

XR943H

FLIP Light Reactive Welding and Grinding Helmet

User Instructions



XR943H - FLIP Light Reactive Welding and Grinding Helmet

1. Introduction

Thank you for your purchase of the Parweld XR943H Welding Helmet. Please read and understand this instruction manual thoroughly to ensure correct, safe and effective use of the helmet. Failure to do so can result in serious injury. Keep this manual in a safe place for future reference.

2. Product Features

The XR943H uses a thin Liquid Crystal Display coupled to sensors react instantly to the arc being struck and switch the display to block the light before it is registered by the eye. The dark shade can be adjusted from 4-13 DIN depending upon the application. The lens system also includes permanent UV and IR filters which ensure full time protection for the user even in the light state or a failure mode. The helmet uses a true colour filter which improves the contrast and visibility especially with green LED's and the colours of the ARC are more realistic. Part of the helmet can be raised for use when grinding or moving around the work area.

Working Temperature
Range from -5 to +55°C.

Storage Temperature
Range from -20 to +70°C.

Relative Humidity
Range from 20% to 80%.

3. Technical Specifications and Parameters

View area (mm):	108x74
Shade Range	Clear state: DIN 3
	DIN 4-8, Step-less Adjustable
	DIN 9-13, Step-less Adjustable
Switching Time	1/30000s
Clearing Delay	0.04-2.0s, Adjustable
Sensitivity Control	0-9 Adjustable
Operation Mode	Weld, Grind, Cut
UV/IR Protection	DIN 16 Permanent with Visor Down
Alerts	ADF Self-check, Low Battery Warning

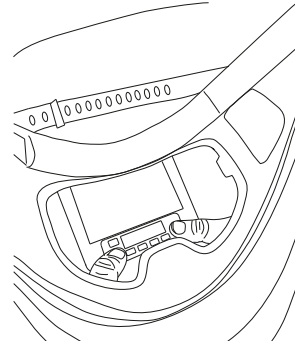


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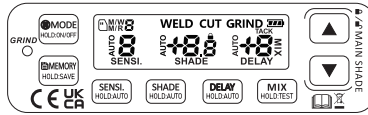
4. Controls Location



To access and operate the controls, partially open the flip and use your thumbs to operate the buttons.

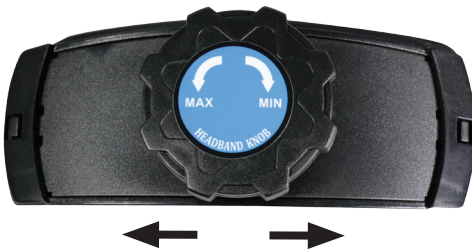


Internal cartridge controls



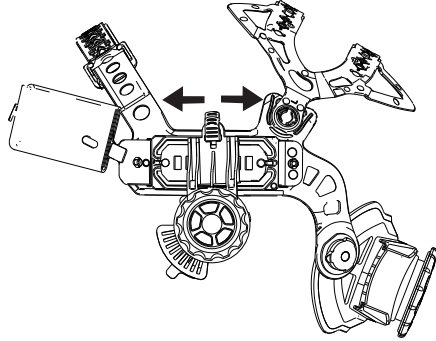
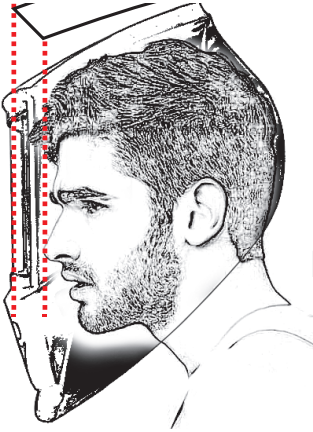
5. Adjustment to Suit Your Head

a) The helmet is provided with a range of adjustments to ensure a perfect fit on your head. Adjust the headband diameter, and the 3 overhead bands so the lens is positioned in your normal line of sight.

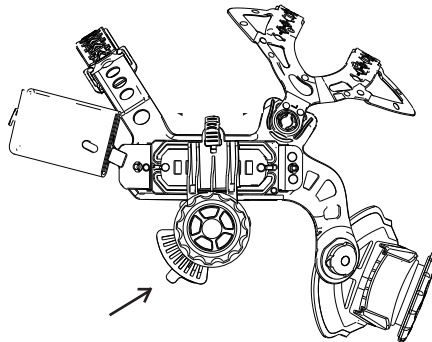


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b. Adjust the Distance Between Face and ADF, Using the two slider tabs, this will allow clearance for spectacles or face masks, ensure they are both set in the same position.



c. Adjust the rake rotation angle, this sets how far down the helmet sits in the down position depending on you working angle you will want to adjust this so the helmet sits close to you chest while maintaining the lens central to you vision. Adjust using the 2 tabs on the inside of the helmet at the pivot point.



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6. Operation

The XR943H can be operated in fully automatic mode or set manually, depending upon the application.

Welding

Use mode button to toggle to welding mode.

Shade adjustment

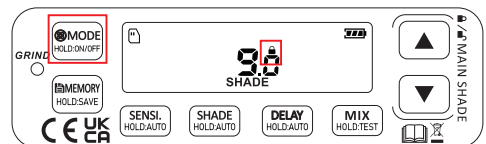
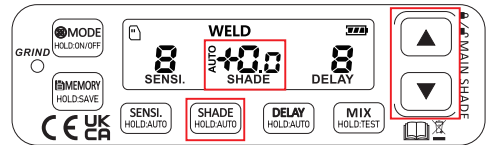
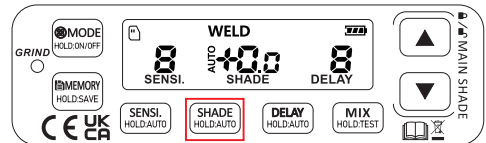
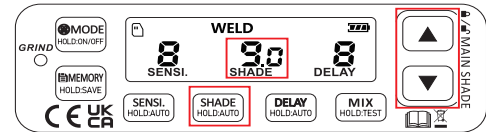
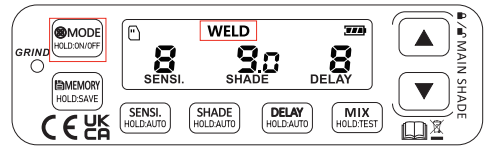
Quick press Shade button to make the shade flash, Use the up/down buttons to adjust the shade.

Automatic Shade control hold down shade button for 2 seconds to switch on Auto mode. In Auto mode the helmet will select the correct shade when welding commences if you prefer lighter or darker than the automatic selection then you can trim the shade +/- by, pressing the shade button briefly and then using the up/down arrow to trim.

Locked shade

This locks the helmet in the dark state Toggle the Mode button until the padlock symbol is on. You can adjust the shade using the up down arrows.

Control View



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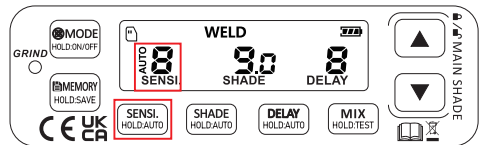
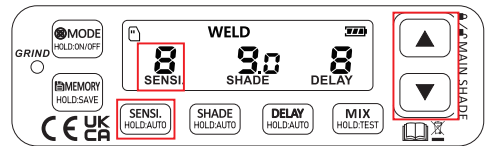
Sensitivity adjustment

Available in Weld and Cut modes, adjusts how sensitive the lens is to changes in light levels, as a general rule for low power welding use high sensitivity, for high power use lower sensitivity, if there is a lot of other light sources that cause the lens to darken then reduce sensitivity.

Quick press SENSI button to make the SENSI flash use up/down to adjust the sensitivity.

Automatic sensitivity control hold down SENSI button for 2 seconds to switch on Auto mode in Auto mode the helmet will auto calibrate to the correct sensitivity level based on the ambient light conditions. (Auto calibration takes about 5 seconds)

Control View



Delay

This is the waiting time for the helmet to lighten after the welding process has finished. A longer delay is preferred for high power welding to reduce glare from the after glow.

Quick press DELAY button to make the DELAY flash use up/down to adjust the delay time.

Automatic delay control. Hold down DELAY button for 2 seconds to switch on Auto mode in Auto mode the helmet will auto calibrate to the correct delay level based on the shade selected and the light levels after the first weld. You +/- can trim the selected delay by briefly pressing the delay button and the using the Up down arrows.

TACK mode

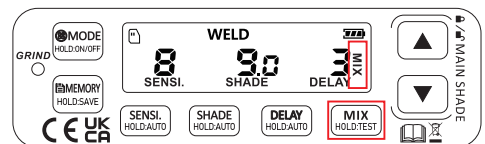
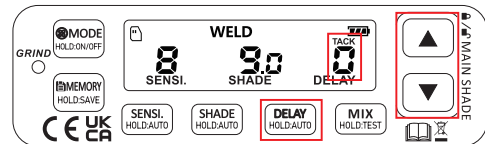
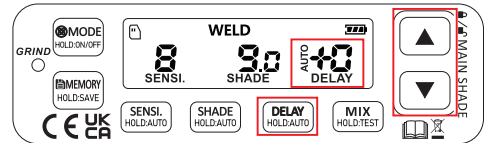
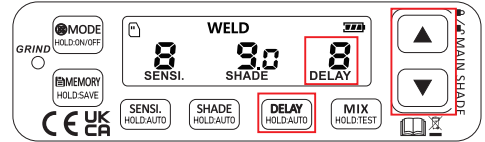
A delay of 0 enables TACK mode which gives rapid lightening after each weld and the lens learns your working pattern.

MIX mode

Switching on the MIX mode reduces fatigue and eye strain by making the switch from dark to light a gradual transition rather than a switch from dark to light. MIX mode does not function with a DELAY of 0.

Briefly press the MIX button to switch on the MIX mode.

Control View



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CUT mode

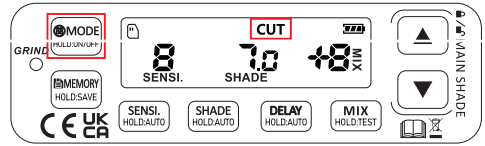
Use mode button to toggle to CUT mode.

In CUT mode the helmet shade can be adjusted from shade 4 to 8 which is more suitable for Plasma cutting applications.

Quick press Shade button to make the shade flash up/ down to adjust the shade External rotate the shade knob.

In CUT mode SENSI and DELAY work as in WELDING mode Other functions are disabled.

Control View



GRIND mode

For grinding you can simply flip the outer lens up to reveal the clear visor, if you are working in a confined space it may be preferable to use the grind mode which locks the lens at shade 3 and can be used with the visor down.

Use mode button to toggle to GRIND mode.

The grind LED will flash to indicate grind mode is activated and the lens will be locked in shade 3 Press the mode button to return to normal operation.

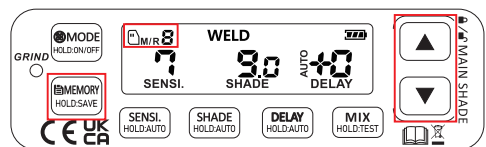
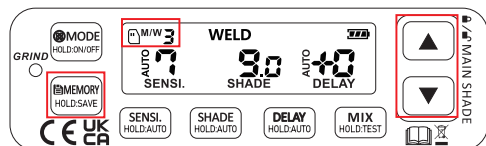
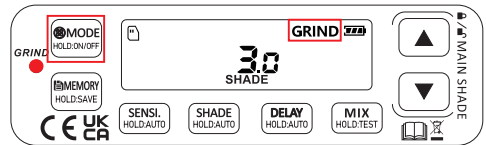
Memory

The memory function allows the storage of regularly used settings for different jobs. There are 9 memory locations that can be used to save to.

If you wish to save to memory after adjusting the setting long press the memory button to call up the memory locations, select the required memory location using the up down arrows and the parameters will save after a few seconds (M/W).

Short press the memory button will recall the next memory location Using the up down arrows you can change the memory location to recall any stored setting. (M/R).

Control View



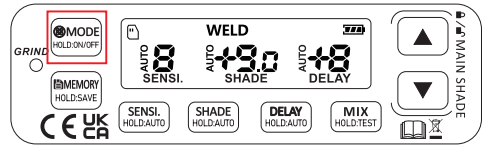
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Power On Off

When not in use you should power off the unit using the MODE button (Internal).

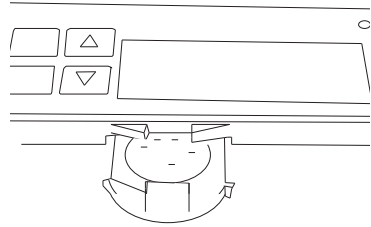
Press the internal mode button for 2 seconds to power off the unit.

To power on press the internal mode button until the display lights up. The unit will perform a self test to ensure the lens darkens.



Battery

The lens has two internal replaceable batteries. Battery replacement is required when the battery symbol starts to flash. Pull out the battery trays noting the orientation of the tab. Remove the two old batteries and replace with the same type CR2450. Pay attention to the + symbol on the batteries and the holder. Reinsert the holders with the tab facing up

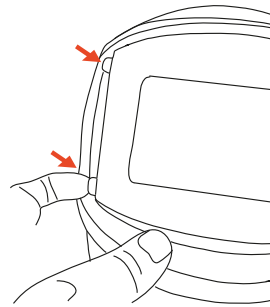


Protective cover lens replacement

Never use the welding helmet without a protective cover lens fitted internally and externally. Failure to do so will invalidate the warranty.

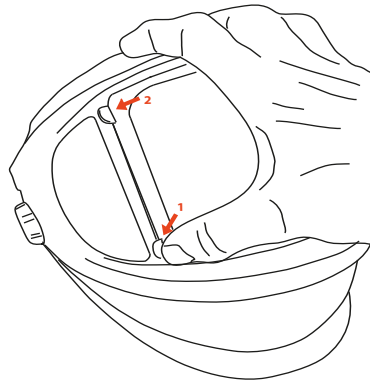
Front cover lens removal

Place the helmet on a flat surface and un-clip the front cover lens one side at a time pulling from under the tabs.



Refitting

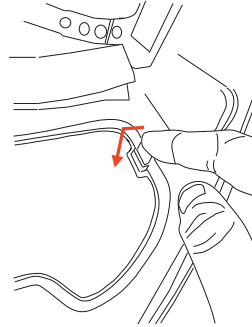
Locate the outer edge of the lens on the side tabs on one side. Whilst supporting the helmet, apply sliding pressure into the lower corner until the lens clips in place, repeat for the upper corner.



Grinding Lens

Placed the helmet in the flipped up position and then on the inside gently push the clear tab away from the helmet to release it, Repeat for the second tab.

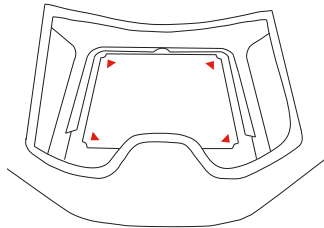
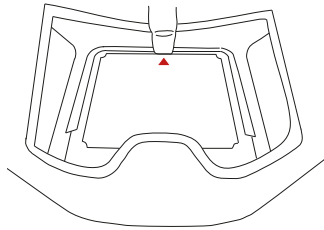
To refit , offer up the lens and engage the two tabs whilst apply pressure on the outside ensure the tab is engaged fully with a click, you make need to press the clear tab on the inside to engage it fully.



ADF cover lens replacement

With the grinding lens removed (as detailed above) . Flex the lens by inserting a finger nail into the slot at the top of the lens,

When replacing ensure it engages under the corner tabs indicated then refit the grinding lens.

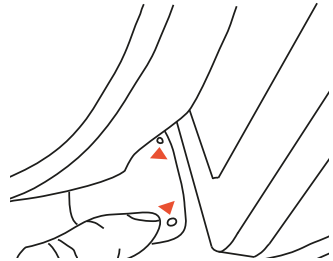
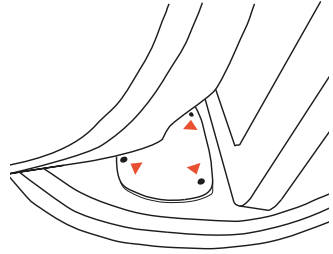


Side windows

The side windows are fitted with solid covers, if you wish to improve peripheral vision while the visor is in the down position these covers can be removed to reveal the shade 3 side windows.

To remove flip the helmet up and pull the solid cover off the 4 locating pegs.

To replace press the solid cover down so it is located securely on the 4 pins



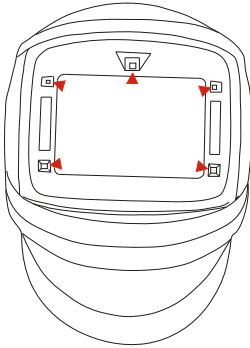
7. Maintenance

Foam headband removal

- Pull the foam band slightly left and right to release from the locating pins and unwrap from the head band. The foam band can be hand washed in a mild detergent, replacement is the opposite of removal.
- Trouble shooting

Fault	Cause	Solution
Irregular shading across the lens	Uneven adjustment of the head band meaning one eye is closer than the other to the lens	Reset head band adjustment so it is symmetrical
Filter flickering or fails to darken	Cover lens is dirty Sensors are dirty View of the weld is obscured Sensitivity is too low	Clean or replace the cover lens Clean the sensors with a lint free cloth Ensure a clear view of the welding arc Increase sensitivity setting

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Sensor Locations

Recommended Shade Numbers

WELDING PROCESS	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
Covered Electrodes	Shade 9								10	Shade 11				Shade 12				Shade 13			14		
MIG Plate Welding	Shade 9								Shade 10		Shade 11		Shade 12				Shade 13			14			
MIG Sheet Welding	Shade 9								Shade 10		Shade 11		Shade 12		Shade 13		Shade 14			15			
TIG	Shade 9				10		Shade 11		Shade 12		Shade 13			Shade 14									
MAG	Shade 9								Shade 10		11	12		Shade 13			Shade 14		Shade 15				
Arc Gouging	Shade 9								Shade 10				11	12	13	14	Shade 15						
Plasma Cutting	Shade 9								Shade 10				Shade 12				Shade 13						
Plasma Welding	4	5	6	7	8	9	10	11	Shade 12		Shade 13				Shade 14				Shade 15				

8. Warranty

The manufacturer provides a warranty of 36 months from invoice date for all manufacturing defects. The warranty becomes void if not operated according to the instruction manual. The warranty becomes void if the helmet has been modified in any way. For warranty service please return to the point of purchase.

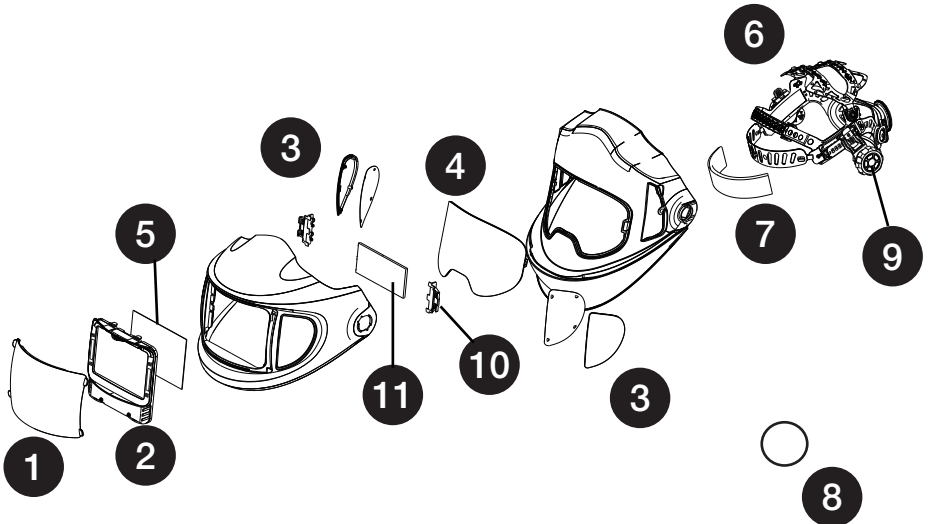
9. Storage

- Switch off the helmet is not in use
- Storage temperature range is -20°C ~ 70°C.

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10. Parts List

Item	Description	Part No
1	Front Cover Lens (outer)	XR423
2	Auto-Darkening Filter (ADF)	XR353
3	Side Window replacement kit inc obscure cover	XR435
4	Grinding protective lens (curved)	XR433
5	Inside Cover Lens (ADF)	XR434
6	Headband Assembly	XR342
7	Sweatband	XR372
8	Battery	CR2450
9	Hand nuts (pair)	XR373
10	Dioptr holder bracket (Pair)	XR436
11	Dioptr lens +1.0 +1.5 +2.0 +2.5 +3.0	LD1050 LD1550 LD2050 LD2550 LD3050





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