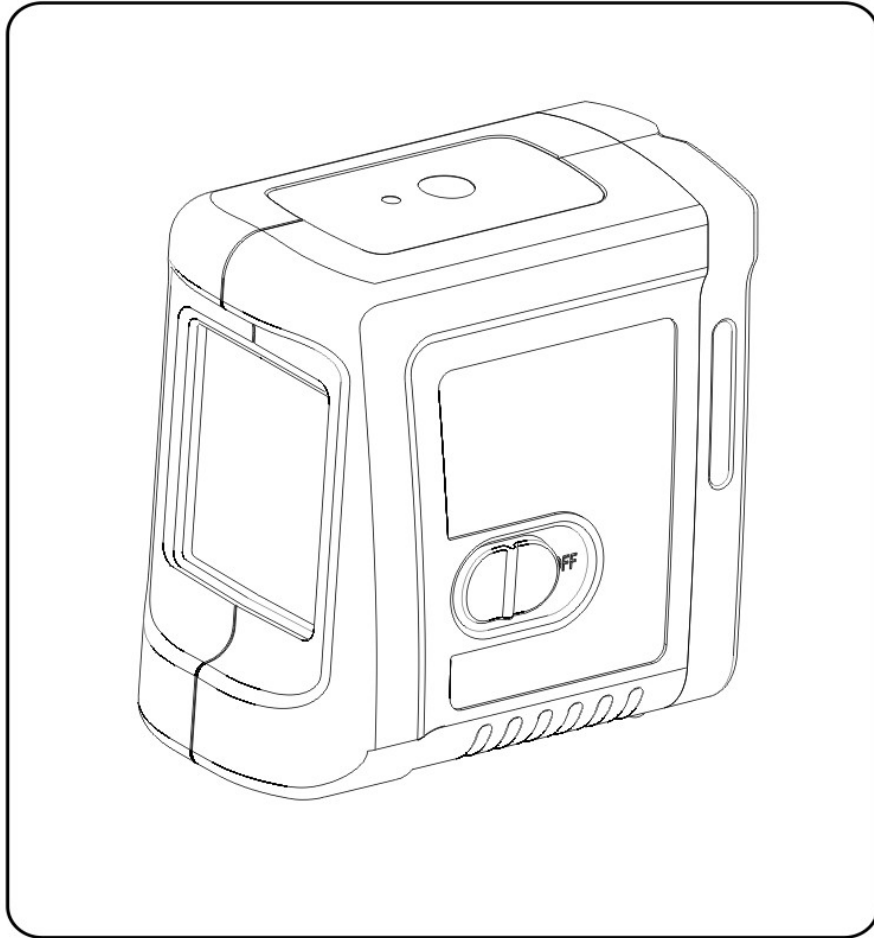


862 Laser level

Maintenance manual



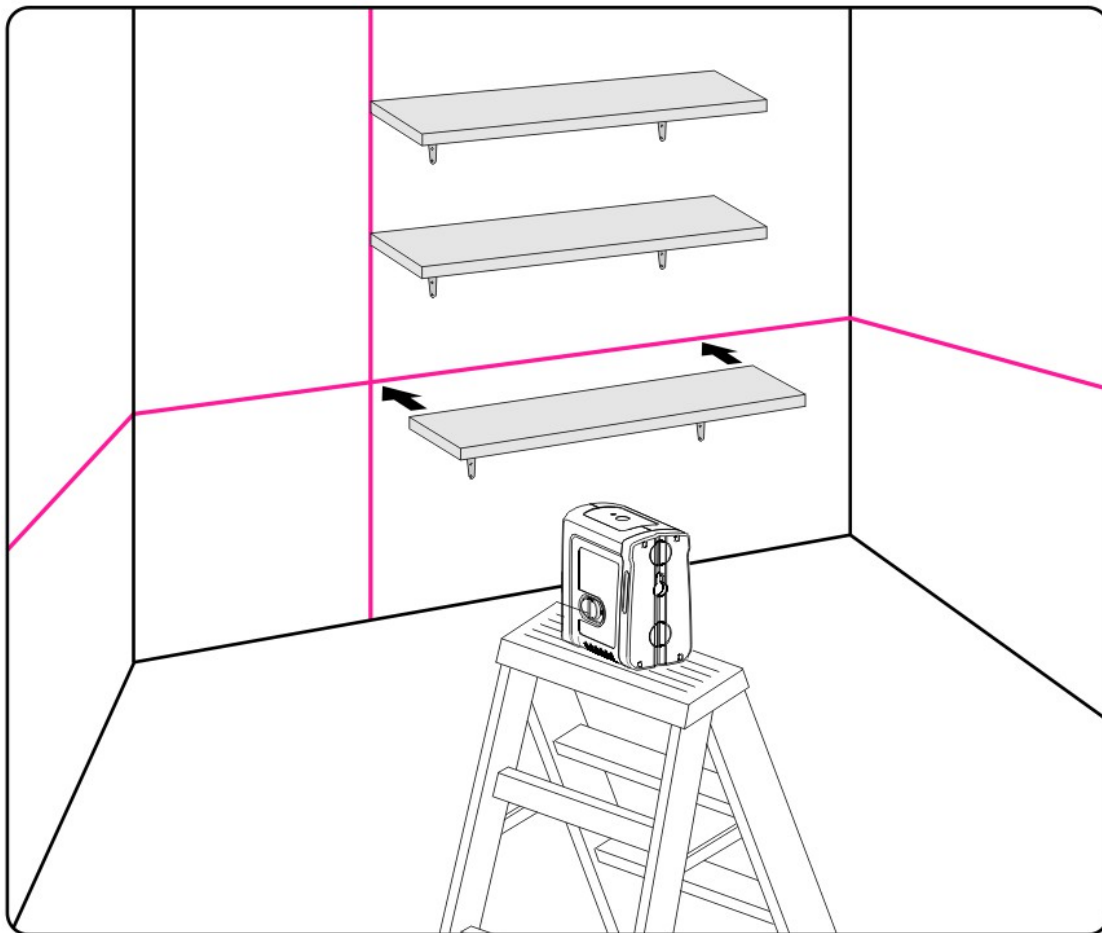
KAPRO

Catalogue

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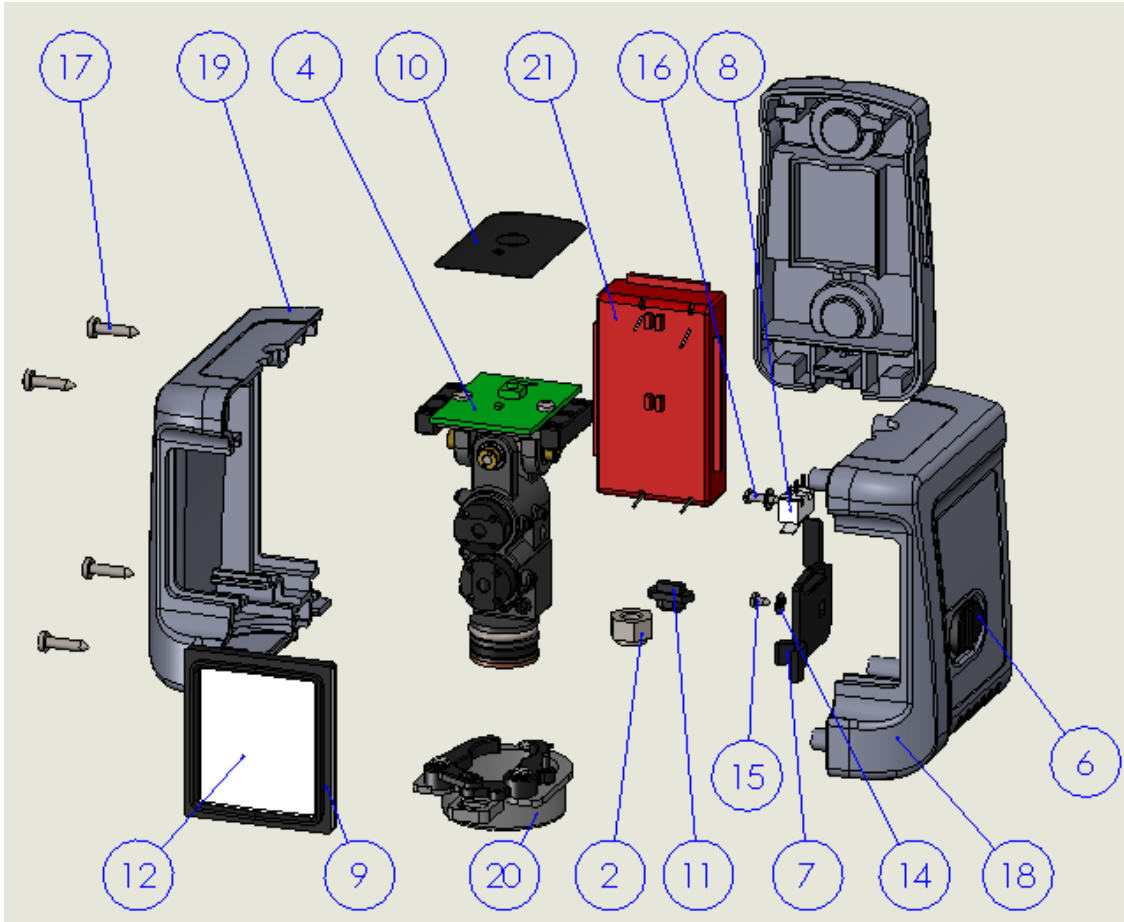
1. Basic function

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

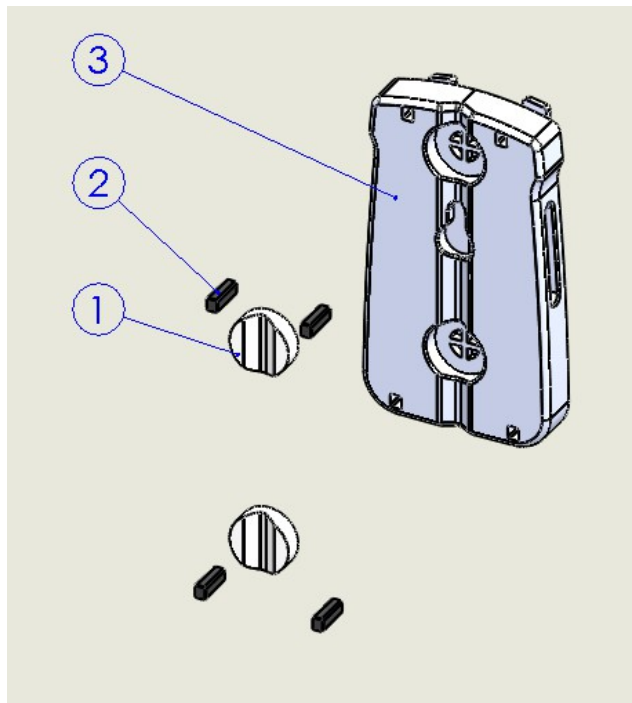
2.1 Final assembly



| 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 |

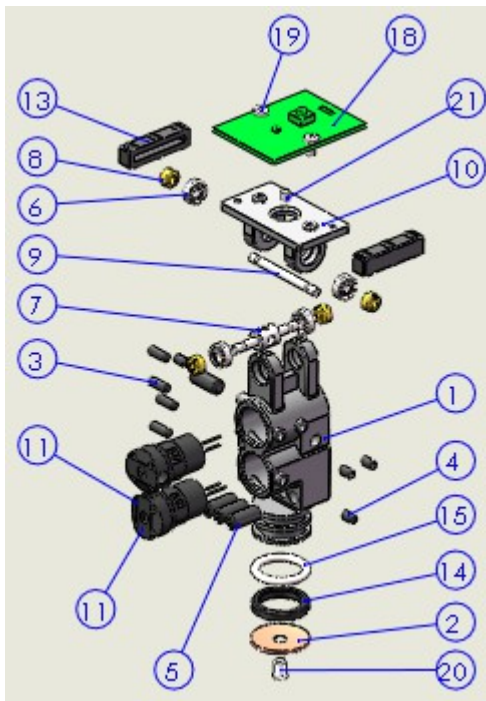
| | | | |
|----|--|-----------|---|
| 8 | 873 开关 switch | | 1 |
| 9 | 862 窗玻璃橡胶 window rubber | SI RUBBER | 1 |
| 10 | 862 按键标贴 label | PC | 1 |
| 11 | 862 电池按钮 battery cover button | PA6+30GF | 1 |
| 12 | 862 窗玻璃 window | K9 | 1 |
| 13 | 873 紫铜片联接钉 Copper sheet screw | 2AL12 | 1 |
| 14 | GB_FASTENER_WASHER_SMW 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 |

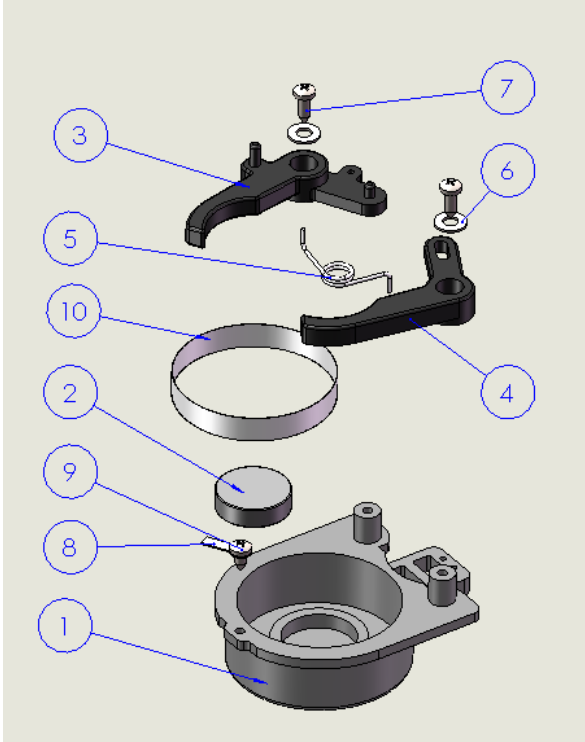
2.3. Pendulum assembly



| 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 |

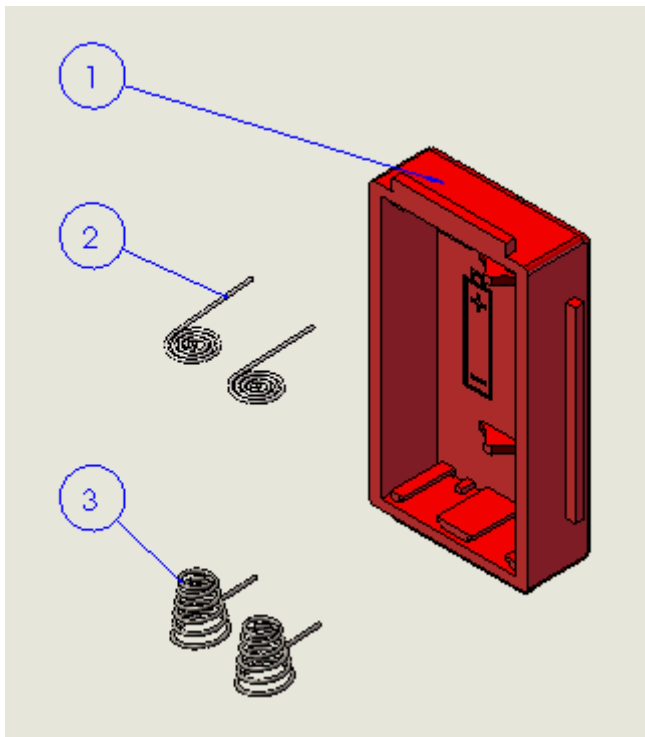
| | | | |
|----|----------------------------------|-----------|---|
| 13 | 862 减震垫 rubber shock pad | SI rubber | 2 |
| 14 | 872 导电橡胶圈 conductive aprons | | 1 |
| 15 | o-rings series a GB | Rubber | 1 |
| 16 | 875 连线板 On-line plate | | 1 |
| 17 | GB CROSS SCREWS TYPE1 M2.5X6 | SUS304 | 1 |
| 18 | 862 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



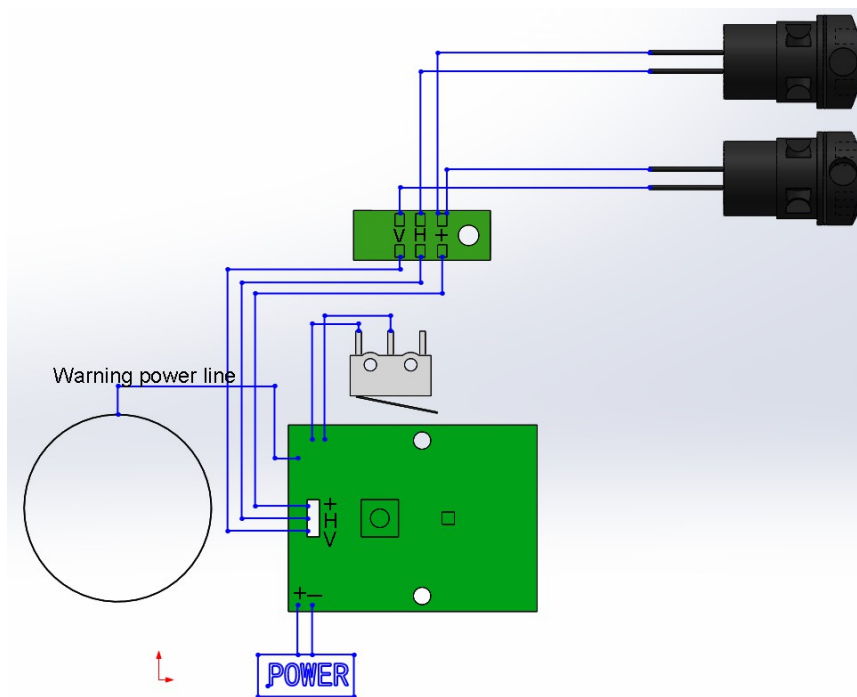
| NO | NAME | Material | QTY |
|----|--|----------|-----|
| 1 | 862 锁紧座 Lock seat | ABS | 1 |
| 2 | 892 磁铁 Magnet | Magnet | 1 |
| 3 | 862 右爪 right claw | PA6+30GF | 1 |
| 4 | 862 左爪 left claw | PA6+30GF | 1 |
| 5 | 862 扭簧 Torsional spring | 65Mn | 1 |
| 6 | GB FASTENER WASHER SMWC 2.5 | sus304 | 2 |
| 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 |