

WELDING HELMET CARBON FIBRE TYPE

LIGHT REACTIVE 9-13 VARIABLE

JEFWELHT3C



User Manual

www.jeffersonstools.com

Specification

• Viewing Area	98mm x 55mm (3.86" x 2.17")	• Switching Time Light to Dark	1/20000s (0.00005s)
• Cartridge Size	110 x 90 x 9mm (4.33" x 3.54" x 0.35")	• Switching Time Dark to Light	0.3s - 0.9s
• UV / IR Protection	Permanent Shade DIN16	• Operating Temperature	-5°C to + 55°C (23°F to 131°F)
• Light State	DIN Shade 4	• Storage Temperature	-20°C to + 70°C (-4°F to 158°F)
• Dark State	From DIN9 to DIN13 (Variable)	• Function Modes	Grinding Mode Welding Mode
• Power Supply	Solar cells, with built in replaceable battery	• Helmet Material	Hi Impact Polymide Nylon BS EN175BCE
• Power On / Off	Fully automatic	• Net Weight	470g
		• Minimum Amperage	40 Amps

Note: This product is manufactured to conform with related DIN EN379 and DIN 175 safety standards and ANSI / ISEA Z87.1-2010 safety standards



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. PLEASE KEEP INSTRUCTIONS SAFE FOR FUTURE USE.

1. Before Welding

- 1) Ensure that the filter, front cover lens, inside cover lens and four optical sensors are clean and secure.
- 2) Inspect all operating parts before use for signs of wear or damage. Any scratched, cracked or pitted parts should be replaced immediately before use to avoid severe personal injury.
- 3) Ensure that the position of the headband is adjusted to fit comfortably and safely. The helmet should be seated as low as possible on the head and close to the face.
- 4) Select the correct DIN Shade setting for your application see table below:

2. DIN Shade Settings

The shade number can be set manually between 9-13. Check the Shade Guide Table below to determine the proper shade number for your application. Select a shade number by turning the shade knob until the arrow points to the required setting:

Process	Arc Current (Amperes)																						
	0.5	1	2.5	5	10	15	20	30	40	60	80	100	125	150	175	200	225	250	275	300	350	400	450
SMAW						9	10	11			12			13			14						
MIG (Heavy)											10	11		12			13			14			
MIG (Light)											10	11		12		13		14		15			
TIG, GTAW				9	10	11			12			13			14								
MAG/CO2								10	11	12	13			14		15							
SAW												10	11	12	13	14	15						
PAC									11		12		13										
PAW				8	9	10	11	12		13		14			15								

3. Operation & Safety

WARNING: IF YOU ENCOUNTER ANY PROBLEMS WITH THE HELMET BEFORE OR DURING USE IT IS IMPORTANT THAT YOU DO NOT CONTINUE WITH THE WELDING PROCESS. IF THE FILTER FAILS TO DARKEN CORRECTLY, FLASHES OR IS UNABLE TO ATTAIN THE APPROPRIATE SHADE TO PROTECT YOUR EYES YOU SHOULD STOP IMMEDIATELY AND CONTACT YOUR JEFFERSON DEALER OR SUPPLIER.

3.1 Welding Protection

- Ensure that the helmet is not used in conditions where welding spatter is more than 43g and exceeding 120m/s.
- The helmet is manufactured to DIN BS EN175:1997 (Impact Level B) please ensure that the appropriate protective clothing is worn to protect any other parts of the body exposed during the welding process.

3.2 Sensitivity, Mode and DIN Shade Settings

- Before you start welding adjust the Mode, Sensitivity and DIN Shade to the appropriate settings for the welding process (see Fig1a & Fig1b) and arc amperage (see table on page 2).
- Continue to adjust the DIN shade settings to attain the appropriate brightness to allow you to see the welding molten pool and the welding spot without glare.

3.3 DIN Shade Delay Setting

It is important that the correct delay setting is used for your welding process to avoid any sudden flaring when you finish the welding process and the welding arc is broken. When the welding arc is broken it is possible for residual arc to flare from the molten welding pool which can be hazardous if the helmet has already automatically adjusted the DIN shade to a lighter setting. To accommodate for this, the helmet is equipped with a **Delay Time Switch** for additional eye protection which can be set to three positions - depending on the welding process:

- 1) **Long** = 0.6 to 0.9 second delay
- 2) **Middle** = 0.4 to 0.6 second delay
- 3) **Short** = 0.3 to 0.5 second delay

It is important that you use the correct delay & sensitivity setting to suit your welding process and that you test the battery and filter before use.

3.4 Testing

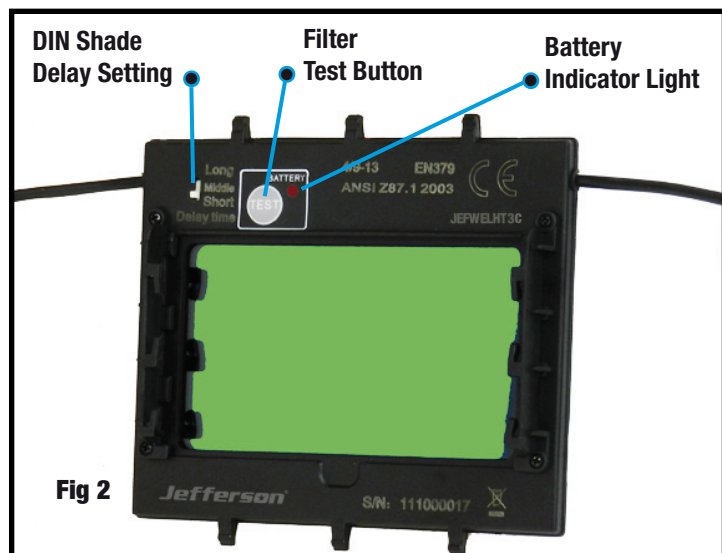
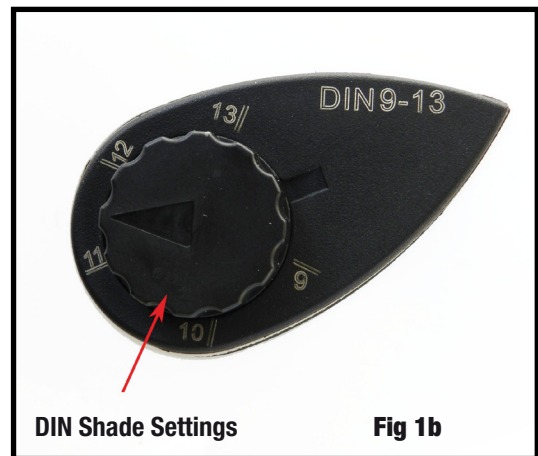
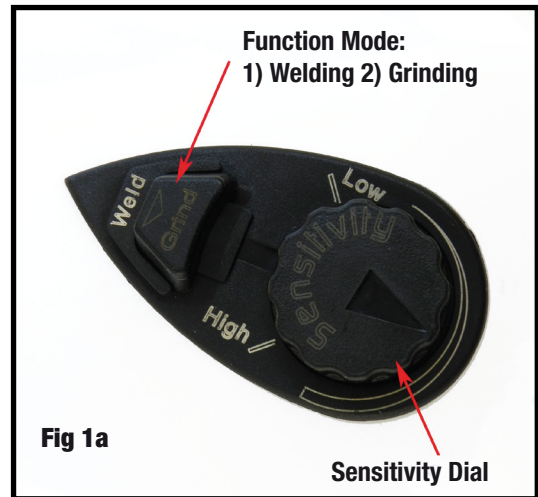
1. Testing the Battery:

You can test the lithium battery is charged by checking that the **Battery Indicator Light** is on. The **Battery Indicator Light** is located beside the **Test** button on the control panel (see Fig 2). If the red light is not displaying or if the light is weak you need to replace the batteries. The helmet takes two CR2450 type batteries.

2. Testing the Filter:

You can test the filter by pressing the **Test** button on the control panel (see Fig 2).

If the battery indicator is on and the filter shade is not darkening when you press the **Test** button there is a fault with the filter and it should not be used to prevent the risk of injury.



3. Operation & Safety (continued...)

3.5 The Magnifying Lens

A magnifying lens is available for this model (sold separately).
The lens is fixed over the visor shown in **Fig 3**.

3.6 Adjusting the Headgear

- It is important that the Helmet fits the user comfortably and securely before welding begins.
- The helmet can be adjusted in 4 places to allow you to establish the best fit (see Fig 4).

1. Top Headband - Adjust the depth of the headband to fit accordingly

2. Filter Harness - Adjust to set the correct distance between the welders eyes and the filter lens

3. Back Headband - Loosen or tighten to attain a comfortable and secure fit

4. Incline Angle - Adjust to set the incline angle of the helmet relative to the welders face and the position of the welders eyes relative to the filter lens

Note: This helmet headband is designed with a mechanism that helps to adjust the centre of gravity on the helmet when the visor is up and down. This mechanism helps to reduce the weight on the neck and reduce fatigue - making the helmet more comfortable and secure when you are working.

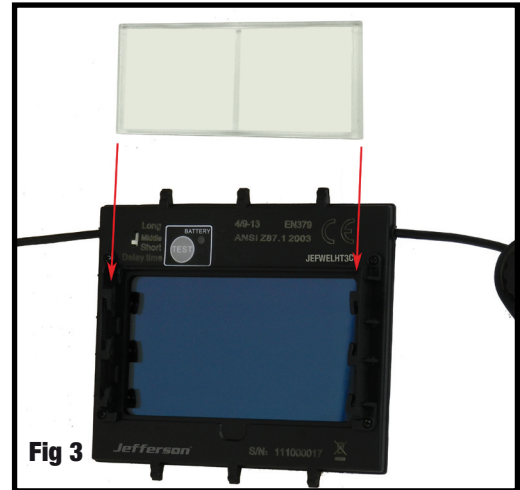


Fig 3

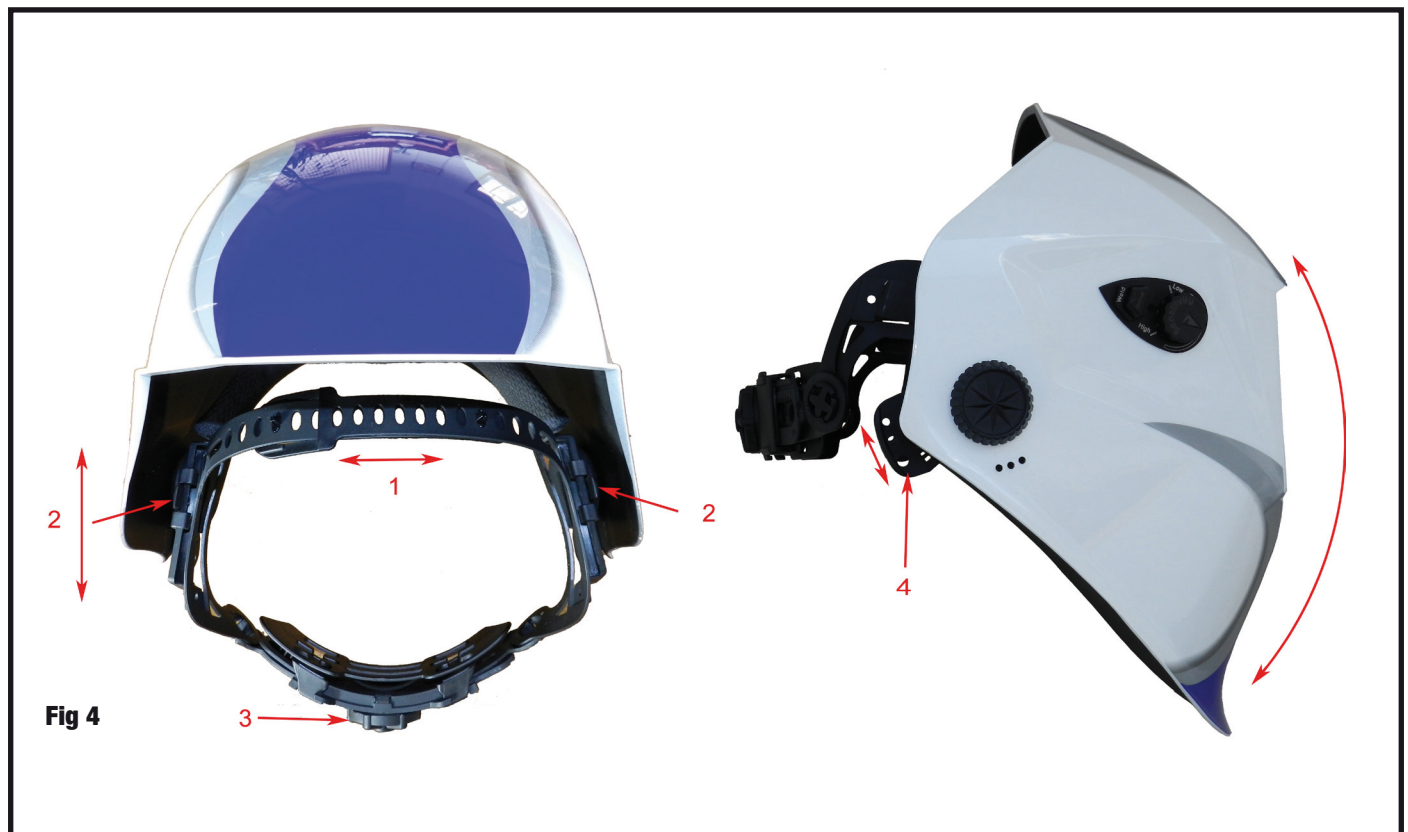
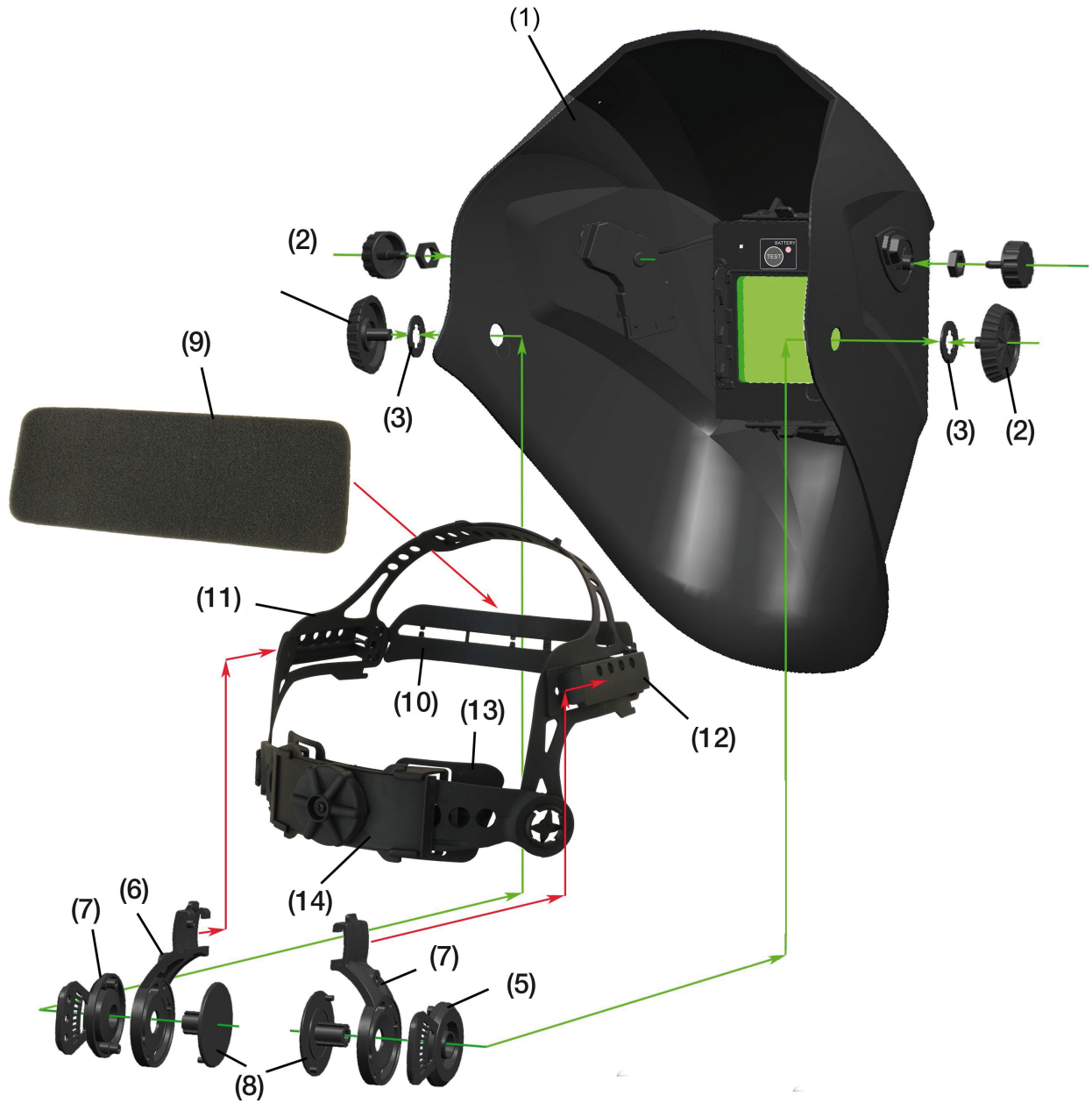


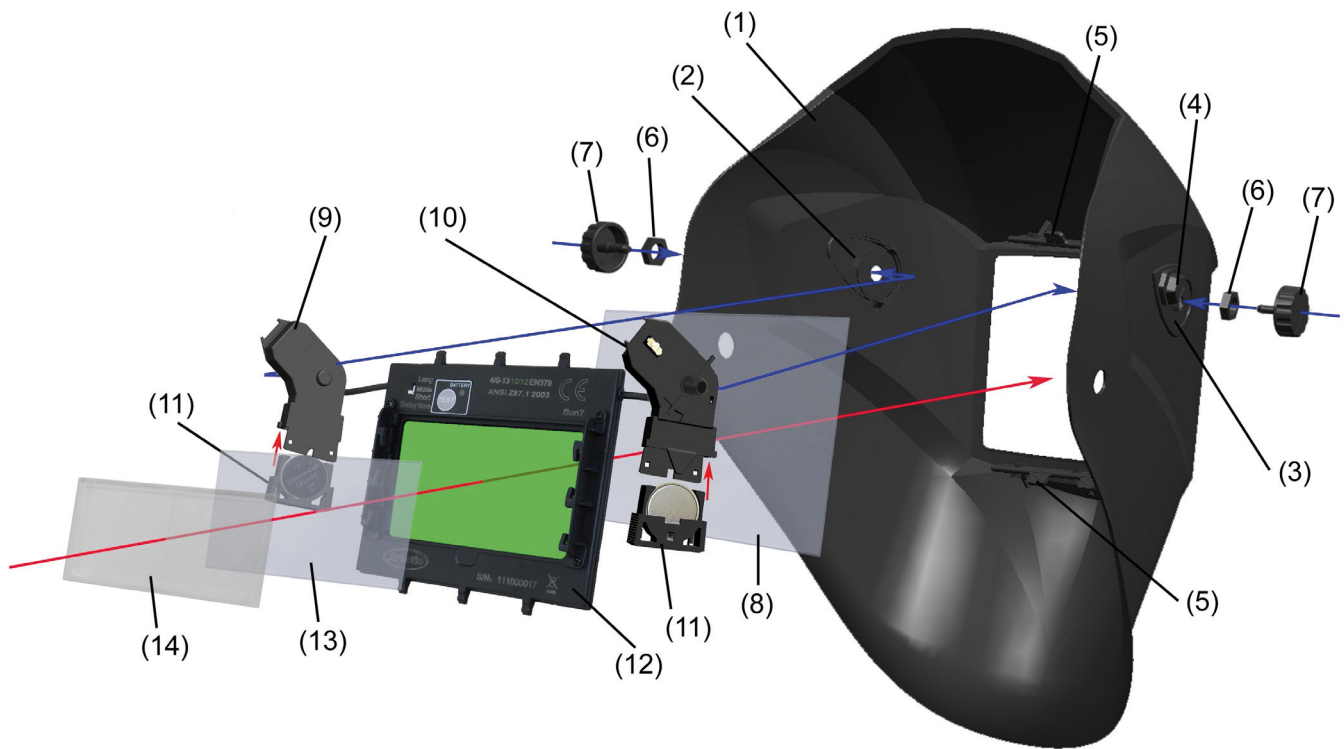
Fig 4

4. Replacement Parts List (part 1)



1. Shell (Welding Mask)	8. Headband fixing screw rack
2. 2x Block Nut	9. Sweatband (cloth)
3. 2x check washer	10. Front band
4. Angle adjusting shim (left)	11. Left band
5. Angle adjusting shim (right)	12. Right band
6. Headband rack (left)	13. Black Elastic Pad
7. Headband rack (right)	14. Headband regulator assembly

5. Replacement Parts List (Part 2)



1. Shell (Welding Mask)	8. Front Cover Lens
2. Shade Scale Plate	9. Shade Screen
3. Sensitivity Scale Plate	10. Sensitivity Screen
4. Welding / Grinding Mode Switch	11. Lithium Battery Housing
5. Filter setting Frame	12. Auto-Darkening Filter
6. 2x Shade Nuts	13. Inside Cover Lens
7. 2x Shade Sensitivity Knobs	14. Magnifying Lens (sold separately)

