SAFETY WARNINGS - READ BEFORE USING

WARNING
Read & Understand All Instructions Before Using

Auto-Darkening welding helmets are designed to protect the eye and face from sparks, spatter and harmful radiation under normal welding conditions. Auto-Darkening filter automatically changes from a light state to a dark state when an arc is struck, and it returns to the light state when welding stops.

The Auto-Darkening welding helmet comes assembled. But before it can be used, it must be adjusted to fit the user properly. Check battery surfaces and contacts and clean it if necessary. Verify if the battery is in good condition and installed properly. Set up for delay time, sensitivity and shade number for your application.

The helmet should be stored in dry, cool and dark area and remove the battery, when not using it for a long time.

WARNING

- This Auto-Darkening welding helmet is not suitable for laser welding and oxyacetylene welding / cutting processes.
- Never place this helmet and Auto-Darkening filter on a hot surface.
- Never open or tamper with the Auto-Darkening filter.
- This Auto-Darkening welding helmet will not protect against severe impact hazards.
- This helmet will not protect against explosive devices or corrosive liquids.
- Don’t make any modifications to either the filter or helmet, unless specified in this manual. Don’t use replacement parts any other than those specified in this manual. Unauthorized modifications and replacement parts will void the warranty and expose the operator to the risk of personal injury.
- Should this helmet not darken upon striking an arc, stop welding immediately and contact your supervisor or your dealer.
- Don’t immerse the filter in water.
- Don’t use any solvents on the filter screen or helmet components.
- Use only at temperatures: -10 °C ~ +55 °C (14 °F ~ 131 °F).
- Storing temperature: -20 °C ~ +70 °C (-4 °F ~ 158 °F). The helmet should be stored in dry cool and dark area and remove the battery, when not using it for a long time.
- Protect filter from contacting with liquid and dirt.
- Clean the filter surface regularly; don’t use strong cleaning solutions. Always keep the sensors and solar cells clean using a clean lint-free tissue.
- Regularly replace the cracked / scratched / pitted front cover lens.
- The materials which may come into contact with the wearers skin, can cause allergic reactions in some circumstances.
- Please install AAA Alkaline batteries (2 required) before using this product. Replace batteries immediately when LOW BATTERY alarm turns red.
COMMON PROBLEMS AND REMEDIES
• Irregular Darkening Dimming
Headband has been set unevenly and there is an uneven distance from the eyes to the filter lens (Reset the headband to reduce the difference to the filter).

• Auto-Darkening filter does not darken or flickers
  ① Front cover lens is soiled or damaged (Change the cover lens).
  ② Sensors are soiled (Clean the sensors surface).
  ③ Welding current is too low (Adjust the sensitivity level to higher).
  ④ Check battery and verify they are in good condition and installed properly. Also, check battery surfaces and contacts and clean if necessary. Please referring to the “POWER” on page 2.

• Slow response
Operating temperature is too low (Do not use at temperatures below -10 °C or 14 °F).

• Poor vision
  ① Front / inside cover lens and / or the filter is soiled (Change lens).
  ② There is insufficient ambient light.
  ③ Shade number is incorrectly set (Reset the shade number).

• Welding helmet slips
Headband is not properly adjusted (Readjust the headband).

**WARNING**
The user must stop using the auto-darkening welding helmet immediately if the above-mentioned problems cannot be corrected. Contact the dealer.

**INSTRUCTIONS FOR USE**
WARNING! Before using the helmet for welding, ensure that you have read and understood the safety instructions.

• POWER
This ADF cartridge is powered by solar cell and 2 AAA alkaline batteries. Open the battery cover, replace the battery when Low battery light turn red. Please connect the battery positive and cathode electrode correctly according to the battery marking inside the battery holder (See fig.1).

• TEST
Press and hold "TEST" to preview shade selection before welding (See fig.1). When released then viewing window will automatically return to the light state (3.5 Shade). Press "TEST", if viewing window does not turn to dark state, replace batteries and try again.
• SELECTING THE GRIND OPTION
When the shade knob is turned to the “grind” position, the shade function is turned off allowing a clear view to grind a weld with the helmet providing face protection. Before restarting welding work, ensure that the shade function is turned back on before welding again (See fig.2).

• SELECTING SHADE LEVEL
Select the shade level you require according to the welding process you will use by referring to the “Shade Guide Table” below for settings. Turn the shade control knob on the side of the helmet to the shade number required.

• SELECTING DELAY TIME
When welding ceases, the viewing window automatically changes from dark back to light but with a pre-set delay to compensate for any bright afterglow on the workpiece. The delay time/response can be set to “S” (short: 0.1 sec.) or “L” (long: 1.0 sec.). As you require using the infinitely dial knob on the back of the shade cartridge (See fig.3a). It is recommended to use a shorter delay with spot welding applications and a longer delay with applications using higher currents. Longer delays can also be used for low current TIG welding in order to avoid the filter opening when the light path to the sensors is temporarily obstructed by a hand, torch, etc.

• SENSITIVITY
The sensitivity can be set to “H” (high) or “L” (low) by using the infinitely dial knob on the back of the shade cartridge. The “Mid-High” setting is the normal setting for everyday use. The maximum sensitivity level is appropriate for low welding current work, TIG, or special applications. Where the operation of the helmet is disturbed by excess ambient light, or another welding machine close by, use the “low” setting (See fig.3b). As a simple rule, for optimum performance, it is recommended to set sensitivity to the maximum at the beginning and then gradually reduce it, until the filter reacts only to the welding light flash and without annoying spurious triggering due to ambient light conditions (direct sun, intensive artificial light, neighbouring welder’s arcs, etc.)

• ADJUSTING THE FIT OF THE HELMET
The overall circumference of the headband can be made larger or smaller by rotating the knob on the back of the headband (See adjustment “Y” in fig.4). This can be done while wearing the helmet and allows just the right tension to be set to keep the helmet firmly on the head without it being too tight.

• If the headband is riding too high or too low on your head, adjust the strap which passes over the top of your head. To do
this release the end of the band by pushing the locking pin out of the hole in the band. Slide
the two portions of the band to a greater or lesser width as required and push the locking
pin through the nearest hole (See adjustment “W” in fig.4).

• Test the fit of the headband by lifting up and closing down the helmet a few times while
wearing it. If the headband moves while tilting, re-adjust it until it is stable.

• ADJUSTING THE DISTANCE BETWEEN THE HELMET AND THE FACE
Step 1: Undo the block nut (See “T” in fig.4) to adjust the distance between the helmet and
your face in the down position.

Step 2: Loosen the block nut on either side of the helmet and slide it nearer or further from
your face (See adjustment “Z” in fig.1). It is important that your eyes are each the same
distance from the lens. Otherwise the darkening effect may appear uneven.
Step 3: Re-tighten the block nut when adjustment is complete.

• ADJUSTING VIEW ANGLE POSITION  Please see fig.5.

• You are now ready to use the helmet. The shading may be adjusted during use by re-setting
the potentiometer control.

SHADE GUIDE TABLE

<table>
<thead>
<tr>
<th>Welding Process</th>
<th>0.5</th>
<th>2.5</th>
<th>10</th>
<th>20</th>
<th>40</th>
<th>60</th>
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<tr>
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<tr>
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NOTE:
SMAW – Shielded Metal Arc Welding          MIG (Heavy) – MIG on Heavy Metals
TIG, GTAW – Gas Tungsten Arc Welding        PAW – Plasma Arc Welding
PAC – Plasma Arc Cutting                   MAG/CO2 - Metal Active Gas
SAW – Shielded Semi-Automatic Arc Welding  MIG (Light) – MIG on Light Alloys
**MAINTENANCE**

- REPLACE THE FRONT COVER LENS. Replace the front cover lens if it is damaged (cracked, scratched, dirty or pitted). Place your finger or thumb into the recess at the bottom edge of the window and flex the window upwards until it releases from one edge (See fig.6).

- REPLACE THE INNER COVER LENS. If it is damaged (cracked, scratched, dirty or pitted).

- CHANGING THE SHADE CARTRIDGE (See figs.6a & 6b).

- INSTALLING NEW CARTRIDGE. Take the new shade cartridge and pass the potentiometer cable under the wire loop before dropping the cartridge into its retaining frame inside the helmet. Press down the wire loop clip and ensure that the front edge of the loop is properly retained under the retaining lugs as shown in fig.6b.

- Fasten the potentiometer to the inside of the helmet with the shaft protruding through the hole. Push the shade control knob onto the shaft.

- CLEANING. Clean helmet by wiping with a soft cloth. Clean cartridge surfaces regularly. Do not use strong cleaning solutions. Clean sensors and solar cells with methylated spirit and a clean cloth and wipe dry with a lint-free cloth.
TECHNICAL SPECIFICATIONS

Viewing Area: 98x44mm (3.86"x1.73")
Cartridge Size: 110x90x9mm (4.33"x3.54"x0.35")
Arc Sensor: 2
Light State: DIN 3.5
Shade: DIN 9 ~ 13
Shade Control: External, Variable Shade
Power On/Off: Fully Automatic
Sensitivity Control: Adjustable by infinitely dial knob
UV/IR Protection: Up to Shade DIN16 at all times
Power Supply: Solar cell. Replaceable batteries
2 x AAA Alkaline battery
Low Battery Alarm: Red Light
Switching Time: 1/25,000 s. from Light to Dark
Delay (Dark to Light): 0.1 ~ 1.0 s by infinitely dial knob
Low Amperage TIG Rated: ≥ 5 amps (DC); ≥ 5 amps (AC)
Grinding: Yes
Operating Temp.: -10 °C ~ +55 °C (14 °F ~ 131 °F)
Storing Temp.: -20 °C ~ +70 °C (-4 °F ~ 158 °F)
Helmet Material: High Impact Resistance Nylon
Total Weight: 1.09Lbs
Application Range:
Stick Welding (SMAW); TIG DC&AC; TIG Pulse DC; TIG Pulse AC; MIG/MAG/CO2; MIG/MAG Pulse; Plasma Arc Cutting (PAC); Plasma Arc Welding (PAW); Air Carbon Arc Cutting (CAC-A);
Grinding
Approved: ANSI Z87.1 / CSA Z94.3
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<tr>
<th>Reference Number</th>
<th>Description</th>
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<tr>
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<td>Lens kit</td>
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<tr>
<td>6</td>
<td>Shade control knob</td>
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