



User Manual

Sonic Wonder Company

HARRIER SUNGLASSES - AUTO SWITCH MODE FOR 4 LEVELS

First, the function introduction

1. Intelligent automatic brightness changing function

The brightness of the lens changes automatically with the intensity of the ambient light. The lightness and darkness are divided into four levels, so that the human eye is always in a relatively comfortable state and is not easy to fatigue.

2. Rapid color change function

The response time of the lens from light to dark or from dark to light is about 0.1 second. This ensures that the human eye will not be short-sighted or blind when the light intensity suddenly changes (such as driving into and out of the tunnel) and protects your driving safety.

3. Anti-UV function

Harrier intelligent automatic brightness-changing sunglasses lens have double-layer, which polarizes light and filters 100% UV, UV420.

4. Polarized function

Since the lens uses a double-layer polarizer, it has all the functions of a polarizer: anti-dazzle, road surface reflection, water surface scale...etc. It's suitable for driving, fishing, traveling, outdoor sports and common wear.

5. Light weight and good explosion-proof performance

Since the lens is made of a flexible substrate, the weight of the conventional glass liquid crystal lens is greatly reduced, and the risk of damage caused by the breakage of the glass lens is no longer worried, and it is more suitable for driving and outdoor sports.

6. The communication signal has a high light transmittance.

Harrier intelligent automatic brightness-changing sunglasses lens blocks UVA, UVB, UV-Tmax and strong visible light. The red, yellow and green light transmittance of traffic lights is much higher than the national standard of 8%, which will not affect the identification of traffic signals.

7. Anti-flicker function

Harrier intelligent automatic color-changing sunglasses add AI intelligent design in the intelligent control circuit. Even if driving or riding on the densely spaced avenue, the mottled light and shadow will not make the glasses flicker, and it will still be guaranteed that drivers have comfortable and clear vision, effectively preventing eye fatigue.

8. Switch mode function (corresponding product model: FJ-RD0168 series)

Harrier intelligent automatic brightness-changing sunglasses dimming mode: manual and automatic: two dimming modes. In the manual mode, there are 4 levels of brightness to switch. In the automatic mode, there are two modes: in-car driving and outdoor sports. To meet the needs of different wearers for the discoloration of lenses in different light environments, after the glasses are powered on, the default mode is: auto dimming - outdoor sports mode.

Second, the instructions for use

i. Power switch description

The power switch uses a smart touch switch. When the temples are opened, the power will automatically shut down, and the lens will flash for 3 times, entering the normal working mode, and then no longer flash.

Note: If the lens does not flash for 3 times or flashes frequently after the temple is opened, it means that the battery is low and needs to be charged.

ii. Charging instructions

When charging, it can be equipped with a data cable or a MICRO-USB universal data cable. The charger can be selected as a mobile phone charger with a DC output of 5V, a car charger or a computer USB port.

Note:

- A. The glasses can be charged whether the temples are opened or closed (optimal charging method: close the temples and then charge).

- B. During the charging process, the small hole next to the charging port of the temple will emit a “red light” to indicate that it is being charged. When the small hole emits “green light”, the charging is completed.
- C. During the charging process, if the temples are changed from the open state to the closed state and the indicator light changes from “red light” to “green light”, the charging is near completion, and this phenomenon is not a abnormality.)
- D. Switch mode description (corresponding product model: FJ-RD0168 series)
The glasses dimming mode has two working modes: manual dimming and auto dimming. There are 4 levels of brightness for switching in the manual dimming mode. In the auto dimming mode, there are two modes: in-car driving and outdoor sports. When the glasses are powered on, the default working mode is auto dimming - outdoor sports mode.
Manual and automatic mode switching method: Use your right finger or the palm to touch the right temple for 6 seconds until the lens flickers. Next, the lens will flash 6 times in a row and this means the manual and automatic mode switching is successful.
In the auto dimming mode, the in-car driving mode and the outdoor sports mode switching: after the right finger or the palm touches the right temple until the lens flashes 3 times in a row, it indicates that the switch between driving mode and the outdoor sports mode is successful.
Switching between different brightness levels in manual dimming mode: After touching the right temple with your right fingers or palm, the brightness level of the lens will switch between 4 levels

Third, the use of precautions

- A. It is forbidden to wash the sunglasses and put them under rainwater (if you need waterproof glasses, it'll need to be customized)
Due to the design of liquid crystal lens and intelligent control circuit, the lens and frame cannot be directly washed with water to prevent water from entering and resulting in abnormal operation of the glasses caused by short circuit, and the rain will also cause the mentioned problems.
Note: When the glasses are washed by water or rain, please close the temples in time and disconnect the power and thoroughly dry the glasses with a hair dryer, then open the temples and check if the glasses are working properly.

- B. Do not force or pull the temples
Please do not force or pull the temples, otherwise, you may break the glasses or give rise to the damage of the control line or the lens.

- C. It is forbidden to scrub the lens with rough glasses cloth.
Harrier glasses are liquid crystal polarizing glasses. If you often use a rough glasses cloth to wipe the lens, it will cause lens abrasion and affect the clarity.

- D. It is forbidden to open the glasses for a long time when the glasses are not worn. For crystal-clear glasses, be sure to close the temples when you are not wearing them to save power and please store it after fully charged.

Fourth 、 Transmittance and Environment Table

Outdoor sport mode	Transmittance	Environment (LUX)
Level 1	35%~38%	<8000LUX
Level 2	24%~27%	8000LUX~20000LUX
Level 3	14%~17%	20000LUX~80000LUX
Level 4	8%~10%	80000LUX <
Indoor mode (driving mode)	Transmittance	Environment (LUX)
Level 1	35%~38%	<100LUX
Level 2	24%~27%	100LUX~500LUX
Level 3	14%~17%	500LUX~5000LUX
Level 4	8%~10%	5000LUX <
Manual mode	Transmittance	Environment (LUX)
Level 1	35%~38%	
Level 2	24%~27%	
Level 3	14%~17%	
Level 4	8%~10%	

Fifth 、 electrical performance and parameters

Symbol	Test Conditions	Min	Typ	Max	Units
Threshold voltage(V _{th})	F=64HZ , AC/square wave	0.9	1	1.1	V (AC)
Saturation voltage(V _{at})	F=64HZ , AC/square wave	1.6	1.65	1.7	V (AC)
T _{on} +T _{off}	25°C , 64HZ , 1.6V(AC)			60	ms
I _{on}	25°C , F=64HZ , V _{sat} =1.65V		1		uA/CM2
Color change response speed				80	ms

Sixth 、UV and Traffic signal transmittance table

Characteristic	Symbol	Conditions	Min	Typ	Max	Note
t _v	Regular luminous transmittance	500nm~780nm		0.36	0.39	ISO: 8%~40%
TSB(380~500)	UV transmittance	380~500nm	0.18		0.39	
t _{SUVA} (315~380)	UV transmittance	315~380nm		0		ISO≦5%
t _{SUVB} (290~315)	UV transmittance	290nm~315		0		ISO≦1%
	Traffic signal transmittance(RED)	Driving voltage : 0V	0.29	0.31		ISO≧8%
	Traffic signal transmittance(Green)	Driving voltage : 0V	0.3	0.32		ISO≧6%
	Traffic signal transmittance(Yellow)	Driving voltage : 0V	0.31	0.34		ISO≧6%
	Traffic signal transmittance(RED)	Driving voltage : 1.35V	0.09	0.11		ISO≧8%
	Traffic signal transmittance(Green)	Driving voltage : 1.35V	0.1	0.12		ISO≧6%
	Traffic signal transmittance(Yellow)	Driving voltage : 1.35V	0.13	0.15		ISO≧6%