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Item #72051
#72052

L6700 LED WELDING HELMET

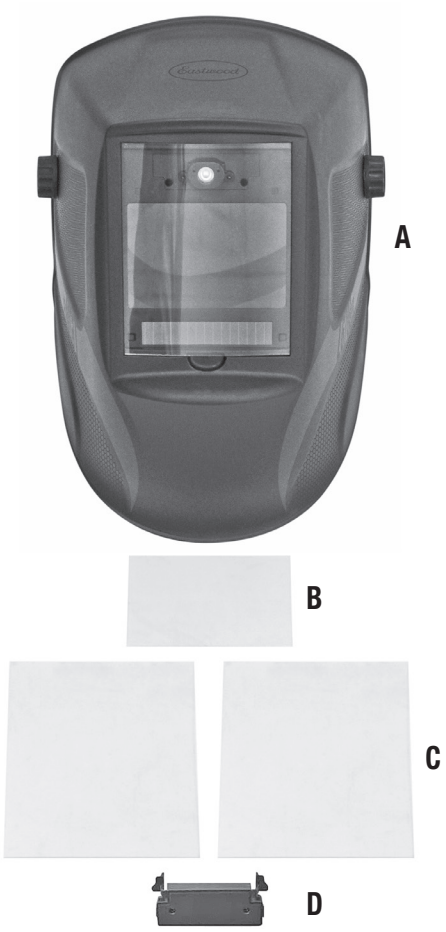
INSTRUCTIONS

Pre-production helmets shown.
Actual helmets may differ slightly

The **EASTWOOD L6700 LED WELDING HELMET** is a high-quality welding helmet that provides excellent UV and IR radiation protection with a large viewing lens. The integral 100 Lumen LED light enhances visibility while welding, plasma cutting, and grinding in dim areas, and is removable, allowing use of the helmet while recharging by installing the included Blanking Plug. True Color technology with auto-darkening feature provides optimal visibility of the workspace at all times with nearly instantaneous arc protection. All settings are adjusted directly on the viewing lens cartridge.
The replaceable, long-life CR2032 batteries (included) are maintained by the solar panel and will last many welding hours before replacement is necessary. The LED light has a separate, USB rechargeable lithium ion battery that can last up to 11 hours. Comfort is at your fingertips with the 10-way adjustable headgear which features a quick-adjust, oversized rear support. This helmet meets ANSI Z87.1, CSA Z94.3, WWH 175 B, AS/NZS 1337, and CE welding helmet standards.

CONTENTS

- **(1)** Eastwood L6700 LED Welding Helmet (with batteries installed) either Light or Dark version **[A]**
- **(1)** Spare Inner Lens Shield **[B]**
- **(2)** Spare Outer Lens Shield **[C]**
- **(1)** Blanking Plug **[D]**



SPECIFICATIONS

Optical class:	1/1/1/1
Viewing area:	3.94” x 2.64” [100 x 67 mm]
Viewing lens type:	True Color
Controls:	Analog
Cartridge Size:	5.25” x 4.5” x 0.35” [133 x 114 x 9 mm]
Sensitivity:	Inside & Stepless adjustment
Delay Time:	Inside & Stepless adjustment 0.15 - 0.80s
Shade adjustment:	Inside and Stepless
Arc Sensors:	4
Light state:	DIN 3
Dark state:	DIN 5-9 / 9-13
TIG capability:	>2A
Grinding mode / location:	Independent switch / Inside
UV & IR protection:	Up to DIN 16
Cartridge Power Supply:	2x Replaceable Li-Mn CR2032 & Solar combination
Switching time (light to dark):	<0.00006 second @ room temperature
Helmet Material:	High Impact Resistant Nylon
Operating Temperature:	23°F to 122°F [-5°C to 50°C]
Weight:	1.23 lbs. [560g]
Certifications:	ANSI Z87.1 CSA Z94.3 WWH 175 B AS/NZS 1337 CE
LED Power Supply:	3.7V / 1100mAh, Li-Ion Rechargeable Battery
LED Light Output:	50 / 100 Lumen
LED Runtime:	11 / 4 Hours
LED Light Activation:	Light-mounted button inside helmet
LED Light Charging:	2 Hour Charge Time (USB Type-C Port) 5V, 1A input

SAFETY INFORMATION

The following explanations are displayed in this manual, on the labeling, and on all other information provided with this product:

⚠ DANGER

DANGER indicates a hazardous situation which, if not avoided, will result in death or serious injury.

⚠ WARNING

WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.

⚠ CAUTION

CAUTION indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

⚠ NOTICE

NOTICE is used to address practices not related to personal injury.

⚠ READ INSTRUCTIONS

- Thoroughly read and understand these product instructions before using.
- Keep these product instructions for future reference.

⚠ DANGER ELECTRIC SHOCK CAN CAUSE INJURY OR DEATH!

- Improper use of an electric welder, plasma cutter, and associated equipment can cause electric shock, injury, and death! Read all precautions described in the specific welder or plasma cutter manual to reduce the possibility of electric shock.
- Always wear dry, protective clothing and leather welding gloves and insulated footwear. Use suitable clothing made from durable flame-resistant material to protect your skin.
- Always operate the welder or plasma cutter in a clean, dry, well ventilated area. Do not operate the plasma cutter in humid, wet, rainy or poorly ventilated areas.
- The electrode and work (or ground) circuits are electrically “hot” when the welder or plasma cutter is on. Do not allow these “hot” parts to come in contact with your bare skin or wet clothing.
- Separate yourself from the welding or plasma cutting circuit by using insulating mats to prevent contact from the work surface.
- Be sure that the work piece is properly supported and grounded prior to beginning an electric arc welding or plasma cutting operation.

⚠ WARNING SPARKS CAN CAUSE FIRE OR EXPLOSION!

- Welding and plasma cutting produces sparks which can be discharged considerable distances at high velocity igniting flammable or exploding vapors and materials.
  DO NOT operate the welder or plasma cutter in areas where flammable or explosive vapors are present.
  DO NOT use near combustible surfaces. Remove all flammable items from the work area where plasma cutting sparks can reach (minimum of 35 feet).
- Always keep a fire extinguisher nearby.
- Use welding blankets to protect painted and or flammable surfaces, rubber weather-stripping, dash boards, engines, etc.

⚠ WARNING ARC RAYS CAN INJURE EYES AND BURN!

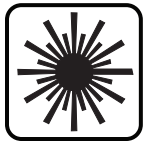
- Arc rays produce intense ultraviolet radiation which can burn exposed skin and cause permanent eye damage. This helmet is capable of providing protection up to shade number 13 only. If your particular welding process emits arc radiation that requires a higher shade number than 13, DO NOT use this helmet and seek alternate protection to protect your eyes from the arc (see ANSI Z49.1 and Z87.1 for safety standards).
- This welding helmet is not intended to offer protection against impact hazards, explosions or corrosive liquids. Always wear ANSI eye protection underneath. The welding helmet is intended to protect the user’s eyes and face from harmful radiation, sparks and spatter under normal welding conditions.
- Always test auto-darkening function before use by quickly subjecting the welding helmet to a bright flash of light such as sunlight, a bright flashlight or a sparkwheel lighter sparking. If the viewing lens does not instantly darken, DISCONTINUE USE IMMEDIATELY. Do not use for welding or plasma cutting until auto-darkening function has been reliably restored.
- The operating temperature range of this auto-darkening helmet is 23°F to 122°F (-5°C to 50°C). Do not use the welding helmet outside of this range; function may be adversely affected.
- Use suitable clothing (long pants, long sleeves, closed toe shoes, gloves) made from durable flame-resistant material for skin protection.
- Only for use welding, plasma cutting, or grinding. This helmet may not auto-darken nor provide ample protection for oxy-fuel, laser welding or cutting and when performing low amperage TIG welding at less than 2A.
- If other persons or pets are in the area of plasma cutting, use welding screens to protect bystanders from sparks and arc rays.

⚠ WARNING FUMES AND GASES CAN BE A HEALTH HAZARD!

- Fumes and gasses released during welding and plasma cutting are hazardous. Prolonged inhalation of fumes above safety exposure limits can injure the lungs and other organs. Use an OSHA approved respirator when operating in confined spaces or where there is inadequate ventilation.
- Use extreme caution when welding or plasma cutting coated materials including but not limited to: cadmium plated, galvanized, lead based paints, powder coat.

⚠ WARNING SERIOUS INJURY, FIRE, & EXPLOSION HAZARD!

- Lithium-ion batteries store a large amount of energy and may erupt in flames or violently explode if handled improperly. Follow these guidelines:
  - **DO NOT** open the unit. The exposed electrical connectors create risk of electrical shock. The battery is not designed to be replaced.
  - **DO NOT** expose to temperatures greater than 122°F [50°C]. Extended exposure to high ambient temperatures will permanently reduce battery life.
  - **DO NOT** charge or use if damaged. Punctured lithium-ion batteries can explode, catch fire, and discharge hazardous fumes. If punctured, immediately move the unit to an open location free of flammables and allow it to discharge if possible. For disposal and further information see: www.epa.gov/recycle/used-lithium-ion-batteries.
  - Charge battery only according to these instructions.



⚠ CAUTION EYE INJURY HAZARD!

- The LED light is extremely bright and can cause temporary blindness. **DO NOT** allow the LED light to project directly into eyes. Keep out of reach of children.

⚠ CAUTION HOT METAL AND TOOLS WILL BURN!

- Welding, plasma cutting, and grinding heats metal and tools to temperatures that will cause severe burns! Furthermore, metal edges can be extremely sharp. Use protective, heat resistant gloves and clothing when operating welding or plasma cutting equipment and handling materials. Never touch work surface or torch consumables until they have completely cooled.
- This welding helmet is not intended for use in direct overhead welding positions. Heavy spark and slag shower could cause serious personal injury. Additional protective gear must be worn when welding overhead.

⚠ NOTICE

- The welding helmet must be operated with the protective inner and outer lens shields installed. Operating without these shields risks damage to the auto-darkening viewing lens, compromising arc protection.
- Inspect the physical condition of the lenses and helmet before use. Discontinue use if damage to the viewing lens or helmet, such as holes, is present.

⚠ NOTICE FIRST AID

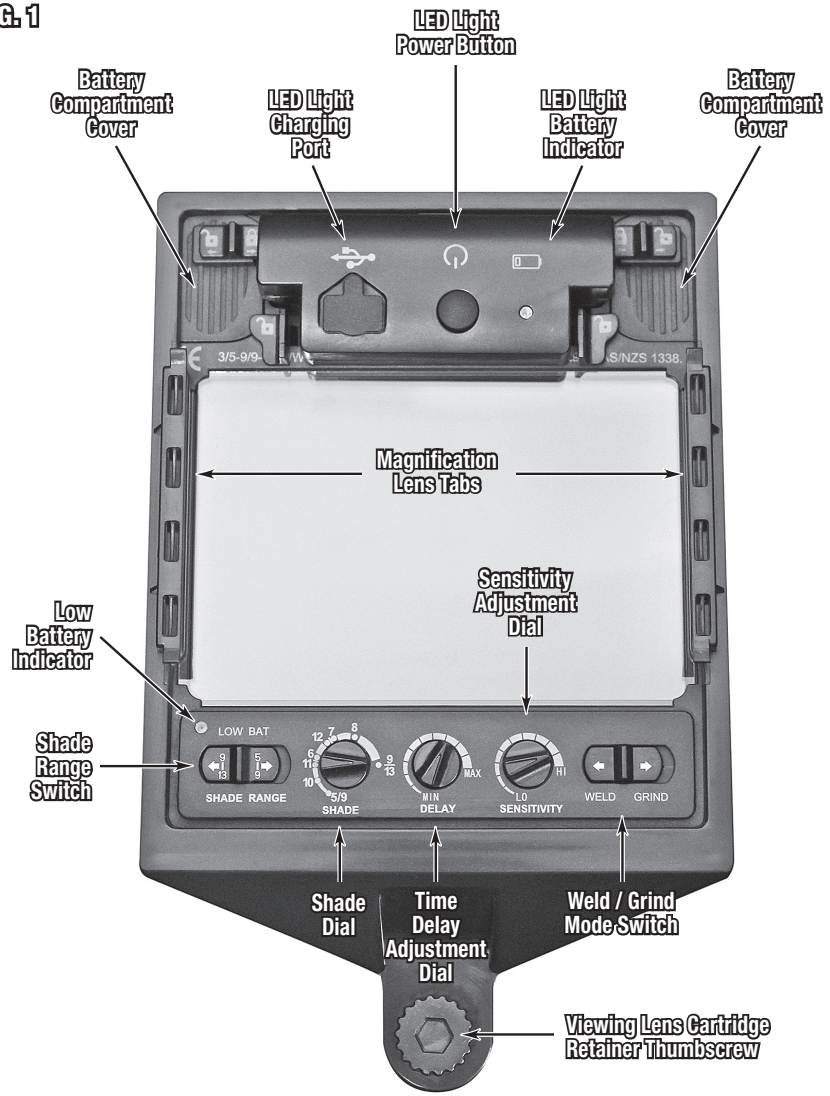
- If exposed to excessive fumes move to an area with fresh air. Follow safety information on the welding material manufacturer's Safety Data Sheet.
- For other injuries follow basic first aid techniques and call physician or emergency medical personnel.

OPERATION

- Remove the blue protective film from the inner and outer viewing lens shields.
- The view through the viewing lens in normal, ambient lighting conditions will have a slight tint with excellent visibility. When exposed to a bright flash of light, such as a welding arc, the viewing lens will darken in a fraction of a second to the set shade number. It will stay shaded until it no longer detects a bright light source.

The viewing lens has multiple adjustments **(FIG 1)** to fine tune your experience and optimize protection. These are covered in the following sections,

FIG. 1



WELD / GRIND MODE

The Weld / Grind Mode Switch turns the auto-darkening feature off for grinding or performing other tasks.

- Push the Switch to the right to enter Grind Mode and disable auto-darkening **(FIG 1)**.
- The undarkened state of the helmet is shade number 3. This is NOT enough shade for any welding or plasma cutting process. To prevent the possibility of eye damage, always verify the Switch position is to the left in Weld Mode before you start welding or plasma cutting.

SHADE

⚠ WARNING ARC RAYS CAN INJURE EYES AND BURN!

- **Arc rays produce intense ultraviolet radiation which can burn exposed skin and cause permanent eye damage. This helmet is capable of providing protection up to shade number 13 only. If your particular welding process emits arc radiation that requires a higher shade number than 13, DO NOT use this helmet and seek alternate protection to protect your eyes from the arc (see ANSI Z49.1 and Z87.1 for safety standards).**
- **Only for use welding, plasma cutting, or grinding. This helmet may not auto-darken nor provide ample protection for oxy-fuel, laser welding or cutting and when performing low amperage TIG welding at less than 2A.**

The Shade Range Switch and Shade Dial control the shade number when the auto-darkening viewing lens activates. Both are located on the inside, below the viewing lens **(FIG 1)**. The auto-darkening feature is triggered by any one of the four arc sensors near the corners of the viewing lens.

SHADE RANGE SWITCH

- The Shade Range Switch has two positions that dictate which shade adjustment range the Shade Dial is in.
  - **Left position:** Shade range 9-13.
  - **Right position:** Shade range 5-9.
- To prevent the possibility of eye damage, always check to make sure you are in the correct shade range before you start welding, especially at high amperages. See **DETERMINING SHADE NUMBER** below.

SHADE DIAL

- The Shade Dial is used to precisely set the shade number after you have verified the Shade Range Switch is set appropriately for the application. See **DETERMINING SHADE NUMBER** below.
  - The shade number is shown by the ring graphic around the Dial. It has reference marks for both shade ranges.
  - Rotate the Dial and point it at the desired shade number. Reference the Shade Guide Table **(FIG 2)**.

DETERMINING SHADE NUMBER

- Reference the Shade Guide Table **(FIG 2)** to determine your suggested shade level.
- If unsure what shade number is needed, starting at the darkest possible shade number (13) is suggested. Having too much shade is safe, but having too little shade can cause eyesight damage.
- Start a brief test arc to determine work area visibility. If unable to see the welding puddle, lighten the shade number by one and repeat until you have adequate visibility. If you notice any dark spots in your vision or after-image bright spots when you close your eyes, INCREASE SHADE NUMBER. Brief exposure will not result in permanent eyesight damage. Repeated, prolonged exposure to an improperly shaded arc will.

FIG. 2

Shade Guide Table

Welding Process	Arc Current (Amperes) 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

SMAW – Shielded Metal Arc Welding
MIG (heavy) – MIG on Heavy Metals
MIG (light) – MIG on Light Alloys
TIG, GTAW – Gas Tungsten Arc Welding
MAG/C02 – Metal Active Gas
SAW – Shielded Semi-Automatic Arc Welding
PAC – Plasma Arc Cutting
PAW – Plasma Arc Welding

DELAY TIME

Delay Time is the amount of time that the viewing lens will remain darkened after an arc is no longer detected. This mostly comes down to user preference. In situations where you are often quickly breaking and restarting the arc, such as MIG stitch welding or sometimes in pulsed TIG welding, using a longer Delay Time setting can be crucial to protecting your vision. In these scenarios a short Delay Time may result in getting arc flashed as the viewing lens switches off the shade just as the arc is retriggered.

The Delay Time Adjustment Dial is located on the inside, below the viewing lens **(FIG 1)**. Turn it clockwise or counterclockwise to increase or decrease the Delay Time, respectively. The range of adjustment is 0.15 - 0.80 seconds.

SENSITIVITY

The Sensitivity adjustment changes how reactive the auto-darkening function is to light. Higher sensitivity number is good to ensure the helmet darkens when doing low amperage welding. Low sensitivity numbers are needed when welding in direct sunlight or bright ambient light.

The Sensitivity Adjustment Dial is located on the inside, below the viewing lens **(FIG 1)**. Turn it clockwise or counterclockwise for higher or lower Sensitivity, respectively.

⚠ WARNING ARC RAYS CAN INJURE EYES AND BURN!
Always test auto-darkening function before use by quickly subjecting the welding helmet to a bright flash of light such as sunlight, a bright flashlight or a sparkwheel lighter sparking. If the viewing lens does not instantly darken, DISCONTINUE USE IMMEDIATELY. Do not use for welding or plasma cutting until auto-darkening function has been reliably restored.

⚠ NOTICE

- **For low amperage TIG welding below 40 amps, the Sensitivity may need to be at the highest setting to avoid flickering of the auto-darkening.**
- **When welding in sunlight or in the presence of a bright light, Sensitivity may need to be at the lowest setting to avoid the auto-darkening triggering without a welding arc.**

LED LIGHT

The LED Light is clipped on to the top of the viewing lens cartridge and operates independently via USB rechargeable, non-replaceable Li-ion battery. This light provides great visibility of the work area, while not triggering the auto-darkening as easily as a high lumen light directed towards the arc sensors would.

The Welding Helmet may be operated with the LED Light module in place or removed from the helmet. A Blanking Plug **[D]** is included and can be clipped into the helmet in place of the LED Light module.

> **⚠ CAUTION** **INJURY HAZARD!**
> **Do not utilize the helmet without Blanking Plug or LED Light module in place. Exposed skin may burn due to exposure to unfiltered arc rays.**

OPERATION

- Press the LED Light power button located on the inside, above the viewing lens **(FIG 1)** to activate it.
- The light defaults to 100 Lumen output. Press the power button again to cycle to 50 Lumen output. Pressing the power button a third time will cycle it off.
- Holding the power button for approximately two seconds will enable automatic mode. Cycle to the desired light output setting before enabling. Automatic mode is confirmed by the LED Light blinking twice. This mode saves battery life by switching the LED Light off while a welding arc is detected.

CHARGING

- When the LED Light battery indicator blinks red **(FIG 1)**, charging is required soon.
- The LED Light module can be charged in-place, or removed from the helmet. A Blanking Plug **[D]** is included and can be clipped into the helmet in place of the LED Light module, allowing use while recharging.

> **⚠ CAUTION** **INJURY HAZARD!**
> **Do not utilize the helmet without Blanking Plug or LED Light module in place. Exposed skin may burn due to exposure to unfiltered arc rays.**

- Flip up the rubber seal on the USB Type-C port.
- Connect to a capable charging device and the LED will illuminate red. The LED Light battery requires 5V, 1A input for optimal charging.
- Allow 2 hours for a full charge.
- The LED battery indicator will illuminate green when charged fully.
- When fully charged, unplug the charging cable and close the port cover to maintain the highest level of moisture resistance.

HELMET FITMENT ADJUSTMENT

For maximum comfort, the headgear is 10-way adjustable. The adjustments are described below:

- **Headband:** Push the two locking pegs out of the headband to unlock the adjustment. Adjust either way to suit your head shape. Snap the pegs back in to lock adjustment once satisfied **(FIG 3)**.
- **Quick-Adjust Rear Support:** The ratcheting rear support is oversized to provide improved comfort. Turn the dial clockwise to tighten it to your head. Rotate counterclockwise to loosen **(FIG 3)**.
- **Helmet Distance:** The distance of the helmet/viewing lens from your face is adjustable on the inside at the helmet pivot points. This adjustment can be particularly helpful if using a welding magnification lens or respirator. To adjust, loosen the Helmet Retention Knob until it is halfway off the carriage bolt. Push in on the Knob with one hand and move the headgear with the other using light pressure **(FIG 4)**. If unable to slide it, loosen the Knob further. Retighten in the new position. Repeat adjustment on the opposite side.
- **Helmet Angle:** The angle tab at the insides of the pivot points determines the angle the helmet rests at when lowered **(FIG 4)**. To adjust, it is helpful to slightly loosen the Helmet Retention Knob then push the locking tab outward with two fingers and adjust the headgear angle with the other hand. Release the locking tab in the new position. Repeat adjustment on the opposite side.
- **Helmet Flip-up Retention:** The Knobs at the exterior sides of the helmet pivot points provide adjustment for resistance of the helmet when flipping it up. Rotate clockwise to tighten and counterclockwise to loosen **(FIG 3)**. Do not over tighten. The knob and carriage bolt are plastic and will strip.

FIG. 3

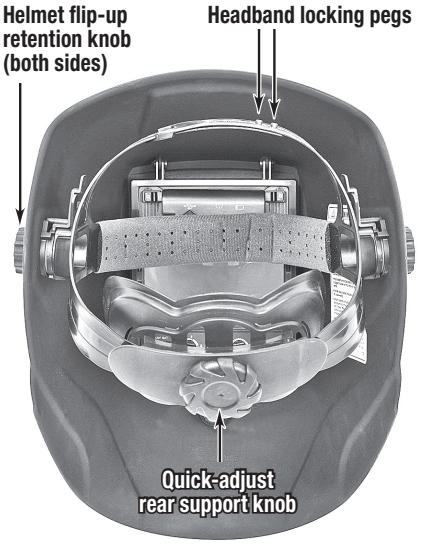
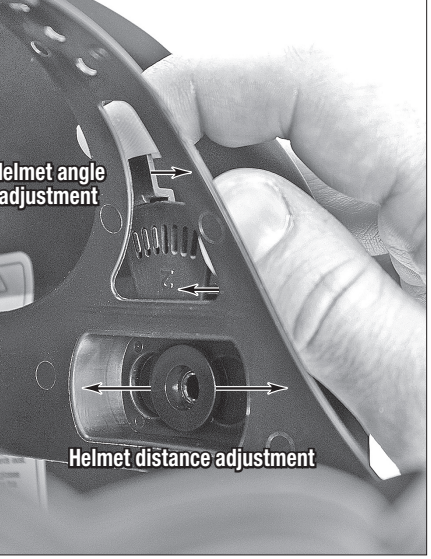


FIG. 4



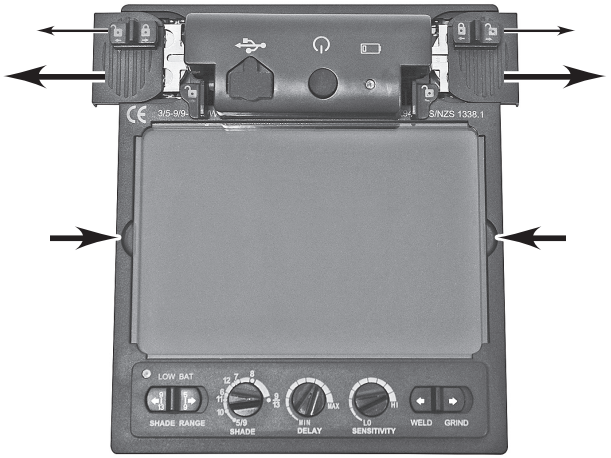
MAINTENANCE

- This welding helmet is powered by solar rechargeable batteries that will provide many hours of protection with regular light exposure. The red LED “LOW BAT” indicator is located on the inside, above the viewing lens and between the battery covers **(FIG 1)**. If illuminated, the batteries may require a charge by exposing the solar panel to bright sunlight for several hours. If this fails to extinguish the light, the batteries will require replacement. See **BATTERY REPLACEMENT** below.
- When dirty, you may clean the outside and inside of lens and shields with a soft cloth and small amount of glass cleaner.
  NOTE: Do not use excessive glass cleaner or allow the viewing lens to become wet or the sensitive electronics will be destroyed. Never use solvents.
- Clean headband with a cloth dampened with mild soap and water. Allow to dry thoroughly.
- Check viewing lens cartridge for damage before each use. If cracked or broken, DO NOT USE.

BATTERY REPLACEMENT

- The batteries are located inside the helmet, at the top of the viewing lens on either side of the LED Light **(FIG 1)**.
- Unfasten the viewing lens cartridge retainer Thumbscrew **(FIG 1)** and lift the retainer up to remove the viewing lens. Carefully set down the viewing lens cartridge on a surface that will not damage it.
- Slide the Battery Covers outward to remove **(FIG 5)**.
- Remove batteries.
- Replace batteries with 3V type CR2032 with positive side facing upward.
- Reinstall Battery Covers in reverse order. Reinsert viewing lens cartridge and fasten viewing lens cartridge retainer Thumbscrew.

FIG. 5



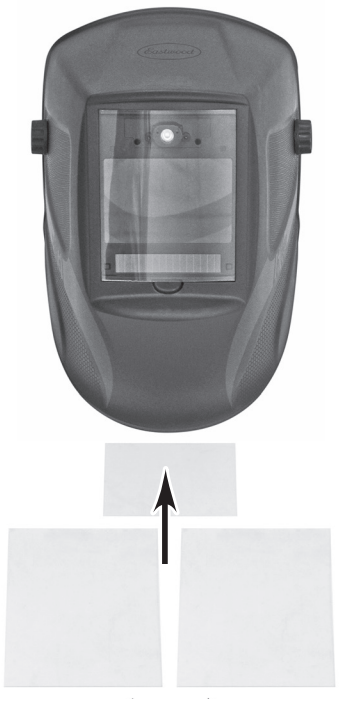
OUTER LENS SHIELD REPLACEMENT

- Insert tip of the forefinger into the semi-circular recess at the bottom of the outer lens shield; pry the lens outward, curling it in the center to remove it from the side channels **(FIG 6)**.
- Install in reverse by squeezing sides to curl the center then insert edges into the channels around frame of opening **(FIG 6)**.

INNER LENS SHIELD REPLACEMENT

- Unfasten the viewing lens cartridge retainer Thumbscrew **(FIG 1)** and lift the retainer up to remove the viewing lens. Carefully set down the viewing lens cartridge on a surface that will not damage it.
- Pinch the inner lens shield with your fingernails in the semi-circular recesses at the sides of the viewing lens. Gently squeeze the lens shield, curling it to remove.
- Install in reverse by squeezing sides to curl the center then insert corners into the viewing lens opening **(FIG 5)**.
- Reinsert viewing lens cartridge and fasten viewing lens cartridge retainer Thumbscrew.

FIG. 6



ACCESSORIES

This helmet is compatible with Eastwood Welding Helmet Magnification Lenses (optional, not included). These improve vision of the weld puddle, just like reading glasses, thereby enabling you to have better control of the weld. They are offered in a variety of corrective powers from +1 to +2.50. See the back page of this manual for the full list of options.

- To install a magnification lens simply slide the lens, with the curved surface facing towards the viewing lens, under the clips **(FIG 1)** at either side of the viewing lens into the desired position.

TROUBLESHOOTING

PROBLEM	CAUSE	CORRECTION
Auto-Dimming Does Not Function, Viewing Lens Will Not Darken	Dirt, Debris Blocking Arc Sensors	Clean the outer lens and ensure the four arc sensors located above and below the viewing lens are unobstructed.
	Batteries Low Charge	Expose the solar panel to a bright light source to recharge them. Make sure dirt, debris is not blocking the solar panel. If function is not restored, replace batteries.
	Workspace Objects Blocking Arc Sensors	In oddball welding positions and tight spaces objects in front of you may block the arc light from reaching the sensors while you are still able to view the welding area. The only remedy for this is to reposition such that both you and the arc sensors can “see” the welding area.
	Weld / Grind Switch Set to Grind	Push Switch left for Weld Mode.
Slow Auto-Darkening Response	Ambient Temperature Too Low	Do not use in temperatures below 23°F [-5°].
	Sensitivity Setting Too Low	Turn the Sensitivity Adjustment Dial clockwise to increase it.
Poor Vision Through Lens	Dirt, Debris, Pitting Obstructing View	Clean or replace the outer lens. See **MAINTENANCE.**
Helmet Slips During Use	Helmet Fit Not Adjusted Properly	See **HELMET FITMENT ADJUSTMENT.**
“LOW BAT” Indicator Illuminated	Batteries Require Recharging or Replacement	Expose the solar panel to a bright light source to recharge them. Make sure dirt and debris are not blocking the solar panel. If this fails, see **BATTERY REPLACEMENT.**

NOTES

NOTES

ADDITIONAL ITEMS

R&D MUST-HAVE ACCESSORIES

#23218
Eastwood Welding Helmet Magnification Lens Master Set +1.0 to +2.50

#12957
Eastwood Welding Helmet Bag

#33996
Eastwood TIG Mate - TIG Filler Rod Feeder Pen

CONSUMABLE ITEMS

#20230 Replacement Outer Lens Shield

#20229 Replacement Inner Lens Shield

OPTIONAL ITEMS

#12957 Eastwood Welding Helmet Bag

#23211 Eastwood Welding Helmet Magnification Lens +1.0

#23212 Eastwood Welding Helmet Magnification Lens +1.25

#23213 Eastwood Welding Helmet Magnification Lens +1.50

#23214 Eastwood Welding Helmet Magnification Lens +1.75

#23215 Eastwood Welding Helmet Magnification Lens +2.0

#23216 Eastwood Welding Helmet Magnification Lens +2.25

#23217 Eastwood Welding Helmet Magnification Lens +2.50

Visit eastwood.com for complete info and pricing.

If you have any questions about the use of this product, please contact
The Eastwood Technical Assistance Service Department: 800.343.9353 >> email: tech@eastwood.com
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