SPECIFICATIONS

Item No.：DMI820

Desc：Digital Display Inclinometer

Version：Ve1.1

DMI820-Digital Display Inclinometer

General Description

DMI820 is a digital display inclinometer which took RION company three years to develop professional for various industry angle controling and measuring.The core of this product is using the micro-mechanical control principle, dual-core measurement unit, can use the Y-axis to compensate X-axis during the measurement process,and then to use RION patent interleaved and temperature compensation model algorithm to play absolute operation advantages of the micro-mechanical electronic principles,to ensure that the instruments measurement with the long-term stability and repeatability. DMI820 is a uniaxial 90deg measurement, resolution 0.001 °、the highest accuracy <0.005 degree full-scale、fast response, stable data, products specially designed for the sides and bottom with magnetic adsorption installation, both sides of the benchmark can be measured and using normally,very convenient to use, In addition, supporting the selection of DMI820 (SMI820) with the use of separate measurement, used in combination with the Division HCA series tilt sensor, the transmission mode wireless or wired optional, wireless using one-to-one band transmission, transmission straight line distance> 10m, the cable transmission standard 1 meter (can be customized long distance), DMI820 series has strong scalability, convenient & practical application and industrial reliability, has absolute cost advantage and has an absolute competitive advantage in the international market !

Features:

- ●Best accuracy：<0.003°
- ●Repeatability：0.003°
- ●Angle resolution：0.001°
- ●Maximum measuring range：±90°
- ●User can set the alarm value by himself
- ● Data store function
- ●Absolute/Relative measurement can switch
- ●Both sides and bottom can measure
- ●Double benchmark strong magnet installation
- ●Working Temperature : -10°～ +70℃
- ●Auto-angle interleaved compensation function
- ●Auto temperature drift compensation
- ●User can calibrate ZERO by himself
- ●Built-in rechargable industry batteries
- ●Night vision fours colors screen
- ●IP54 protection class
- ●°/mm/m Dual units switch function
- ● Filter frequency optional
- ●Three kinds of measurement mode selectable (radian, angle, mm)

Application :

- ●Building construction
- ●Automobile four-wheel testing
- ●Road slope
- ●Machinery installation
- ●Piping installation
- ●Industrial platform
- ●Turntable testing
- ●Pan unit angle detection
- ●Production jig
- ●Medical instruments

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Technical Data

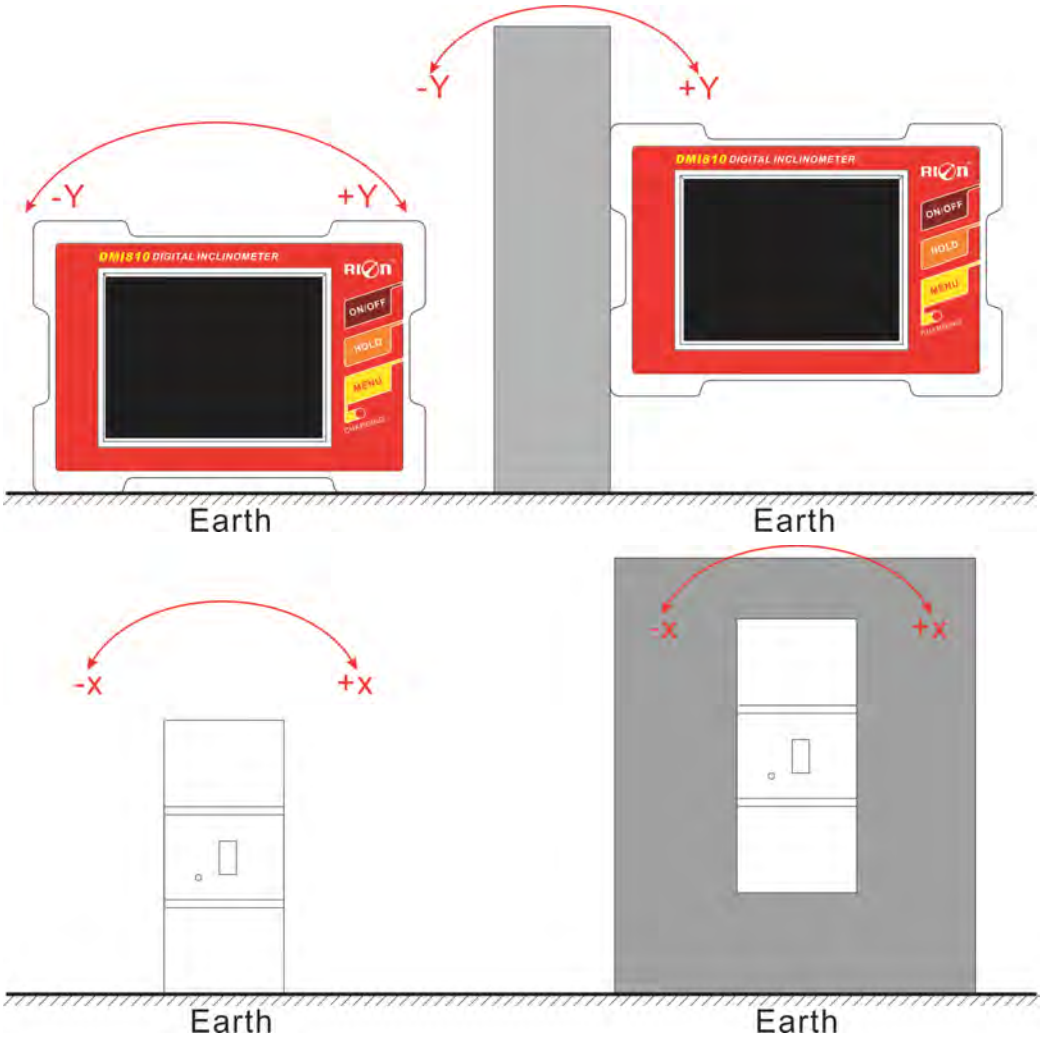
Parameter	DMI820-15	DMI820-30	Unit
Angle Measuring range	DMI820:±15 ° ;	DMI820:±30 ° ;	°
MM measuring range	267	577	mm
Meausring axis	Single axis	Single axis	
The highest meausring accuracy	<0.005 （Full measuring range）	<0.01 （Full measuring range）	°
Angle Measuring resolution	0.001	0.001	°
MM measuring accuracy	0.1	0.2	mm
Three measurement mode selectable	radian, angle, mm measuring can be selected		
MM measuring res	0.02		mm
LCD	64 true colors night vision display screen		
LCD visible area size	L57.6*W43.2		mm
Working temperature	-10°～ +70℃		°/℃
Working humidity	85		%RH
Power supply	3.7VCharging Lithium battery		V
Ideal charging time	3~4		h
Battery sustainable charging times	11		h
Equipped with PC software	VC software		
Data output signal	USB1.1		
Connect plug in	Standard 5Pin USB connector		
Shock resistance	10g@11ms、3Times/Axis(half sinusoid)		g
Shock impact	10grms、10～100Hz		g
Weight	300		g
Waterproof grade	IP54		
Material	Metal		
Size	L105*W73*H27.1mm		mm

Ordering information :

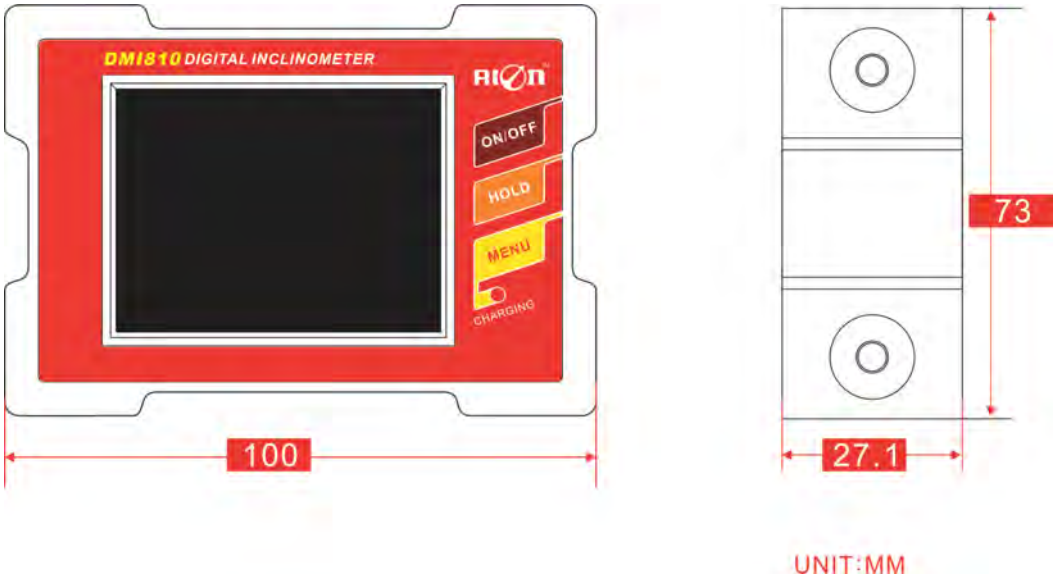
Item No.	Desc.
DMI810	Standard single-axis digital display inclinometer/ Measuring range±15°;±30°;±60°;±90°
WMI810	External wireless connection single axis inclinometer separated measuring/ Measuring range ±15°;±30°;±60°;±90°
DMI820	Standard dual-axis digital display inclinometer/ ±15°;±30°;±75°
WMI820	External wireless connection dual-axis inclinometer separated measuring/ Measuring range±15°;±30°;±75°

E.g:DMI820-15 is standard single-axis digital display inclinometer with measuring range ±15°

Measuring direction

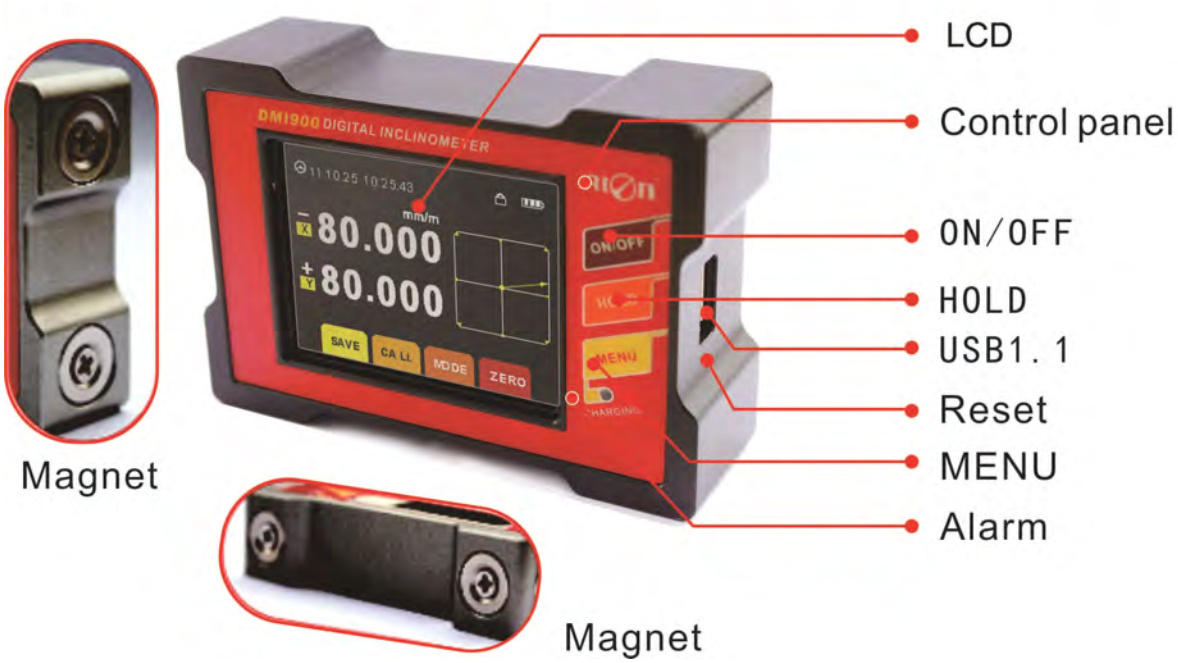


Product Dimension diagram



Product appearance size：L100*W73*H27.1mm

Product Functions:



ON/OFF： **Press for 2seconds to power on or off ;**

HOLD： **This key to lock the current data, convenient customer records;**

MENU： **Press MENU menu disappears, then re-press appears.。**

RESET HOLE: If the instrument occur a crash in working, key can't operation, can use the needlepoint hard object to insert into the hole for touch the button;

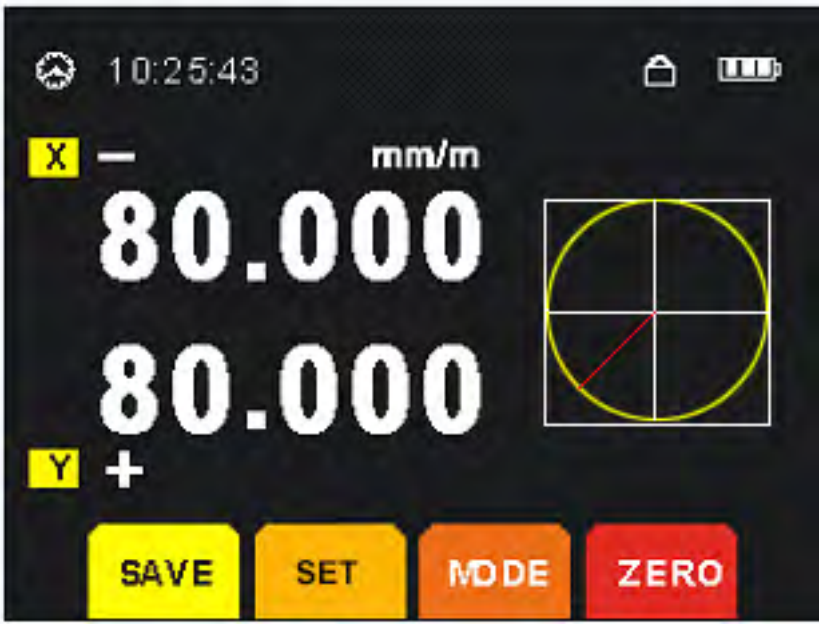
USB JACK： For charging purposes or USB1.1 protocol output data ;
WARNING LIGHT：Charging warning lights, lights up means is charging, light off mens has been filled with power then can take off the charger .(In order to keep the battery with a long life please don't use it as much as possible when it is charging with power.)

Functional menu instructions :

1.ON/OFF press 3 seconds or so, when heard "beep..."Let go,startup/shutdown .
2..Press "HOLD" button to lock , re-press to unlock , Upper right corner of the monitor icon display.
3. Press MENU menu disappears, then re-press appears.。
4． Press the " MENU" and "HOLD" keys at same time to enter the touch screen calibration.

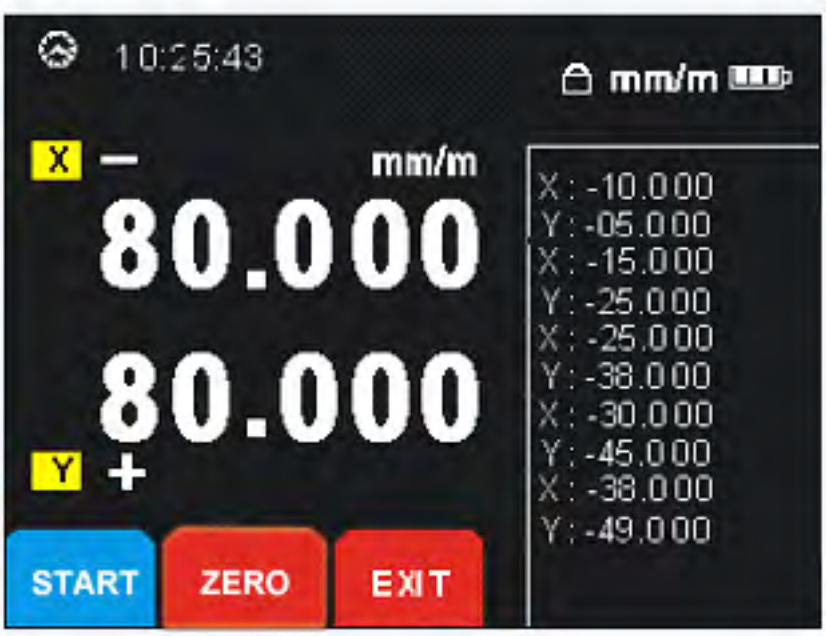
4.1 Click "OK" enterinto nex step ,click "EXIT" to Exit touchscreen calibration.

4.2 Click the red dot with a small pen to move the red finish four points automatically exit calibration.



一、Click the SAVE button to enter the touch screen save option
A. DELETE ALL DATA
B. SAVE THE SINGLE POINT
C. SAVE MULTIPLE POINT（Saved frequency selectable 1，5，10，20）
D. Click "OK "to choose "success"
E. EXIT Give up selection to keep the original

Select “save the single point” to enter into interface



Save then click START ,Saved the related data in SD card , and display at the right corner of the interface , Right corner of the six sets of data can be displayed, and then refresh

ABS/ZERO Switch keys

EIXT: Exit saving function

二、**SET**

Click the SET button to enter the setup interface six button options and features:

A. ALARM : Angle alarm value setting

B. CALI. : Calibration setting

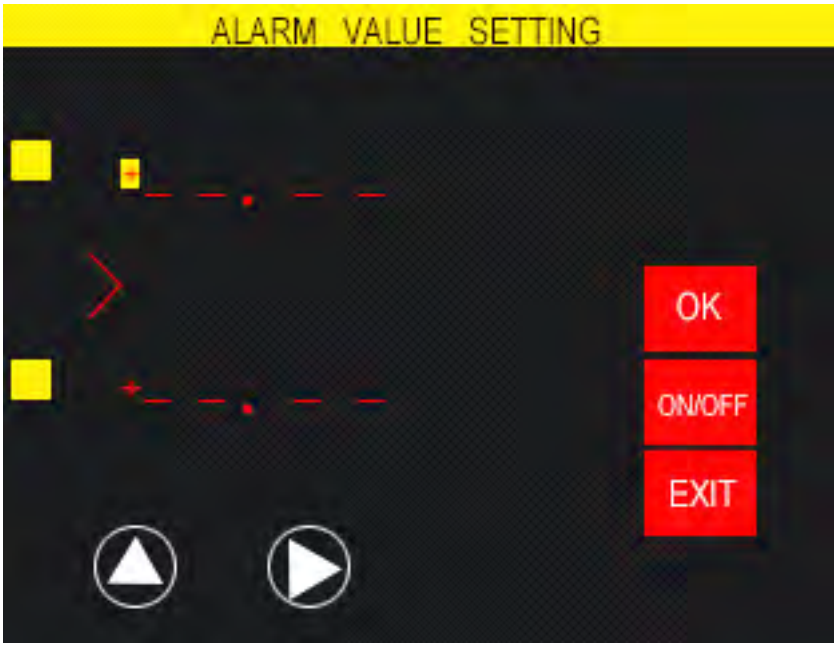
C. FILTER : Filter frequency setting

D. DATE : Date settting

E. FAC.RESET : Factory default setting

F. EXIT : Exit the setting interface

A.**ALARM**



1. Click ON / OFF and open the angle alarm setting, display numbers, closed setting then shows "------."
2. Click on the X or Y axis data point select the appropriate axis angle setting.
3. Click the up: Changing the corresponding bits of data and symbols.
Left: Change the corresponding bit of the direction keys.
Angle symbol is +: When the angle is greater than the corresponding alarm
-: When the angle is less than the corresponding alarm
+ / -: Outside this range alarm

For example:
Set X: +03.00 means when the X axis angle +3.3, is greater than 3 degrees then alarm;
Set Y: -04.00 means when the Y axis angel -4.6 ,is less than -4 degrees then alarm;
Set Y: + / -05.00 angle when the Y axis angle -6, exceed -5 to +5 degrees then alarm

4. Click "OK " to save the setting angle, then to take effect
5. EXIT: Exit set the angle saving

B. CALI

Click" OK" then to operate according to related action

C.FILTER

Default 20HZ
Select 1HZ : Output frequence after filting
OK : Select success
EXIT : Exit selection

D.DATE

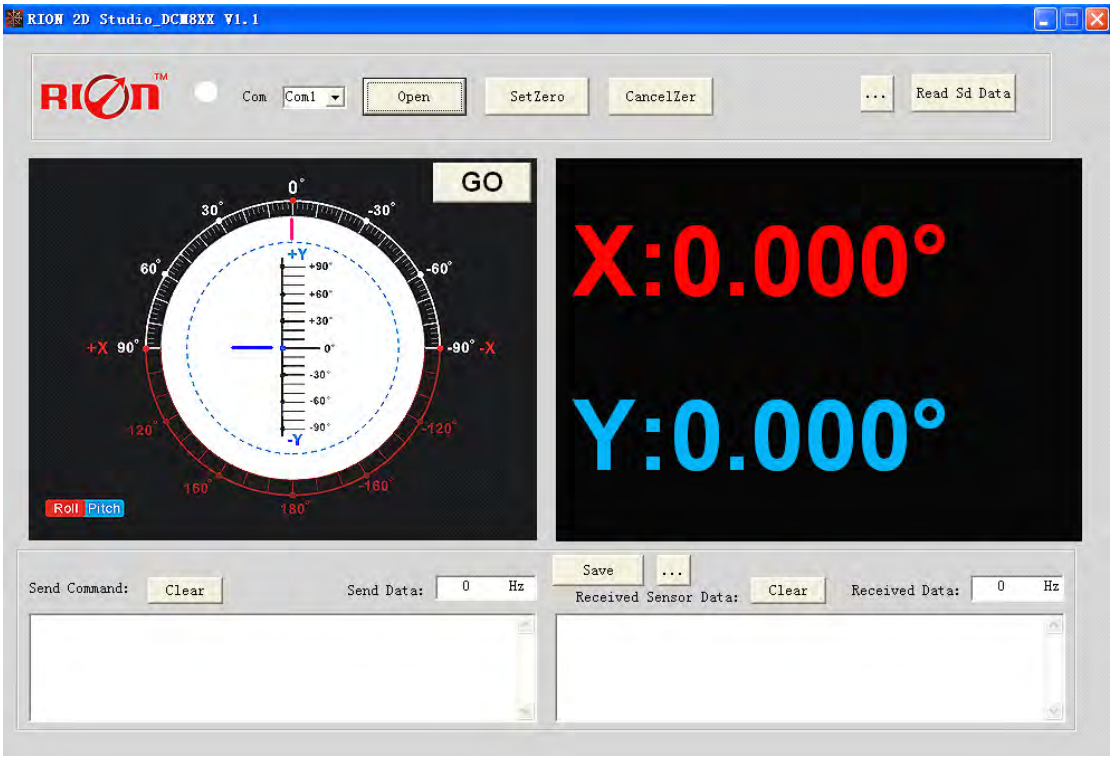
Setting data & time to display the correct time of saved data

To the left: choose the time (date) (month) (year), the location of the hours,minutes

and seconds, recycled
The up button: adding the corresponding value
The down keys: reduce the corresponding numerical values
OK: save Settings
EXIT: quit Settings date interface, no save

E.FAC.RESET
Restore the factory Settings
The parameters of the recovery has alarm value, filtering frequency,calibration angle

三、Unit mode selection
MODE press each time to display unit mode change DEG, degree,minutes and seconds, mm/m switching cycles
四、ZERO/ABS : Absolute Relative
ZERO: click to set the current angle to ZERO
ABS: click on the switch to absolute zero
五、When crashing to restart with needle to press the holes under the lamp to reset
六、Charging and upload the SD card to access the data using the software to store data



Supporting optional products:


DMI810标准单轴数显倾角仪量程:±90°
长度:0-700mm/m(±15° ： 0-267mm/m)


DMI820标准双轴数显倾角仪量程:±75°
长度:0-700mm/m(±15° ： 0-267mm/m)


SMI810外部有线连接单轴倾角仪分离式测量
量程:±90° 长度:0-700mm/m(±15° ： 0-267mm/m)


SMI820外部有线连接双轴倾角仪分离式测量
量程:±75° 长度:0-700mm/m(±15° ： 0-267mm/m)


WMI810外部无线连接单轴倾角仪分离式测量
距离：10m 量程:±90° 长度:0-700mm/m(±15° 0-267mm/m)


WMI820外部无线连接双轴倾角仪分离式测量
距离：10m量程:±75° 长度:0-700mm/m(±15° ： 0-267mm/m)

Products maintenance :

1. The digital display angle instrument using 3.7 V rechargeable lithium battery, in order to improve the battery life, please recharge when the battery not completely to be used out.
2. Press power ON without digital display, please recharge in time.
3. The instrument reliability and can be used in the vibration environment, please don't high-altitude fall the instrument to avoid cause permanent damage.
4. If found instrument damage please don't disassemble it by yourself, please contact us at first for professional guidance , such as personal removed , subject to manufacturer shall refuse to repair.

Warning ：

1.This product has a high precision sensor and information processing circuit, it is forbidden to drop impact or to tear open outfit, otherwise the consequence is proud.
2. Don't press the multiple keys at the same time, it is easy to affect the service life of the Product.
3.This product should be placed in a safe place where Children can not touch.

ESD Sensitive Device

More information please visit our official website: www.rion-tech.net

RION™

深圳市瑞芬科技有限公司

CHINA SHENZHEN RION TECHNOLOGY CO.,LTD.

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