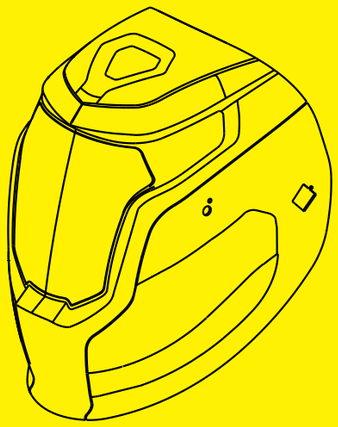
AUTO DARKENING WELDING HELMET

USER´S MANUAL

70064

CE



MODEL: DX-980E

PLEASE READ THIS MANUAL CAREFULLY BEFORE USING

I Abstract

Solar energy auto-darkening welding helmet is a set of spectral filtering technology, photoelectric inductive control technology, liquid crystal light control technology in one high-tech products. Auto darkening filter (ADF) works with the photoelectric induction principle, which makes the liquid crystal change from the bright state into a dark state in receiving the arc light, and automatic back to bright state when welding is finished, thereby protecting the user's eyes and face skin from the arc, splash and infrared / ultraviolet radiation.

II Product features

1 By the lithium battery which change required 1pc CR 2450 and solar battery power supply. long service life of 5000 hours,15-20 minutes with automatic closing function, low voltage indication.

2 The external control knob, can be realized on the shading 5~8/9-13, sensitivity and delay time control, welding/grinding functions can be selected.

3 Photoelectric sensor technology, high-quality dual LCD and filter, which provide the welder a clear field of view and effective protection, ultraviolet ray protection grade up to DIN16.

4 Two arc sensing probe, constantly sense arc induction in using, that enable the filter switch time reach 1/25000s from light to dark state, so as to protect the eyes from arc damage.

5 Filter bright state grade is DIN4, it takes 0.1-2.0s by preset from dark state to a bright state when arc disappear.

6 Normal operation temperature is from minus 5 degrees to 55 degrees broad scope of application, such as manual arc welding,gas shielded arc welding, argon arc welding and plasma cutting.

7 Portable and balanced design, fully adjustable headgear, provides comfortable wearing and relieves fatigue.

8 Products meets the safety and technical standard of EN379.

III Operation guide

1.Before welding

1.1 Please check if the protective film is been removed from the internal and external screen.

1.2 Please check if the power is sufficient before using.

1.3 Please check if the filter display is normal.

1.4 Please check whether the protect films are complete, solar cell is damagedor blocked by dust, especially check whether the arc sensor is polluted.

1.5 Please check all operating parts are worn off or damaged. If any scratched or broken parts, should be replaced immediately. So as not to incur any personal injury.

1.6 Please check light tightness before each using.

1.7 According to the machine type and welding current to choose the right shade number.

2.Shade number selection.

2.1 Shade number can be manually set from 5~8/9-13. adjusting knob is outside the mask, by rotating the adjusting knob to set the proper shading number.

2.2 Adjust the helmet to the correct shade for the welding process by referring to Table 1.

Welding Process	Arc Current(Amperes)																				
	0.5	2.5	10	20	40	80	125	175	225	275	350	450									
	1	5	15	30	60	100	150	200	250	300	400	500									
SMAW				9	10	11		12			13										
MIG(heavy)						10	11		12			13									
MIG(light)						10	11		12			13									
TIG,GTAW			9		10		11		12			13									
MAG/GO2						10		11		12			13								
PAC							11			12				13							
PAW				8	9	10		11		12			13								

Note: *SMAW-Shielded Metal Arc Welding. *TIG, GTAW-Gas Tungsten Arc Welding(GTAW)(TIG).
*MIG(heavy)-MIG on heavy metals *PAC-Plasma Arc Cutting. *PAW-Plasma Arc Welding
*MIG(light)-MIG on light alloys

3.Delay Time

Delay time,it's for the helmet to switch back from full dark to full light. according to the welding current and power length,by the " DELAY " knob fast or slow.

3.1 Choose the minimum, the delay time is set in 0.1-0.25s, suitable for spot welding, short welding or seam welding work.

3.2 Choosing the maximum, the delay time is set in 0.85-1.0s. suitable for high current welding or prevent eye fatigue from the arc.

3.3 Choosing the medium, suitable for the majority of indoor and outdoor welding operation.

4.Sensitivity

According to the welding process and the ambient light, through the regulation of " SENSITIVITY " knob for setting, default sensitivity is at the lowest state.

4.1 Choose the Min, suitable for high current welding or in bright light environment in welding, or from other sources interference environment.

4.2 Choose the Max, suitable for low current welding or in low light environment in welding, especially low current argon arc welding.

4.3 Mid-range selection, suitable for most in indoor and outdoor welding.

5.Welding / grinding set

During the cutting or grinding, need to put the knob to the "Grind" position. Note: some products without this feature, see the technical parameter table

6.Test

6.1 Set the shading number at any place of 5~8/ 9-13, press the TEST button, check whether the LCD change from light to dark, and automatic return to bright state.

6.2 For the filter without self-test function, pls set the shading to any place between 5~8/ 9-13 before use, then use the ordinary incandescent light source more than 40W near to the arc sensor of filter, check whether the LCD becomes dark, and automatically returned to the bright state after removing the light source.

7.Headband Adjustment

7.1 Headband size can be manually adjusted to fit different people to wear. Press the rotary gear moderately and adjust the tightness to feel comfortable. The rotating gear has self-locking function, rotating forcibly is prohibited in order to avoid damaging the gear.

7.2 There are positioning holes on the side of the helmet, through adjusting the fixed plate in lateral hole location, can change the angle of sight, adjusting the angle of view.

7.3 By adjusting the screw tightness, can change the face mask on angle, also it can be turned up or down. The ideal angle in welding is eyes and joints connected by straight line perpendicular to the filter.

8.Battery replacement

8.1 Part ADF use 1 piece of 3V lithium battery as a backup power supply, Part ADF use changeable battery.

Note: waste battery shall dump in accordance to local government laws and regulations filters should be in accordance with the electronic waste material processing.

8.2 The battery can be used continuously for 5000 hours in normal condition. The low voltage lamp doesn't work when the power is sufficient and battery is required to be replaced when the low voltage lamp is on.

Note: some products have no alarm function of low voltage.

IV Maintenance

1 Please use tissues, lens paper or clean soft cotton cleaning the filter.

2 Please use neutral detergent to clean welding helmet shell and sweat bands.

3 Regularly replace of external and internal protection plate, sweat bands.

4 Do not use corrosive solvent or gasoline to dilute detergent.

V Attention

1 The auto-darkening welding helmet is not suitable to laser welding and oxygen acetylene welding.

2 Do not put weld cap and filter near heat or damp place.

3 Do not remove the filter from the welding cap or open the filter box without authorization.

before operation, please confirm the welding or grinding function selection is correct.

5 The protective plate must be installed to protect the filter away from damage.

6 Do not make any amend or replacement of weld cap or ADF without authorization.

7 Stop using immediately if the filter can't change to dark and contact the dealer.

8 Do not use alcohol, petrol or thinner to clean filter, do not immerse it in water.

9:Operation temperature:-5°C ~ + 55 °C (23 °~131° F, F) the reaction of ADF will be slow down if the ambient temperature is too low. But it does not affect the protective performance.

10 Replace protective films immediately if it's broken or scratched. Since it may affect view and seriously reduce the protective performance.

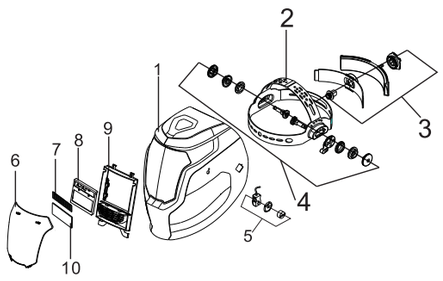
11 Replace protector immediately if it's broken or scratched. Do not use hard objects to contact filter lens surface, in order to prevent damage to the filter

12 Clean filter surface, sensors and solar cells regularly.

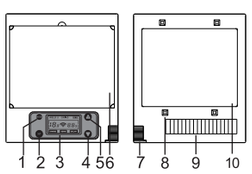
13 Helmet can not prevent serious impact, explosive or corrosive liquid damage.

Note: serious personal injury will be incurred if users do not follow the above-mentioned attentions

VI Helmet structural graph



1.Helmet Body
2.Headgear
3.Headgear Adjusting Knob
4.Headgear Angle Adjusting Knobs
5 Shade No Adjusting
6.Protective Plate
7.Solar Panel
8. Fixed Plate
9. Press card
10.UV/IR Filter



DX-980E

1.MODE 6.LCD
2.SET 7.Lithium Battery
3.LED 8.Arc sensor
4.DOWN 9.Solar cell
5.UP(TEST) 10.UR/IR Fliter

Operation Instruction

1.**For Function key " MODE**": interchange in " WELD L(5-8)" ; "WELD H(9-13)" ;"GRIND(4)"by pressing it in turn,

MODE	SHADE
GRIND :	4
WELD L :	5-8
WELD H :	9-13

2.**For " SET" key**: light will be flickering when press " SHADE", "SENS", and " DELAY" in sequence, and flickering on each setting state will show it's current data, which can be adjusted by right two arrow keys. When press " SET" the fourth time or no more setting within 5 seconds, then setting state will be log off but settings will be saved well.

3.**Upper arrow key**: In set mode, it is for up-adjusting. And the " T " letter there means " SELF-TESTING " button under modes of "WELD L (5-8)" and " WELD H (9-13) ". but useless under " GRIND" mode.

4.DOWN arrow key:function 1:to lower the digits on each setting mode. function 2:to power off filter by pressing for 3 seconds(press any button to power on)

5.When filter set on " GRIND" mode, filter not working, " SET" and ARROW KEYS are prohibited to use.

6. This is POWER icon, total three grids. When battery running low, one grid will flicker; if battery running out, grids missing. Now you have to change battery to longer filter's lifetime.

VII FQA

FQA	REASONS	SOLUTIONS
Filters do not darken or flickers	Protector is polluted or damaged	To clean or replace it
	Arc sensor is not clear	To clean the surface of sensor
	Welding current is too small	To adjust sensitivity to the max
	Battery is low	To replace battery
React slowly	Ambient temperature is too low	Do not use below -5 degree
	Sensitivity setting is too low	To raise sensitivity properly
Filter is not clear	Protector is stained	To clean or replace protector
	Protective film is not removed	To remove the protective film
	Filter lenses have stains	To wipe the both sides of the filter lenses
	Ambient light is insufficient	To adjust the light of the workplace
	Shade No. is not set correctly	To re-set the shading N0.
Welding cap slips	Headband is not adjusted	To adjust the fixed nuts of the headgear

CAUTIONS! You should stop using the product immediately and contact dealer if the above-mentioned questions can not be solved.

VIII Technical Specifications

Model	DX-590E	DX-650E
Optical Class	1/2|1/2	
Viewing Area	92X42mm	98X43mm
Cartridge Size	110x90x9mm	
Arc Sensor	2	
Light State	Variable shade,9~13	Variable shade,5~8/9~13
Dark State	Variable shade,5~8/9~13	Variable shade, 9 ~13
Shade Control	Internal,Variable	
Power On/Off	Fully Automatic	
Sensitivity Control	Low-High by Adjustment button/infinitely dial knob	
UV/IR Protection	DIN16	
Power Supply	Solar cell. Battery change required 1 CR 2032 lithium battery	Solar cell. Battery change required 1 CR 2450 lithium battery
Switching Time	1/1500S from Light to Dark	
Dark to Light	0.1-2.0S by Adjustment button/infinitely dial knob	
Low Amperage TIG	≥20amps	
Grinding Function	≥5amps(DC),≥5amps(AC),	
Low Volume Alarm	YES	
ADF self-check	YES	
Operating Tep.	-5°C~55°C	
Storing Tep.	-20°C~70°C	
Warranty	1 Years	
Welding Processes	MMA,MIG,MAG/CO2,TIG and Plasma Welding. Arc Gouging & Plasma Cutting.	

Model	DX-850E	DX-900N	DX-950N	DX-980N	DX-980E
Optical Class	1/1/1/2				
Viewing Area	100X50mm	98X62mm		98X80mm	
Cartridge Size	133X114X10mm				
Arc Sensor	4				
Light State	DIN4				
Dark State	Variable shade, 9 ~13				Variable shade,5~8/9~13
Shade Control	Internal,Variable				
Power On/Off	Fully Automatic				
Sensitivity Control	Low-High by Adjustment button/infinitely dial knob				
UV/IR Protection	DIN16				
Power Supply	Solar cell. Battery change required 1 CR 2450 lithium battery				
Switching Time	1/25000S,from Light to Dark				
Dark to Light	0.1-2.0S by Adjustment button/infinitely dial knob				
Low Amperage TIG	≥5amps(DC),≥5amps(AC),				
Grinding Function	YES				
Low Volume Alarm	YES				
ADF self-check	YES				
Operating Tep.	-5°C~55°C				
Storing Tep.	-20°C~70°C				
Warranty	1 Years				
Welding Processes	MMA,MIG,MAG/CO2,TIG and Plasma Welding. Arc Gouging & Plasma Cutting.				