3.62"x1.65" Clear Viewing Window



Premium sponge and sweat-absorbing material for double head protection



Image: The ergonomic and lightweight headgear, designed for comfort, alongside the 3.62" x 1.65" clear viewing window.

### SETUP

1. **Unpacking:** Carefully remove the welding helmet and all accessories from the packaging. Inspect for any shipping damage.
2. **Headgear Assembly:** Attach the headgear to the helmet if it is not already assembled. Ensure it is securely fastened.
3. **Headgear Adjustment:**
  - Place the helmet on your head.
  - Adjust the top strap and the rear knob to ensure a snug and comfortable fit. The helmet should sit securely without being too tight or loose.
  - Adjust the angle and distance of the helmet from your face using the side knobs to achieve optimal viewing and balance.

## FIT YOUR PERSONAL NEEDS

SU SAFE-UP provides efficient after-sales service. Please feel free to contact us if you have any problems, we will provide you with a solution as soon as possible.



Image: The adjustable headgear allows for personalized fit and comfort, featuring a breathable cushion and up-and-down adjustment.

4. **Initial Test:** Before welding, perform a test by exposing the helmet's sensors to a bright light source (not direct sunlight or welding arc) to ensure the auto-darkening function is working. The lens should momentarily darken.

## OPERATING INSTRUCTIONS

The SU SAFE-UP welding helmet offers various adjustments to optimize your welding experience:

- **Shade Adjustment (DIN9-13):** Use the external knob to select the appropriate shade level for your welding process (MIG/MAG, TIG, ARC). Refer to welding standards for recommended shade levels.
- **Sensitivity Control:** Adjust the sensitivity knob to control how easily the sensor reacts to the welding arc. Higher sensitivity is suitable for low amperage TIG welding, while lower sensitivity is better for bright environments or high amperage welding.
- **Delay Control:** Adjust the delay knob to set the time it takes for the lens to return from dark to light state after the arc stops. A longer delay is useful for tack welding or when working with hot materials to prevent eye fatigue. The delay can be set from 0.1s to 1.0s.
- **Grind Mode:** Activate the grind mode (usually an external switch or knob position) to disable the auto-darkening

function, allowing you to use the helmet as a grinding shield with a clear view (DIN4). Remember to switch back to welding mode before striking an arc.

- **True Color Lens Technology:** This helmet features true color lens technology, providing a clearer and more natural view of your workpiece, reducing eye strain and improving weld quality.



Image: Comparison illustrating the superior clarity and natural color provided by SU SAFE-UP's true color lens technology compared to traditional green-tinted lenses.

- **Application:** This helmet is suitable for various welding processes including MIG/MAG, TIG, and ARC welding.

## MIG/MAG



## TIG



## ELECTRODE



Image: The helmet is versatile and can be used for MIG/MAG, TIG, and Electrode welding applications.

## MAINTENANCE

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### • Cleaning:

- Clean the helmet shell with a mild soap and water solution. Avoid harsh chemicals or abrasive cleaners.
- Wipe the auto-darkening filter and protective lenses with a soft, lint-free cloth. Do not use solvents.

- **Battery:** The helmet is solar-powered with a built-in battery. Under normal use, the battery should last for an extended period (up to 5000 hours). If the low battery indicator appears, ensure the helmet is exposed to sufficient light for the solar cells to charge the battery. The helmet uses 1 CR2 battery (included).
- **Storage:** Store the helmet in a dry, clean place away from direct sunlight and extreme temperatures when not in use.
- **Lens Replacement:** Replace the outer and inner protective lenses if they become scratched, pitted, or damaged to maintain clear vision and protection.

## TROUBLESHOOTING

| Problem                                  | Possible Cause  | Solution   |
|--|---|--|
| Lens does not darken when arc is struck. | Low battery.<br>Sensors are dirty or obstructed.<br>Sensitivity setting is too low.<br>Helmet is in grind mode. | Expose helmet to light for solar charging.<br>Clean sensors.<br>Increase sensitivity.<br>Switch out of grind mode. |
| Lens flickers or darkens intermittently. | Sensitivity setting too high or too low.<br>Ambient light interference.<br>Sensors partially obstructed.        | Adjust sensitivity.<br>Reduce ambient light or adjust helmet position.<br>Clean sensors.                           |
| Poor visibility through the lens.        | Protective lenses are dirty or scratched.<br>Incorrect shade setting.   | Clean or replace protective lenses.<br>Adjust shade to appropriate level.  |

## SPECIFICATIONS

| Feature            | Detail  |
|--------------------|---|
| Model Number       | UNE   |
| Viewing Area       | 3.62" x 1.65"   |
| Light State Shade  | DIN4  |
| Dark State Shade   | DIN9-13 (Adjustable)  |
| Switching Time     | 1/25000 sec   |
| Delay Time         | 0.1s - 1.0s (Adjustable)  |
| Arc Sensors        | 2   |
| Power Supply       | Solar Powered with Lithium Manganese Dioxide Battery (1 CR2 included) |
| Battery Cell Type  | Lithium Manganese Dioxide   |
| Battery Life       | Up to 5000 hours  |
| Standards          | ANSIZ87.1-2010, EN379   |
| Item Weight        | 712 g   |
| Package Dimensions | 33.91 x 24.41 x 18.8 cm   |

## WARRANTY AND SUPPORT

SU SAFE-UP is committed to providing efficient after-sales service. If you encounter any problems with your welding helmet, please do not hesitate to contact us. We are dedicated to providing a prompt and satisfactory solution.

For support, please refer to the contact information provided with your purchase or visit the official SU SAFE-UP website.