

SEALEY POWER WELDERS

INSTRUCTIONS FOR:
**WELDING HELMET SOLAR
POWERED SHADE 9 - 13**
MODEL NO: **PWH399**

Thank you for purchasing a Sealey Power 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 AND CAUTIONS. USE THIS PRODUCT CORRECTLY AND WITH CARE FOR THE PURPOSE FOR WHICH IT IS INTENDED. FAILURE TO DO SO MAY CAUSE DAMAGE OR PERSONAL INJURY AND WILL INVALIDATE THE WARRANTY. PLEASE KEEP INSTRUCTIONS SAFE FOR FUTURE USE.

1. SAFETY INSTRUCTIONS

- 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 -5°C to 55°C (23°F to 131°F).
- ✓ Store helmet only in temperatures ranging from -20°C to 70°C (-4°F to 158°F).
- ✓ 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.
- x **DO NOT** use helmet for any purpose for which it is not designed.
- x **DO NOT** use helmet unless you have been instructed in its use by a qualified person.
- x **DO NOT** open or tamper with the shade cartridge.
- x **DO NOT** get the helmet wet or use in damp or wet locations.
- x **DO NOT** leave work place with helmet in lowered position, as bright light source may darken cartridge unexpectedly.
- x **DO NOT** place the helmet on a hot surface.
- x **DO NOT** use helmet without front cover window fitted. To do so will invalidate your warranty.
- ✓ Clean helmet (see section 5.5) and store the helmet in a safe, dry, childproof location.
- WARNING!** The materials of the helmet may, when coming into contact with the wearers skin, cause an allergic reaction to susceptible individuals.
- 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 dealer for checking.**
Continued use of the product knowing that the auto darkening feature is NOT FUNCTIONING may DAMAGE YOUR EYES and CAUSE BLINDNESS.

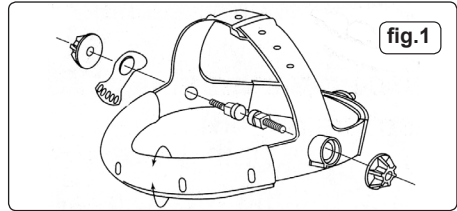
2. INTRODUCTION

High quality variable shade 9-13 welding helmet manufactured and tested to BS EN 379 and BS EN 175. Fully automatic switching from light to dark on striking arc. Fitted with solar power panel - no batteries required. Features infinitely adjustable sensitivity and delay controls for switching dark to light. Grinding mode enabling the user to grind without the need to remove mask. Contoured design offers full face and neck protection and also protects lens from scratching when unit is laid down. Fitted with comfortable head band and non-slip quick release ratchet mechanism. Suitable for MIG, TIG and arc welding.



3. SPECIFICATION

Model No:.....	PWH399
Shade Active:.....	9 - 13 Variable
Shade Inactive:.....	4
Viewing Area:.....	96 x 42mm
UV/IR Protection:.....	YES
Operating time, Light/Dark:.....	0.0001ms
Temperature Range:.....	-5°C to +55°C
Power:.....	Solar Cells



4. INSTRUCTIONS FOR USE

⚠ **WARNING!** Before using the helmet for welding ensure you have read and understood the safety instructions in Section 1.

4.1 Assemble the headband parts (see fig.1) into the mask as indicated in fig.2. Before the mask can be used the headband must be adjusted to fit the user properly.

4.2 ADJUSTING THE FIT OF THE HELMET.

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.2). 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.

4.3 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.2).

4.4 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.

4.5 ADJUSTING HELMET TILT.

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 plate off the fixed peg within the helmet and rotate it to the required position and allow one of the holes in the plate to drop back over the peg. Retighten the clamp knob 'C'.

4.6 SELECTING SHADE LEVEL.

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

4.7 **GRIND POSITION.** 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.**

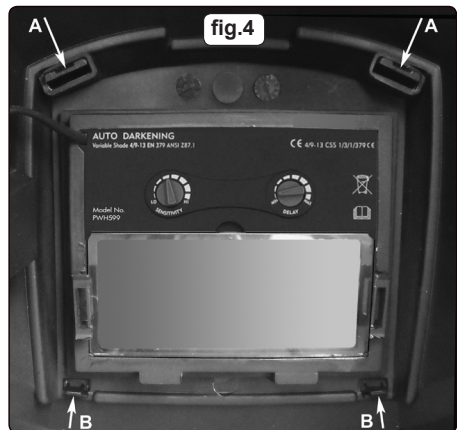
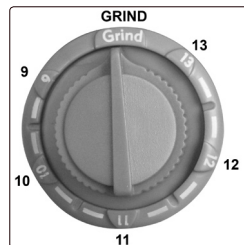
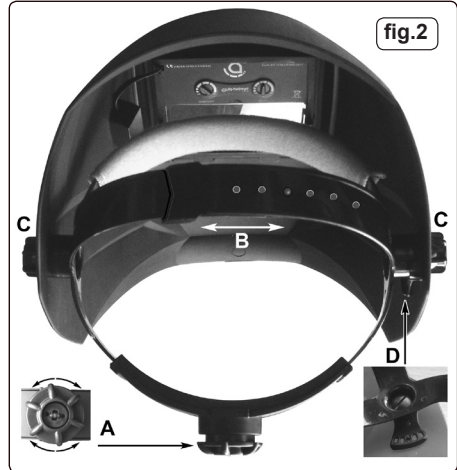
4.8 SELECTING DELAY TIME/RESPONSE TIME

4.8.1 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.

4.9 SENSITIVITY

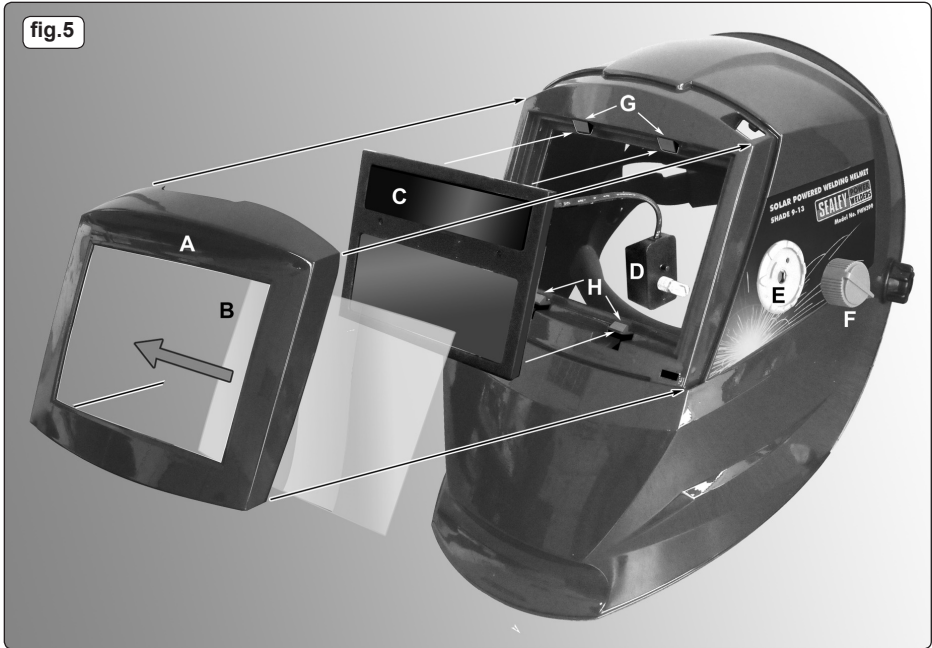
4.9.1 For normal ambient light conditions set the sensitivity knob to the high setting (fig.4).

4.9.2 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

fig.5



5.1 CHANGING THE SHADE CARTRIDGE.

All components clip into the front of the helmet as shown in fig.5 above.

5.1.1 To access the cartridge firstly remove the front cover 'A' by releasing the four clips accessible on the inside of the helmet above and below the cartridge.

5.1.2 Release the top clips first (see 'A' in fig.4) by pressing them downwards and forwards. Then release the bottom clips (see 'B' in fig.4) by pressing them upwards and forwards. Lift off the front cover.

5.1.3 Pull the grey knob off the potentiometer shaft on the side of the helmet. Unscrew the nut at the base of the shaft and remove it. Push the shaft through into the inside of the helmet so that the potentiometer is hanging free on its lead.

5.1.4 Referring to fig.5, push downwards on the two clips 'H' whilst pushing the bottom edge of the cartridge outwards from inside the helmet. When it is free from the lower clips pull the cartridge downwards and forwards to free it from the upper retainers. See 'G' in fig.5.

5.2 FITTING NEW CARTRIDGE.

Take the new shade cartridge and hook the top edge under the upper retainers 'G' ensuring that the potentiometer has passed into the inside of the helmet. Push firmly on the bottom edge of the cartridge so that it snaps into place behind the two clips 'H'.

5.2.1 Refix the potentiometer to the side of the helmet and turn the shaft anticlockwise until it clicks into the 'off' position. Push the knob back onto the shaft so that the pointer points to the 'Grind' position.

5.2.2 Place the front cover 'A' onto the front of the helmet so that the cover clips pass into the matching holes in the

helmet. Press firmly on the top of the cover to engage the top clips then press firmly at the base of the cover to engage the lower clips.

5.3 REPLACING OUTER PROTECTIVE WINDOW.

Remove the front cover 'A' as described in sections 5.1.1 and 5.1.2.

5.3.1 Remove the window 'B' from the back of the front cover by lifting one vertical edge and sliding the whole window sideways until it releases from its retaining points. The window will flex sufficiently to allow you to do this.

5.3.2 Flex the new window and slide it in from one side under the retaining points until it is in position. Ensure that it laps over the inside of the window opening on either side.

5.4 REPLACING CARTRIDGE PROTECTIVE WINDOW.

The protective cartridge window that can be seen on the inside of the helmet should be replaced if damaged. The window is held in place at its four corners.

5.4.1 To remove the window place your finger tip into the scoop just below the cartridge controls (see fig.4) and flex the window upwards until the upper corners release. Lift out the window.

5.4.2 Take the new window and place one vertical edge under the corner retainers in the window recess. Flex the window in the middle and tuck the other end into the corner retainers.

5.5 CLEANING.

Clean helmet by wiping with a soft cloth. Clean cartridge surfaces regularly. Do not use solvent based cleaners . Clean sensors and solar cells with methylated spirit using a clean cloth and wipe dry with a lint-free cloth.

6. PROBLEM SOLVING

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 & MARKINGS

WELDING PROCESS	CURRENT (AMPERES)														
	0.5	2.5	10	20	40	60	125	175	225	275	350	450			
		1.0	5.0	15	30	50	100	150	200	250	300	400	500		
Covered Electrode	Shade 9				S10		Shade 11			Shade 12			Shade 13		S14
MIG Plate Welding	Shade 10					Shade 11			Shade 12			Shade 13		S14	
MIG Sheet Welding	Shade 10					Shade 11			Shade 12		S13	S14	S15		
TIG	Shade 9		S10	Shade 11			S12	Shade 13			Shade 14				
MAG	Shade 10				S11	S12	Shade 13			S14	S15				
Arc Gouging	Shade 10							S11	S12	S13	S14	S15			
Plasma Cutting	Shade 11						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.

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 equipment.

WARRANTY: Guarantee is 12 months from purchase date, proof of which will be required for any claim.

INFORMATION: Call us for a copy of our latest catalogue on 01284 757525 and leave your full name and address including your postcode.

	Sole UK Distributor Sealey Group, Bury St. Edmunds, Suffolk.	 01284 757500  01284 703534	 www.sealey.co.uk  sales@sealey.co.uk
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EC DECLARATION OF CONFORMITY

We the sole importers into the UK, hereby declare that the equipment described below

Description and Function:.....Welding Helmet Solar Powered Shade 9-13.....

Model/Type:.....PWH399.....

Manufacturing Date / Serial number (optional).....

Manufacturer's authorised representative within the EC: **Jack Sealey Ltd. Kempson Way, Suffolk Business Park, Bury St. Edmunds, Suffolk, IP32 7AR**

Conforms to the requirements of the following Directives, as indicated.

- 2006/42/EC Machinery Directive
- 2000/14/EC Outdoor Noise Emissions Directive
- 2006/95/EC Low Voltage Directive
- 2002/96/EC WEEE Directive
- 2004/108/EC EMC Directive
- 2002/95/EC RoHS Directive
- 93/68/EEC CE Marking Directive
- 97/23/EC Pressure Equipment Directive

And the following harmonised standard(s): **BS EN 175: 1997** **BS EN 379: 2003 + A1: 2009**

BS EN 165: 2005 **BS EN 166: 2002**

National technical standards and specifications (if applicable):.....

Technical file compiled by: **Jack Sealey Ltd.**

Signed:.....*Steve Buckle*.....

Date:.....10-May-2010.....

Place: Bury St.Edmunds.

Name:.....Steve Buckle.....

Position:.....Marketing Director.....

Being the responsible person appointed by the manufacturer.



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