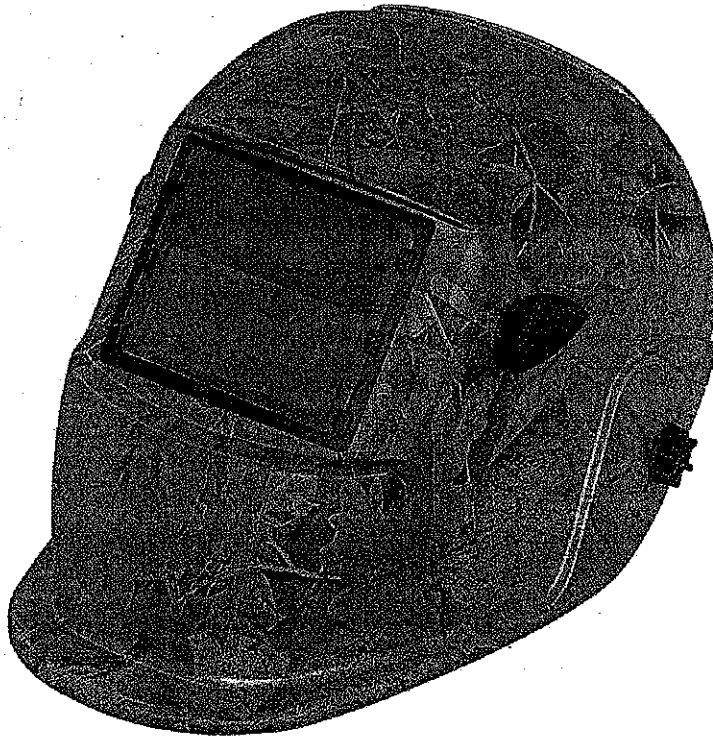


CAMOUFLAGE  
**WELDING HELMET**  
AUTO-DARKENING

## User's Manual



### Auto-Darkening Welding Helmet User's Manual

**WARNING: Read and understand all instruction before use!**

This Auto-Darkening Welding Helmet is designed to protect the eyes and face from sparks, spatter, and harmful radiation under normal welding conditions. Auto-darkening filter automatically changes from "light state" to "dark state" when an arc is struck, and returns to "light state" when welding stops.

Auto-Darkening Welding Helmet comes ready for use. Adjust headgear and select the correct shade number for application before commencing welding operation.

#### BEFORE WELDING

- Make Sure front cover lens is clean and the sensors on the front of the Auto-Darkening Filter Cartridge are unobstructed by dirt or debris. Make sure front & inside cover lenses are properly secured.
- Inspect all operating parts for signs of wear or damage before using helmet. Any scratched, cracked or pitted parts should be replaced immediately before using again to avoid personal injury.
- Ensure that Auto-Darkening Helmet is set to "Weld" mode, "Grind" mode is for grinding operations only.
- Set "Shade knob" to desired shade number for welding application. See SHADE GUIDE TABLE (No.1) for selecting proper Shade setting.
- Adjust headgear so the helmet sits properly on your head, as low as possible and close to your face. Helmet angle in the "lowered" position can be adjusted by turning the limitation washer.

#### DARK SHADE NUMBER SELECTION

The number can be set manually between shade 9 and 13. Check the SHADE GUIDE TABLE (No.1) to determine the proper shade number for your application. Select a shade number by turning the "shade knob" until the arrow points to the desired shade number (SEE SHADE GUIDE TABLE No.1).

#### PRODUCT FEATURES

- This Auto-Darkening helmet is equipped with a geared headband mechanism that reduces the amount of head movement required to lower face shield just prior to welding. This feature greatly reduces head & neck strain and general fatigue cause by repeatedly lowering face shield during day-to-day welding operations.
- Auto-Darkening lens changes from "light state" to "dark state" in 1/30,000 of second after arc is struck.
- "Dark to clear delay can be set to "short", "medium", or "long" delay setting.
- Outboard mounted "Sensitivity Knob" allows wearer to adjust sensitivity without removing helmet.
- Auto-darkening lens changes to "light state" automatically according to delay setting; 0.25 sec-0.35 sec. for "short" delay, 0.35 sec. - 0.5 sec "middle" delay, 0.5 sec - 0.8 sec. "long" delay.

- Auto-darkening lens can be set to desired shade in "Welding" mode or fixed shade "Grind" mode.

- Auto-darkening Filter Cartridge is equipped with high performance solar power supply.

- Variable shade (DIN) from DIN9 to DIN13 is adjusted by selecting appropriate shade number on outboard mounted "Shade Knob".

- This product is in full conformity with related DIN, ISO, EN safety standards and ANSI Z87.1-2003 standards.

- Ultra-high performance of UV/IR auto-darkening filters provide full protection for user's eyes & face against UV/IR radiation during entire welding process, even in "light" state. The UV/IR protection level is up to Shade 16(DIN) continuous protection in all modes and settings.

#### **WARNING:**

**This Auto-Darkening Welding Filter Helmet is not suitable for Laser Welding, & Oxyacetylene Welding application.**

- Never place this Helmet and/or Auto-Darkening Filter Cartridge on a hot surface.
- Never open or tamper with the Auto-Darkening Filter Cassette.
- This Auto-Darkening Welding Helmet will not protect against severe impact hazards, explosive devices or corrosive liquids.
- Do not modify helmet or Auto Darkening Filter Cassette unless otherwise specified in this "User's Manual". Do not use replacement parts other than those specified in this manual. Unauthorized modifications and replacement parts will void the warranty and expose user to risk of personal injury.
- Should Auto-Darkening helmet fail to darken upon striking an arc, stop welding immediately and contact your supervisor or dealer.
- Do not immerse filter in water or expose Auto-darkening Filter Cassette to moisture.
- Do not use any solvents on filter's screen, cover lenses or helmet components.
- Use only at temperatures between 23°F (- 5°C) and 131°F (55°C)
- Store only in temperatures between -4°F (- 20°C) and 158°F (70°C)
- Always Protect filter from contacting with liquid and dirt.
- Clean filters' surfaces regularly; do not use strong cleaning solutions. Always keep sensors and solar cells clean using a clean lint-free tissue or cloth.
- Replace cracked, scratched or pitted cover lenses regularly.

**Severe personal injury could occur if user fails to follow the aforementioned warnings, and / or fails to follow the operating instructions properly.**

#### **TROUBLE SHOOTING GUIDE**

**Irregular Darkening Dimming:** Headband has been set unevenly and there is an uneven distance between the user's eyes and the filter's lens.

**Solution:** Readjust headgear for proper fit.

**Auto-Darkening Filter Does Not Darken or Flickers**

**Solution:** A. Front cover lens is soiled or damaged, clean or replace. B. Sensors on Auto-Darkening lens may be obstructed by dirt or debris; clean with lint-free cloth or tissue. C. Welding current set low, adjust current for proper welding operation and set delay to "long" position.

**Slow Response: Solution:** Operating temperature too low or high, use helmet only at recommended temperatures.

**Poor Vision: Solution:** A. Front and/or inside cover lenses are soiled, clean or change lenses. B. Insufficient ambient light, illuminate work area. C. Incorrect shade number selected, consult SHADE GUIDE TABLE (No.1) for proper shade selection.

**Welding Helmet Slips: Solution:** Adjust headgear for proper fit.

**CAUTION: Stop using helmet immediately if above-mentioned helmet problems can not be corrected. Contact supervisor or dealer.**

#### **LENS & HELMET MAINTENANCE**

**Replacing front cover lens:** Front cover lens should be replaced if it becomes damaged (cracked, scratched, pitted or soiled).

**Step 1:** Remove the front cover lens by sliding finger tip inside the cover plate recess slot located at the bottom-center of the lens. Lift to bend cover plate and free it from retaining tabs.

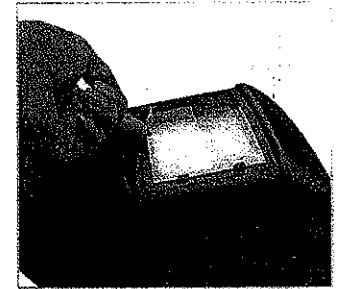
**Step 2:** Bow the new cover plate slightly, slide ends into left and right cover plate retaining tabs and release.

**Replace inside Cover Lens if it becomes cracked, scratched, pitted or soiled.**

Clean the Auto-Darkening Filter Lens with a clean lint-free tissue or soft cotton cloth.

Do not immerse the Auto-Darkening Filter Cassette in water or any other liquid. Never use abrasives, solvents or oil based cleaners.

Do not remove the Auto-Darkening Filter Cassette from the helmet. Do not open filter.



#### **TECHNICAL SPECIFICATIONS**

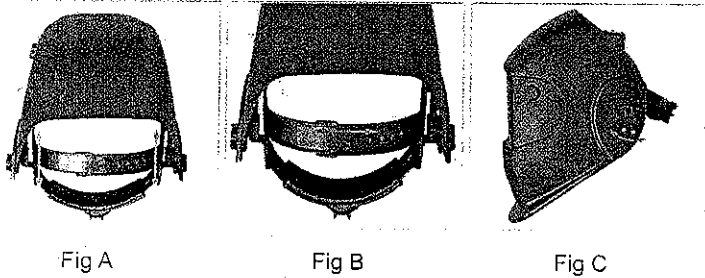
<b>Viewing Area:</b>	3.86" x 1.69" (98 x 43 mm), two optical sensors.
<b>Size of Cartridge</b>	4.33" x 3.54" x 0.35" (110 x 90 x 9 mm)
<b>UV/IR Protection</b>	Up To Shade DIN16 continuous, in all modes & settings.
<b>Light State:</b>	Shade DIN 4
<b>Variable Shade:</b>	From DIN 9 to DIN 13
<b>Power Supply:</b>	Solar cells
<b>Power On/Off:</b>	Fully Automatic
<b>Sensitivity:</b>	Outboard Mounted "Sensitivity knob", Infinitely Adjustable.
<b>"WELDING" / "GRINDING" Modes:</b>	Helmet can be set to variable shade "Weld" and fixed shade "grind" modes.
<b>Switching Time Light to Dark:</b>	1/30000 s (0.000033sec). (-5°C, 0.0008 sec)
<b>Switching Time Dark to Light:</b>	0.25~0.8s at "Short - Middle - Long" Position
<b>Operating Temperature:</b>	Use between 23°F (- 5°C) and 131°F ( 55°C ) only.
<b>Storing Temperature:</b>	Store between -4°F (- 20°C) and 158°F ( 70°C ) only.
<b>Helmet Material:</b>	Lightweight impact resistant nylon shell.
<b>Total Weight:</b>	1 lb. (450g)

**PRODUCT WARRANTY:**

This manufacturer's warranty is limited to repair, replacement or refund for defective materials or products. This warranty does not cover product malfunctions or damages resulting from tampering, misuse or abuse. Operating Instructions must be followed carefully to maintain this warranty, failure to do so will void said warranty. The manufacturer is not liable for any indirect or consequential damages arising from the use or misuse of this product. A copy of the original receipt and serial number (located on filter cartridge) are required as proof of purchase. This warranty is non-transferable and extends only to the original buyer purchasing the products from the manufacturer directly, or through its authorized distributors, dealers, or agents.

**PROPER ADJUSTMENT OF HEADGEAR**

This Auto-Darkening Welding Helmet has three important headgear adjustments designed to set the correct viewing angle, proper eye distance & vertical position to the lens, and are unique to each user. Figures A, B & C below indicate where these important adjustments are located. Ensure that this helmet has been properly adjusted to fit the user prior to use.



SHADE GUIDE TABLE (No.1)

Welding Process	Arc Current (Amperes)															
	0.5	2.5	10	20	40	80	125	175	225	275	350	450				
SMAW					9	10		11		12		13	14			
MIG (heavy)							10	11		12		13	14			
MIG (light)							10	11		12		13	14			
TIG,GTAW			9	10	11		12		13			14				
MAG/CO <sub>2</sub>						10	11	12		13		14				
SAW								10	11	12	13	14				
PAC								11		12		13				
PAW			8	9	10	11	12		13		14					

Note: \* SWAW-Shielded Metal Arc Welding. \* TIG, GTAW-Gas Tungsten Arc Welding(GTAW)(TIG).  
 \* MIG(heavy)-MIG on heavy metals. \* SAW Shielded Semi-Automatic Arc Welding.  
 \* MIG(light)-MIG on light alloys. \* PAC-Plasma Arc Cutting. \* PAW-Plasma Arc Welding.

- 1. Front Cover Lens
- 2. Auto-Darkening Filter Carriage
- 3. Inside Cover Lens
- 4. Shade Knob/Sensitivity Knob
- 5. 2 x Shade Nut
- 6. Shade-Box/Sensitivity-Box
- 7. Shade Scale Plate/Sensitivity Scale Plate
- 8. 2 x Block Nut
- 9. Shell (Welding Mask)
- 10. Filter Setting Frame
- 11. 4 x Filter Setting Screw
- 12. Front Headband
- 13. 2 x Adjustable Limitation Washer
- 14. 2 x Screw
- 15. Adjustable Headband

