

Summary

The automatic welding mask is a new generation product for labor protection. New technology such as LCD, optoelectronics detection, solar power, microelectronics, etc are integrated into it. The automatic welding mask not only can efficiently protect operators eyes from injuries caused by arc, but also can make both hands free to strike arc accurately.

Therefore, the quality of products and work efficiency may be raised considerably. It may be widely used for various welding, cutting, spraying and arc gouging, etc.

WARNING

Read and understand all instructions before using.

- Be sure that the dark shade of the lens in the welding helmet is the correct shade number for your application.
- This helmet and lenses are not suitable for "overhead" welding application, laser welding, or laser cutting applications.
- Welding helmets are designed to protect the eyes and face from sparks, spatter, and harmful radiation under normal welding conditions. They will not protect against severe impact hazards, including fragmenting grinding disks, and they must never be used for grinding.
- This helmet will not protect against explosive devices or corrosive liquids. Machine guards or eye splash protection must be used when these hazards are present.
- Impact resistant, primary eye protection, spectacles or goggles that meet current ANSI specifications, must be worn at all times when using this welding helmet.
- Avoid work positions that could expose unprotected areas of the body to spark, spatter, direct and/or reflected radiation. Use adequate protection if exposure cannot be avoided.
- Check for light tightness before each use. Before each use, check that the protection plates are clean and that no dirt is covering the sensors on the front of the lens.
- Inspect all operating parts before each use for signs of wear or damage. Any scratched, cracked, or pitted parts should be replaced immediately.
- Do not make any modifications to either the welding lens or helmet, other than those specified in this manual.

Do not use any replacement parts other than those specified in this manual. Unauthorized modifications and replacement parts will void the warranty and expose the user to the risk of personal injury.

- If this lens does not darken when striking arc, stop welding immediately and contact representative.
- Do not immerse this lens in water if this model is not water proof.
- Do not use any solvents on any lens or helmet components.
- The recommended operating temperature range for welding lens is -5°C-55°C (23°F-131°F). Do not use this device beyond these temperature limits.
- Failure to follow these warnings and/or failure to follow all of the operating instructions could result in severe personal injury.

Characteristics

Welding Plus automatic welding helmet is equipped with a filter set that can auto darken. The filter is transparent before welding, so the operators may observe the work surface clearly. When striking arc, the filter darkens automatically immediately. When arc goes out, the filter will become transparent again. The switching time from light to dark is about 0.0002 second. The switching time from dark to light may be set up within 0.1-0.9 second.

The mask is equipped with a continuous darkness-adjusting unit, so the operator may select an arbitrary dark shade number ranging from No.5 to No.9 & No.9 to No.13

OUTLAW's automatic welding mask gives the operators permanent complete protection against UV/IR even in transparent condition. The UV/IR protection level is up to DIN15.

The mask is equipped with 2 sets of photosensors OUTLAW 1.0 and 4 sets of photosensors OUTLAW 1.3 to sense arc light. In addition, the mask is also provided with an outer protection plate made of high polymer materials. The plate is wear-resistant and thermostable. This helmet is a True Color welding helmet. With advanced True Color technology, the users can weld with improved clarity due to new Blue Optical Coating technology, grind with precision while in grind mode. There is no need to remove the helmet to see clearly! Results are enhanced weld quality, increased efficiency and improved safety because the users can see more.

Method of operation

1. Assemble the mask as shown in the construction and assembly figure
2. **The power supply**, The power of the helmet is provided by solar cells and lithium battery. Turning on or off is automatically controlled by circuit.
3. **Darkness selection**, When striking the arc, the observing window darkens immediately. At this moment, according to the technical requirement, the operator adjusts the darkness knob in the direction as shown by the arrow to select the optimum darkness.
4. **Delay time selection**, By moving the DELAY selector knob on the rear of the cartridge, the time taken for the lens to lighten after welding can be altered from 0.1~0.9 second. Turn to LO: The time the lens lightens after welding changes to be shorter. The shortest time is about 0.1 second depending upon welding point temperature and shade set. This setting is ideal for track welding or production welding with short welds. Turn to HI: The time the lens lightens after welding changes to be longer. The longest time is about 0.9 second depending upon welding point temperature and shade set. This setting is ideal for welding at high amperage where there is an after glow from the weld.
5. **Sensitivity selection**, By moving the SENSITIVITY selector knob on the rear of the cartridge, the sensitivity to ambient light changes can be altered. Turn to LO: The photosensitivity changes to be lower. Suitable for high amperage welding and welding in bright light conditions (lamp light or sun light).

Turn to HI: The photosensitivity changes to be higher. Suitable for low amperage welding and using in poor light conditions. Suitable for using with steady arc process such as TIG welding. If the helmet can be used normally, we suggest using this helmet with a bit high sensitivity.

6. Because the shape of heads vary from person to person, the work position and the observing angle is different, the operator may adjust the headband adjusting button and the segmental positioning plate to select an appropriate observing angle. By pushing and turning the adjustment screw, the perimeter of the head band can be adjusted.
7. Lock&Unlock Turn to left to lock the ADF frame. Turn to right to unlock the ADF frame.
8. Turn shade adjusting knob counter-clockwise until you feel knob "click". You can now grind with helmet. Remember to turn knob back when you want to weld again.

Lens Layout

OUTLAW 1.0



OUTLAW 1.3



Main specifications

OUTLAW 1.0

Shell Type:	OUTLAW 1.0
Filter Model:	OUTLAW 1.0
View Colour:	True Colour
Filter Dimension:	110mm x 90mm
View Area:	92mm x 42mm
Light Mode:	Shade 4
Light to Dark Speed:	0.3ms
Weld Mode:	9-13
Grind Mode:	Yes
IR / IV Protection:	DIN15
Sensors:	2
Operating Temperature:	- 5°C to 55°C
Optical Classification:	1/1/1/2
Shade Control:	External
Power Supply:	Solar Cell with Replaceable Battery
Standards:	ANSI Z87.1 / DIN / CE / CSA
Warranty:	12 Months

OUTLAW 1.3

Shell Type:	OUTLAW 1.3
Filter Model:	OUTLAW 1.3
View Colour:	True Colour
Filter Dimension:	133mm x 114mm x 10mm
View Area:	100mm x 82mm
Light Mode:	Shade 4
Light to Dark Speed:	0.2ms
Weld Mode:	Variable Shade: 5-9 / 9-13
Grind Mode:	Yes
IR / IV Protection:	DIN15
Sensors:	4
Operating Temperature:	-5°C to 55°C
Optical Classification:	1/1/1/2
Shade Control:	Internal
Power Supply:	Solar Cell with Replaceable Battery
Standards:	ANSI Z87.1 / DIN / CE / CSA
Warranty:	12 Months

**CONSTRUCTION AND ASSEMBLY FIGURE
FOR AUTOMATIC WELDING MASKS:**

Description & Spare Parts	OUTLAW 1.0	Part number
1. Helmet shell		HS101
2. Locking nut		LN1
3. Outer protection cover lens		FOL10
4. Automatic welding filter		WLC10
5. Inner protection lens		IL10
6. Shade knob		SN10
7. ADF frame lock		FL10
8. Lens Frame		LF10
9. Tester Button		—
10. Low battery light		—
11. Sensitivity adjustment		—
12. Delay adjustment		—
13. Head harness adjustment Knob		HHK10
14. Mounting Screws for fixing head harness		MS11
15. Segmental adjustment positioning plate		—
16. Sweatband		SWB10
17. Locking pin		LP1
18. Battery CR2032		CR2032
19. Complete head harness		CPHH

OUTLAW 1.0



AUTO DARKENING WELDING HELMET MANUAL

OUTLAW 1.0

OUTLAW 1.3

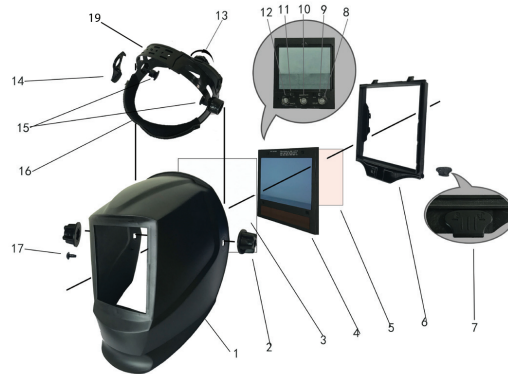


Points for attention

1. Be sure that the helmet is used in correct condition and check it according to WARNING content.
2. There is liquid crystal-valve in the filter, although it has inner and outer protection plate, it is important to avoid heavy impact.
3. The outer protection plate of helmet should be periodically inspected and cleaned. In case of break, crack, pitting, the plate must be replaced.
4. In order to operate more efficiently and safely, please select correct dark shade number.
5. If the filter is not a water-proof model, please keep away from water.
6. Be sure that the arc light is completely received by sensor, if not, the filter won't darken or be unstable in darkness.
7. Please use the automatic filter at temperature between -5°C-55°C (23°F-131°F).
8. Please don't disassemble the filter, any problems arising, please contact our company or agent.

Description & Spare Parts	OUTLAW 1.3	Part number
1. Helmet shell		HS101
2. Locking nut		LN1
3. Front Outer protection cover lens		FOL13
4. Automatic welding filter		WLC13
5. Inner protection cover lens		IL13
6. Lens cartridge Frame		LF13
7. ADF frame lock		FL10
8. Delay adjustment		—
9. Weld - Grind switch		—
10. Sensitivity adjustment		—
11. Shade mode		—
12. Shade select		—
13. Headband tightness adjusting knob		HHK10
14. Segmental positioning plate		MS11
15. Screw for fixing headband		—
16. Sweatband		SWB10
17. Locking pin		LP1
18. Battery CR2032		CR2032
19. Complete head harness		CPHH

OUTLAW 1.3



		Shade Guide Table																									
		Arc Current (Amperes)																									
Welding Process		0.5	1	2.5	5	10	15	20	30	40	60	80	100	125	150	175	200	225	250	300	350	400	450	500			
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

NOTE:

- SMAW – Shielded Metal Arc Welding
- TIG, GTAW – Gas Tungsten Arc Welding
- PAC – Plasma Arc Cutting
- SAW – Shielded Semi-Automatic Arc Welding

- MIG (heavy) – MIG on Heavy Metals
- PAW – Plasma Arc Cutting
- MAG/CO2 – Metal Active Gas
- MIG (light) – MIG on Light Alloys



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Please read this manual carefully before using these automatic welding helmets. These welding helmets are designed for use by individuals with a full understanding of hazards and safety risk with welding.