SAPPHIRE
LIKE BEING THERE...

Instruction Manual for Recessed-Ceiling Screen

SAPPHIRE
LIKE BEING THERE...

CE ⌧ **RoHS**

Thank you for purchasing a sapphire projection screen.

Before use, please read instructions carefully. After installation, store instructions for future reference.

Caution

Warnings: Please prevent screen from wet place to avoid electric or fire dangerous.

1. Please read carefully with this instructions before installation to avoid damage to product causing by inappropriate installation or operation.
2. Please keep the screen away from hot sources, such as radiator, heating machine, fireplace, loudspeaker or other relative device.
3. Only Plug with ground wire is acceptable.
4. Only accessories from authorized supplier is acceptable.
5. Please unplug the power wire when lighting and raining or not use with a long time.
6. Please contact the professional for installation and repairing.
7. Please prevent screen from wet and water .
8. As soon as the plug of the screen is connected to the power source, the screen is connecting with electricity.
9. Please use the approved power line (three-core power line)/ device interface/power plug.
10. Please use the rating (voltage, amps) power line (three-core power line) / device interface/power plug. If have any questions about power line/ device interface/power plug, please contact the professional people.
11. After installation, please locate a power device in order to disconnect power or connect the power plug to electrical socket. This electrical socket should be installed to a convenient position. If the accident occurs during operation, please disconnect power or take out the power plug.
12. The ceiling or wall used for fixture installation must be secure enough; load-bearing requirement must be 4 times of the screen to prevent the screens from falling.
13. Before using, please remove the fixation strap and screws from the low bar to avoid the damage of product.

⚡ **Warnings** ⚠

To prevent from electric dangerous, please don't remove the end cap. There is no need for users to check the parts inside, please handle the problems to professional repairman.

⚡ Please notice the non-insulated voltage of the spare parts to prevent from electric dangerous.

⚠ Please operate according to the user manual with the screen.

(1) For adjusting the viewing area, please insert the adjustment to regulate adjustment hole. A clockwise adjustment will increase the viewing area for about 13mm.
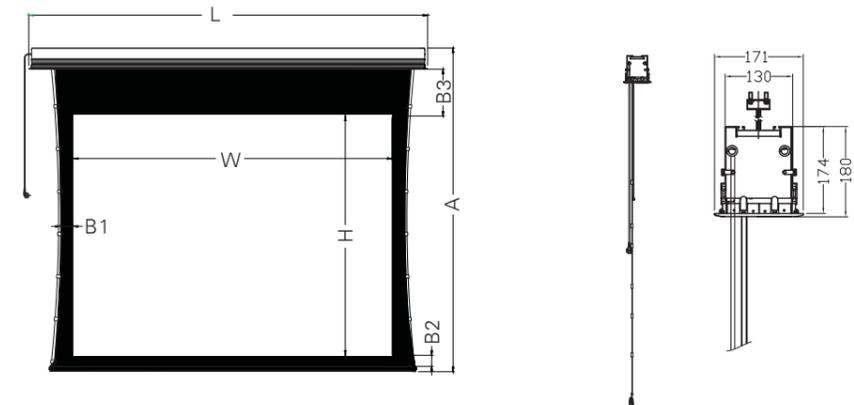
Note: After pressing the up button, you will need a few seconds to see the adjustment of screen; and after pressing the down button, you will see the position changed of screen.

Please do not operate the following step before step1 to avoid damages of screen.

(2) A counterclockwise cycle can adjust the distance to 13mm between casing and rod.

⚠ Please be careful while operating, too much retracting will cause the damages of screen and motor.
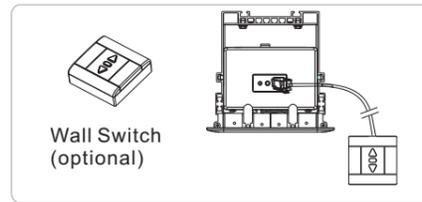
Product Specifications

Format	Model	Specification (inch)	Viewing Area WxH(mm)	L (mm)	B1 (mm)	B2 (mm)	B3 (mm)
16:9	SETC200WSF–ATR	92	2037x1146	2656	80	65	400
	SETC240WSF–ATR	106	2347x1320	2966	80	65	400
	SETC270WSF–ATR	120	2657x1494	3276	80	65	400

Note:
1. Due to product updates, sizes and specifications are subject to change at any time.
The tolerance for L is approximately ± 5mm (3/16 inches).
2. Actual dimension is measured by: total screen length L x end cap depth x end cap height.
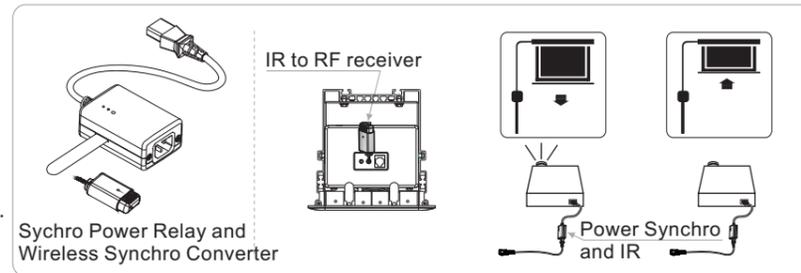
D. External Wall Switch (optional)

The wall switch is available for a fixed location. Please connect RJ11 plug to EXTCTRL input on the screen.

Note: please use a cord for a far location.

Wall Switch (optional)

E. Synchro Power Relay(optional)

After connecting the Wireless Synchro Converter, the screen can be controlled by FM modulation wireless controller which can cooperate with Sychro Power Relay and switch of projector to control the up and down of screen synchronously.
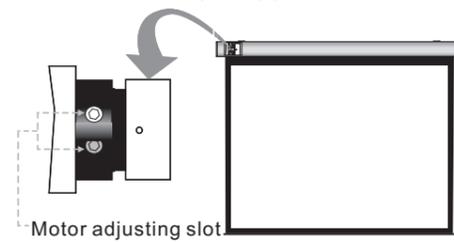
IR to RF receiver

Sychro Power Relay and Wireless Synchro Converter

Power Synchro and IR

三. Screen Adjustment

(Please take apart the baffle when adjusting the screen. And please reinstall the baffle after adjusting.)

Motor Positioning

Avoid the overheating of motor; please do not use the screen over 4 seconds for extending and retracting continuously. The motor needs 4 minutes to cold down and the motor do not need any lubricant. The standard factory setting of upper and lower limitation is perfect. To avoid the damage, please contact the professional people or local dealers for repairing.

Pleae adjust the motor adjusting slot using M4 allen key

Motor adjusting slot

"Screen Extending" Adjustment

Operate the adjustment when the screen extends completely：

(1) For adjusting the viewing area, please insert the adjustment to regulate adjustment hole. A clockwise adjustment will increase the viewing area for about 13mm.

Note: After pressing the"Up" button, you will need a few seconds to see the adjustment of screen; and after pressing the"down"button, you will see the position changed of screen.

(2) With the over-adjustment, a counter-clockwise adjustment will return the screen. This adjustment can be operated when the screen stops at the lowest postion without controlling.

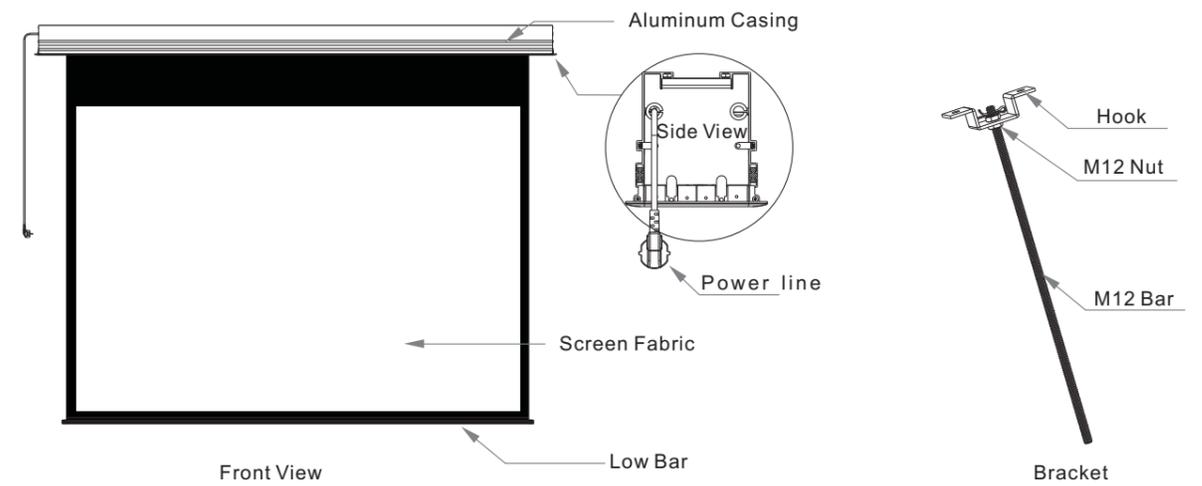⚠ Please be careful while operating, too much retracting will cause the damages of screen and motor.

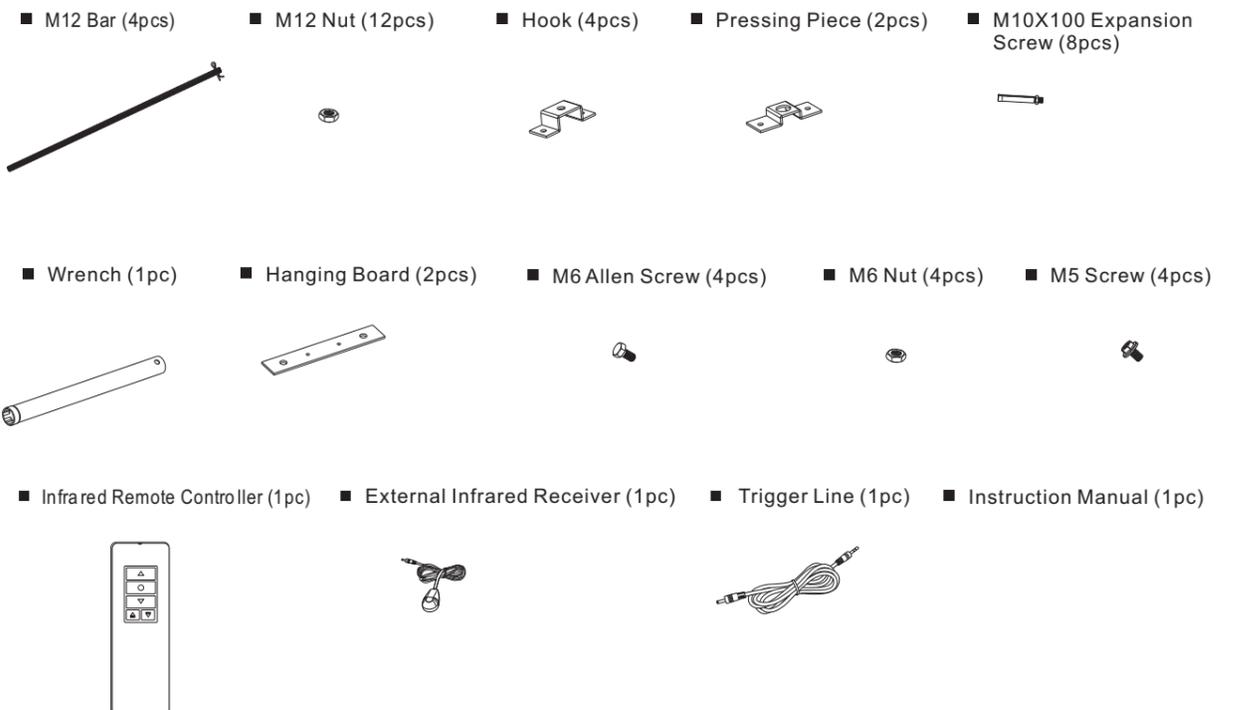### "Screen Retracting" Adjustment

Reference:

(Note: This adjustment is not safety, please contact the professional people for repairing and avoid damaging of screen and warranty failure)

"Caution" we strongly recommend that do not regulate the screen limitation privately. The standard limitation of screen is set from the factory and this standard can satisfy the requirement of users.
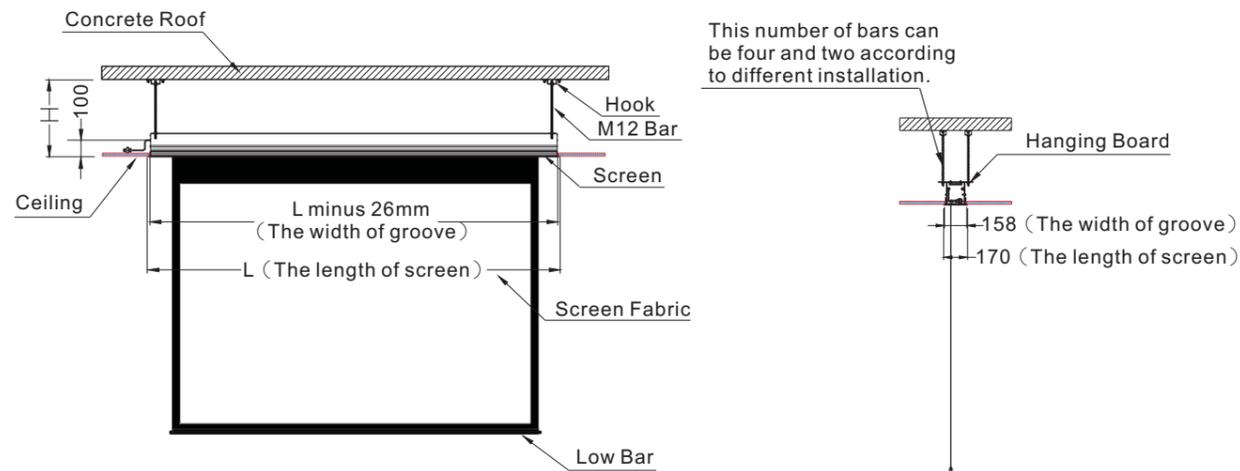
Description

Aluminum Casing

Side View

Power line

Screen Fabric

Low Bar

Front View

Hook

M12 Nut

M12 Bar

Bracket

Accessaries

■ M12 Bar (4pcs)　　■ M12 Nut (12pcs)　　■ Hook (4pcs)　　■ Pressing Piece (2pcs)　　■ M10X100 Expansion Screw (8pcs)

■ Wrench (1pc)　　■ Hanging Board (2pcs)　　■ M6 Allen Screw (4pcs)　　■ M6 Nut (4pcs)　　■ M5 Screw (4pcs)

■ Infrared Remote Controller (1pc)　　■ External Infrared Receiver (1pc)　　■ Trigger Line (1pc)　　■ Instruction Manual (1pc)

Installation Instruction

This screen needs to be recessed into the ceiling, and this instruction manual shows us the grille-ceiling and wood-ceiling as example. Please install the screen according to different applications. This screen needs to be recessed at the best viewing angle in order to improve the image. Take out all the parts from the packaging and follow the accessories guideline to ensure you have all parts.

Concrete Roof

100

Hook
M12 Bar

Ceiling

Screen

L minus 26mm
（The width of groove）

L（The length of screen）

Screen Fabric

Low Bar

This number of bars can be four and two according to different installation.

Hanging Board

158（The width of groove）
170（The length of screen）

一. Grille-Ceiling Mount

1.Choose a position according to the required space, and then take apart the ceiling (figure 1). Please measure the distance H between concrete roof and ceiling surface correctly (figure 2).

Take apart the ceiling

Concrete Roof   Roof Surface

H

Grille-ceiling   Ceiling Surface

Figure 1

Figure 2

2.This screen equips bracket, and build up the hanging bracket using the hook, M12 nut and M12 bar. Cut the length of M12 bar to H minus 100mm(H is the distance between concrete roof and ceiling surface) (Note: H is 500mm, the length of hanging bracket is 400m which is 500mm minus 100mm) (figure 3).
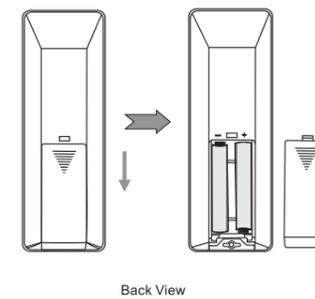
Brooch   Hook

M12 Nut

Hminus100mm

Approximately 150mm

M12 Bar

Mz2 Screw (4pcs)

100.0

figure 3

1.The shortest distance between receiver and emitter is 50cm。
2.Controller will work within 30 degree away horizontally from the center of receiver point within 8 meters from the screen。
3.The controller will not work if the signal is covered by somthing。
4.Keep the controller far away from high temperature and humid situation。
5.Please change the battery when the signal is weak。
6.Please take the battery out if the controller was not being used for long time。

Controller Battery Installation
1.Turn the controller around，push to open the cover as guide arrow.
2.Put the battery in according to the guide of cathode anode。
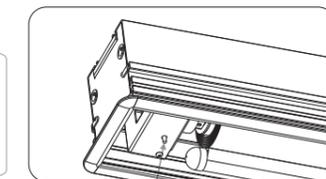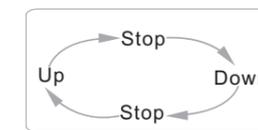3.Close the cover。

Back View

二. External Control System

Four control systems are available for motorized screen
(1)Manual Control
(2)Infrared Remote Control (IR)
(3)Dry Contact
(4)Switch

EXT CTRL —— Trigger
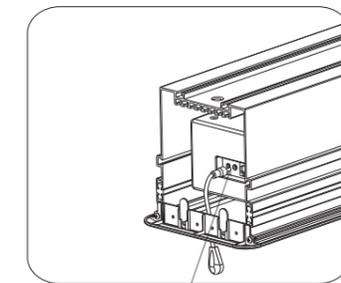TRIG —— Dry Contact/RS232
EXT IR —— External Infrared Receiver

A.Manual Control：

The manual control button is under power box:
(Close to power line)Cyclic Control

Up   Stop   Down
Stop
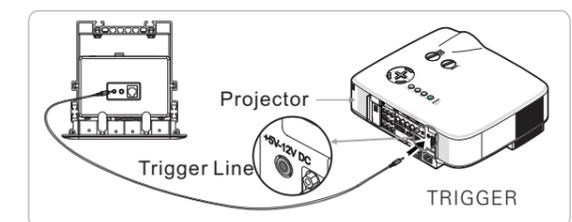
Cyclic Control

B. Infrared Remote Control：

Because of the recessed mount, the external infrared EXT Ir input must be inserted by external infrared receiver, then please fix it in eyes for control.

External Infrared Input

C. Trigger：

1. Please connect 2,5mm plug of trigger to the TRIG input on the screen; connect 3.5mm plug to the output on trigger (only for the equipments which have trigger function)
2. The projection screen will automatically lower when the projector is on. It will automatically retract when the projector is turned off

Projector

+9V-12V DC

Trigger Line

TRIGGER
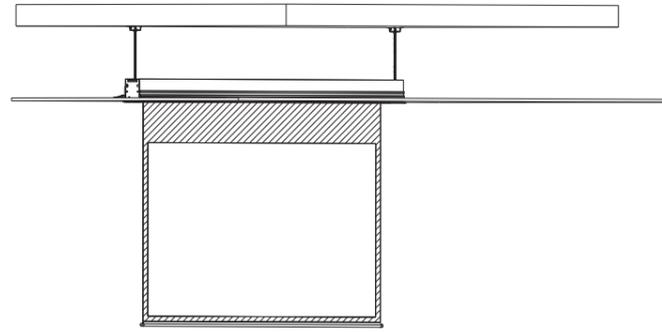
11. Installation Completed (figure 27).

Figure27

Note: the upward instructions are only suitable for the distance H which between 200-600mm; if the distance is greater than 600mm, please follow the steps as below:

1)Install the hanging bracket at a required position before ceiling fitment (M12 bar is not provided) (figure 28).
2)Saw an oblong groove at a completed ceiling (note: please ensure the hanging bracket must be installed in the middle of this groove) (figure 29). The rest of steps can follow the instructions as before!

Hminus100
Not completed ceiling

Figure28

Two Hanging Boards are in middle.

L（Total length of screen）minus26mm

Figure29

Product Instruction

LED
Up
Stop
Down
Micro-up
Micro-down

Front View
Model：1GD—IRan

1.Infrared Remote Control

Controller Buttons Function Instruction
1.Press button ☐ , screen goes up。
2.Press button ☐ , screen goes down。
3.Press button ☐ , screen stops。
4.Press Micro-up button ☐ , screen can be increased by fine-tuning。
5.Press Micro-down button ☐ , screen can be decreased by fine-tuning。

3.Please measure the security distance between hanging brackets (figure 4), and fix the hanging brackets on the ceiling using expansion screws (figure 5).
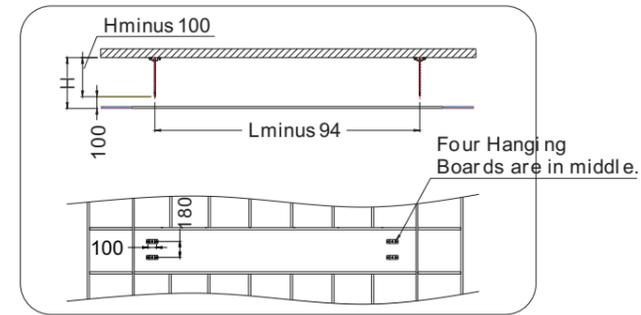

Hminus 100
Lminus 94
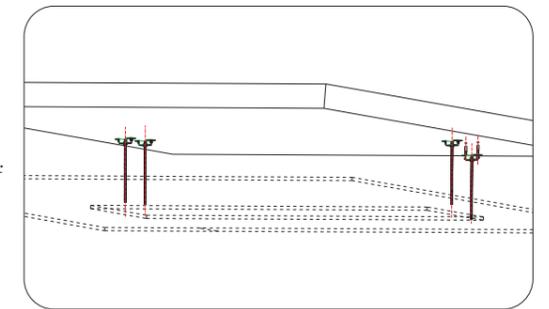Four Hanging Boards are in middle.

figure 4   figure 5

4, Please follow the below steps to install the power cord which recessing in casing, and plug in the external infrared receiver (because of the recessed mount, the external infrared receiver must be ready for control).

1)Take out the power cord (figure 6).
2)Loose the screws of power box and take out the power box (note: the power box must be buttoned on the hanger of bracket according to figure 11, please put up and move back the power box to take out), because the power cord has a limit, please do not draw it strongly.
3)Loose and take out two rubber screws, then remove the end cap (figure 8-9).
4)Remove the line cover of end cap, then fill in the power line. Afterward, stuck the line cover back to end cap, then install the power line outside the casing.
5)Install the end cap again (figure 10)
6)Insert the external infrared receiver to EXT IR hole (figure 10) (note: please put the completed external infrared receiver into inside frame of screen to avoid the pressing from screen). Then install the power box back to bracket (note: ensure the power box is buttoned on the hanger of bracket) (figure 11).
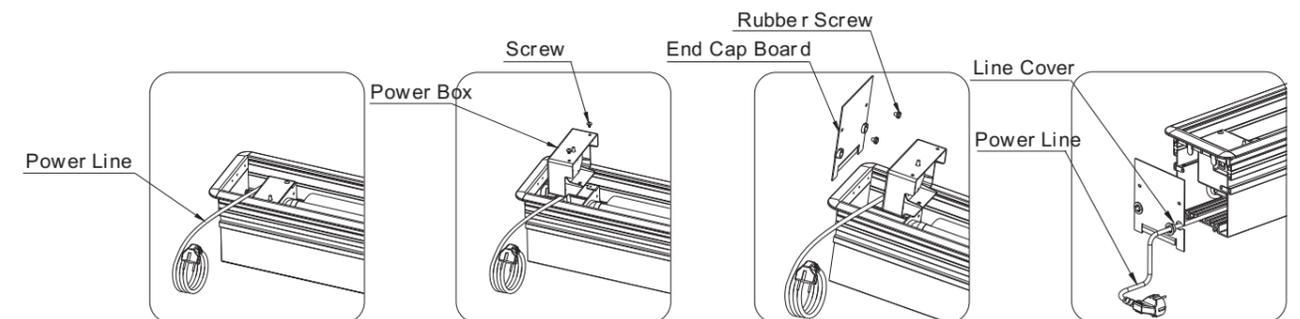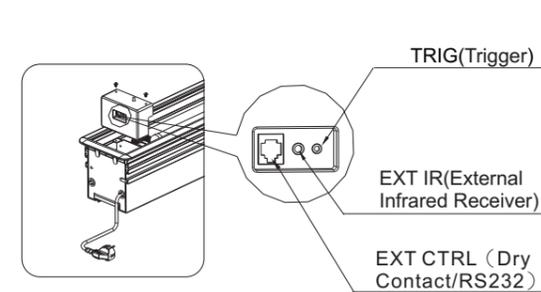

Rubber Screw
Screw   End Cap Board
Line Cover
Power Box
Power Line   Power Line

Figure6   Figure7   Figure8   Figure9

TRIG(Trigger)
EXT IR(External Infrared Receiver)
EXT CTRL（Dry Contact/RS232）

M4 Screw
Switch   Power Box
Signal Output
Bracket
Note: the power box must be buttoned on the hanger of bracket.
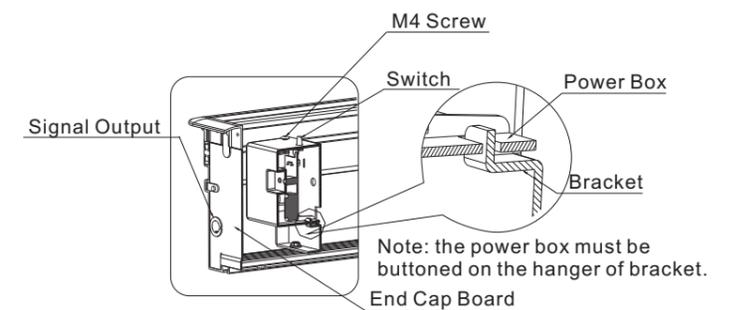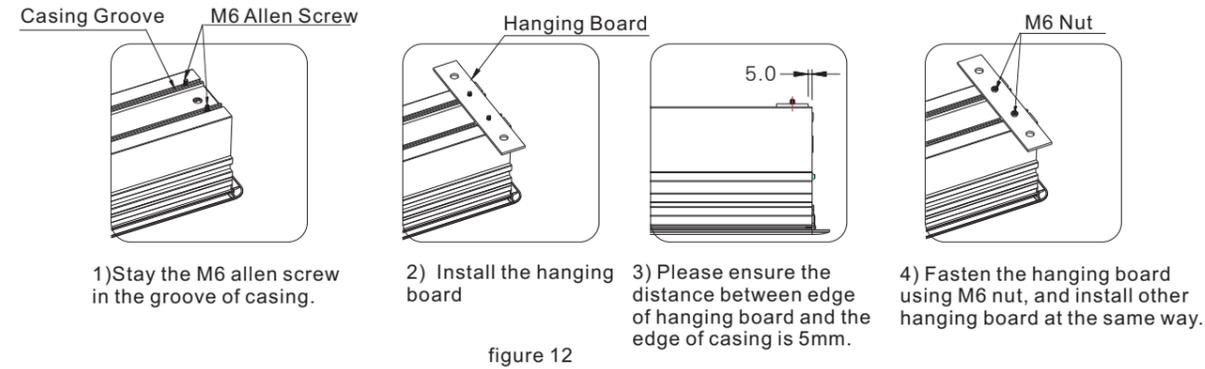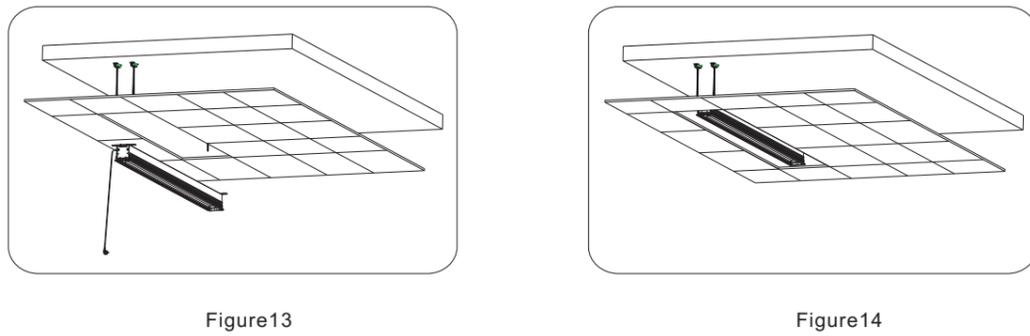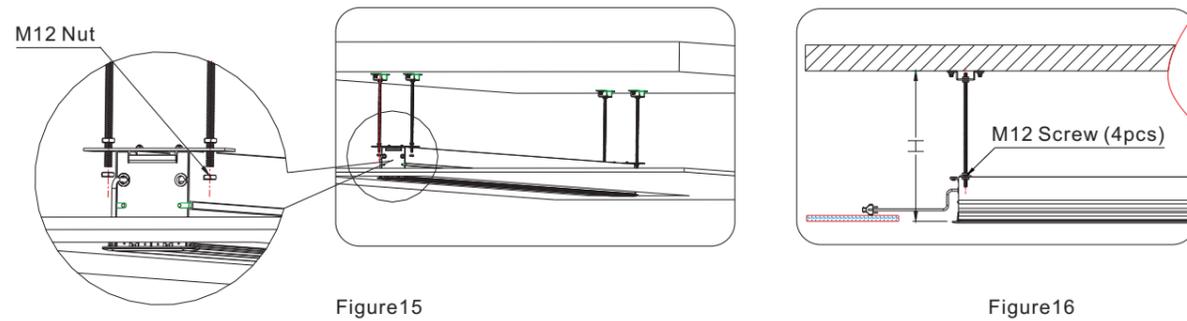End Cap Board

Figure 10   Figure 11

5.Please stay the screen in the opposite direction, and fix the left and right hanging board on the screen using M6 screw and nut (figure 12).
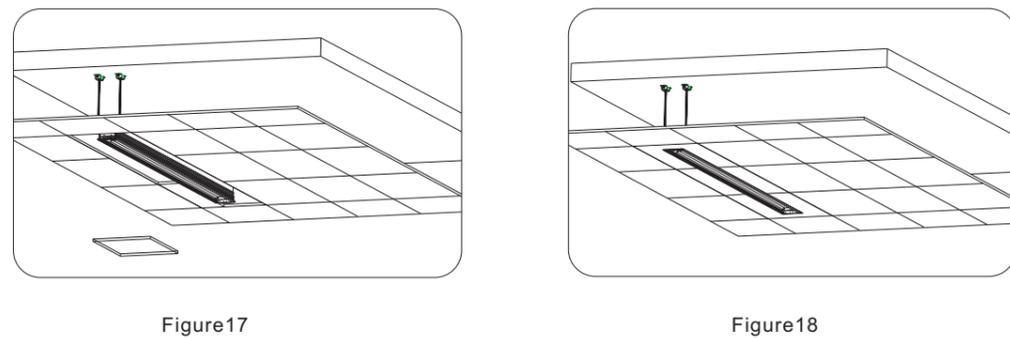
Casing Groove   M6 Allen Screw   Hanging Board   M6 Nut

5.0

1)Stay the M6 allen screw in the groove of casing.

2) Install the hanging board

3) Please ensure the distance between edge of hanging board and the edge of casing is 5mm.

4) Fasten the hanging board using M6 nut, and install other hanging board at the same way.

figure 12

6. Install the whole screen on the hanging bracket (figure 13-14)

Figure13

Figure14

7. Fix the screen using M12 nut (figure 15), then adjust the security distance to H (the distance between concrete roof and ceiling surface) using adjusting screw. Loose the M12 nut and fix the whole screen, and then connect the power (figure 16).

M12 Nut

M12 Screw (4pcs)

Figure15

Figure16

8. Cut the separated ceiling board in a suitable size, which can fill in the size of space as screen (figure 17-18).
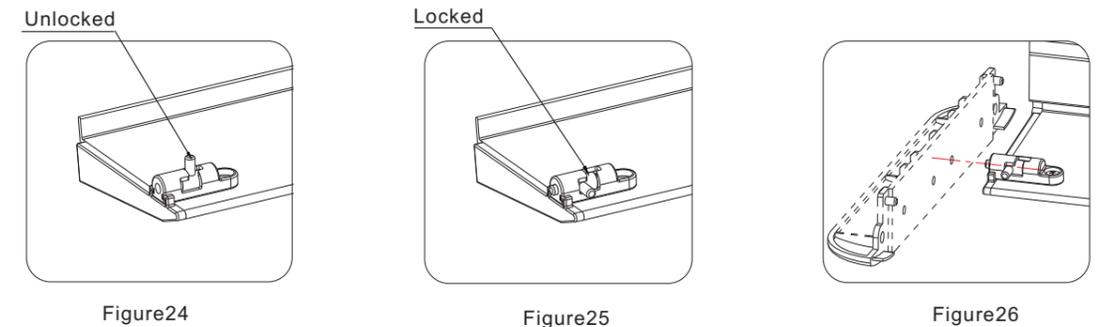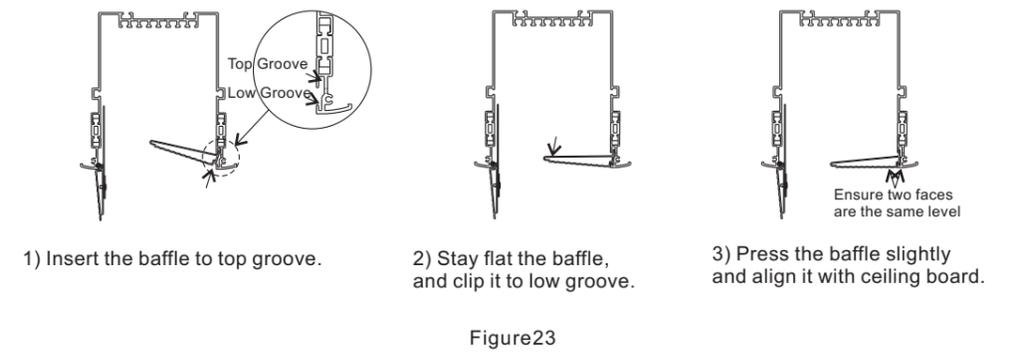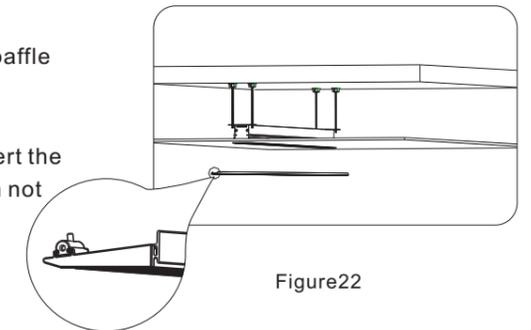
Figure17

Figure18

Note: the upward instruction shows us installation of external control system, if the users want to add other control systems, please follow the steps as below:

1)Loose the screws of power box and take out the power box (because the power cord has a limit, please do not draw it strongly). Then loose two rubber screws again, and remove the end cap (please ensure the power line is fixed), step 3 can be follow.

2)Insert the control system signal line to corresponding output (figure 11), and take out the signal line from control system signal line exit (figure 19).

3)Reinstall the end cap after completed control system and fasten the two rubber screws then reinstall the power box and fasten two screws according to step 8.

Power Line   Signal Line Exit

Figure21

10. Install the front baffle as following steps
1) Extend the screen and keep the rear baffle opening
2) Disconnect the power of screen, and then install the front baffle
3）Please ensure the security lock is unlocked (figure 22).
4）Install the front bafle (figure 23)
5）Unlock the security lock of baffle (figure 24、figure 25), insert the plug of security to a hole of end cap (figure 26), if the baffle can not move up that please align baffle with ceiling board.
6）Connect the power after installation

Figure22

Top Groove
Low Groove

Ensure two faces are the same level

1) Insert the baffle to top groove.

2) Stay flat the baffle, and clip it to low groove.

3) Press the baffle slightly and align it with ceiling board.

Figure23

Unlocked   Locked

Figure24

Figure25

Figure26

6. Fix the screen using M12 nut, then fasten the nut by wrench (accessories) (figure 13-14); until the ornament board align the ceiling (figure 15) and connect the power.
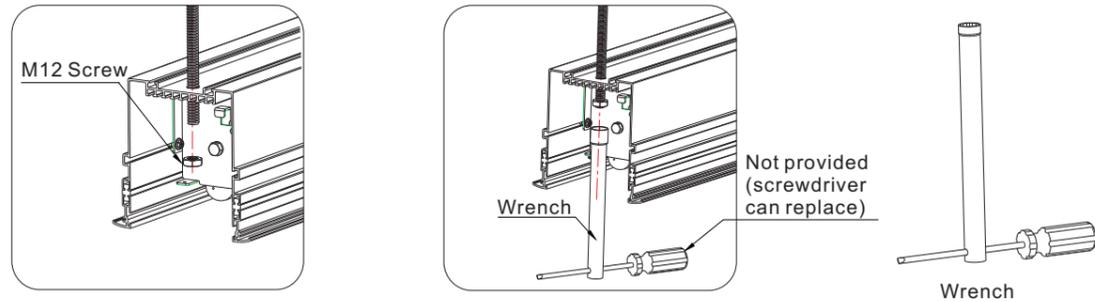
M12 Screw

Not provided
(screwdriver
can replace)

Wrench

Wrench

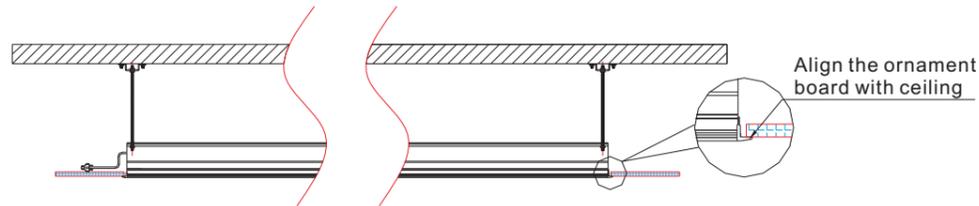Figure13

Figure14

Align the ornament
board with ceiling

Figure15

7.Please ensure the hexagon surface of nut and inside surface of casing are at the same level (figure 16); stay the pressing piece on the nut (figure 17-18)
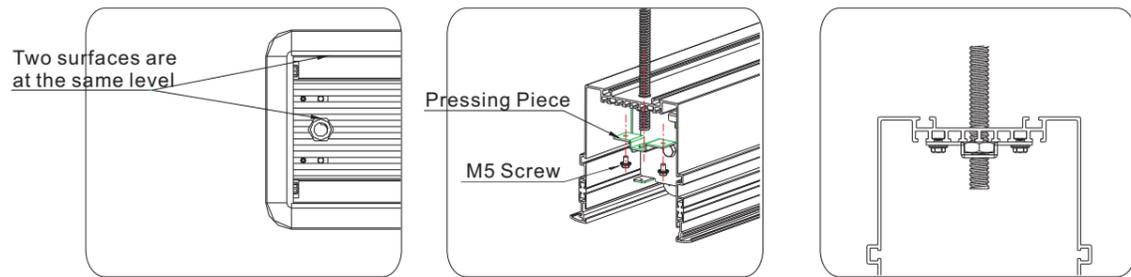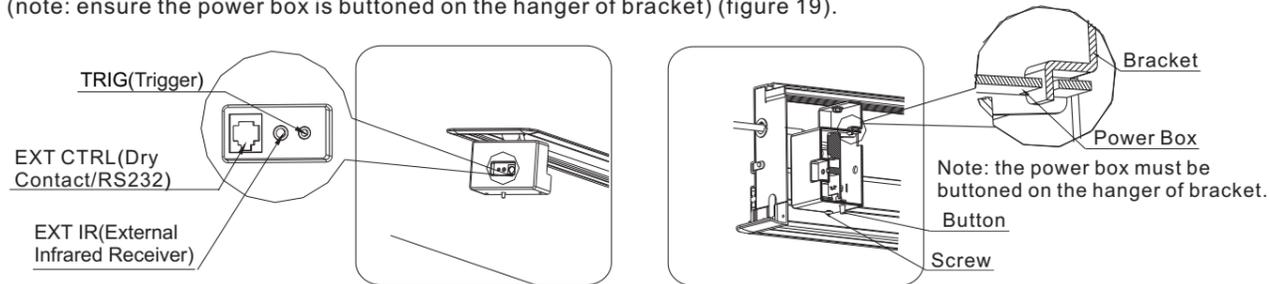
Two surfaces are
at the same level

Pressing Piece

M5 Screw

Figure16

Figure17

Figure18

8. Insert the external infrared receiver to EXT IR hole（figure 18）,because of the recessed mount, the external infrared receiver must be ready for control, then install the power box back to bracket .
(note: ensure the power box is buttoned on the hanger of bracket) (figure 19).

TRIG(Trigger)

EXT CTRL(Dry
Contact/RS232)

EXT IR(External
Infrared Receiver)

Bracket

Power Box

Note: the power box must be
buttoned on the hanger of bracket.

Button

Screw

Figure18

Figure19

Note: the upward instruction shows us installation of external control system, if the users want to add other control systems, please follow the steps as below:
1)Loose the screws of power box and take out the power box (because the power cord has a limit, please do not draw it strongly). Then loose two rubber screws again, and remove the end cap (please ensure the power line is fixed), step 3 can be follow.
2)Insert the control system signal line to corresponding output (figure 11), and take out the signal line from control system signal line exit (figure 18).
3)Reinstall the end cap after completed control system and fasten the two rubber screws then reinstall the power box and fasten two screws according to step 4.
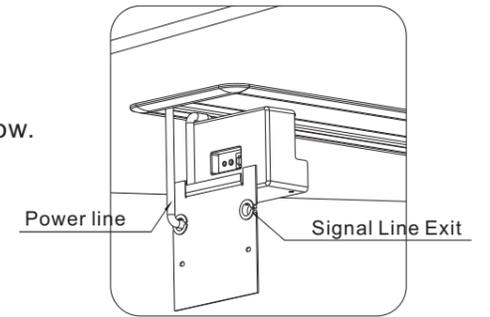
Power line

Signal Line Exit

Figure19

10. Install the front baffle as following steps
1）Extend the screen and keep the rear baffle opening
2）Disconnect the power of screen，and then install the front baffle
3）Please ensure the security lock is unlocked (figure 22).
4）Install the front bafle (figure 23)
5）Unlock the security lock of baffle (figure 24、figure 25), insert the plug of security to a hole of end cap (figure 26), if the baffle can not move up that please align baffle with ceiling board.
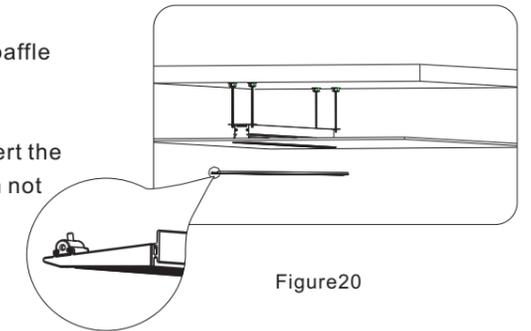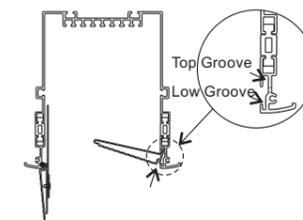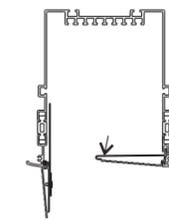6）Connect the power after installation

Figure20
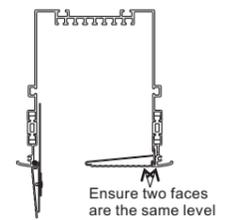
Top Groove

Low Groove

Ensure two faces
are the same level

1) Insert the baffle to top groove.

2) Stay flat the baffle,
and clip it to low groove.

3) Press the baffle slightly
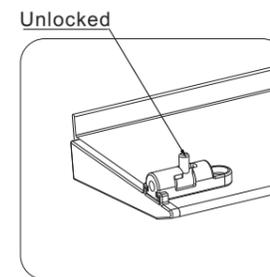and align it with ceiling board.

Figure21
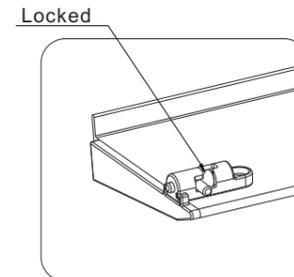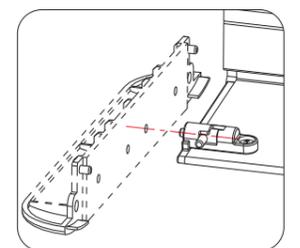
Unlocked

Locked

Figure22

Figure23

Figure24

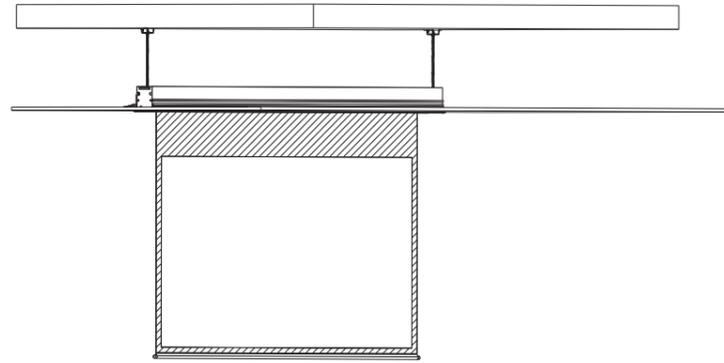11. Installation Completed (figure 25).

Figure25

.Note: the length of M12 bar is 500mm. Please prepare the bar your self if the distance H (between concrete roof and ceiling) is longer than 600mm.

二. Wood Ceiling

1. Saw an oblong groove at a required position (figure 1); Please measure the distance H between concrete roof and ceiling surface correctly (figure 2).

L(Total length of screen)minus26mm
158mm

Concrete Roof / Roof Surface
H
Wood Ceiling / Ceiling Surface
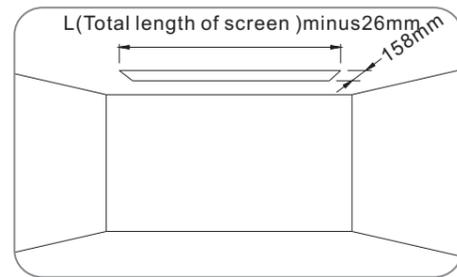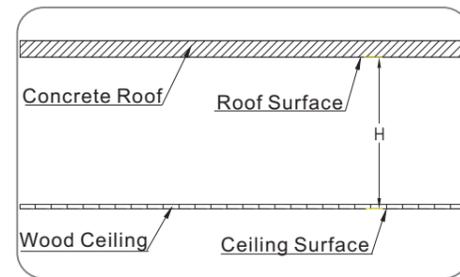
Figure1   Figure2

2.This screen equips bracket, and build up the hanging bracket using the hook, M12 nut and M12 bar. Cut the length of M12 bar to H minus 100mm(H is the distance between concrete roof and ceiling surface) (Note: H is 500mm, the length of hanging bracket is 400m which is 500mm minus 100mm) (figure 3).

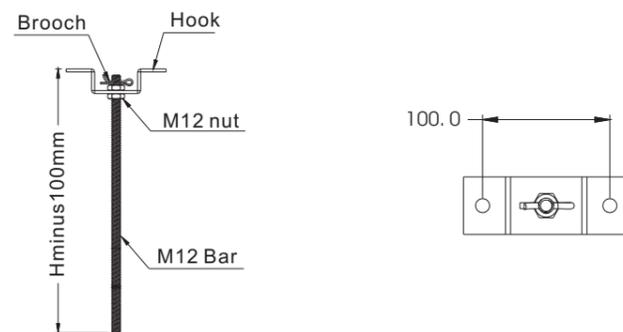Brooch   Hook
Hminus100mm
M12 nut
100.0
M12 Bar

Figure 3

3.Please measure the security distance between hanging brackets (figure 4), and fix the hanging brackets on the ceiling using expansion screws (figure 5).
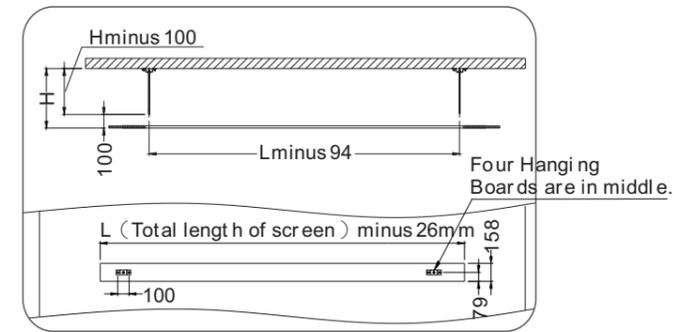

Hminus 100
100
Lminus 94
Four Hanging Boards are in middle.
L（Total length of screen）minus 26m/m
158
100
64

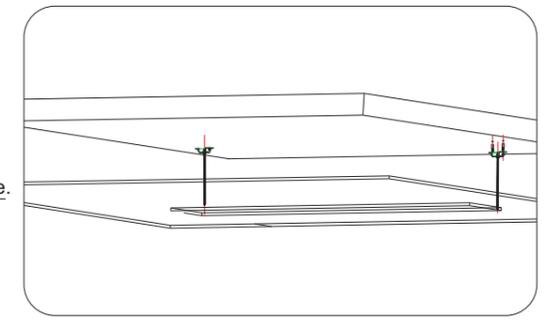Figure 4   Figure 5

4, Please follow the below steps to install the power cord which recessing in casing .
1)Take out the power cord (figure 6).
2)Loose the screws of power box and take out the power box (note: the power box must be buttoned on the hanger of bracket according to figure 11, please put up and move back the power box to take out), because the power cord has a limit, please do not draw it strongly.
3)Loose and take out two rubber screws, then remove the end cap (figure 8).
4)Remove the line cover of end cap, and then fill in the power line. Afterward, stuck the line cover back to end cap, then install the power line outside the casing (figure 9)
5) Please complete the installation of end cap and fasten two rubber screws; do not need to install the power box at this moment.
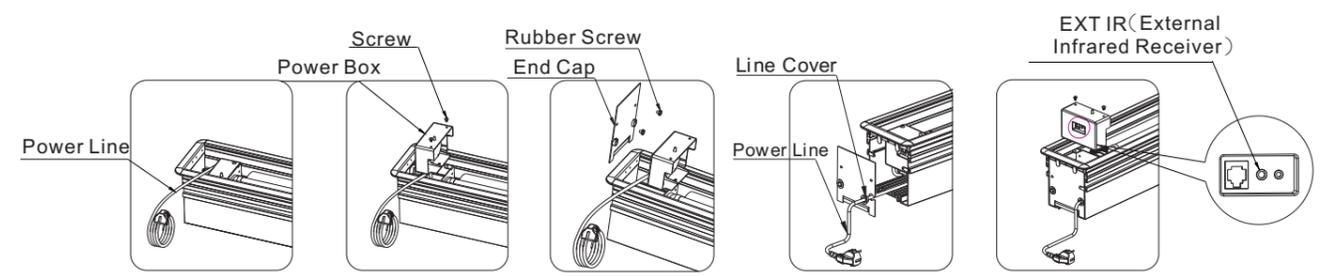

Screw   Rubber Screw   EXT IR（External Infrared Receiver）
Power Box   End Cap   Line Cover
Power Line   Power Line

Figure6   Figure7   Figure8   Figure9   图10

5. Install the whole screen on the hanging bracket (figure 11-12)

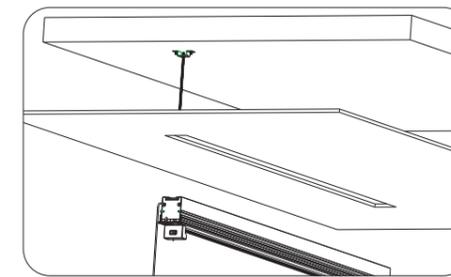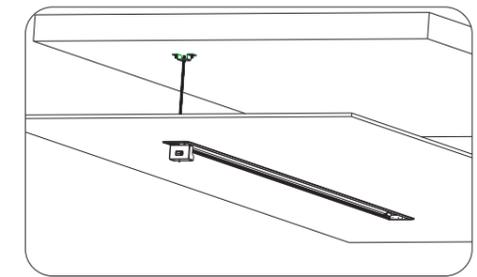Figure11   Figure12