

## ARCCAPTAIN HSH-S800

# ARCCAPTAIN HSH-S800 Eagle Auto-Darkening Welding Helmet Instruction Manual

Model: HSH-S800 Eagle

## 1. INTRODUCTION

Thank you for choosing the ARCCAPTAIN HSH-S800 Eagle Auto-Darkening Welding Helmet. This manual provides essential information for the safe and effective use, setup, operation, and maintenance of your welding helmet. Please read this manual thoroughly before use and retain it for future reference.

The ARCCAPTAIN HSH-S800 Eagle is designed to provide superior eye and face protection during welding operations. It features a large viewing screen with 1/1/1/1 optical clarity, advanced true color technology, and four premium arc sensors for rapid auto-darkening.

## 2. SAFETY INFORMATION

**WARNING: Welding and cutting processes can be hazardous and may cause serious injury or death. Always follow all applicable safety precautions and guidelines.**

- Always wear appropriate personal protective equipment (PPE) in addition to this welding helmet, including safety glasses, flame-resistant clothing, and gloves.
- Ensure the helmet is properly adjusted and functioning before each use.
- Do not use the helmet if any part is damaged or if the auto-darkening function is not working correctly.
- This helmet provides protection against harmful UV/IR radiation even in the light state (DIN 4). However, it must darken to the appropriate shade level for welding.
- Avoid direct exposure to welding arc without proper eye protection.
- Keep the helmet and its components clean and free from debris.
- This product complies with ANSI Z87.1-2010, CSA Z94.3, DIN EN 175, and DIN EN 379 standards.

## 3. PRODUCT OVERVIEW

The ARCCAPTAIN HSH-S800 Eagle welding helmet is designed for comfort and protection, featuring a durable Polyamide (PA) shell and an advanced auto-darkening filter (ADF).



Figure 3.1: Front view of the ARCCAPTAIN HSH-S800 Eagle Welding Helmet, showcasing its design and auto-darkening lens.

# 20FT MILITARY GRADE DROP PROTECTION



Figure 3.2: Illustration of the helmet's durability, highlighting its corrosion, shock, and flame resistance, lightweight design, and comfort.

## Key Components:

- **Helmet Shell:** Made from high-quality Polyamide (PA) material for impact resistance.
- **Auto-Darkening Filter (ADF):** The electronic lens that automatically darkens upon arc ignition.
- **Outer Protective Lens:** Protects the ADF from spatter and scratches.
- **Inner Protective Lens:** Protects the inside of the ADF.
- **Headgear:** Adjustable system for a secure and comfortable fit.
- **Arc Sensors:** Four sensors detect the welding arc to trigger the ADF.
- **Control Knobs:** For adjusting shade, sensitivity, and delay time.
- **Grind Mode Button:** Activates grind mode, keeping the lens in a light state (DIN 4).

## 4. SETUP AND ADJUSTMENT

### 4.1 Headgear Adjustment

The helmet's headgear is designed for comfort and stability. Proper adjustment is crucial for optimal performance and safety.



# ADJUSTABLE HEADGEAR DESIGN

This headgear features a soft padded front and rear headband to reduce pressure points.



**Comfortable**



**Sweatproof**



**Antiskid  
130° Adjustable**



Figure 4.1: The adjustable headgear, designed for comfort, sweat absorption, and anti-skid properties with 130° adjustability.

1. **Size Adjustment:** Rotate the knob at the back of the headgear to fit snugly around your head.
2. **Top Strap Adjustment:** Adjust the top strap to position the helmet correctly on your head, ensuring the viewing area is at eye level.
3. **Distance Adjustment:** Adjust the distance between the helmet and your face using the side knobs. Ensure there is enough space for comfortable breathing but not so much that light can enter from the sides.
4. **Angle Adjustment:** Adjust the tilt angle of the helmet to your preference.

## 4.2 Battery Installation/Check

The helmet is powered by solar cells and a replaceable CR2450 lithium battery. The battery is typically pre-installed.

- Before first use, ensure the battery is correctly seated.
- The solar panel helps extend battery life. Ensure it is not obstructed.
- If the low battery indicator appears, replace the CR2450 battery (refer to Section 6.3).

## 5. OPERATING INSTRUCTIONS

The ARCCAPTAIN HSH-S800 Eagle features an advanced auto-darkening system for optimal eye protection and clear visibility.



Figure 5.1: A welder utilizing the ARCCAPTAIN HSH-S800 Eagle helmet during a welding operation, demonstrating its practical application.

### 5.1 Powering On/Off

The helmet's auto-darkening filter is always on and ready for use. It automatically enters a low-power sleep mode when not in use and wakes up when exposed to light or an arc.

### 5.2 Shade Adjustment (DIN 4/9-13)

The shade level can be adjusted using the external knob on the side of the helmet. This allows you to select the appropriate darkness for different welding processes and amperages.

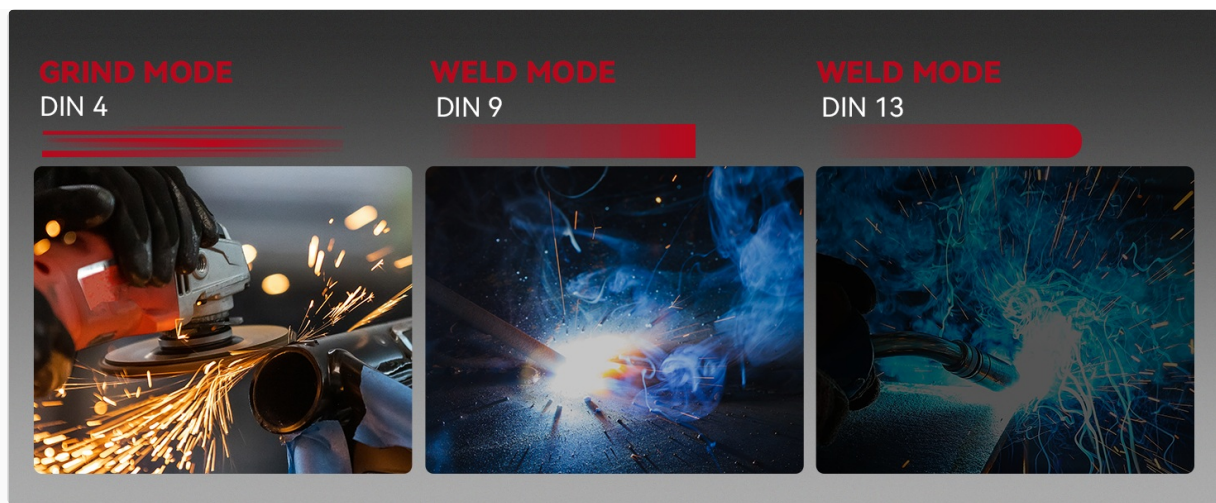


Figure 5.2: Visual representation of Grind Mode (DIN 4) and Weld Modes (DIN 9 and DIN 13) for different applications.

- **Light State:** DIN 4 (for grinding or inspection).
- **Dark State:** Adjustable from DIN 9 to DIN 13. Refer to welding standards for recommended shade levels based on amperage and welding process.

### 5.3 Sensitivity Adjustment

The sensitivity control adjusts how easily the arc sensors detect the welding arc and trigger the darkening function. Adjust this based on ambient light conditions and the intensity of the arc.

- **High Sensitivity:** For low amperage welding or when the arc is partially obstructed.
- **Low Sensitivity:** For high amperage welding or in bright ambient light to prevent false triggering.

### 5.4 Delay Time Adjustment

The delay time controls how long the lens remains dark after the welding arc extinguishes. This prevents eye strain from residual bright light or brief arc interruptions.

- **Short Delay:** For quick, repetitive tack welds.
- **Long Delay:** For high amperage welding or when the workpiece remains glowing after the arc.

### 5.5 Grind Mode

Activate the external grind mode button to lock the ADF in its light state (DIN 4). This allows for grinding or cutting operations without the lens darkening, while still providing UV/IR protection. Remember to switch back to weld mode before welding.



# **WIDE APPLICATION**

Perfect for welding, grinding and cutting



**STICK**



**MIG**



**TIG**



**CUTTING**

Figure 5.3: The helmet is suitable for various applications including Stick, MIG, TIG welding, and cutting operations.

## **5.6 True Color Technology**

The HSH-S800 Eagle incorporates True Color technology, providing a clearer and more natural view of your work area in both light and dark states. This enhances visibility and precision.

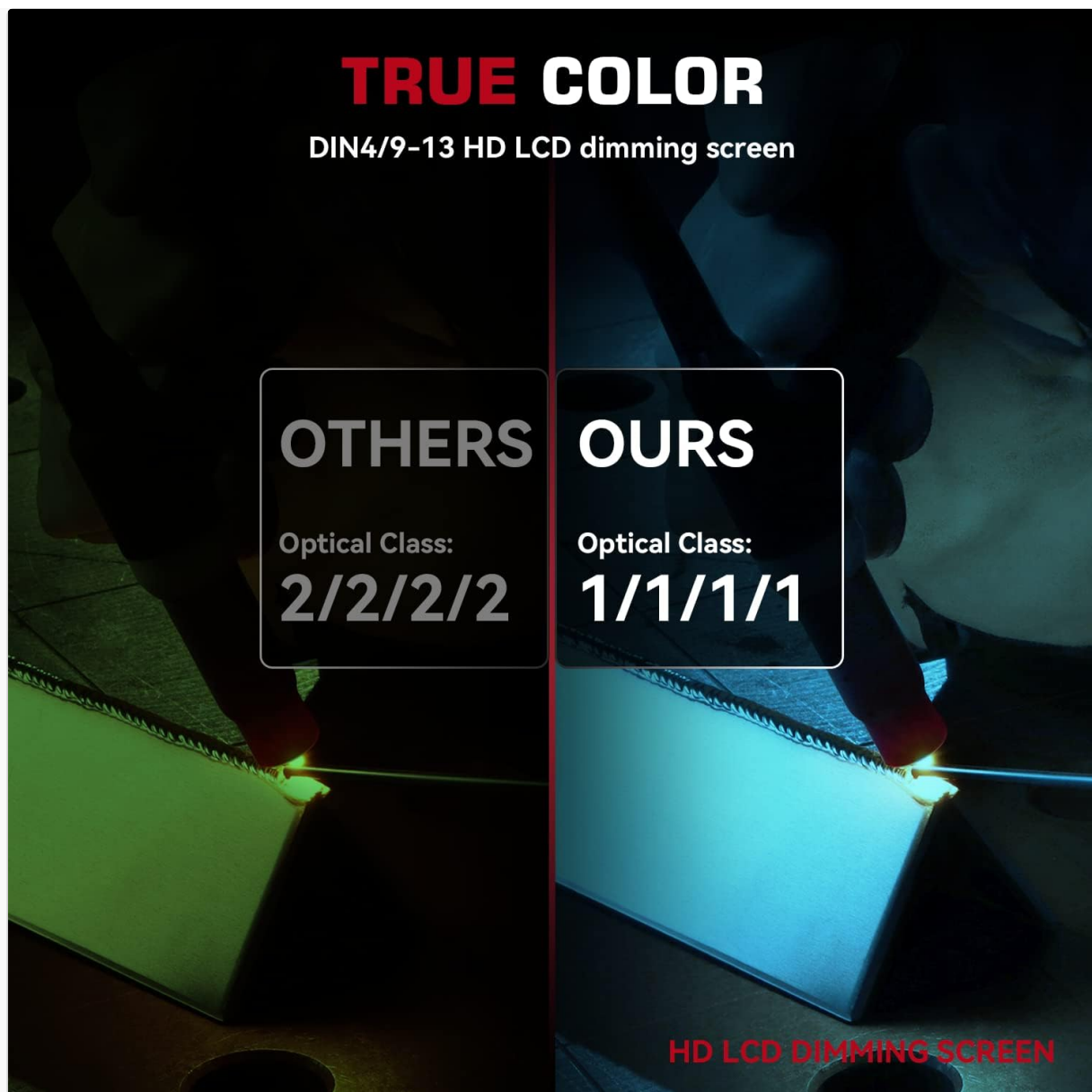


Figure 5.4: Comparison illustrating the superior 1/1/1/1 optical clarity and true color view of the ARCCAPTAIN helmet versus standard lenses.



Figure 5.5: Details of the upgraded 3.0 True Color lens, highlighting optimal eye protection (UV/IR DIN 16), 1/1/1/1 optical clarity, solar cell/CR2450 battery power, and 4 arc sensors.

## 6. MAINTENANCE



Regular maintenance ensures the longevity and proper functioning of your welding helmet.

## 6.1 Cleaning the Helmet and Lens

- Clean the helmet shell with a mild soap and water solution. Avoid harsh solvents.
- Wipe the outer and inner protective lenses with a soft, clean cloth. If heavily soiled or scratched, replace them.
- Gently clean the arc sensors with a cotton swab. Do not scratch them.

## 6.2 Replacing Protective Lenses

Protective lenses should be replaced when they become scratched, pitted, or too dirty to clean effectively. The helmet includes 3 replacement lenses.

1. Carefully remove the old outer or inner protective lens by unclipping or sliding it out.
2. Insert a new protective lens, ensuring it is securely in place.

## 6.3 Battery Replacement

When the low battery indicator illuminates, replace the CR2450 lithium battery.

1. Locate the battery compartment on the ADF.
2. Open the compartment and remove the old CR2450 battery.
3. Insert a new CR2450 battery, observing correct polarity.
4. Close the battery compartment securely.

## 6.4 Storage

Store the helmet in a clean, dry place away from direct sunlight and extreme temperatures. Use the original packaging or a protective bag to prevent scratches.

## 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; Arc sensors dirty or obstructed; Sensitivity too low; Helmet in Grind Mode.	Replace battery; Clean sensors; Increase sensitivity; Switch out of Grind Mode.
Lens darkens intermittently or flashes.	Sensitivity too low; Arc sensors dirty or obstructed; Other light sources interfering.	Increase sensitivity; Clean sensors; Block interfering light sources.
Poor visibility through the lens.	Protective lenses dirty or scratched; ADF dirty.	Clean or replace protective lenses; Clean ADF surface.
Helmet feels uncomfortable or unstable.	Headgear not properly adjusted.	Re-adjust headgear for a secure and comfortable fit.

If problems persist after attempting these solutions, contact ARCCAPTAIN customer support.

## 8. SPECIFICATIONS

Feature	Specification
Model Number	HSH-S800 Eagle
Viewing Size	3.86" x 1.69"
Optical Clarity	1/1/1/1
Arc Sensors	4
Response Time	1/25000 sec
Light State	DIN 4
Dark State	Variable 9-13
UV/IR Protection	DIN 16 (permanent)
Power Supply	Solar cell & replaceable CR2450 Lithium Metal battery
Material	Polyamide (PA)
Item Weight	1.6 pounds
Product Dimensions	9 x 7 x 7 inches
Certifications	ANSI/ISEA Z87.1-2010, CSA Z94.3, DIN EN 175, DIN EN 379
Included Components	1x Welding helmet, 3 x Replacement Lens, 1x User manual, 1x Random Cool Stickers







## 9. WARRANTY AND SUPPORT

### 9.1 Warranty Information

This ARCCAPTAIN welding helmet comes with a 180-day warranty from the date of purchase. This warranty covers manufacturing defects under normal use. It does not cover damage resulting from misuse, abuse, unauthorized modifications, or normal wear and tear.

### 9.2 Customer Support

For technical assistance, warranty claims, or any questions regarding your ARCCAPTAIN HSH-S800 Eagle welding helmet, please contact ARCCAPTAIN customer service. Refer to the contact information provided with your product packaging or visit the official ARCCAPTAIN website.

 <p>ARCCAPTAIN Inverter Welding Machine MIG200</p> <p>INVERTER WELDER</p> <p>User Manual www.arccaptain.com</p>	<p><a href="#">ARCCAPTAIN MIG200 Inverter Welding Machine User Manual</a></p> <p>Comprehensive user manual for the ARCCAPTAIN MIG200 Inverter Welding Machine, covering safety precautions, product overview, functions, performance and system characteristics, technical parameters, operation, installation, maintenance, troubleshooting, transportation, storage, wiring diagrams, and component lists.</p>
 <p>ARCCAPTAIN TIG200PACDC</p>	<p><a href="#">ARCCAPTAIN TIG200PACDC Welding Setup Guide: Material &amp; Parameter Settings</a></p> <p>Comprehensive setup guide for the ARCCAPTAIN TIG200PACDC welding machine. Provides essential parameters like amperage, pulse, gas flow, and tungsten settings for TIG welding aluminum, steel, and stainless steel.</p>
 <p>ARCCAPTAIN Inverter Welding Machine TIG205P Pro</p> <p>INVERTER WELDER</p> <p>User Manual www.arccaptain.com</p>	<p><a href="#">ARCCAPTAIN TIG205P Pro Inverter Welding Machine User Manual</a></p> <p>Comprehensive user manual for the ARCCAPTAIN TIG205P Pro Inverter Welding Machine, covering safety, product description, functions, installation, operation, welding parameters, and troubleshooting.</p>
 <p>ARCCAPTAIN Inverter Welding Machine TIG200P</p> <p>INVERTER WELDER</p> <p>User Manual www.arccaptain.com</p>	<p><a href="#">ARCCAPTAIN TIG200P Inverter Welding Machine User Manual</a></p> <p>Comprehensive user manual for the ARCCAPTAIN TIG200P Inverter Welding Machine, covering safety, product description, functions, installation, operation, troubleshooting, and maintenance.</p>
 <p>ARCCAPTAIN Inverter Welding Machine MIG200 Fit</p> <p>INVERTER WELDER</p> <p>User Manual www.arccaptain.com</p>	<p><a href="#">ARCCAPTAIN MIG200 Fit Inverter Welding Machine User Manual</a></p> <p>Comprehensive user manual for the ARCCAPTAIN MIG200 Fit Inverter Welding Machine. Covers safety, product introduction, operation for MIG, Spool gun, Flux-Cored, MMA, and TIG welding, technical parameters, maintenance, and troubleshooting.</p>
 <p>ARCCAPTAIN Inverter Welding Machine MIG165 Pro</p> <p>INVERTER WELDER</p> <p>User Manual www.arccaptain.com Remote control welding machine</p>	<p><a href="#">ARCCAPTAIN MIG165 Pro User Manual</a></p> <p>User manual for the ARCCAPTAIN MIG165 Pro inverter welding machine, covering safety, product introduction, operation, maintenance, and troubleshooting.</p>