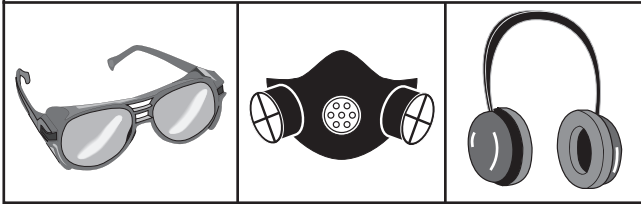




# Auto Darkening Welding Helmet MODEL H7786 INSTRUCTION SHEET

## **!WARNING**

Welding helmets do not provide unlimited protection for your eyes, ears and lungs. Personal injury could result from using this welding helmet without proper protective gear. Always wear safety glasses, an approved respirator, and hearing protection while welding.



### Introduction

This Auto Darkening Welding Helmet features a reaction time of 2ms, 2 sensors, variable shades from 9-13, adjustable delay from 0.1-1.0 seconds, a view area of 1¼" x 3¼" and a weight of 19 oz. Along with those features, the headgear is fully adjustable and is supplied with a sweat band.

### Inventory (Figure 2)

- A. Welding Hood..... 1
- B. AAA size Batteries ..... 2

### Operation Safety

Welding produces ultraviolet and infrared rays that are harmful if skin or eyes are left unprotected.

- Use a welding helmet that is supplied with the correct shade filter to protect your eyes and face while welding or watching a welding process. Refer to the Shade and Sensitivity charts on **page 4**.

- Wear safety glasses with sides shields or goggles under the welding helmet.
- Wear protective clothing that is fire resistant like leather or wool. DO NOT wear tennis shoes or street shoes while welding. Wear leather boots that come up past the ankles and have fire resistant soles.
- Protect those around you from welding flash and fire by using protective barriers or screens.
- Remove any flammable materials in the area before you begin to weld.
- Have someone perform fire watch while you are welding and for at least an hour after you have finished welding, to guard against fire.
- DO NOT weld if the welding helmet is damaged. Inspect it carefully and replace components as needed. Make sure the clear protective lense is not scratched or covered with smoke as it may impede the sensors, causing the auto darkening feature to malfunction and expose the operator.
- Never use the welding helmet to look at the sun. The welding helmet is designed for use while welding, only.
- DO NOT perform overhead welding using this welding helmet. Dripping metal could damage the auto darkening lense resulting in its malfunction, exposing the operator.
- DO NOT grind while wearing the helmet. The helmet and/or lense may become damaged and malfunction.

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## Adjusting the Headgear

The headgear supplied with your welding helmet can be adjusted for height, diameter, angle and friction during flip-down.

### Height

1. Bend middle strap inward and press the bead out of the hole.
2. Adjust the strap length until the sweat band is positioned just above your eye brows.
3. Snap the bead into the closest hole in the strap.

### Diameter

1. Locate the hand knob on the back of the headband. Rotate it clockwise to tighten and counterclockwise to loosen.
2. Place the helmet on your head and make adjustments to the headband until it is comfortably snug.

### Angle

1. Looking at the back of the helmet, locate the friction knob on the right hand side and loosen it 4 or 5 complete turns. It is not necessary to remove it completely.
2. On the side of the helmet and just below the friction knob are 3 holes. One of these holes will be occupied by a plastic pin. Push the pin in toward the inside of the helmet and position it over the desired hole.
3. Insert the pin and tighten the friction knob.

Choosing the hole furthest from the front of the helmet will allow the helmet to tilt further forward. Choosing the hole closest to the front will allow the helmet to tilt less.

## Flip-down Friction

1. Tighten or loosen the friction knobs located on either side of the helmet to increase or decrease the amount of effort needed to raise and lower the helmet.

The headband and middle strap must be properly adjusted before flipping the helmet down by nodding your head. If the headband is too loose, the helmet may tumble off after being flipped down and the lenses could be damaged.



Figure 1. Model H7786.

## Identification

- A. Delay Time Dial
- B. Sensitivity Dial
- C. Battery Compartment
- D. View Window
- E. Variable Shade Dial
- F. "ON" Switch
- G. Solar Cell
- H. Sensor

## Delay Time

This feature allows you to control how soon the auto lense reverts back to the #4 shade condition after you have stopped welding. This can be very important when the puddle remains very bright momentarily.

## Sensitivity

You can control how sensitive the sensors are to the arc light. We recommend that the dial be set in the middle position for most applications.

## Battery Compartment

The helmet uses 2 AAA size batteries which are installed in this compartment. If the helmet is to be stored for an extended time, remove the batteries to avoid damage to the compartment.

## View Window

This window is set to #4 shade when off or when the sensors are not exposed to strong light.

## Shade Dial

Adjustments can be made to the amount of shading the view window provides. The range is from #9 to #13 shade.

## "ON" Switch

Push this button once to turn on the auto darkening feature on the helmet. The helmet will turn off automatically 15 minutes after the sensors have been exposed to bright light.

## Solar Cell

This unit powers some of the components used by the auto darkening device.

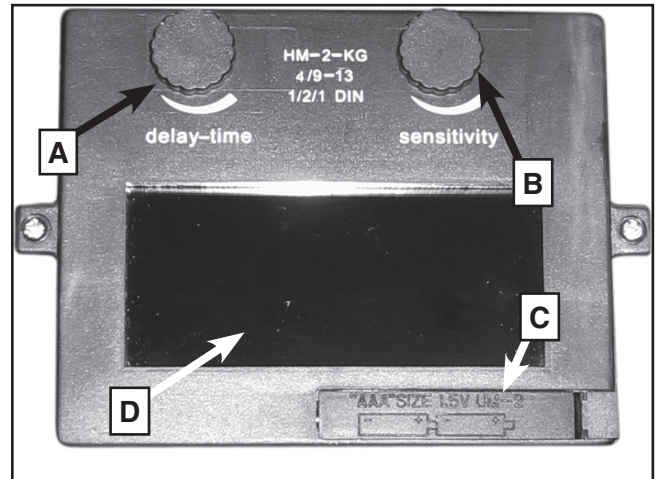


Figure 2. View of the inside control panel.

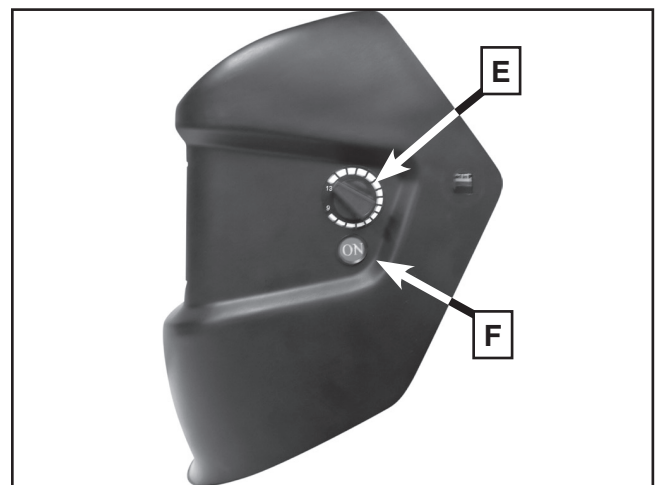


Figure 3. View of the left side of helmet.

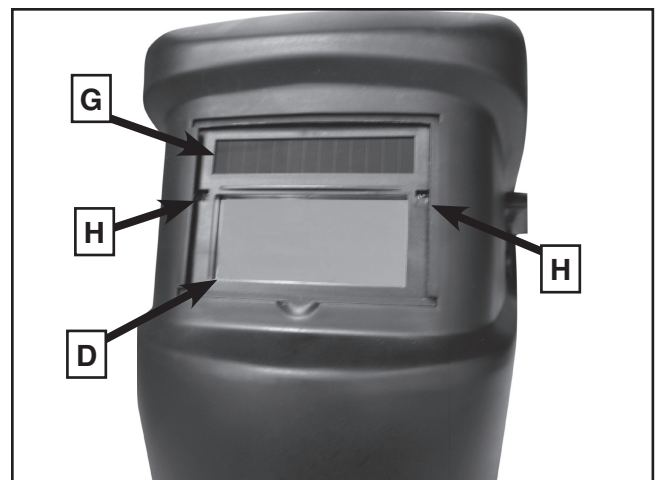


Figure 4. The front of the helmet.

# Operation

## "ON" Switch

Push the "ON" button on the side of the helmet. The auto darkening feature will activate and stay active for 15 minutes after the last bright light. You will need to push the button again when this occurs. *Before welding* raise the helmet up to a bright light source and make sure the auto darkening feature activates. If it does not, push the button and check again. If it still does not work see the troubleshooting guide at the end of this instruction sheet.

## Variable Shade

The shade chart below shows settings that can be used for various welding processes. We recommend that you start *ANY* welding process at #12 or #13 and reduce the shade as needed for safety.

Welding App.	Current Amp.	Shade No.
Stick Welding	<40	#9
	40-80	#10
	80-175	#11
	175-300	#12
	300-500	#13
MIG (metal inert gas)	<100	#10
	100-175	#11
	175-300	#12
	300-500	#13
TIG (tungsten inert gas)	<50	#10
	50-100	#11
	100-200	#12
	200-400	#13
Air Carbon Arc	<500	#12
	500-700	#13
Plasma Cutting	60-150	#11
	150-250	#12
	250-400	#13
Plasma Welding	<50	#9
	50-200	#10
	200-400	#11

## Sensitivity Dial

As previously mentioned, the auto darkening lense can be made more sensitive or less sensitive to bright light produced by welding. In most applications, the dial should be set to middle of its range. However, the setting should be changed when used in extreme conditions. Below is a list of applications and settings that you can use as a guide for making adjustments.

Stick Welding	Mid Sensitivity
MIG Welding (short circuit)	Low-Mid Sensitivity
MIG Welding (pulsed or spray)	Mid Sensitivity
TIG Welding	Mid-High Sensitivity
Plasma Cutting/ Welding	Low-Mid Sensitivity

# Maintenance

## Batteries

To replace the batteries, unclip the cover on the battery compartment. Be sure to orient the replacements as described on the compartment cover or damage could occur to the electronics in the helmet. Remove the batteries for long term storage of the helmet.

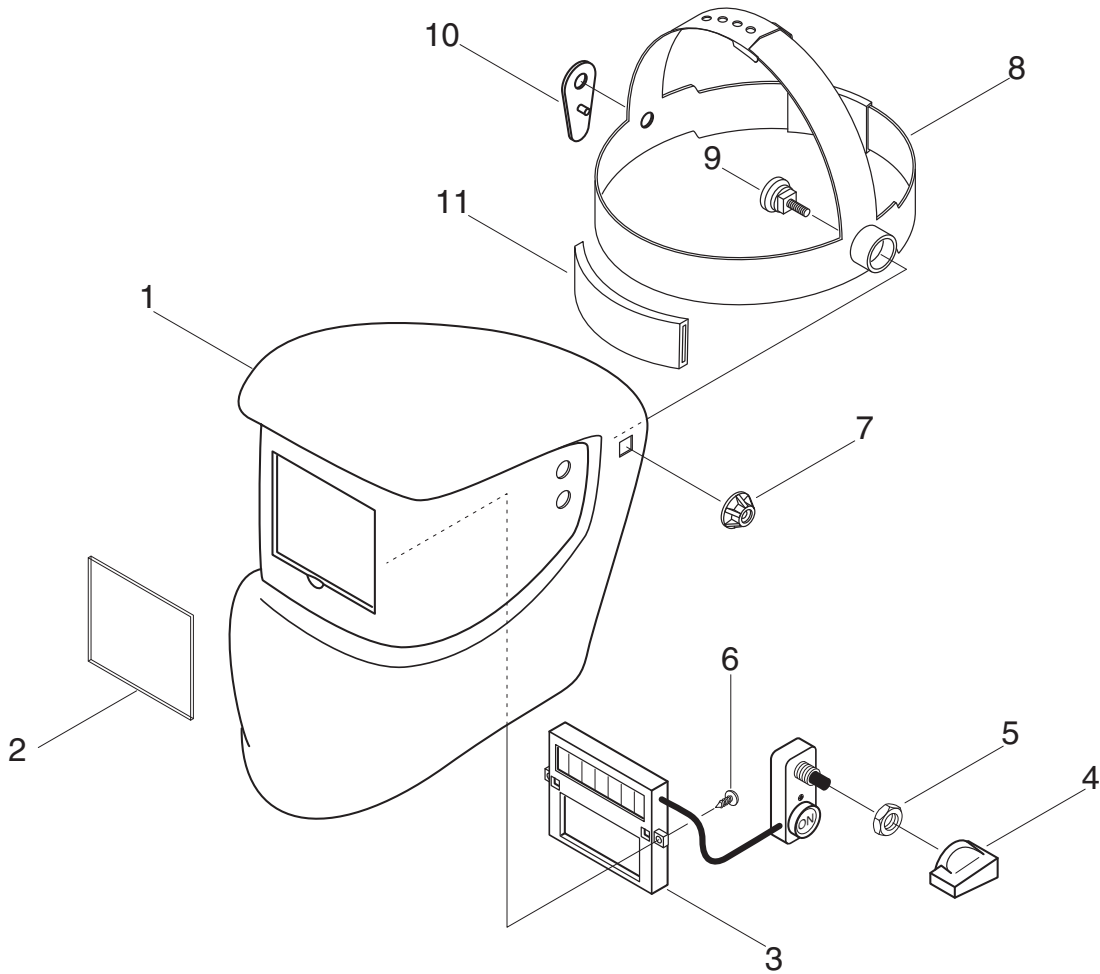
## Lens Cover

The lens cover must be clean to insure the proper and safe operation of the auto darkening feature. We recommend that the lens cover be removed and that it be cleaned with warm soapy water and a soft cloth. Paper towels, solvents and some glass cleaners will damage the lens cover, reducing its effectiveness and safe operation. Replace damaged lens covers.

# Troubleshooting

Symptom	Possible Cause	Possible Solution
Auto darkening lens does not darken when "ON" button is pushed.	<ol style="list-style-type: none"> <li>1. Batteries are low or dead.</li> <li>2. Batteries are installed incorrectly.</li> <li>3. Contact points on batteries are dirty or corroded.</li> <li>4. Power cord from the switch to the circuitry is damaged.</li> <li>5. Switch is faulty.</li> <li>6. Auto darkening lens is faulty.</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace batteries with new ones.</li> <li>2. Remove the batteries and orient them as shown on the battery compartment cover and reinstall.</li> <li>3. Remove the batteries and clean the ends. Replace corroded batteries with new ones.</li> <li>4. Contact Grizzly Industrial for repair or replacement.</li> <li>5. Contact Grizzly Industrial for repair or replacement.</li> <li>6. Contact Grizzly Industrial for repair or replacement.</li> </ol>
Auto darkening lens does not darken while welding.	<ol style="list-style-type: none"> <li>1. Batteries are low or dead.</li> <li>2. Batteries are installed incorrectly.</li> <li>3. Contact points on batteries are dirty or corroded.</li> <li>4. Lens cover is damaged or dirty, impeding the 2 sensors.</li> <li>5. Sensitivity is set too low.</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace batteries with new ones.</li> <li>2. Remove the batteries and orient them as shown on the battery compartment cover and reinstall.</li> <li>3. Remove the batteries and clean the ends.</li> <li>4. Clean or replace the lens cover.</li> <li>5. Turn the dial for sensitivity all the way up and test against a bright light. DO NOT weld to test.</li> </ol>
Auto darkening lens does not stay on or flickers during welding.	<ol style="list-style-type: none"> <li>1. Sensitivity is set too low.</li> </ol>	<ol style="list-style-type: none"> <li>1. Review sensitivity settings section.</li> </ol>

# H7786 Parts Breakdown and List



Ref #	Part #	Description
001	PH7786001	HELMET BODY
002	PH7786002	LENSE COVER
003	PH7786003	AUTO DARKENING LENSE
004	PH7786004	KNOB
005	PH7786005	NUT
006	PH7786006	SCREW
007	PH7786007	FRICTION KNOB
008	PH7786008	HEADBAND
009	PH7786009	FRICTION SCREW
010	PH7786010	TILT STOP BRACKET
011	PH7786011	SWEAT BAND







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