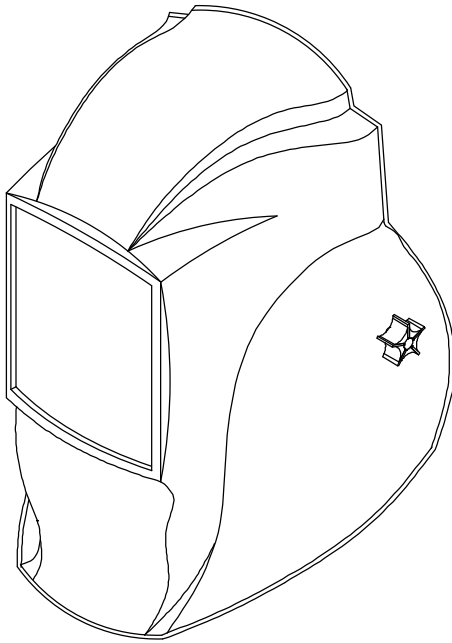




OM-235 589B

2015-04

## Passive Welding Helmets MP-10 Series



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# SECTION 1 – WELDING HELMET SAFETY PRECAUTIONS – READ BEFORE USING

helmet 2013-09

-  Protect yourself and others from injury — read, follow, and save these important safety precautions and operating instructions.

## 1-1. Symbol Usage



**DANGER!** – Indicates a hazardous situation which, if not avoided, will result in death or serious injury. The possible hazards are shown in the adjoining symbols or explained in the text.

 Indicates special instructions.



Indicates a hazardous situation which, if not avoided, could result in death or serious injury. The possible hazards are shown in the adjoining symbols or explained in the text.

This group of symbols means Warning! Watch Out! ELECTRIC SHOCK, MOVING PARTS, and HOT PARTS hazards. Consult symbols and related instructions below for necessary actions to avoid the hazards.

**NOTICE** – Indicates statements not related to personal injury.

## 1-2. Arc Welding Hazards

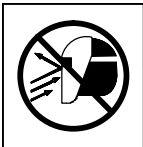
-  Only qualified persons should install, operate, maintain, and repair this unit.



### ARC RAYS can burn eyes and skin.

Arc rays from the welding process produce intense visible and invisible (ultraviolet and infrared) rays that can burn eyes and skin. Sparks fly off from the weld.

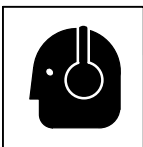
- Wear a welding helmet fitted with a proper shade of filter to protect your face and eyes when welding or watching (see ANSI Z49.1 and Z87.1 listed in Safety Standards). Refer to Lens Shade Selection table in Section 1-4.
- Wear approved safety glasses with side shields under your helmet.
- Use protective screens or barriers to protect others from flash, glare, and sparks; warn others not to watch the arc.
- Wear body protection made from durable, flame-resistant material (leather, heavy cotton, wool). Body protection includes oil-free clothing such as leather gloves, heavy shirt, cuffless trousers, high shoes, and a cap.
- Before welding, adjust the auto-darkening lens sensitivity setting to meet the application.
- Stop welding immediately if the auto-darkening lens does not darken when the arc is struck. See the Owner's Manual for more information.



## **WELDING HELMETS do not provide unlimited eye, ear, and face protection.**

Arc rays from the welding process produce intense visible and invisible (ultraviolet and infrared) rays that can burn eyes and skin. Sparks fly off from the weld.

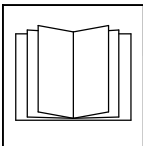
- Use impact resistant safety spectacles or goggles and ear protection at all times when using this welding helmet.
- Do not use this helmet while working with or around explosives or corrosive liquids.
- Do not weld in the overhead position while using this helmet.
- Inspect the auto-lens frequently. Immediately replace any scratched, cracked, or pitted cover lenses or auto-lenses.



## **NOISE can damage hearing.**

Noise from some processes or equipment can damage hearing.

- Wear approved ear protection if noise level is high.



## **READ INSTRUCTIONS.**

- Read and follow all labels and the Owner's Manual carefully before installing, operating, or servicing unit. Read the safety information at the beginning of the manual and in each section.

- Use only genuine replacement parts from the manufacturer.
- Perform maintenance and service according to the Owner's Manuals, industry standards, and national, state, and local codes.





## **FUMES AND GASES can be hazardous.**

Welding produces fumes and gases. Breathing these fumes and gases can be hazardous to your health.

- Keep your head out of the fumes. Do not breathe the fumes.
- If inside, ventilate the area and/or use local forced ventilation at the arc to remove welding fumes and gases. The recommended way to determine adequate ventilation is to sample for the composition and quantity of fumes and gases to which personnel are exposed.
- If ventilation is poor, wear an approved air-supplied respirator.
- Read and understand the Safety Data Sheets (SDSs) and the manufacturer's instructions for adhesives, coatings, cleaners, consumables, coolants, degreasers, fluxes, and metals.
- Work in a confined space only if it is well ventilated, or while wearing an air-supplied respirator. Always have a trained watchperson nearby. Welding fumes and gases can displace air and lower the oxygen level causing injury or death. Be sure the breathing air is safe.
- Do not weld in locations near degreasing, cleaning, or spraying operations. The heat and rays of the arc can react with vapors to form highly toxic and irritating gases.
- Do not weld on coated metals, such as galvanized, lead, or cadmium plated steel, unless the coating is removed from the weld area, the area is well ventilated, and while wearing an air-supplied respirator. The coatings and any metals containing these elements can give off toxic fumes if welded.

## 1-3. Proposition 65 Warnings

 Welding or cutting equipment produces fumes or gases which contain chemicals known to the State of California to cause birth defects and, in some cases, cancer. (California Health & Safety Code Section 25249.5 et seq.)

 This product contains chemicals, including lead, known to the state of California to cause cancer, birth defects, or other reproductive harm. *Wash hands after use.*

## 1-4. Lens Shade Selection Table

Process	Electrode Size in. (mm)	Arc Current in Amperes	Minimum Protective Shade No.	Suggested Shade No. (Comfort)*
Shielded Metal Arc Welding (SMAW)	Less than 3/32 (2.4) 3/32–5/32 (2.4–4.0) 5/32–1/4 (4.0–6.4) More than 1/4 (6.4)	Less than 60	7	--
		60–160	8	10
		160–250	10	12
		250–550	11	14
Gas Metal Arc Welding (GMAW)  Flux Cored Arc Welding (FCAW)		Less than 60	7	--
		60–160	10	11
		160–250	10	12
		250–500	10	14
Gas Tungsten Arc Welding (TIG)		Less than 50	8	10
		50–150	8	12
		150–500	10	14
Air Carbon Arc Cutting (CAC-A)	Light Heavy	Less than 500	10	12
		500–1000	11	14
Plasma Arc Cutting (PAC)		Less than 20	4	4
		20–40	5	5
		40–60	6	6
		60–80	8	8
		80–300	8	9
		300–400	9	12
Plasma Arc Welding (PAW)		Less than 20	6	6–8
		20–100	8	10
		100–400	10	12
		400–800	10	12
		400–800	11	14

Reference: ANSI Z49.1:2005

\* Start with a shade that is too dark to see the weld zone. Then, go to a lighter shade which gives a sufficient view of the weld zone without going below the minimum.

## 1-5. Principal Safety Standards

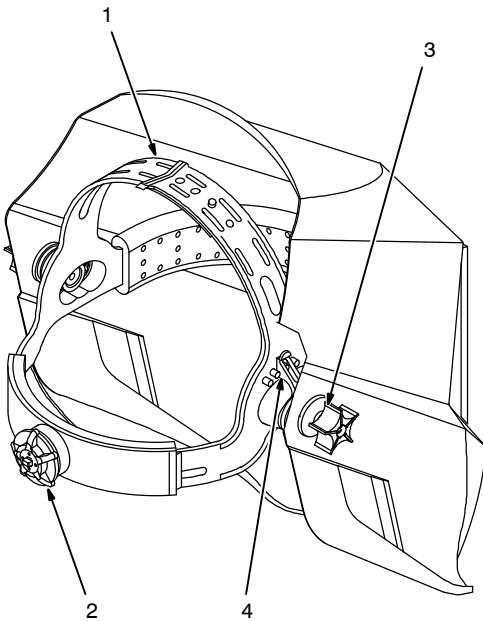
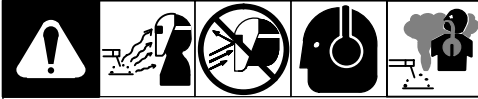
*Safety in Welding, Cutting, and Allied Processes*, ANSI Standard Z49.1, is available as a free download from the American Welding Society at <http://www.aws.org> or purchased from Global Engineering Documents (phone: 1-877-413-5184, website: [www.global.ihc.com](http://www.global.ihc.com)).

*Safe Practice For Occupational And Educational Eye And Face Protection*, ANSI Standard Z87.1, from American National Standards Institute, 25 West 43rd Street, New York, NY 10036 (phone: 212-642-4900, website: [www.ansi.org](http://www.ansi.org)).



# SECTION 3 – OPERATING INSTRUCTIONS

## 3-1. Adjusting Headgear



☞ *There are four headgear adjustments: headgear top, tightness, distance adjustment, and angle adjustment.*

### 1 Headgear Top Adjustment

Adjusts headgear for proper depth on the head to ensure correct balance and stability.

### 2 Headgear Tightness Adjustment

Adjusts headgear for a secure fit. To adjust, push in the adjusting knob located on the back of the headgear. Turn knob left or right to obtain desired tightness.

☞ *If adjustment is limited, it may be necessary to remove the comfort cushion.*

### 3 Distance Adjustment

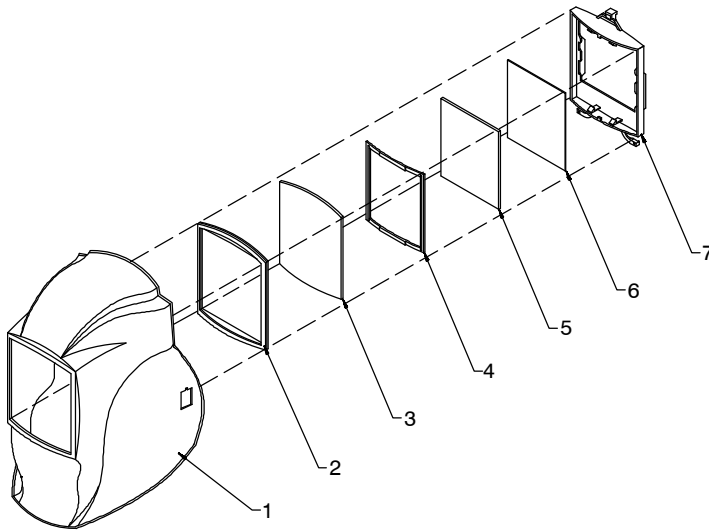
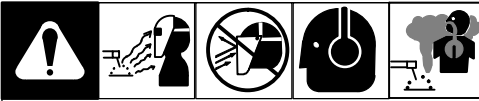
Adjusts the distance between the face and the lens. To adjust, loosen both outside tension knobs and press inward to free from adjustment slots. Move forward or back to desired position and re-tighten. (Both sides must be equally positioned for proper vision.)

### 4 Angle Adjustment

Four pins on the right side of the headband top provide adjustment for the forward tilt of the helmet. To adjust, loosen the right outside tension adjustment knob then lift on the control arm tab and move it to the desired position. Retighten tension adjustment knob.

☞ *When using the back distance adjustment position, only the back three angle adjustment pins can be used.*

## 3-2. Replacing Lens and Lens Covers



805 051

**⚠** Never use the helmet without the inside and outside lens covers properly installed. Welding spatter will damage the lens and void the warranty.

- 1 Helmet Shell
- 2 Gasket
- 3 Outside Lens Cover
- 4 Spacer
- 5 Lens No. 10

- 6 Inside Lens Cover
- 7 Lens Holding Frame

To remove the lens holding frame, push down on the frame retaining arms and push the retaining clips outward. Lift the assembly and pull free of the helmet.

To replace the outside lens cover, push the cover toward inside of helmet. Remove the rubber lens gasket and install on new lens

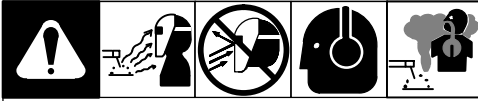
cover. Reinstall the lens holding frame.

**☞** Be sure the flat side of lens cover gasket faces the helmet shell.

To replace the inside lens cover, remove the spacer from the frame by pushing up on the two top retaining tabs. Replace lens cover and reinstall the assembly in the helmet.




### 3-3. Installing Optional Magnifying Lens

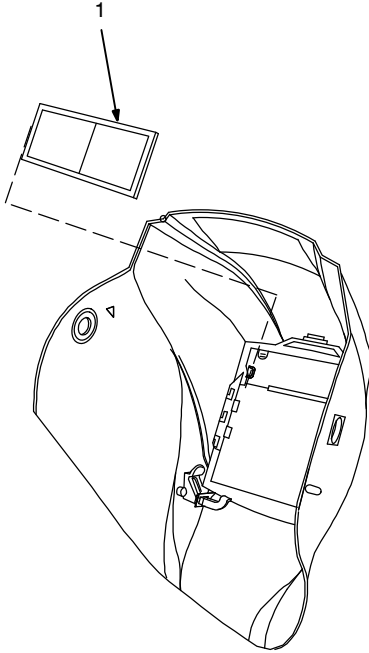


#### 1 Optional Magnifying Lens

Starting at the top, slide magnifying lens into the helmet retaining brackets. Align the magnifying lens with the auto-darkening lens assembly.

Reverse procedure to remove magnifying lens.

 *To prevent lens fogging, install flat side of magnifying lens toward auto-darkening lens.*

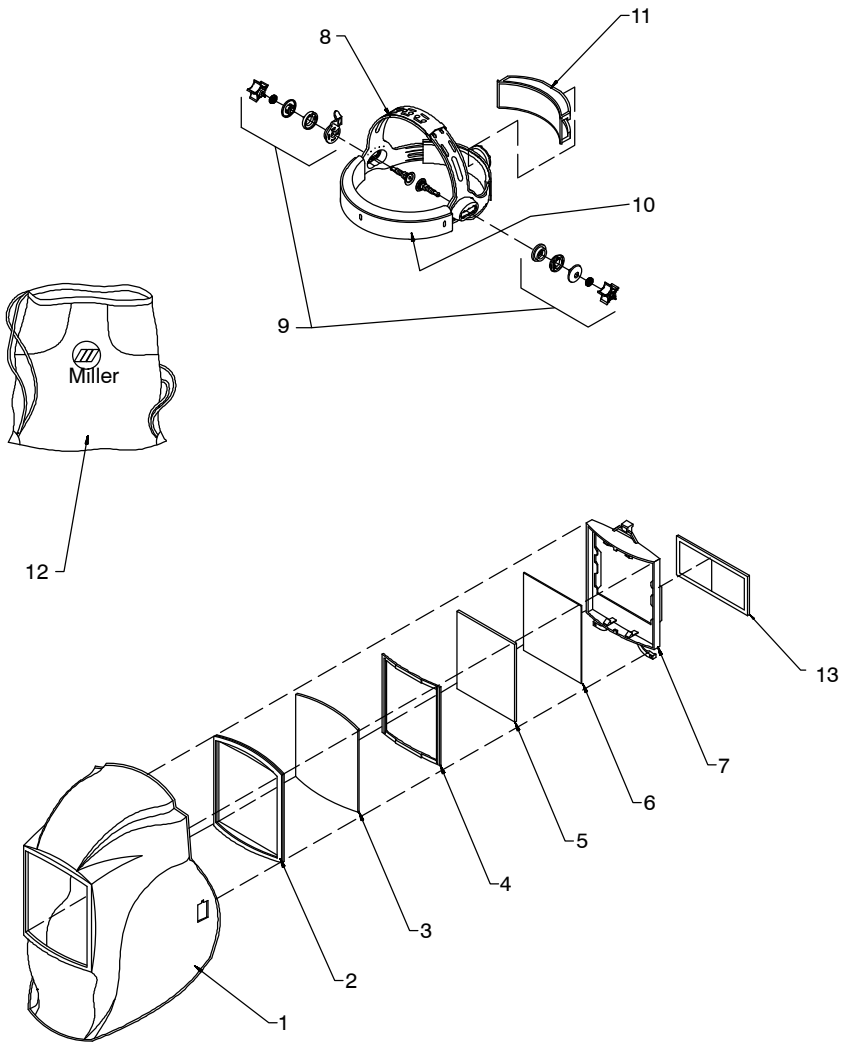


## SECTION 4 – MAINTENANCE

**NOTICE** – *Never use solvents or abrasive cleaning detergents.*

The helmet requires little maintenance. However, for best performance clean after each use. Using a soft cloth dampened with a mild soap and water solution, wipe the cover lenses clean. Allow to air dry. Occasionally, the filter lens should be cleaned by gently wiping with a soft, dry cloth.

## SECTION 5 – PARTS LIST



805 051

Figure 5-1. MP-10 Passive Welding Helmet

Item No.	Part No.	Description	Quantity
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**Figure 5-1. MP-10 Passive Welding Helmet**

1	◆216331	Shell, Helmet Black	1
1	◆223454	Shell, Helmet Inferno	1
2	216337	Gasket, Large Lens Cover	1
3	216326	Lens Cover, Frt 4-11/16 In X 5-5/8 In	1
4	235629	Spacer, MP-10	1
5	235630	Filter Plate, #10 4 1/2 X 5 1/4 (MP-10)	1
6	235628	Lens Cover, In 4-1/2 In X 5-1/4 In (MP-10)	1
7	216335	Frame, Lens Holding Top Cntrl	1
8	770246	Ratchet Headgear Assy	1
9	770248	Adjustment Hardware	1
10	770249	Fabric Headband	1
	079975	O-ring, 0.187 ID X 0.103 CS Rbr	2
11	◆216336	Cushion	1
12	◆770250	Bag, Miller	1
	◆222003	Adapters, Hard Hat (Not Shown)	1
	◆259637	Adapters, Slotted Hard Hat (Not Shown)	1
13	◆212235	Lens, 0.75 Magnification	1
13	◆212236	Lens, 1.00 Magnification	1
13	◆212237	Lens, 1.25 Magnification	1
13	◆212238	Lens, 1.50 Magnification	1
13	◆212239	Lens, 1.75 Magnification	1
13	◆212240	Lens, 2.00 Magnification	1
13	◆212241	Lens, 2.25 Magnification	1
13	◆212242	Lens, 2.50 Magnification	1
	◆236052	Kit, Digital Elite Auto-Darkening Lens Upgrade	1

◆ Optional

## SECTION 6 – LIMITED WARRANTY

**LIMITED WARRANTY** – Subject to the terms and conditions below. Miller Electric Mfg. Co., Appleton, Wisconsin, warrants to its original retail purchaser that the new Miller equipment sold after the effective date of this limited warranty is free of defects in material and workmanship at the time it is shipped by Miller. THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE WARRANTIES OR MERCHANTABILITY AND FITNESS.

Miller fixed shade helmets are warranted for 30 days from the date of purchase. *Proof of purchase is required for warranty transactions so it is imperative that a copy of the original invoice or sales receipt be retained.*

**For warranty transactions, contact your Miller Distributor.**

Effective January 1, 2015



Visit our website at  
**[www.MillerWelds.com](http://www.MillerWelds.com)**



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