



INSTRUCTIONS FOR

# WELDING HELMET AUTO DARKENING SHADE 9-13

MODEL NO: PWH610, PWH611, PWH612, PWH613

Thank you for purchasing a Sealey product. Manufactured to a high standard, this product will, if used according to these instructions, and properly maintained, give you years of trouble free performance.

**IMPORTANT:** PLEASE READ THESE INSTRUCTIONS CAREFULLY. NOTE THE SAFE OPERATIONAL REQUIREMENTS, WARNINGS & CAUTIONS. USE THE PRODUCT CORRECTLY AND WITH CARE FOR THE PURPOSE FOR WHICH IT IS INTENDED. FAILURE TO DO SO MAY CAUSE DAMAGE AND/OR PERSONAL INJURY AND WILL INVALIDATE THE WARRANTY. KEEP THESE INSTRUCTIONS SAFE FOR FUTURE USE.



Refer to instruction manual

## 1. SAFETY

- WARNING!** This helmet is not suitable for use with laser welding or CUTTING or for overhead welding applications.
- ✓ Ensure all workshop safety rules, regulations and conditions are complied with when using welding equipment. The helmet will not offer protection against misuse of workshop tools, equipment, or accessories.
- ✓ Maintain the helmet in good condition and protect cartridge from liquid and dirt contact. Regularly replace the protective lens and replace any damaged or worn parts. Use genuine parts only. Unauthorised parts may be dangerous and will invalidate the warranty.
- ✓ Ensure the front cover window is securely in place before use.
- ✓ Fit the helmet and adjust the head band so the helmet will sit as low and near to your face as possible.
- ✓ Use helmet only in temperatures ranging from -10°C to 60°C.
- ✓ Remove ill fitting clothing, remove ties, watches, rings and other loose jewellery.
- ✓ Maintain correct balance and footing.
- ✓ Ensure the floor is clear from obstructions, not slippery and wear non-slip shoes.
- ✓ Keep children and unauthorised persons away from the working area.
- WARNING!** The helmet will only protect the eyes and face from radiation and sparks. It will not protect against explosive devices or corrosive liquids.
- ✗ **DO NOT** use helmet for any purpose for which it is not designed.
- ✗ **DO NOT** use helmet unless you have been instructed in its use by a qualified person.
- ✗ **DO NOT** open or tamper with the shade cartridge.
- ✗ **DO NOT** get the helmet wet or use in damp or wet locations.
- ✗ **DO NOT** leave work place with helmet in lowered position, as bright light source may darken cartridge unexpectedly.
- ✗ **DO NOT** place the helmet on a hot surface.
- ✗ **DO NOT** use helmet without front cover window fitted. To do so will invalidate your warranty.
- ✓ Clean helmet (see section 5.4) and store the helmet in a safe, dry, childproof location.
- WARNING!** Before welding always inspect the cartridge filter to ensure that it is not damaged. To test the filter prior to welding, direct the front of the cartridge filter to a bright light source which will cause the lens to darken. Then using your hand rapidly cover and uncover the sensor. The filter should lighten momentarily then return to a dark state.
- WARNING! DO NOT** use the helmet if damaged or you suspect it may be faulty. (Contact Sealey dealer).
- ▲ **DANGER! DO NOT** use if, at any time, the face plate in the cartridge **FAILS** to darken when exposed to a welding spark. Remove cartridge and return to your Sealey stockist for checking.
- ▲ **Continued use of the product knowing that the auto darkening feature is NOT FUNCTIONING may DAMAGE YOUR EYES and CAUSE BLINDNESS.**

## 2. INTRODUCTION

Welding helmet with infinitely adjustable shade control between 9-13. Complies with BS EN 379, BS EN 175 and DIN standards. Features True Colour technology for improved visibility, less eye strain and realistic colour recognition. Fully automatic switching from light to dark on striking arc. Shade is selected by a rotary knob on side of helmet. Grinding function enables user to grind without removing mask. Solar panel power supply - no batteries required. Features sensitivity and delay controls for switching light to dark. Contoured design helmet with adjustable headband for added comfort. Suitable for MIG, TIG and arc welding.

## 3. SPECIFICATIONS

Model No's:..... PWH610, 611, 612, 613  
 Shade active: ..... 9-13 variable  
 Shade inactive: ..... 4  
 Viewing area: ..... 96 x 38mm  
 Grinding function:..... yes  
 Operating time light/dark: ..... 0.1ms  
 Operating temperature: ..... -10°C to +60°C  
 Power:..... solar cells  
 Weight:..... 515g

## 4. INSTRUCTIONS

- ❑ **WARNING!** Before using the helmet for welding ensure you have read and understood the safety instructions in Section 1. Before the mask can be used the headband must be adjusted to fit the user properly.

### 4.1. ADJUSTING THE FIT OF THE HELMET.

- 4.1.1. The overall circumference of the headband can be made larger or smaller by pushing in and rotating the knob on the back of the headband (See adjustment 'A' in fig.1). This can be done whilst 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.
- 4.1.2. 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 pip 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 pip through the nearest hole (See adjustment 'B' in fig.1)
- 4.1.3. Test the fit of the headband by lifting up and closing down the helmet a few times whilst wearing it. If the headband moves whilst tilting re-adjust it until it is stable.

### 4.2. ADJUSTING HELMET TILT.

- 4.2.1. If the cartridge window is not aligned with the eyes when the helmet is in the lowered position adjust the tilt of the helmet in relation to the headband. Referring to fig.2 loosen the knob 'C' adjacent to the tilt plate 'D'. Lift the tilt lever 'E' off tilt plate 'D' and rotate it to the required position. Retighten the clamp knob 'C'.

### 4.3. SELECTING SHADE LEVEL

- 4.3.1. Refer to the shade guide in Section 7 and adjust the knob on the side of the helmet to the correct setting (fig.3).

### 4.4. GRIND POSITION.

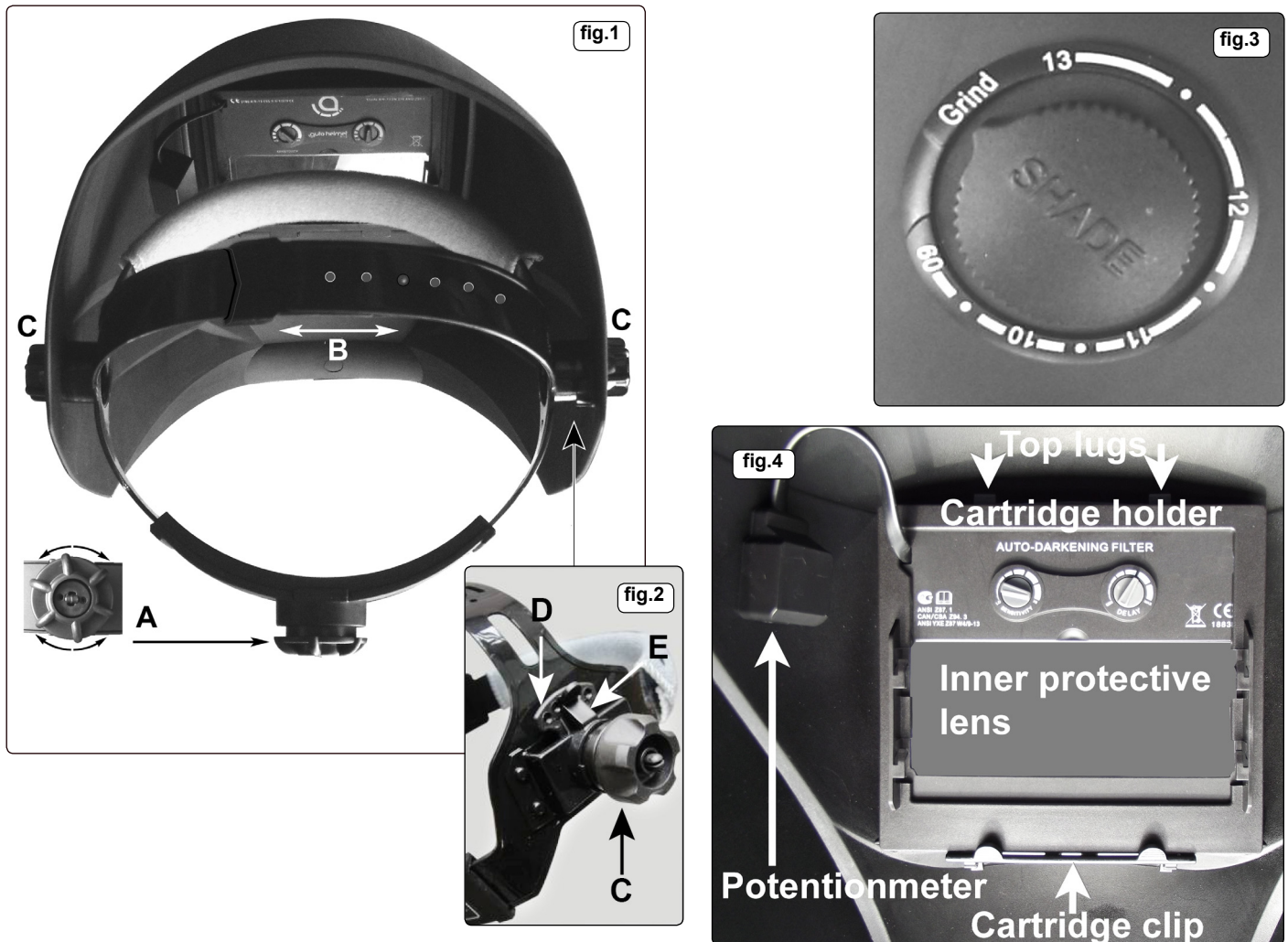
- 4.4.1. Turn the shade knob (fig.3) anti-clockwise until it clicks into the grind position. When grinding is finished the knob must be turned back to the appropriate shade position before welding again. Failure to do this could result in damage to your eyes.

### 4.5. SELECTING DELAY TIME/RESPONSE TIME

- 4.5.1. The delay time in which it takes the lens to change from dark to light or vice versa can be varied from 0.1sec to 0.9 sec, this adjustment is carried out by turning the delay time knob on the inside of the cartridge, see fig.4.

### 4.6. SENSITIVITY

- 4.6.1. For normal ambient light conditions set the sensitivity knob to the high setting (fig.4).
- 4.6.2. For conditions where there is an excess of light, which may affect the performance of the lens, turn the knob to the low setting.



## 5. MAINTENANCE

### 5.1. FITTING NEW CARTRIDGE Refer to fig.4

- 5.1.1. All parts fit into the back of the helmet.
- 5.1.2. Pull off grinding knob, undo nut and release potentiometer from helmet body.
- 5.1.3. Pull cartridge clip down, pull bottom of cartridge out and disengage from top lugs.
- 5.1.4. Unclip cartridge from its holder, take note of the way it fits into the cartridge holder.
- 5.1.5. Renew cartridge and reassemble in reverse order.

## 5.2. REPLACING OUTER PROTECTIVE COVER LENS

5.2.1. Remove the shade cartridge (refer to 5.1)

5.2.2. Push the lens into the helmet and renew.

## 5.3. REPLACING INNER PROTECTIVE COVER LENS.

5.3.1. From inside the helmet, use finger recess in the top edge of the filter to lever up the lens and replace.

## 5.4. CLEANING

5.4.1. Clean helmet by wiping with a soft cloth. Clean cartridge surfaces regularly. Do not use solvent based cleaners.

5.4.2. Clean sensors and solar cells with methylated spirit using a clean cloth and wipe dry with a lint-free cloth.

## 6. TROUBLESHOOTING

Problem	Cause	Solution
Irregular darkening or dimming.	The headband may have been unevenly set on the two sides of the helmet (unequal distances from the eyes to the shade cartridge).	Readjust the distance of the shade cartridge.
Shade cartridge does not darken or flickers.	The sensors are soiled or obstructed.	Clean.
	Front cover lens oiled or damaged.	Clean or replace.
	Welding current too low.	Adjust weld amps.
Poor vision.	Operative lenses and/or shade cartridge soiled.	Check, clean or replace.
	Insufficient background lighting.	Adjust light.
Slow response.	Operating temperature too low.	Do not use at temperatures below -10°C (14°F).
Welding helmet slips.	Headband adjustments incorrect.	Refer to section 4.

## 7. SHADE GUIDE

WELDING PROCESS	CURRENT (AMPERES)													
	0.5	2.5	10	20	40	60	125	175	225	275	350	450		
Covered Electrode		1.0	5.0	15	30	50	100	150	200	250	300	400	500	
MIG Plate Welding	Shade 9				S10		Shade 11			Shade 12		Shade 13		S14
MIG Sheet Welding	Shade 9				S10		Shade 11			Shade 12		S13	S14	S15
TIG	Shade 9				S10	Shade 11			S12	Shade 13		Shade 14		
MAG	Shade 9				S10	S11	S12	Shade 13		S14	S15			
Arc Gouging	Shade 9				S10	S11	S12	S13	S14	S15				
Plasma Cutting	Shade 9				S10	S11	Shade 12			Shade 13				
Plasma Welding	4	5	6	7	8	9	10	11	S12	Shade 13		Shade 14		S15
Meaning of the markings on the filter:														
4	9	13	SEALEY		1	3	1	379						
Light state scale no.	Lightest dark state scale no.	Darkest state scale no.	Manufacturers identification.		Optical class.	Diffusion of light class.	Variation in luminance transmittance class.	Number of the applied standard.						

Parts support is available for these products. Please contact us: email [sales@sealey.co.uk](mailto:sales@sealey.co.uk) or telephone 01284 757500



### ENVIRONMENT PROTECTION

Recycle unwanted materials instead of disposing of them as waste. All tools, accessories and packaging should be sorted, taken to a recycling centre and disposed of in a manner which is compatible with the environment. When the product becomes completely unserviceable and requires disposal, drain any fluids (if applicable) into approved containers and dispose of the product and fluids according to local regulations.

**Note:** It is our policy to continually improve products and as such we reserve the right to alter data, specifications and component parts without prior notice.

**Important:** No Liability is accepted for incorrect use of this product.

**Warranty:** Guarantee is 12 months from purchase date, proof of which is required for any claim.

Sealey Group, Kempson Way, Suffolk Business Park, Bury St Edmunds, Suffolk. IP32 7AR



01284 757500



01284 703534



[sales@sealey.co.uk](mailto:sales@sealey.co.uk)



[www.sealey.co.uk](http://www.sealey.co.uk)