



OWNER'S OPERATING MANUAL
ELECTRONIC WELDING HELMET
MODEL RWH-800A & RWH-800AX1

SPECIFICATIONS

Filter cartridge size.....	133 x 114 x 10mm
Viewing area.....	100 x 59.5mm
Light shade.....	DIN 4
Dark shade.....	DIN 5-9/9-13
Light to dark switching time	1/10,000 sec
Dark to light switching time.....	0.1-0.8 sec
Power On/Off.....	Fully automatic
Power supply.....	Li-battery & Solar cell
Optical class.....	1/1/1/2
Arc sensor.....	4
Battery capacity.....	1200mAh
Operating temperature.....	-20°C to 65°C
Storing temperature.....	-40°C to 75°C
UV/IR protection.....	DIN 16
Weight.....	500g

THANK YOU FOR BUYING A RYOBI
ELECTRONIC WELDING HELMET

Your new welding helmet has been engineered and manufactured to Ryobi's high standard of dependability, ease of operation and operator safety. Properly cared for, it will give you years of rugged, trouble free performance. If you use your welding helmet properly and only for what it is intended, you will enjoy years of safe, reliable service.



CAUTION: Carefully read through this entire owner's manual, paying close attention to the general safety rules and rules for safe operation, before using.

KEEP THIS MANUAL FOR FUTURE REFERENCE

IMPORTANT SAFETY INSTRUCTIONS

The purpose of safety rules is to attract your attention to possible dangers. The safety symbols and the explanations with them, require your careful attention and understanding. The safety warnings do not by themselves eliminate any danger. The instruction or warnings they give are not substitutes for proper accident prevention measures.



SAFETY ALERT SYMBOL. Indicates danger, caution or warning. May be used in conjunction with other symbols or pictures.

Failure to obey a safety warning can result in serious injury to yourself or to others. Always follow the safety precautions to reduce the risk of fire, electric shock and personal injury.

Do not attempt to operate this product until you have read thoroughly and completely understood the safety rules, etc. contained in this manual. Failure to comply can result in accidents involving fire, electric shock or serious personal injury. Save this Owners Operating Manual and review it frequently for continual safe operation and for instructing others who may use this product.



WARNING

To reduce the risk of injury, the user must read and understand the operator's manual.

SAFETY INSTRUCTIONS



WARNING. This helmet is not suitable for use with laser or gas-welding.

Ensure all workshop safety rules, regulations, and conditions are complied with when using welding equipment. The helmet will not offer protection against mis-use of workshop tools, equipment, or accessories.

Maintain the helmet in good condition and protect cartridge from liquid and dirt contact.

Never open or tamper with the shade cartridge.

Select the shade level before use.

Ensure the front cover lens 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 -20°C to 65°C (-4°F to 149°F).

The eye protective plate in helmet is not unbreakable. Helmet will not protect you against severe impact hazards (such as, but not limited to) fragmenting abrasive discs/grinding wheels, stones and other grinding tools, explosive devices or corrosive fluids. The helmet will only protect the eyes and face from radiation and sparks.

Remove ill fitting clothing, remove ties, watches, rings, and other loose jewellery.

Maintain correct balance and footing. Ensure the floor is not slippery and wear non slip shoes.

Keep children and unauthorised persons away from the working area.



WARNING. DO NOT use the helmet if damaged or you suspect it may be faulty.

DO NOT use helmet unless you have been instructed in its use by a qualified person.

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 lens and frame fitted. To do so will invalidate your warranty.

Clean helmet and store the helmet in a safe, dry, childproof location.

The materials of the helmet may, when coming into contact with the wearers skin, cause an allergic reaction to susceptible individuals.

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.

IMPORTANT SAFETY INSTRUCTIONS



DANGER. If, at any time, the face plate in the cartridge fails to darken when exposed to a welding spark, DO NOT USE.

Remove cartridge and return to your dealer for checking. Continued use of the product knowing that the auto darkening feature is not functioning may damage your eyes and cause blindness.

Continued use of the helmet which is not functioning will invalidate the warranty and could prohibit a successful claim on any insurance company.

Never carry out repairs on or modifications to the welding helmet. These may only be carried out by trained experts.

MARKINGS

	4	/	5-9/9-13	RYOBI	1	/	1	/	1	/	2	/	EN379
Light Shade Scale No.													
Dark Shade Scale No.													
Manufacturer's Identification													
Optical Class													
Diffusion Of Light Class													
Variations In Luminous Transmittance Class													
Angle Dependency Class													
Certification Mark or Number of Standard													

SHADE LEVEL GUIDE

	CURRENT (AMPERES)													
WELDING PROCESS	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

ADJUSTING THE HELMET

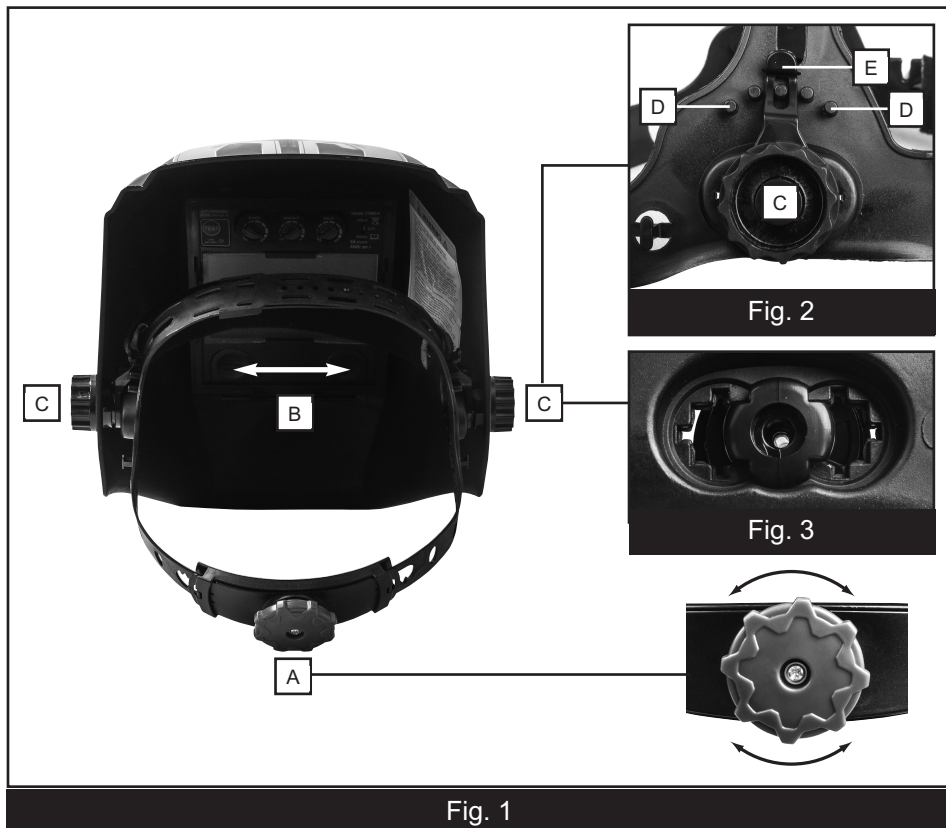


Fig. 1



WARNING. Before using the helmet for welding ensure you have read and understood the safety instructions. The helmet comes ready assembled but before it can be used it must be adjusted to fit the user properly.

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.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.

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).

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.

ADJUSTING THE 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 lever 'E' off tilt pip 'D' and rotate it to the required position. Please note there are 5 tilt pip positions. Retighten the clamp knob 'C'.

ADJUSTING THE HELMET

DISTANCE OF HARNESS FROM FILTER LENS

There are 3 positions possible that the harness can be set upon to achieve the desired distance between the welders eyes and the filter lens, Fig.3.

Ensure that the plastic protection film is removed from both the front and rear cover lenses before use.

OPERATION

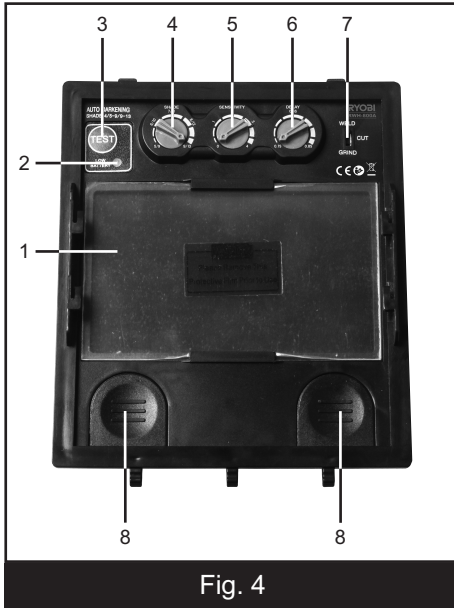


Fig. 4

ADJUSTMENT CONTROLS (FIG.4)

1. Viewing area/ rear cover lens
2. Low battery warning light
3. Test button
4. Shade adjustment
5. Sensitivity adjustment
6. Delay adjustment
7. Weld / Cut / On/Off (Grind)
8. Battery compartment

OPERATING INSTRUCTIONS

Ensure that the plastic protection film is removed from both the front and rear cover lenses.

Press the test button. If the lens does not darken, check the batteries.

Adjust the welding helmet according to your individual requirements.

SWITCHING ON

Select either cut (shade 5-9) or weld (shade 9-13) on the switch (located inside the helmet on the top right hand side of the filter) depending on your application.

SWITCHING OFF/GRIND MODE

After the welding is complete, or to carry out grinding after the weld; turn the filter to the off (grind) position.

SENSITIVITY

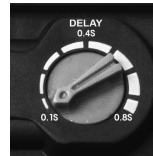


The sensitivity can be adjusted between 1 and 4.

If the welding current is too small, turn it to a higher setting.

If the welding current is too high, turn it to a lower setting.

DELAY

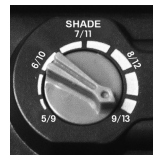


The delay can be adjusted by turning the dial to either 0.1 (fast) or 0.8 seconds (slow).

If the welding current is too high and the molten pool is too bright, you will need to turn the dial to a higher setting.

For spot welding turn the dial to a lower setting.

SHADE



The filter will automatically change from the light state (shade 4) to the dark state (see below) when the welding or cutting starts. The filter will automatically return to a light state when the welding stops

Cut: Shade 5-9

Weld: Shade 9-13

Note: Never block any of the sensors on the front of the filter. This will stop the filter from automatically changing to a dark state and could cause damage to your eyes.

OPERATION

GRIND

To use the grind function turn the on/off (grind)/shade select switch to grind. When switched to grind mode the auto darkening filter will not turn black when detecting any arc light.

Before using the helmet for welding purposes the switch must be changed back to a shade position.

MAINTENANCE

INSPECTION

Carefully inspect your electronic welding helmet regularly.

Crack, pitted or scratched filter or cover lenses reduce vision and seriously impair protection. These should be replaced immediately to avoid damage to the eyes.

Inspect the complete helmet frequently and replace worn or damaged parts immediately.

CLEANING

Clean helmet by wiping with a soft, dry 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.

Never bring the UV filter into contact with water.

Note: The cartridge in the welding helmet is a sealed unit therefore there are no spare parts available.

REPLACING THE REAR COVER LENS

Push the 2 tabs outwards, Fig.5, and lift the filter holder up.

Remove the filter lens.

Slide out the old cover lens.

Pull off the plastic protection film and slide in the new cover lens.

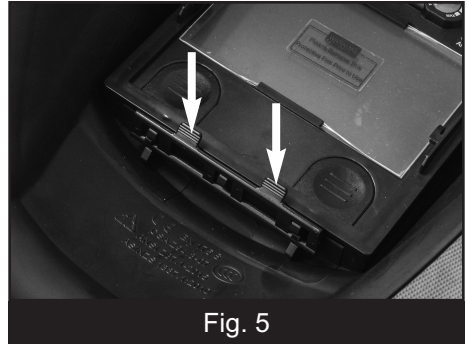
Follow the above instructions in reverse order to refit the filter lens etc.

REPLACING THE FRONT COVER LENS

Push the 2 tabs outwards, Fig.5, and lift the filter holder up.

Remove the filter lens.

Pull out the old cover lens.



Pull off the plastic protection film and put the new cover lens back in.

Follow the above instructions in reverse order to refit the filter lens etc.



WARNING. Do not use the helmet with out the cover lenses in place.

REPLACING THE BATTERIES

Push the 2 tabs outwards, Fig.5, and lift the filter holder up.

Slide the battery compartment down and remove, Fig.4.

Remove the old battery.

Fit the replacement battery (+) upwards.

Refit the cover and slide up to fully secure.

Follow these instructions to replace the second battery.









Refit the filter cover and secure in place.

TROUBLESHOOTING

Troubleshooting Guide		
Problem	Possible Cause	Remedy
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.

SYMBOLS

Some of the following symbols may be used on this product. Please study them and learn their meaning. Proper interpretation of these symbols will allow you to operate the product better and safer.

SYMBOL	NAME	DESIGNATION/EXPLANATION
	Safety Alert Symbol	Indicates danger, warning or caution. It means attention!!! Your safety is involved.
	Read Your Operator's Manual	Your manual contains special messages to bring attention to potential safety concerns as well as operating and servicing information. Please read all the information carefully to ensure satisfaction and safe use.
	uV radiation	Protect operator and passerby from the effect of uV radiation. This can cause permanent damage to the eye. Make sure the arc and resulting flash is shielded at all times.
	Wear approved face mask	Always wear approved face mask with correct filter, gloves and apron to protect against welding operation.
	Wet conditions alert	Do not expose to wet or damp conditions.
	Keep bystanders away	Keep all bystanders and pets at least 15 m away.
	Recycle Symbol	Waste electrical products should not be disposed of with household waste. Please recycle where facilities exist. Check with your Local Authority or retailer for recycling advice.
	CE Marking	Conforms to relevant safety standards.

RYOBI POWER EQUIPMENT WARRANTY

Subject to the warranty conditions below, this RYOBI tool (hereinafter called "the Product"), is warranted by Ryobi (herein called "the Company") to be free from defects in material or workmanship for a period of 24 months from the date of original purchase covering both parts and labour. Under the terms of this warranty, the repair or replacement of any part shall be the opinion of the Company or its authorised agent. Should service become necessary during the warranty period, the owner should contact the authorised Ryobi retailer from whom the product was purchased, or the nearest Company branch office. In order to obtain warranty service, the owner must include the Sales Docket and Warranty Certificate to confirm date of purchase. This Product is sold by the dealer or agent as principal and the dealer has no authority from the Company to give any additional warranty or guarantee on the Company's behalf except as herein contained or herein referred to.

Warranty Conditions

This warranty only applies provided that the Product has been used in accordance with the manufacturer's recommendations under normal use and reasonable care (in the opinion of the Company) and such warranty does not cover consumable components, damage, malfunction or failure resulting from

misuse, neglect, abuse, or used for a purpose for which it was not designed, or is not suited and no repairs, alterations or modifications have been attempted by other than an Authorised Service Agent. This guarantee will not apply if the tool is damaged by accident or if repairs arise from normal wear and tear.

Accessories such as bits, blades, sanding discs, cutting lines, etc., are excluded from this guarantee. Normal consumable parts, such as carbon brushes, bearings, chucks, cord assembly's, spark plugs, recoil pulleys and bump head assembly's are specifically excluded from this guarantee.

The Company accepts no additional liability pursuant to this warranty for the costs of traveling or transportation of the Product or parts to and from the service dealer or agent - which costs are not included in the warranty.

Nothing herein shall have the effect of excluding, restricting or modifying any conditions, warranty, right or liability imposed, to the extent only that such exclusion, restriction or modification would render any term herein void.

RYOBI®

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THIS WARRANTY FORM SHOULD BE RETAINED BY THE CUSTOMER AT ALL TIMES.

For your record and to assist in establishing date of purchase (necessary for in-warranty service), please keep your purchase docket and this form, completed with the following particulars.

PURCHASED FROM:.....

ADDRESS OF DEALER:.....

DATE:..... MODEL NO..... SERIAL NO.....

Present this form with your Purchase Docket when Warranty Service is required.