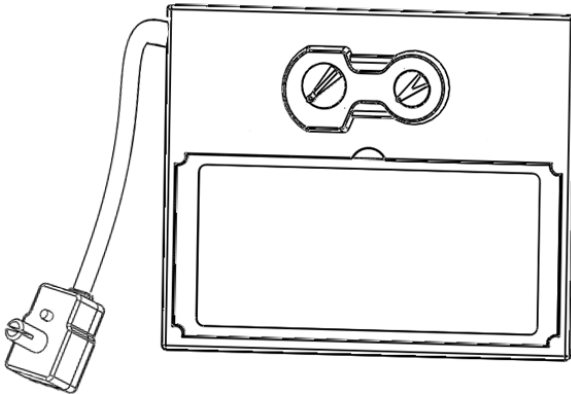


# Auto Darkening Welding Shield



LYG-8507A Filter

User's manual



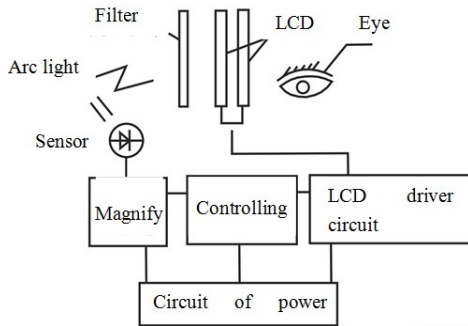
Pay attention to personal safety and read this manual carefully while installing and operating this product.

## **1 Main characters:**

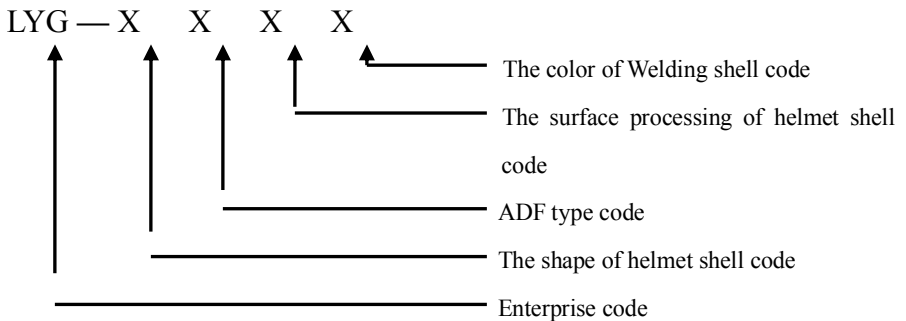
- The safe structure design adopts a world famous style, conforms to the ergonomic principle, and provides an ample internal space, which makes it easy to operate and comfortable to wear. The helmet shell materials with soft texture are resistant to high/low temperature, corrosion, flame-retardant and light-proof, with high strength, and durability. It may comprehensively protect your face, neck, ears and so on.
- Liquid crystal of high quality and optical coating, and protection for shielding ultraviolet and infrared rays (level of protection:16#) are adopted to protect welding operator from being injured by harmful rays such as ultraviolet rays, infrared rays, etc.
- The original design of automatic transform technology used in controlling circuit make it possible for goggles to be able to react to the arc in 3/10000 second and change strong light to dark light. As a result, it can protect our eyes from being injured by sudden arc.
- Unique design anti-interference switch avoids not seeing welding object clearly due to complex surrounding nearby.
- Dark shade, step-less control, set by hand according to actual situation.
- Dark to light: 0.1 s ~ 0.8 s, step-less control.

## 2 Working principle

Different with traditional passive shading lens, made from various additives and pigment. ADF adopts LCD as lens ADF, using the probe on mirror surface to probe the appearance and disappearance of arc when welding, and using electricity to drive shading level of the LCD to achieve the goal of protecting user from harmful rays, can absolutely reflect ultraviolet rays and ultra red rays. In addition, hands are thoroughly set free. Welding is more accurate. Therefore, efficiency is improved.



## 3 Model editor instruction

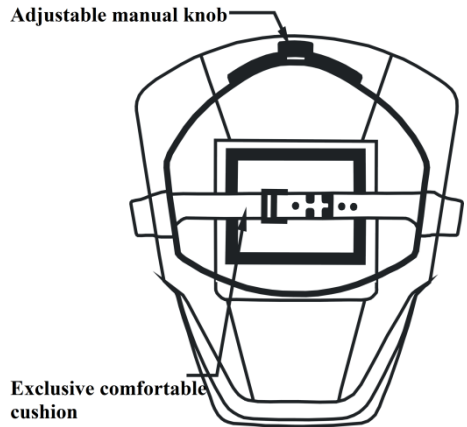
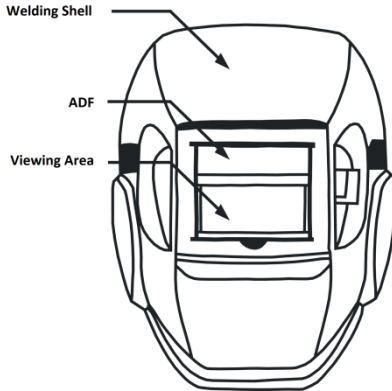


## 4 Main technical parameter

|                                      |                                |
|--------------------------------------|--------------------------------|
| Filter Model                         | <b>LY500A</b>                  |
| Filter Size                          | 110mm×90mm×9mm                 |
| Active Viewing Area                  | 92.5mm×42.5mm                  |
| Light Shade                          | DIN4                           |
| Dark Shade                           | DIN9~DIN13                     |
| Way to shift Dark State              | Step-less shift                |
| Switching Time                       | ≤3/1000S                       |
| Sensitivity Adjustment               | Step-less Control              |
| Delay Time                           | 0.1S~0.8S                      |
| Power supply                         | Lithium battery & Solar supply |
| Rated Capacity of<br>Lithium Battery | 600mAh                         |
| Operating Temperature                | -20°C~+65°C                    |
| Sensors to Weld Arc                  | 2                              |
| Protect Grade against<br>UVB         | DIN16                          |
| Grind                                | YES/No                         |
| Low battery                          | No                             |
| Test                                 | No                             |

## 5 Structure of welding mask and installation of headband

### 5.1 Structure of welding shield

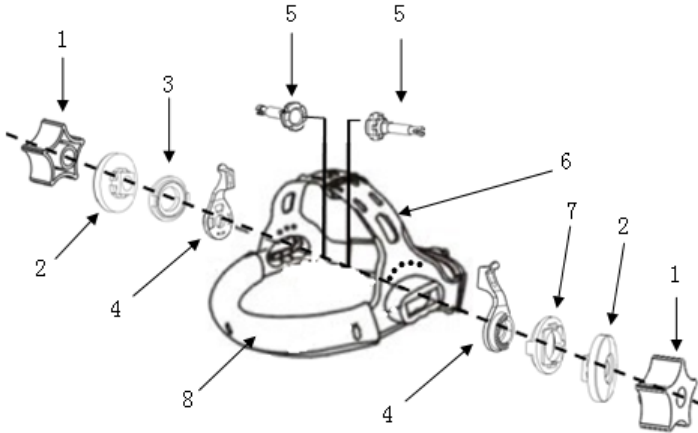


## Dark Shade Knob



## 5.2 Description of Headband Installation

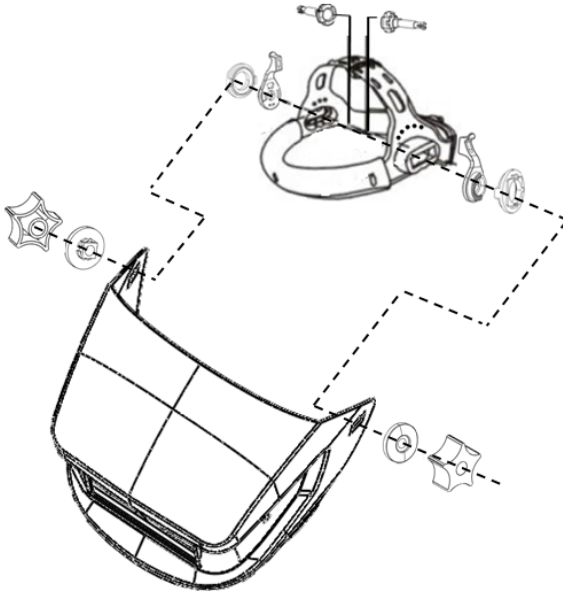
- a) Take out the headband, and disassemble it according to the exploded view below :



### Note

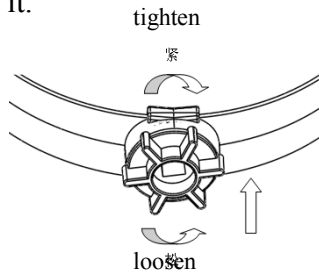
- The two plastic parts numbered as "3" and "7", with the same appearance, are distinguished on left and right; they are marked with "L" and "R", and please be sure to notice the distinction during disassembling and installation.
- The part numbered as "4" in the view is a locating piece working to adjust the viewing angle.
- The part numbered as "8" in the view is a sweatband; please replace it regularly.

- b) Take out the mask and install the headband according to the exploded view below:

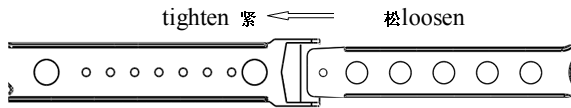


### 5.3 Description of Shield Adjustment

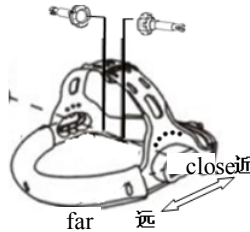
- a) Turn the headband first to make the headband adjusting knob at the back of the head, press with hand and turn counterclockwise the headband diameter adjusting knob to broaden the headband size; otherwise, narrow it.



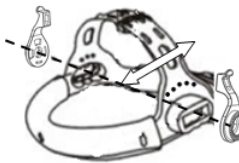
- b) Adjust the band depth location hole to adjust the length wise position of the headband from head top to eyes;



- c) Loosen lug nuts at both sides to make the mask move back and forth in the long mobile hole of the head loop so as to adjust the distance from the window view to eyes;



- d) Fix locating piece on different locating columns to adjust the window view angle, slightly adjust the required angle of elevation, horizontal view angle, and top view angle;



- e) Loosen lug nuts at both sides to adjust the vertical angle of the mask, to turn up or down the mask; you may hear a click during adjusting.



## 6 Auto darkening filter's operation instruction

### 1. Dark shade:

The table below is the darkness colour number comparison table; please select correct darkness colour number based on the actual working conditions so as to reach the optimal protection and work efficiency:

| Welding current (A) \ Welding type | 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 | 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:**LYG-8507A/LY500B/LY500H'S dark shade is outside control.

### 2. Sensitivity adjustment:

*Choose the appropriate sensitivity, not only realize the anti-interference capability, but also achieve better work.*

- When welding current is small, you need to put the "sensitivity" knob to high position, so you can detect weak stable arc
- When welding current is big, you need to put the "sensitivity" knob to low position, You can avoid the arc interference by others
- Sensitivity is step-less control, set by hand according to actual situation

### 3. Delay time:

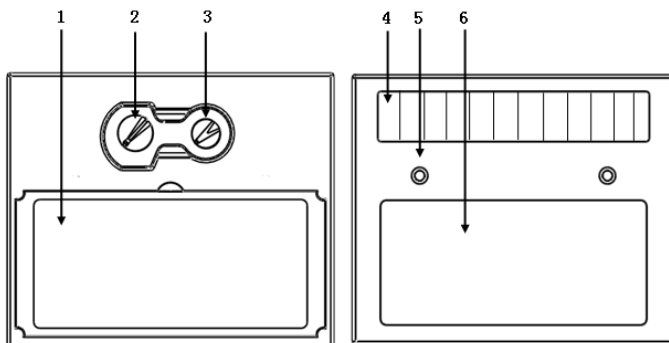
*Delay time is time from dark to light, Step-less control.*

- When welding current is big and the light of molten pool is very strong, you need to put the “delay” knob to high position, so you can avoid the glasses to be wounded by the light of molten pool.
- If you want to do spot welding, you need to put the “delay” knob to low position, so you can improve the work efficiency.
- Adjust “delay” knob to middle place is suitable for most of welding mode.

## **7 Precautions for Use of Helmet**

1. Before using the auto darkening welding helmet, please first tear off the films attached to the inside and outside PC screening glass of the window, adjusting the tightening knob between headband and helmet body, and then adjust the headband diameter and depth properly for wearing.
2. Test with standard incandescent lamps of 40W or above before using, the liquid crystal will turn black when you put lamps near it.
3. Do not put the helmet on any high-temperature weld joint after welding.
4. Do not use the helmet as safety helmet.
5. Replace unclear or damaged inside or outside screening glass timely to ensure the lines of sight.
6. In order to protect the product from damage, please do not clean it with clear water or cleaning solvent; please use soft tissues or cloth for cleaning.
7. In order to ensure the auto darkening filter works correctly, please keep the sensors of weld arc on it clean of other objects.
8. When the ambient temperature is relatively low, the liquid crystal materials in the cartridge may not work correctly while it has no influence on various protective properties.

## 8 ADF Filter



- 1、 LCD protect plate
- 2、 Sensitivity control knob
- 3、 Delay time control knob
- 4、 Solar cell
- 5、 Sensor
- 6、 UV-IR filter