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ANDELI OPTIM-600LB

ANDELI OPTIM-600LB Panoramic Auto-Darkening Welding Helmet Instruction Manual

Model: OPTIM-600LB | Brand: ANDELI

1. INTRODUCTION

This manual provides essential information for the safe and effective use of your ANDELI OPTIM-600LB Panoramic Auto-Darkening Welding Helmet. Please read this manual thoroughly before operation and retain it for future reference. This helmet is designed to protect your eyes and face from sparks, spatter, and harmful radiation under normal welding conditions.



Image 1.1: Front view of the ANDELI OPTIM-600LB Welding Helmet.

2. SAFETY INFORMATION

Always prioritize safety when welding. Failure to follow these safety instructions can result in serious injury or death.

- **Eye and Face Protection:** This helmet provides protection against UV/IR radiation, sparks, and spatter. However, it is not suitable for laser welding or overhead welding applications where falling molten metal could

cause injury.

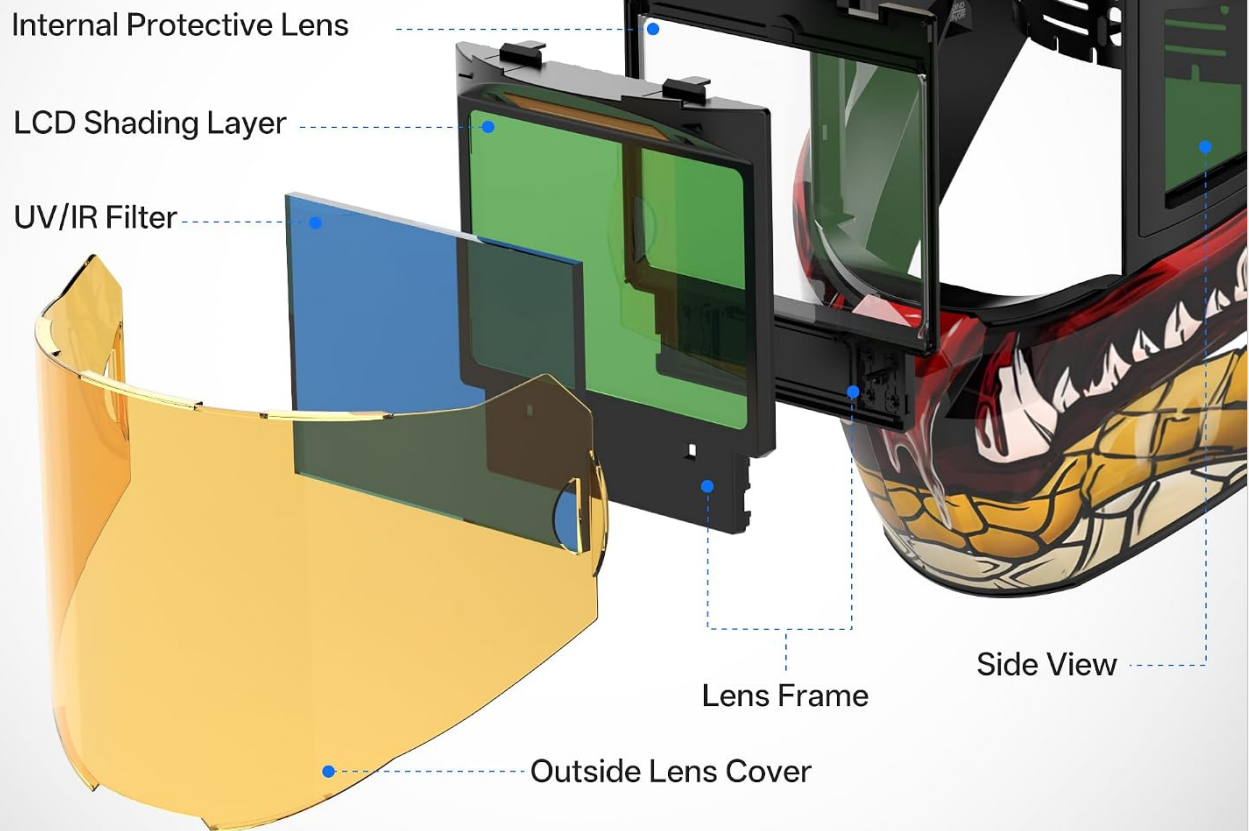
- **Respiratory Protection:** Ensure adequate ventilation or use appropriate respiratory protection to avoid inhaling welding fumes and gases.
- **Fire Hazards:** Welding produces sparks and heat. Keep flammable materials away from the welding area. Have a fire extinguisher readily available.
- **Electrical Safety:** Always follow electrical safety guidelines for your welding equipment. Ensure proper grounding and inspect cables for damage.
- **Helmet Inspection:** Before each use, inspect the helmet for any damage, especially to the auto-darkening filter (ADF) and protective lenses. Replace any damaged parts immediately.
- **Temperature Limits:** Do not expose the helmet to extreme temperatures outside the specified operating range (-5°C to +55°C / 23°F to 131°F).
- **Non-Welding Use:** This helmet is not intended for use as a general-purpose face shield for grinding unless specifically set to grind mode.

3. PRODUCT COMPONENTS

The ANDELI OPTIM-600LB welding helmet features a multi-layered lens system and an adjustable headgear for comfort and protection.

PREMIUM WELDING HELMET

Exclusive structure design fitting the head better



2-Layer LCD Glasses

Truely dimming glass protecting your eyes

1-Layer Optical Filter

Truely filter arc light

Image 3.1: Exploded view illustrating the multi-layer lens system and components.

- **Outside Lens Cover:** Protects the auto-darkening filter from sparks and scratches.
- **Lens Frame:** Secures the lens system within the helmet.
- **UV/IR Filter:** Provides constant protection against harmful ultraviolet and infrared radiation.
- **LCD Shading Layer:** The auto-darkening liquid crystal display that changes shade upon arc detection.
- **Internal Protective Lens:** Protects the LCD shading layer from the inside.
- **Side View Panels:** Fixed shade side panels for enhanced peripheral vision.

4. SETUP

4.1 Headgear Adjustment

Proper headgear adjustment is crucial for comfort and stability during welding. The OPTIM-600LB features a 6-point contact headgear system.

ALL DAY COMFORT

6 Separate Contact Points Distribute Weight and Eliminate Pressure

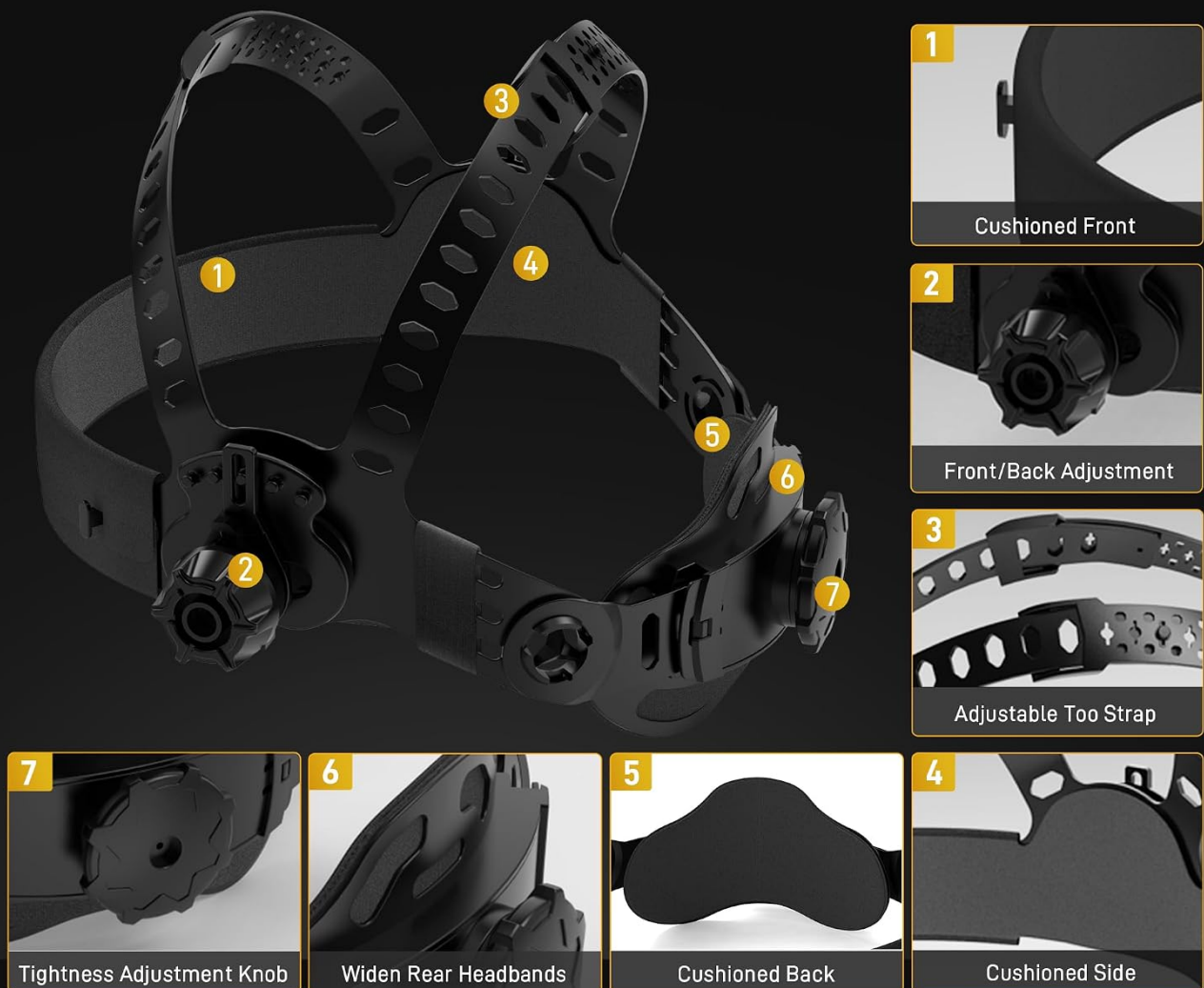


Image 4.1: Detailed view of the headgear adjustment points.

1. **Tightness Adjustment Knob:** Rotate the knob at the back of the headgear to adjust the circumference for a snug fit.
2. **Top Strap Adjustment:** Adjust the strap over the top of your head to control how high or low the helmet sits on your head.
3. **Front/Back Adjustment:** Use the side knobs to adjust the distance between your face and the lens.
4. **Cushioned Pads:** Ensure the cushioned front, back, and side pads are positioned comfortably against your head.

4.2 Battery Charging

The helmet is powered by a rechargeable 500mAh polymer battery, supported by high-efficiency solar panels and a USB Type-C charging port.



Image 4.2: Illustration of the Type-C charging port and solar panel.

- **Solar Charging:** The helmet's solar panels continuously charge the internal battery during use, extending runtime.
- **USB Type-C Charging:** For initial charging or when solar charging is insufficient, connect a Type-C cable to the charging port. A full charge provides up to 1000 hours of runtime.
- **Battery Indicator:** After charging is complete, if the device is off, the battery indicator light will flash, indicating that it has entered the battery self-test mode. Restarting or turning off the device will disable this self-test function.

5. OPERATING INSTRUCTIONS

5.1 Control Panel Overview

The advanced user control panel allows for precise adjustments of welding parameters.

QUALITY WELDING LENS



Image 5.1: Close-up of the digital control panel and external controls.

- **MODE Button:** Cycles through different operating modes (Grind, Cut, Weld, Lock).
- **TEST Button:** Allows you to check if the auto-darkening function is working correctly before welding.
- **Shade Adjustment (+/-):** Increases or decreases the shade level.
- **SENSI (Sensitivity) Knob:** Adjusts the sensitivity of the arc sensors.
- **DELAY Knob:** Adjusts the time the lens remains dark after the arc stops.
- **External Grind Mode Switch:** Quick access to grind mode (Power on/off).

5.2 Operating Modes

The helmet supports various applications with specific DIN shade settings.

MULTIPLE MODES APPLICATION

Meeting Your Day-to-Day Welding Work Demands

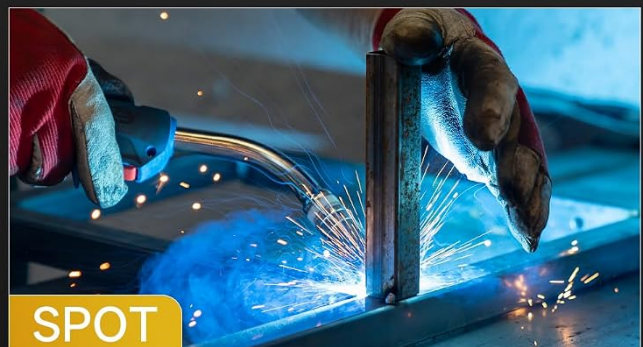
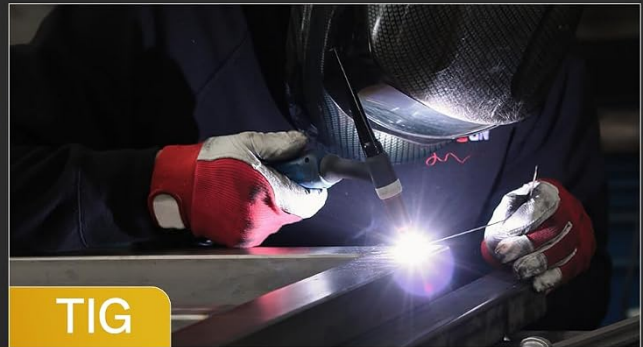


Image 5.2: Visual representation of different welding and cutting modes.

- **Grind Mode (DIN 4):** For grinding operations. The ADF remains in a light state (DIN 4) to protect against sparks and debris without darkening. Activate via the external switch.
- **Cut Mode (DIN 5-9):** Suitable for plasma cutting and similar applications requiring lighter shades.
- **Weld Mode (DIN 9-13):** For various welding processes including MIG, TIG, and Stick/MMA. Adjust shade based on amperage and material.
- **Lock Mode (DIN 5-13):** Locks the current shade setting to prevent accidental changes during operation.

5.3 Shade Adjustment

The shade level can be adjusted from DIN 5 to DIN 13 to match the welding process and amperage.

- Use the + and - buttons on the control panel to select the desired shade level.
- Refer to welding safety standards for recommended shade levels for different processes and amperages.

5.4 Sensitivity Adjustment

The sensitivity control adjusts how readily the auto-darkening filter reacts to the welding arc.

FASTER PHOTOSENSITIVITY

Detecting 5Amp TIG welding arcs to provide superior eye protection



4

ARC Sensors



1/30000^s

Higher sensitivity Control



Technological
Innovation



Image 5.3: Depiction of the 4 arc sensors and fast photosensitivity.

- Rotate the **SENSI** knob to adjust. Higher sensitivity is suitable for low amperage TIG welding (detects arcs as low as 5 Amps) or when the arc is partially obscured.
- Lower sensitivity is recommended in bright environments or when other welders are nearby to prevent false triggering.

5.5 Delay Adjustment

The delay control determines how long the lens remains dark after the welding arc extinguishes.

- Rotate the **DELAY** knob to set the time from 0.1 to 1.0 seconds.
- A shorter delay is useful for tack welding, while a longer delay helps protect eyes from afterglow or when working with high amperage welds that cool slowly.

5.6 True Color Technology

The helmet features upgraded True Color technology for enhanced visual clarity.

UPGRADED TRUE COLOR

Unmatched heat resistance and visual clarity



Image 5.4: Visual comparison highlighting the clarity of True Color technology.

This technology provides a more natural view of the weld puddle and surrounding environment, reducing eye strain and improving control during welding.

6. MAINTENANCE

6.1 Cleaning

- **Outer Protective Lens:** Clean regularly with a soft, clean cloth and a mild soap solution. Avoid abrasive cleaners or solvents.
- **Inner Protective Lens:** Clean as needed using the same method as the outer lens.
- **Auto-Darkening Filter (ADF):** Handle with extreme care. Clean only with a soft, dry cloth. Do not use liquids or solvents on the ADF.
- **Helmet Shell:** Wipe clean with a damp cloth.

6.2 Lens Replacement

Replace protective lenses when they become scratched, pitted, or too dirty to clean effectively. The helmet comes with 3 replacement lenses.

1. **Outer Lens:** Carefully remove the old outer lens by unclipping or sliding it out of its frame. Insert a new outer lens, ensuring it is securely seated.
2. **Inner Lens:** Remove the old inner lens from the inside of the helmet. Place a new inner lens into position.
3. **ADF:** The auto-darkening filter itself should only be replaced if it is damaged or malfunctioning and cannot be repaired. Consult the manufacturer for ADF replacement.

7. TROUBLESHOOTING

If you encounter issues with your welding helmet, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
Lens does not darken when arc is struck.	Low battery; Sensors blocked; Sensitivity too low; Incorrect mode.	Charge battery via Type-C or solar; Clean sensors; Increase sensitivity; Ensure helmet is in Weld or Cut mode.
Poor visibility through the lens.	Dirty protective lenses; Incorrect shade setting.	Clean or replace protective lenses; Adjust shade to appropriate level for welding process.
Lens darkens intermittently or flashes.	Sensors partially blocked; Sensitivity too high; External light interference.	Ensure sensors are clear; Decrease sensitivity; Shield sensors from ambient light if necessary.
Helmet feels uncomfortable or unstable.	Improper headgear adjustment.	Re-adjust all headgear points (tightness, top strap, front/back position) for a secure and comfortable fit.

8. SPECIFICATIONS

Feature	Specification
Viewing Size	4.53" x 3.23" (Main Lens) + Side View
Optical Clarity	1/1/1/2 True Color
Light State	DIN 3.0
Dark State	DIN 5-9 / DIN 9-13 (Adjustable)
Auto Darkening Response Time	0.08ms (Light to Dark)
Delay Time	0.1-1.0s (Dark to Light)
UV/IR Protection	Up to Shade DIN 16 at all times

Feature	Specification
Power Source	Polymer Battery, Solar Powered, Type-C Charging
Operating Temperature	-5°C ~ +55°C (23°F ~ 131°F)
Weight	0.6 kg (1.32 lbs)
Material	Plastic

9. WARRANTY AND SUPPORT

Your ANDELI OPTIM-600LB Welding Helmet comes with a **1-year warranty** from the date of purchase, covering manufacturing defects.

For warranty claims, technical support, or any inquiries regarding your product, please contact the seller directly:

- **Seller:** ANDELI Official Store US
- Refer to your purchase documentation for specific contact details.

Please have your model number (OPTIM-600LB) and proof of purchase ready when contacting support.

10. PRODUCT VIDEO

Watch this video for a visual overview of the ANDELI OPTIM-600LB welding helmet's features and operation.

Your browser does not support the video tag.

Video 10.1: Demonstration of the ANDELI OPTIM-600LB welding helmet's features and performance.

ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page’s manual context to help answer it.

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Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

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