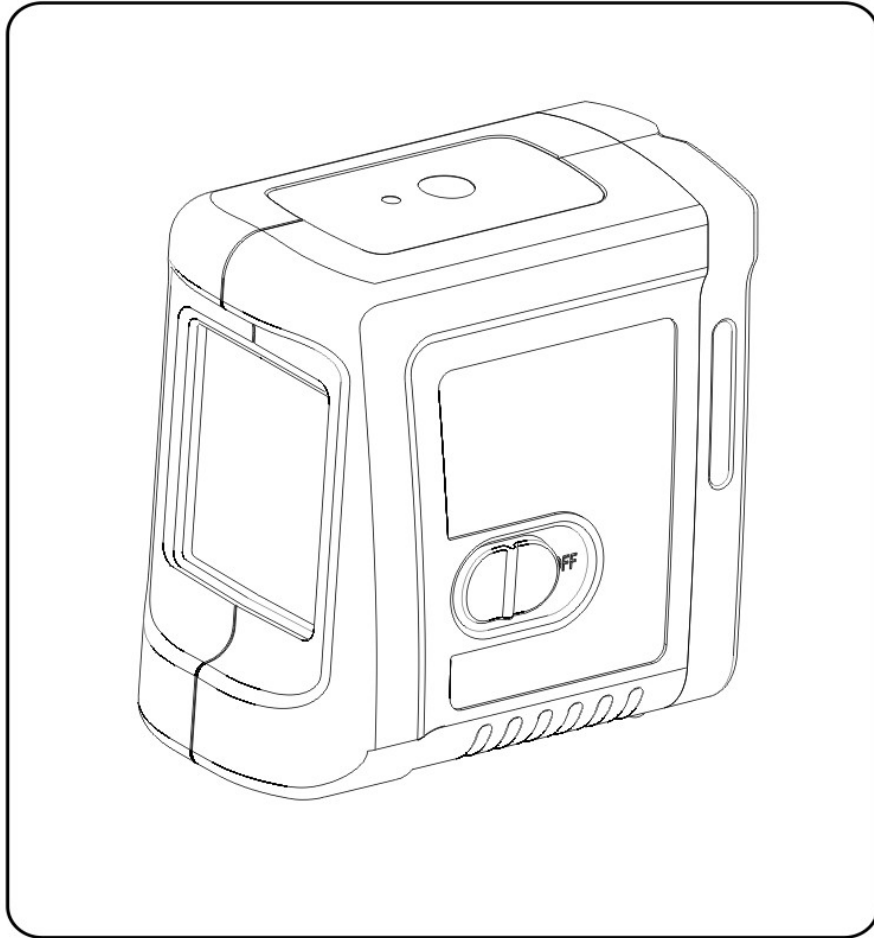


862 Laser level

Maintenance manual



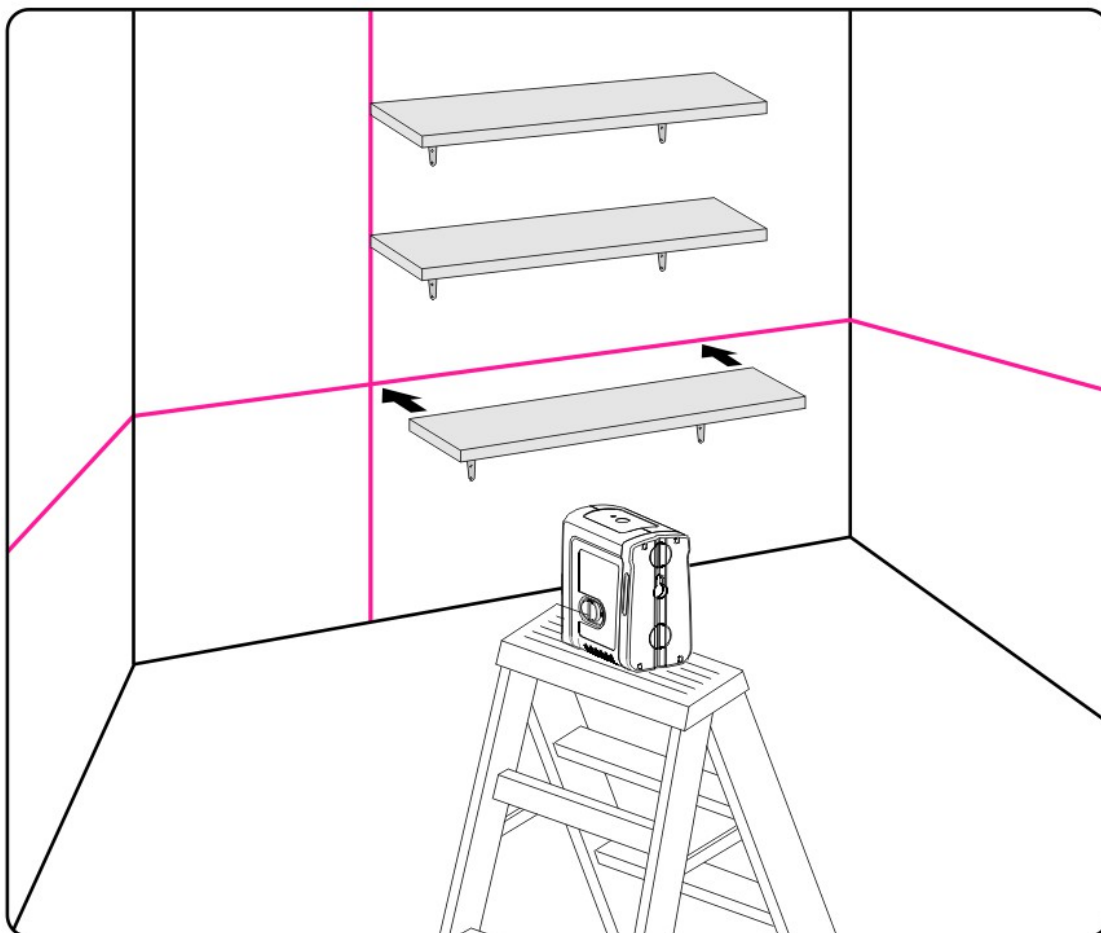
KAPRO

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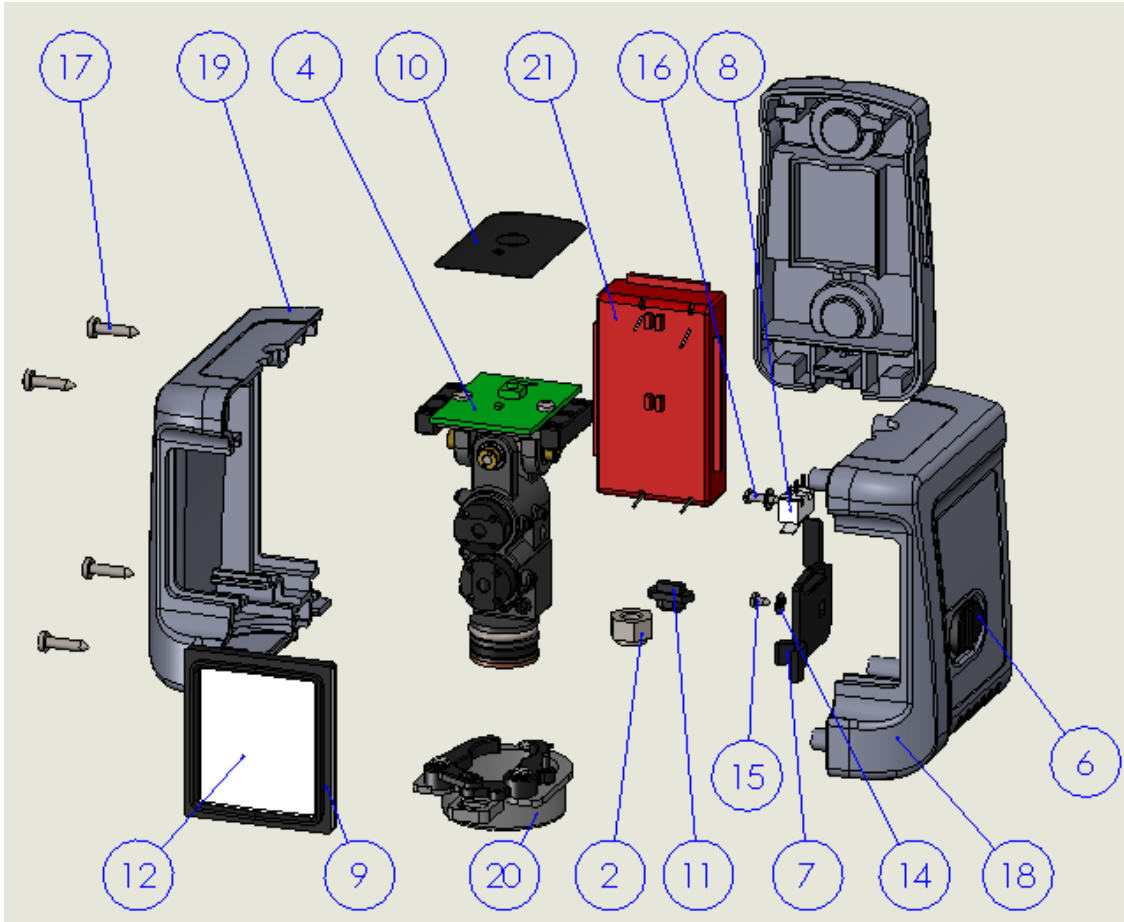
1. Basic function

The instrument can produce two mutually orthogonal laser sectors (a horizontal and a vertical plane). Laser sector projected on the walls, laser line creating two orthogonal. As shown in the figure below laser projection.



2、Instrument structure

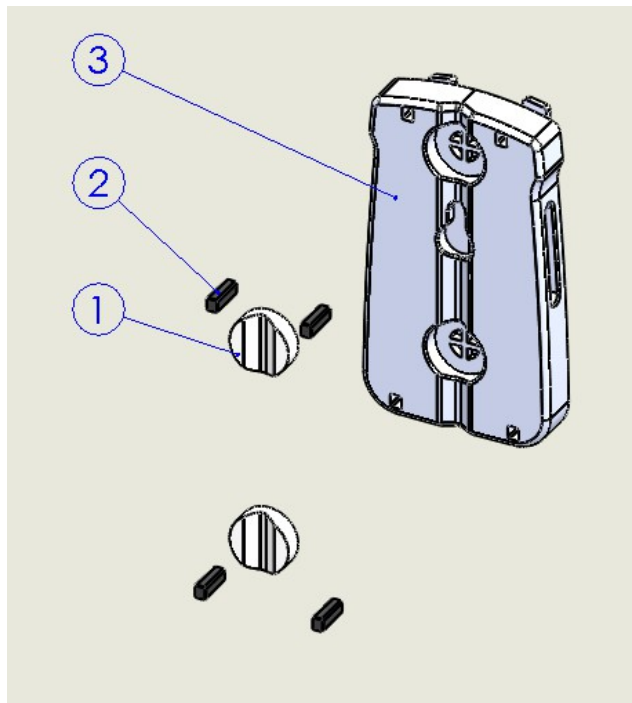
2.1 Final assembly



NO	NAME	Material	QTY
1	862 摆体组 Pendulum Assembly		1
2	862 1/4 "base screw	sus304	1
3	886-23 电池盖组 battery cover assembly		1
4	862 主板 main board	PCBA	1
5	GB_CROSS_SCREWS_TYPE1 M2.5X5-5 H type-N		2
6	862 开关钮 Switch button	PA6+30GF	1
7	862 开关卡座 Switch seat	POM	1

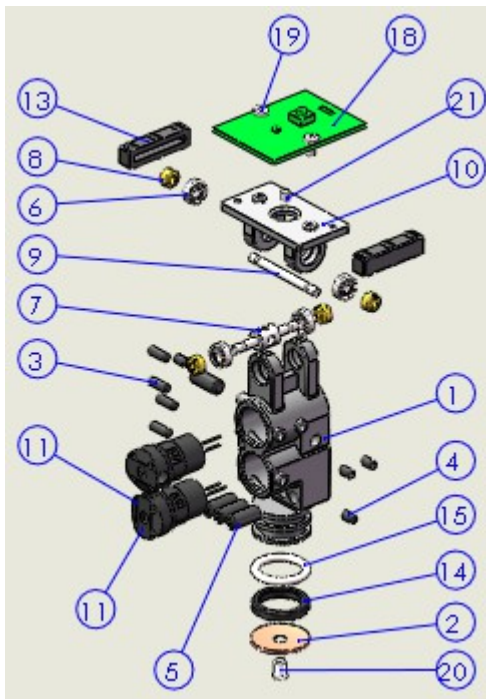
8	873 开关 switch		1
9	862 窗玻璃橡胶 window rubber	SI RUBBER	1
10	862 按键标贴 label	PC	1
11	862 电池按钮 battery cover button	PA6+30GF	1
12	862 窗玻璃 window	K9	1
13	873 紫铜片联接钉 Copper sheet screw	2AL12	1
14	GB_FASTENER_WASHER_SMW C 2.5	SUS304	2
15	GB_CROSS_SCREWS_TYPE128 ST2.2X4.5 H C-N	SUS304	1
16	GB_CROSS_SCREWS_TYPE128 ST2.2X9.5 H C-N	SUS304	1
17	GB_CROSS_SCREWS_TYPE128 ST2.9X13 H C-N	SUS304	4
18	862 右外壳 shell right	ABS	1
19	862 左外壳 left right	ABS	1
20	862 锁紧座组件 locking assembly		1
21	862 电池盒组件 battery box assembly		1

2.2. Battery cover assembly



NO.	NAME	Material	QTY
1	935 磁铁 Magnet	MAGNET	2
2	862 橡胶塞 rubber	SI RUBBER	4
3	862 电池盖 Battery cover	PA6+30GF	1

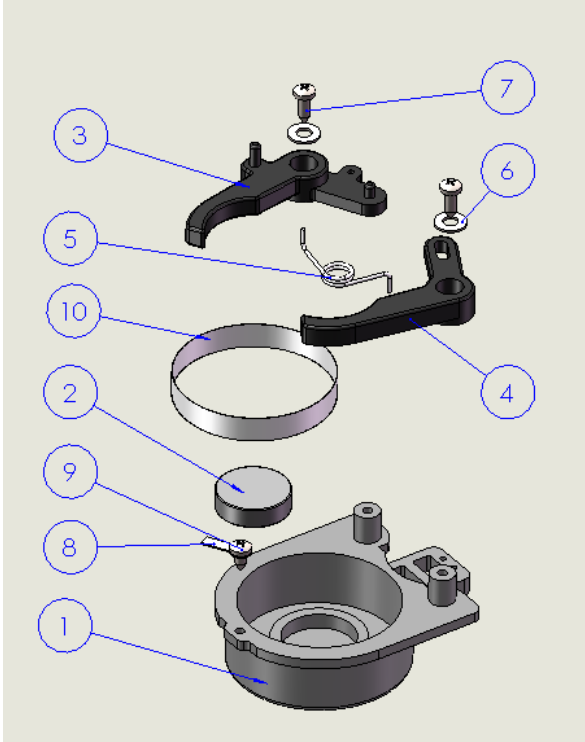
2.3. Pendulum assembly



NO	NAME	Material	QTY
1	862 摆体 Pendulum	AC43A	1
2	862 紫铜片 Red copper sheet	T2	1
3	hex socket set screws with flat point GB ,M3*8	45#	4
4	GB FASTENER SCREWS HSFP M3X5-N	45#	4
5	hex socket set screws with flat point gb,M5*12	SUS304	4
6	872 轴承 deep groove ball bearings gb		4
7	872 中心轴 1 center shaft-1	SUS304	1
8	872 压圈 /pressure ring	HPb59-1	4
9	872 中心轴 2center shaft-2	SUS304	1
10	862 顶板 roof	ADC-12	1
11	hexagon socket set screws with cup point GB		8
11	862 线激光器 line laser		2

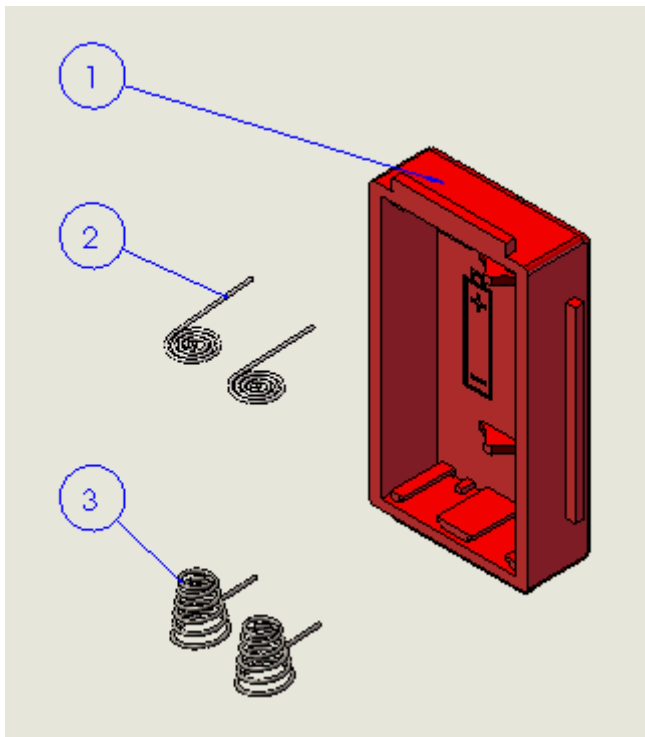
13	862 减震垫 rubber shock pad	SI rubber	2
14	872 导电橡胶圈 conductive aprons		1
15	o-rings series a GB	Rubber	1
16	875 连线板 On-line plate		1
17	GB CROSS SCREWS TYPE1 M2.5X6	SUS304	1
18	862 主板 main board	PCBA	1
19	GB CROSS SCREWS TYPE1 M2.5X5	SUS304	2
20	873 紫铜片联接钉 Copper sheet screw	2AL12	1
21	GB FASTENER SCREWS HSFP M2.5X4-N	SUS304	1

2.4 .Lock seat assembly



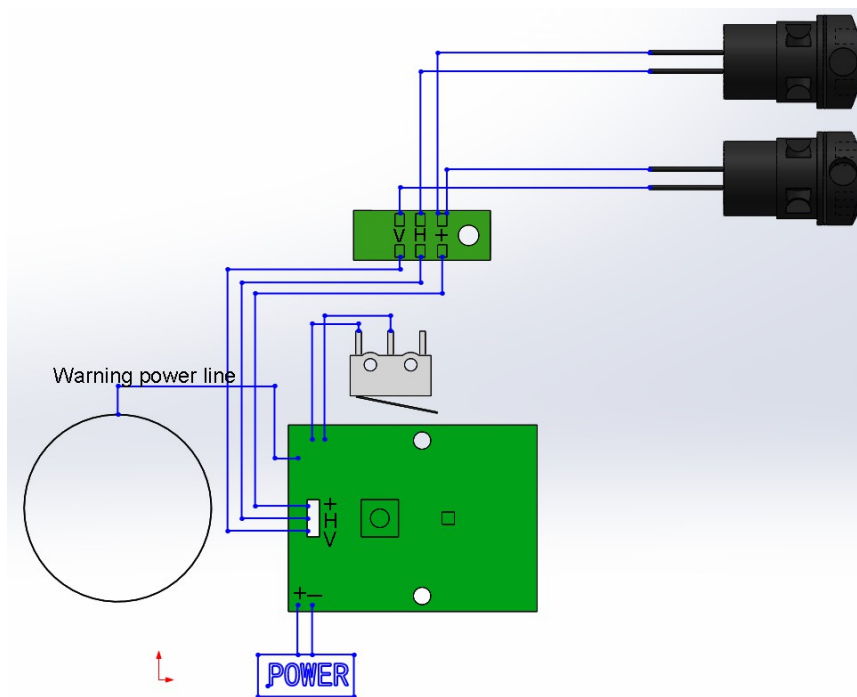
NO	NAME	Material	QTY
1	862 锁紧座 Lock seat	ABS	1
2	892 磁铁 Magnet	Magnet	1
3	862 右爪 right claw	PA6+30GF	1
4	862 左爪 left claw	PA6+30GF	1
5	862 扭簧 Torsional spring	65Mn	1
6	GB FASTENER WASHER SMWC 2.5	sus304	2
7	GB_CROSS_SCREWS_TYPE128 ST2.2X6.5 H C-N	sus304	2
8	873 接地端子 terminal	q235	1
9	GB_CROSS_SCREWS_TYPE128 ST2.2X4.5 H C-N	sus304	1
10	862 导电胶布 Conductive TapesB5		1

2.5. Battery box assembly



NO	NAME	Material	QTY
1	862 电池盒 Battery box	ABS	1
2	872 正极端子 /positive terminal	65Mn	2
3	872 弹簧端子 spring terminal	65Mn	2

2.6 Electrical jobs chart



3、 Common fault and eliminating methods

3.1、 Don't start up

Cause
 (1) Three dry cells working voltage is lower than 3 V analysis:
 (2)The power plug contact with the motherboard
 (3) The travel switch contact undesirable

Troubleshooting:

- (1) Replace the battery in time
- (2)Open the shell, reinstall the power plug
- (3) Open the shell to adjust the position of the switch chip

Note: keyboard or motherboard damage can also cause cannot boot (less likely), and to change the contact.

3.2、 After startup without laser line

Cause
 (1) Instrument tilt is too large, beyond the scope of work is the police analysis:
 (2) laser tube main board attachment poor contact or broken

Troubleshooting:

- (1)Adjust the Angle of screw adjust equipment to work within the scope of returned to normal
- (2) To open the shell welding laser tube connection

Note: the main board or damage to the laser tube can also be caused no laser line (less likely), and to

change the contact.

3.3、 After startup cannot level

- Cause analysis:
- (1) The bearing surface is oxidation corrosion
- (2) The alarm ring contact surface oxidation by pollution or lead to poor contact
- Troubleshooting:
- (1) Open the shell, with rusty spot bearing replacement
- (2) Open the shell, after the alarm ring with anhydrous ethanol removal of contamination or oxidation

4、 SPEC

Laser class:	class 2
Laser beam output pattern:	vertical, horizontal, horizontal and vertical
Effective range:	98'/30m
Accuracy:	0.5mm/1m(0.02"/40")
Beam angle:	120°±5°
Self-leveling time:	4sec±1sec
Self-leveling range:	±5°
Wavelength:	630-650nm
Power supply:	2 AA batteries(not included)
Battery life:	20 hours of continuous use
Operating temperature:	14°F–113°F(-10°C – 45°C)
Storage temperature:	-4°F–131°F(-20°C–55°C)
Water&dust proof:	IP54
Dimensions:	3.5"x2.2x3.6"(90mmx55mmx92mm)
Weight including batteries:	500g