

**Model Vega-PJ1**  
**Machine Codes:**  
**Y037/Y038**  
**Field Service Manual**

14 June, 2013



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# Important Safety Notices

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## Lead-Free Solder

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This product is manufactured using lead-free solder as a part of a movement within the consumer products industry at large to environmental responsible. Lead-free solder must be used in this product.

### **WARNING**

- This product is using lead free solder. DO NOT USE LEAD BASED SOLDER TO REPAIR THIS PRODUCT! The melting temperature of lead-free solder is higher than that of leaded solder by 86 °F to 104 °F (30 °C to 40 °C). Use of a soldering iron designed for lead-based solders to repair product made with lead-free solder may result in damage to the component and or PCB being soldered. Great care should be made to ensure high-quality soldering when servicing this product – especially when soldering large components, through-hole pins, and on PCBs - as the level of heat required to melt lead-free solder is high.

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## Prevention of Physical Injury

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1. Before disassembling or assembling parts of the machine and peripherals, make sure that the machine power cord is unplugged.
2. The wall outlet should be near the machine and easily accessible.
3. If any adjustment or operation check has to be made with exterior covers off or open while the main switch is turned on, keep hands away from electrified or mechanically driven components.
4. The machine drives some of its components when it completes the warm-up period. Be careful to keep hands away from the mechanical and electrical components as the machine starts operation.

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## Observance of Electrical Safety Standards

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The machine and its peripherals must be serviced by a customer service representative who has completed the training course on those models.

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## Safety and Ecological Notes for Disposal

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1. Dispose of replaced parts in accordance with local regulations.

### **WARNING**

- To prevent a fire or explosion, keep the machine away from flammable liquids, gases, and aerosols. A fire or an explosion might occur.

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This product contains substances which are harmful to humans and the environment.




- The lamp contains mercury.

Please dispose of this product or used lamps in accordance with local regulations.

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# Symbols and Trademarks

This manual uses several symbols and abbreviations. The meaning of those symbols and abbreviations are as follows:

	See or Refer to
	Screw
	Connector

## ★ Important

- Microsoft® and Windows® are registered trademarks of Microsoft Corporation in the United States and /or other countries.
- Other product names used herein are for identification purposes only and may be trademarks of their respective companies. We disclaim any and all rights involved with those marks.

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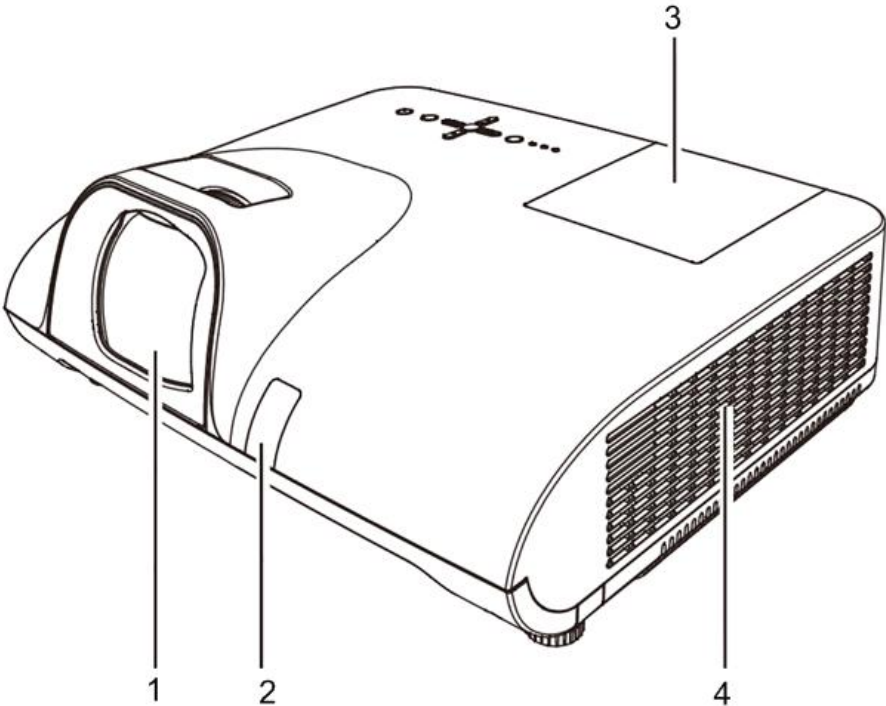
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# 1. Product Information

## Overview

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### Front and Top View

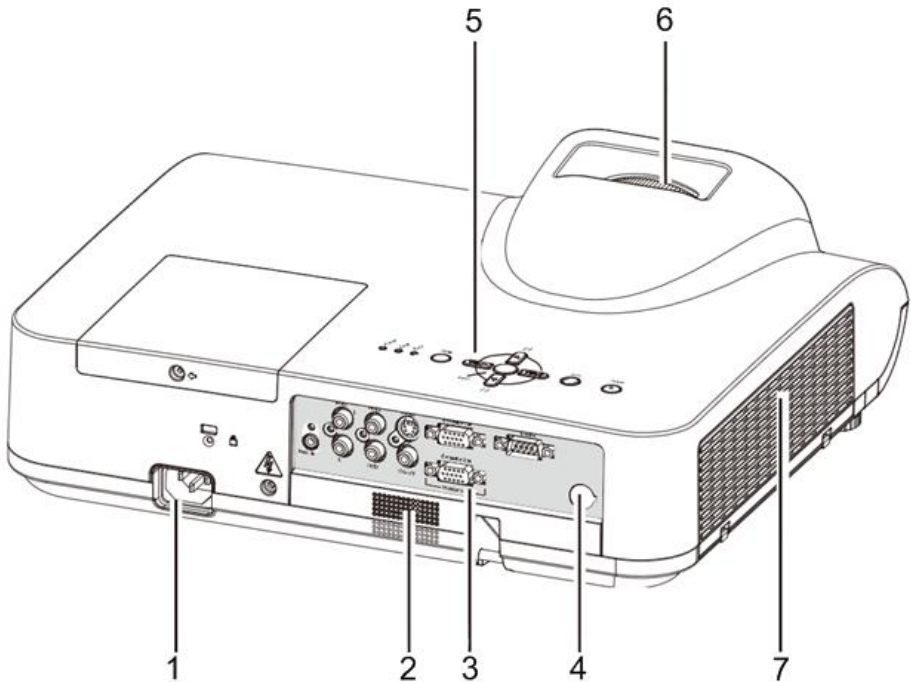


y0375200

1	Projector lens
2	Infrared Remote receiver (front)
3	Lamp Cover
4	Exhaust Vents

Rear View

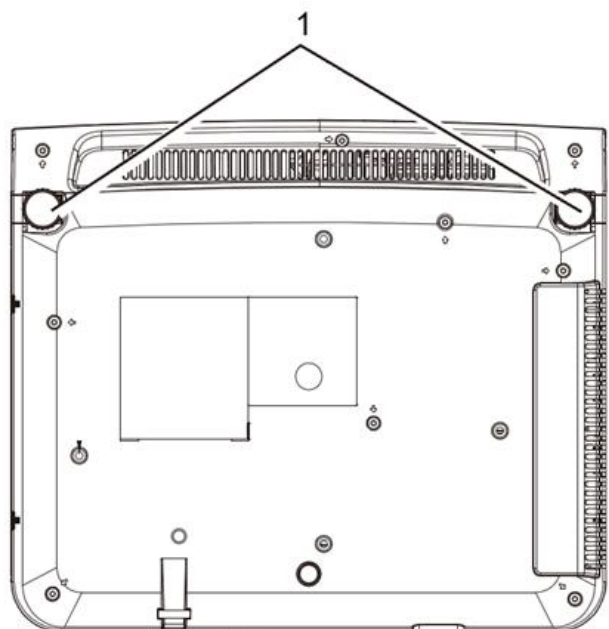
1



y0375201

1	Power Cord Connector
2	Speaker
3	Terminals and Connectors
4	Infrared Remote receiver (rear)
5	Top Control and Indicators
6	Focus Ring
7	Filters

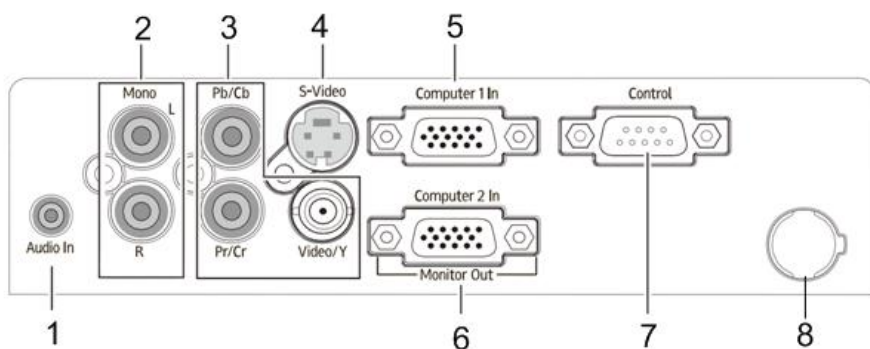
## Bottom View



y0375202

1	Adjustable Feet
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## Terminals

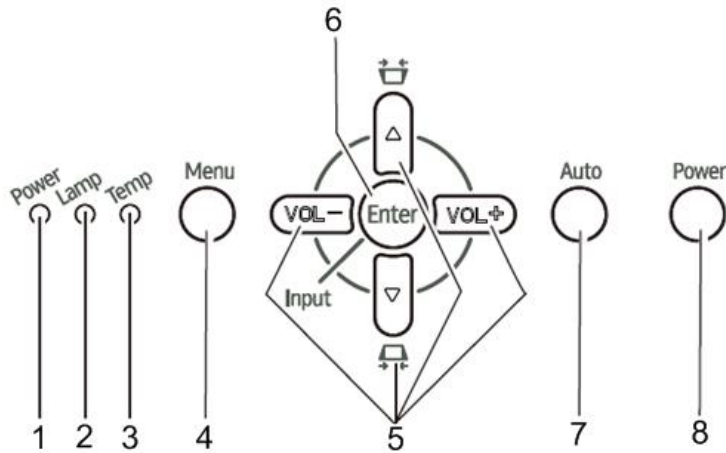


y0375204


1	Audio In	Connect the audio output from computer connected to 5 or 6 to this jack.
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2	<b>Audio In(Video)</b>	<ul style="list-style-type: none"><li>- Connect the audio output from video equipment connected to 3 or 4 to this jack.</li><li>- For a mono audio signal (a single audio jack), connect it to L(MONO) jack.</li></ul>
3	<b>Pb/Cb/Pr/Cr/Video/Y</b>	<ul style="list-style-type: none"><li>- Connect video signal to Video/Y jack.</li><li>- Connect component video signal to Pb/Cb/ Pr/Cr/Y jacks.</li></ul>
4	<b>S-Video</b>	Connect the S-Video output from video equipment to this terminal.
5	<b>Computer 1 In</b>	Connect analog RGB output signal from a computer to this terminal.
6	<b>Computer 2 In/Monitor Out</b>	<ul style="list-style-type: none"><li>- Connect computer output to this terminal.</li><li>- Output the analog signal from 5 to other monitor.</li></ul>
7	<b>Control</b>	Connect the serial control cable to this terminal when using RS-232C control the projector.

## Top control and Indicators

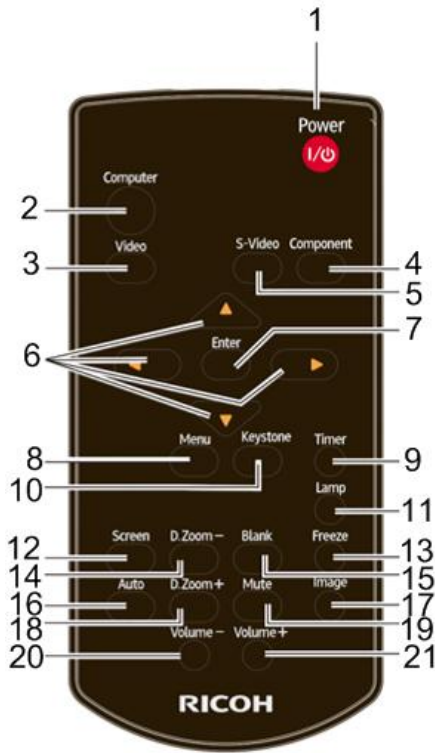


y0375203

1	<b>Power</b> indicator	<ul style="list-style-type: none"> <li>- Lights red when the projector is in standby mode.</li> <li>- Lights green during operations.</li> <li>- Flashes green in the Power management (standby) mode.</li> <li>- Flashes red in cooling state.</li> </ul>
2	<b>Lamp</b> indicator	Turns orange when the life of the projection lamp draws to an end.
3	<b>Temp</b> indicator	Flashes red when the internal temperature of the projector is abnormally high.
4	<b>Menu</b> button	Open or close the screen menu.
5	Pointer  (VOL+/-, Keystone) buttons	<ul style="list-style-type: none"> <li>- Select item or adjust data in screen menu.</li> <li>- Adjust the volume.</li> <li>- Correct the keystone distortion.</li> </ul>
6	<b>Input/Enter</b> button	<ul style="list-style-type: none"> <li>- Switch the input source.</li> <li>- Enter screen menu operation.</li> <li>- Execute the selected items.</li> </ul>
7	<b>Auto</b> button	<ul style="list-style-type: none"> <li>- Automatically set the display parameter for PC input signal.</li> <li>- Switch to search input source automatically when there is no signal input.</li> </ul>
8	<b>Power</b> button	Turn on or turn off the projector.

Remote Control

1



y0375206

1	<b>Power</b> button	Turn on or turn off the projector.
2	<b>Computer</b> button	Select the Computer 1 or Computer 2 input source.
3	<b>Video</b> button	Select the Video input source.
4	<b>Component</b> button	Select the Component input source.
5	<b>S-Video</b> button	Select the S-video input source.
6	Pointer ◀▶▲▼ button	- Select item or adjust data in screen menu. - Select the image display area in digital zoom mode.
7	<b>Enter</b> button	Enter the menu or select an item in the menu.
8	<b>Menu</b> button	Open or close the on-screen menu.
9	<b>Timer</b> button	Open the Timer function.

10	<b>Keystone</b> button	Correct the image keystone distortion.
11	<b>Lamp</b> button	Select a lamp mode.
12	<b>Screen</b> button	Select the screen size.
13	<b>Freeze</b> button	Freeze the picture on the screen.
14	<b>D.Zoom-</b> button	Zoom out the image.
15	<b>Blank</b> button	Temporarily close the image on the screen.
16	<b>Auto</b> button	Execute the setting of Auto setup.
17	<b>Image</b> button	Select an image mode.
18	<b>D.Zoom+</b> button	Zoom in the image.
19	<b>Mute</b> button	Mute the sound.
20	<b>Volume -</b> button	Decrease the volume level.
21	<b>Volume +</b> button	Increase the volume level.

#### ↓ Note

To ensure safe operation, please observe the following precautions:

- Do not bend, drop or expose the remote control to moisture or heat.
- For cleaning, use a soft dry cloth. Do not apply benzene, thinner, spray, or any chemical material.

# Specifications

1

Mechanical properties	
Dimensions (W x H x D)	356 mm x 306 mm x 126 mm
Net Weight	3.7kg
Monitor's Resolution	
LCD System	0.63" TFT, active matrix type, 3 panels
Monitor's resolution	1,024 x 768 dots
Compatible signals	
Color standard	PAL, SECAM, NTSC, NTSC4.43, PAL-M and PAL-N
HDTV Signal	480i, 480p, 576i, 576p, 720p, 1035i, 1080i, 1080P
Scanning frequency	Horizontal frequency: 15kHz–100 kHz, Vertical frequency: 50Hz–120 Hz
Optical elements	
Image size (diagonal lines)	50"-110"
Projection distance	0.60m~1.36m
Lens	F=1.8, f=8.08mm with fixed focus
Lamp consumption	230W
Terminal	
Component (Video) input terminal	RCAX3(complex)
S-Video terminal	Mini DIN4x1
Computer 1 in terminal	Mini D-sub 15 pin x 1
Computer 2 in/Monitor out terminal	Mini D-sub 15 pin x 1
Audio input terminal	Mini Jack (stereo) x 1
RS-232C terminal	D-sub 9 pin x 1
Audio	

Internal audio AMP	3W * 2, stereo
Internal speaker	3W RMS 4ohm, * 1
Power	
Voltage and Power Consumption	AC 100–240 V (Max 3.8A), 50/60 Hzz
Fuse	6.3A /250V
Operating Environment	
Operating Temperature	41°F-95°F (5°C-35°C)
Operating Humidity	20%-85%
Storage Temperature	14°F-140°F (-10°C-60°C)
Storage Humidity	10%-85%
Altitude	less than 3000m
Remote Control	
Battery	AAA or LR03 1.5V ALKALINE TYPE x 2
Operating Range	16.4' (5m)/±30
Dimensions (W x H x D)	52mm (W) x 18mm (H) x 110mm (D)
Net Weight	67g (including batteries)
<b>Accessories</b>	
User's Manual (CD), Important Information, Warranty card, Remote Control and Batteries, AC power cord, VGA cable	
<b>Optical Accessories</b>	
Lamp unit, Filter unit	



## 2. Installation

### Installation Requirements

The projector provides many convenient features and functions. Proper operation may enable you to fully utilize the features and keep it in good condition. Otherwise, it will not only shorten the service life of the unit, but also may cause malfunction, a fire, or other accidents.

The lamp of the projector is a wearing part.

The luminance may decrease after a period of operation and be weaker than that of a new lamp.

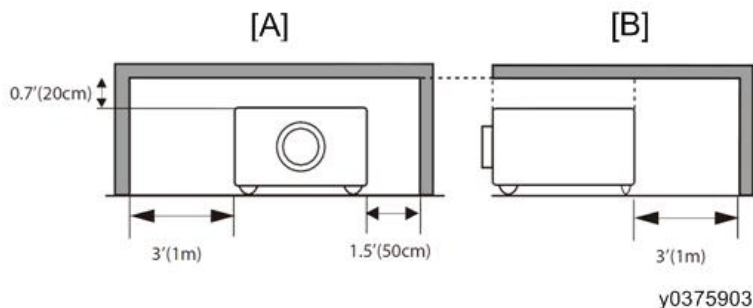
This is normal. Please strictly follow the steps in Turning on the unit and Turning off the unit to turn on/off the projector, and the requirements in Maintaining and cleaning the projector to service and clean the projector regularly. Or the high temperature residual heat may not radiate, greatly shortening the service life of the projector and lamp, or even damaging them within a short period.

### Safety precautions

The projector must be grounded.

Do not expose the projector to raindrops or high humidity to avoid a fire or electric shock.

- This projector produces intense light from the projection lens. Avoid staring directly into the lens, otherwise eye damage could be caused. Be especially careful that children do not stare directly into the beam.
- Place the projector in a proper position. Otherwise it may result in fire hazard.
- Leave an appropriate space from the top, sides, and back of the shell in order to ventilate and cool down the projector. The figures below indicate the minimum distance to be left. It must be satisfied if the projector is placed in sealed environment like a cabinet.



[A] SIDE and TOP

[B] REAR

- Do not cover the vent of the projector. Poor radiation may shorten the service life or even cause dangers.
- Remove the AC power plug if the projector is not to be used for a long time.
- Do not project the same image for a long time; otherwise, a residual image may appear on the LCD panel due to its characteristic.

### **CAUTION**

- Do not set the projector in greasy, wet, or smoky conditions such as in a kitchen, to prevent a malfunction or accident. If the projector comes in contact with oil or chemicals, it may become deteriorated. Read and keep this manual for future reference.

#### **Environment-friendly use conditions:**

The environment-friendly life time of the projector and remote control is 10 years, the lamp (consumable) 5 years, and the provided batteries (consumable) 5 years.

The use conditions of the environment-friendly use period are the same with that of the product. Properly operate and effectively maintain the projector according to the requirements in this manual.

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## **Safety Guide**

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All the safety and operating instructions should be read before the product is operated.

Read all of the instructions given here and retain them for later use. Unplug this projector from AC power supply before cleaning. Do not use liquid or aerosol cleaners.

Use a damp cloth for cleaning.

Follow all warnings and instructions marked on the projector.

For added protection to the projector during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet.

This will prevent damage due to lightning and power line surges.

Do not expose this unit to rain or use near water... for example, in a wet basement, near a swimming pool, etc.,.

Do not use attachments not recommended by the manufacturer as they may cause hazards.

Do not place this projector on an unstable cart, stand, or table. The projector may fall, causing serious injury to a child or adult, and serious damage to the projector.

Use only with a cart or stand recommended by the manufacturer, or sold with the projector. Wall or shelf mounting should follow the manufacturer's instructions, and should use a mounting kit approved by the manufacturers.

An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.

Slots and openings in the back and bottom of the cabinet are provided for ventilation, to ensure reliable operation of the equipment and to protect it from overheating.

The openings should never be covered with cloth or other materials, and the bottom opening should not be blocked by placing the projector on a bed, sofa, rug, or other similar surface. This projector should never be placed near or over a radiator or heat register.

This projector should not be placed in a built-in installation such as a book case unless proper ventilation is provided.

Never push objects of any kind into this projector through cabinet slots as they may touch dangerous voltage points or short out parts that could result in a fire or electric shock. Never spill liquid of any kind on the projector.

Do not install the projector near the ventilation duct of air-conditioning equipment.

This projector should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supplied, consult your authorized dealer or local power company.

Do not overload wall outlets and extension cords as this can result in fire or electric shock. Do not allow anything to rest on the power cord. Do not locate this projector where the cord may be damaged by persons walking on it.

Do not attempt to service this projector yourself as opening or removing Covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

Unplug this projector from wall outlet and refer servicing to qualified service personnel under the following conditions:

- a. When the power cord or plug is damaged or frayed.
- b. If liquid has been spilled into the projector.
- c. If the projector has been exposed to rain or water.
- d. If the projector does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions as improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the projector to normal operation.
- e. If the projector has been dropped or the cabinet has been damaged.
- f. When the projector exhibits a distinct change in performance-this indicates a need for service.

When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer that have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock, or injury to persons.

Upon completion of any service or repairs to this projector, ask the service technician to perform routine safety checks to determine that the projector is in safe operating condition.

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## Air circulation

Vents in the cabinet are provided for ventilation.

To ensure reliable operation of the product and to protect it from overheating, these openings must not be blocked or covered.

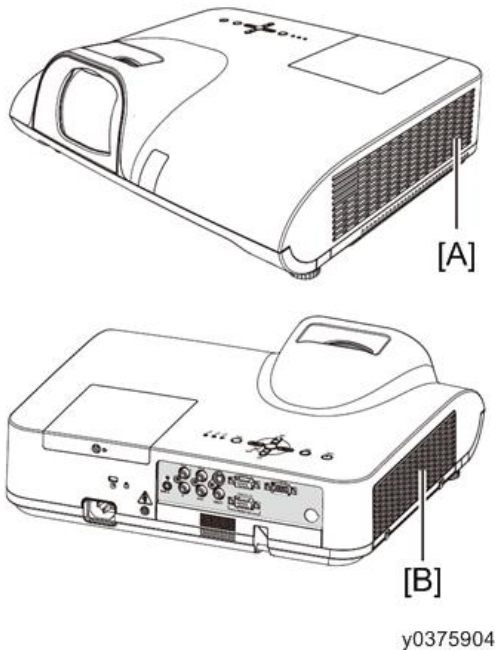
## **CAUTION**

Hot air is exhausted from the exhaust vent.

When using or installing the projector, the following precautions should be taken.

- Do not put any flammable objects, or spray can near the projector. Hot air is exhausted from the air vents.
- Keep the exhaust vent at least 1 m away from any objects.
- Do not touch a peripheral part of the exhaust vent, especially screws and metallic part. This area will become hot while the projector is being used.
- Do not put anything on the projector. Objects put on the cabinet will not only get damaged but may also cause a fire hazard. Cooling fans are provided to cool down the projector.

The fan's running speed is changed according to the temperature inside the projector.



[A] Exhaust Vent

[B] Air intake Vent

## Moving the projector

When moving the projector, cover the lens cap and retract the adjustable feet to prevent damage to the lens and cabinet. Put it into a pouch (provided) with the lens facing upwards if the projector is not in use for a long period.

## Installing the projector properly

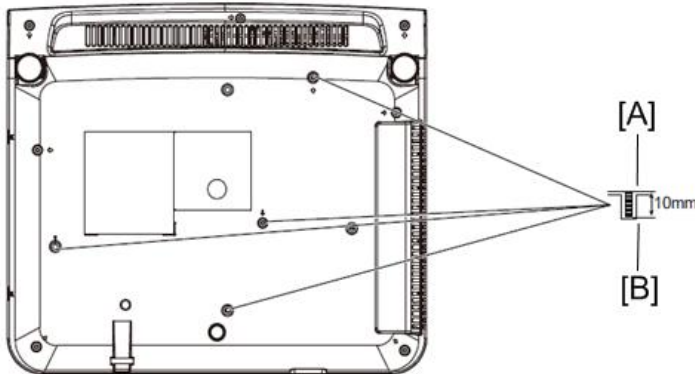
Be sure to install the projector properly.

Improper installation may reduce the lamp lifetime and even cause a fire hazard.

- Do not roll the projector over 20 degrees from side to side.
- Do not point the projector up to project an image.
- Do not point the projector down to project an image.
- Do not put the projector on either side to project an image.

Caution when mounting the projector on the ceiling.

- Only qualified personal is authorized for ceiling installation.
- We are not responsible for the hurt and damage caused by ceiling bracket that purchased from unauthorized dealer even in warranty period.
- Remove the ceiling bracket immediately while not use.
- While installing, torque screwdriver is suggested, don't use electric or impact-type screwdriver.
- Please read the manual of bracket for details.
- The bracket is subject to change without notice.



y0375905

[A] Max. 10

[B] Torque: 1.25+0.2Nm

Caution in moving or transporting the projector

- Do not drop or bump the projector, otherwise damages or malfunctions may result.

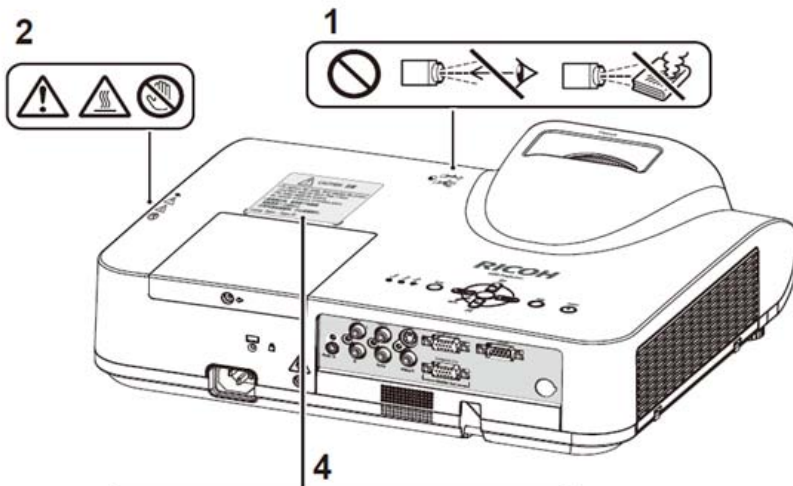
- When carrying the projector, use a suitable carrying case.
- Do not transport the projector by courier or any other transport service in an unsuitable transport case. This may cause damage to the projector. For information about transporting the projector by courier or any other transport service, consult your dealer.
- Do not put the projector in a case before it is cooled enough.

## 2

### **Safety Labels of This Machine**

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1. Do not look into the lens while the projector is on. Serious damage to your eyes could result. Do not use any other object than the projector's lens cover to cover the lens while the projector is on. Doing so can cause the object to get extremely hot, and possibly resulting in a fire or damage due to the heat emitted from the light output.
2. Do not try to touch the ventilation outlet on the right (when seen from the front) as it can become heated while the projector is turned on and immediately after the projector is turned off. Parts of the projector may become temporarily heated if the projector is turned off with the Power button or if the AC power supply is disconnected during normal projector operation. Use caution when picking up the projector.
3. Do not remove any screws except the lamp cover screws. Do not block or cover the vents.
4. To replace the lamp, first unplug the power cord then wait for more than 1 hour. The lamp might be broken. Be careful of pieces of broken glass.

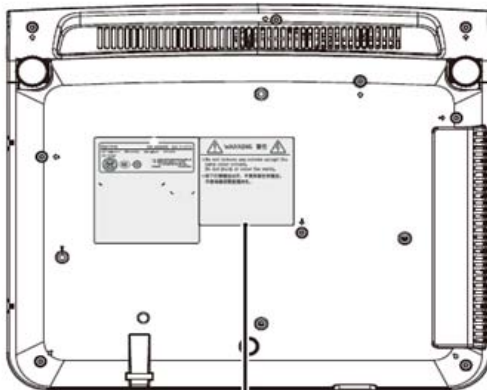


**CAUTION 注意**

- To replace the lamp, first unplug the power cord then wait for more than 1 hour.
- The lamp might be broken. Be careful of pieces of broken glass.
- 要更换灯泡, 首先拔下电源线然后等待 1 小时以上。
- 灯泡可能会被碰碎。小心玻璃碎片。

Lamp Type : Type10

Y0375906



**WARNING 警告**

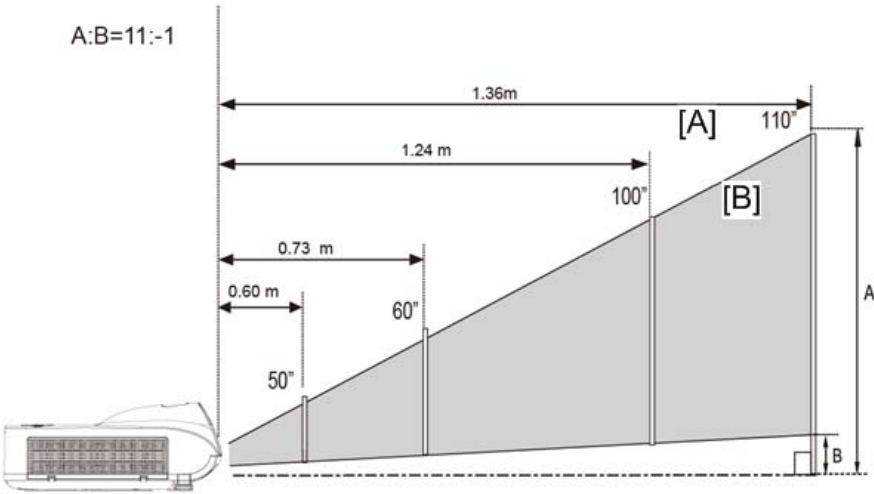
- Do not remove any screws except the lamp cover screws.
- Do not block or cover the vents.
- 除了灯罩螺丝以外, 不要拆除任何螺丝。
- 不要堵塞或覆盖通风孔。

Y0375907

## Positioning the projector

### Note

- The brightness in a room has a great influence on picture quality. It is recommended to limit the ambient lighting in order to get the best image.
- All measurements are approximate and may vary from the actual sizes.



Y0375901

[A] Inch Diagonal

[B] Fixed

Screen size (W x H)mm 4:3ratio	50"	60"	100"	110"
	1016 x 762	1219 x 914	2032 x 1524	2235 x 1676
Project distance(m)	0.60	0.73	1.24	1.36
A( m)	0.84	1.00	1.68	1.84
B( m)	0.08	0.09	0.15	0.17

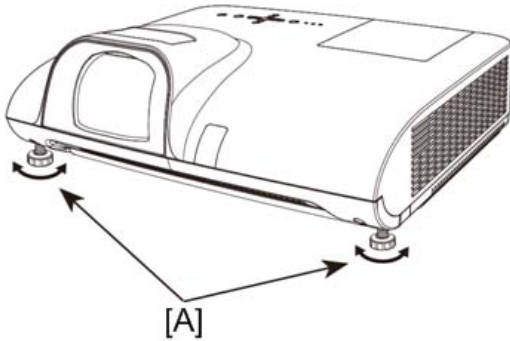
## Adjustable feet

Projection angle can be adjusted up to 10.0 degrees with the adjustable feet.

Rotate the adjustable feet and tilt the projector to the proper height; to raise the projector, rotate the both feet clockwise.

To lower the projector or to retract the adjustable feet, rotate the both feet counterclockwise.

To correct keystone distortion, press the Keystone button on the remote control or on the top control or select Keystone from the menu.



Y0375902

[A] Adjustable feet



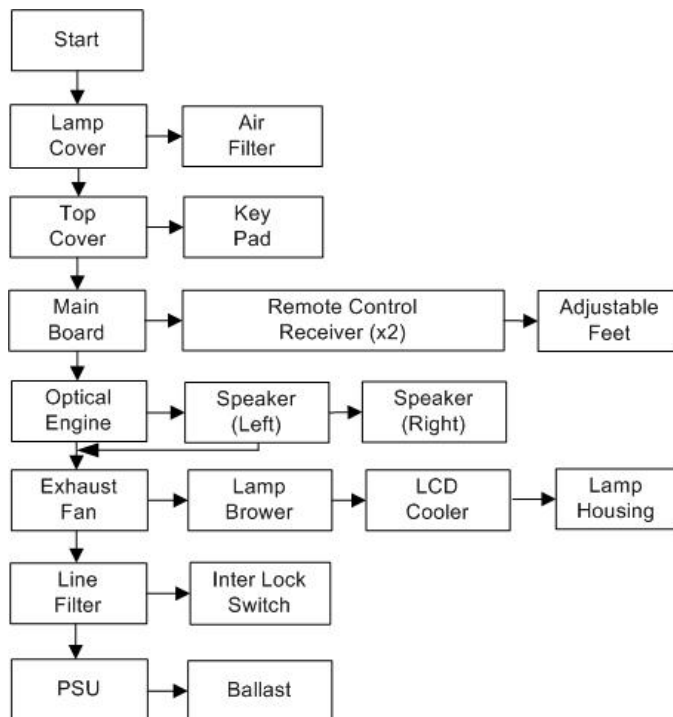
# 3. Replacement and Adjustment

## Replaceable Part Hierarchy

The flow chart below shows what parts must be removed to access each replaceable part in the projector.

The parts on the first level (e.g., Lamp cover) are accessible without removing any other parts.

The more levels down that a part is, the more parts you need to remove in order to access it..



y0375800

## Special Tools

Make sure that engineers are equipped with the following tools, which will be necessary in order to update the main firmware, and to perform adjustments that are necessary after replacing the optical engine or main board.

1. RS-232C cable (cross)
2. Notebook PC

# Parts Replacement

## Lamp Module

1. Remove the seal on the top left side on the rear and the screw.



y0375002

### Note

- When assembling, attach the following new sticker after cleaning with alcohol.



Y0375207

2. Pull the lamp cover toward you to remove.



y0375003

3. Remove the 3 screws.

4. Hold the part shown in the blue circle and remove the lamp unit.



y0375005



y0375006

## Top Cover

1. Remove the 8 screws on the bottom.
2. Remove the sticker attached at the center bottom on the front side shown in the blue circle, and remove the 1 screw.

### ↓ Note

- When assembling, attach the following new sticker after cleaning with alcohol.



Y0375207



y0375007

### 3. Remove the 2 screws.

The one on the rear is a tapping screw M3 x 8 (binding head).



y0375008

4. While pressing the lock lever at both sides on the bottom, lightly lift the front side to remove.



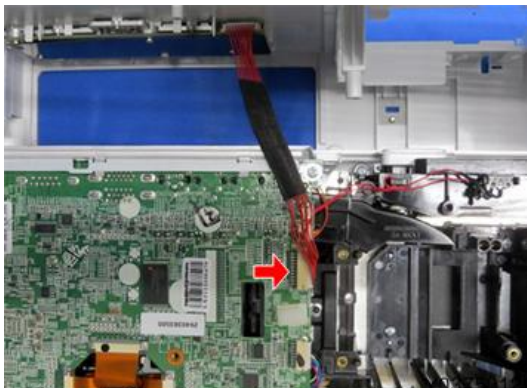
y0375009

5. Hold the both sides of the top cover to remove.



Y0375010

6. Disconnect the connector.



Y0375012

## 7. Top cover.



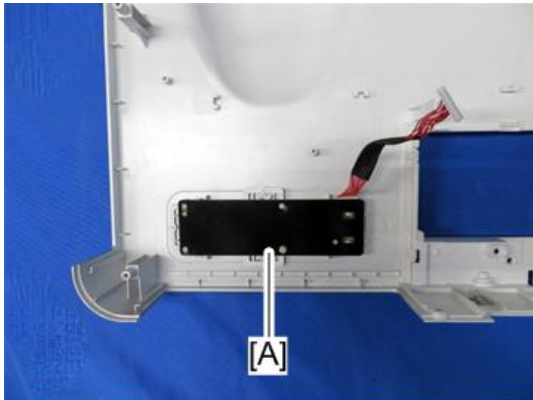
Y0375012

Y0375013

3

## Key Pad

### 1. Black cover [A]( x 3 ).



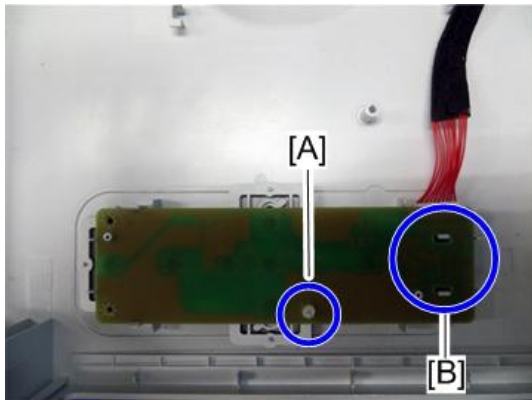
Y0375014



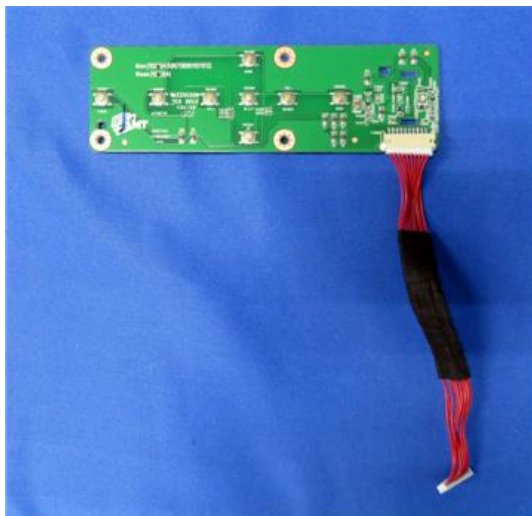
Y0375015

### 2. Remove the 1 plastic retainer pin [A].

3. Disengage the 2 tabs [B].

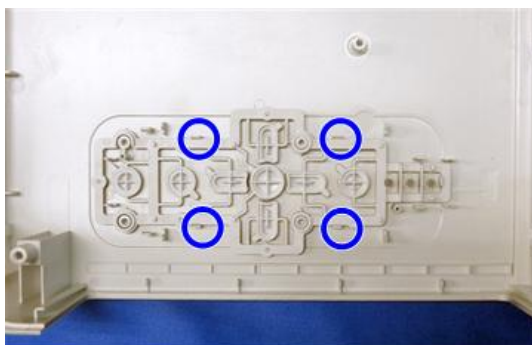


Y0375017



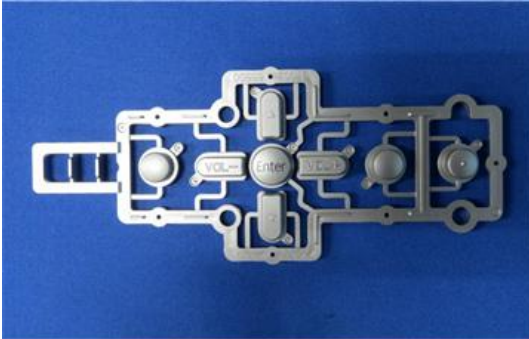
Y0375018

4. Disengage the 4 tabs on the top cover.

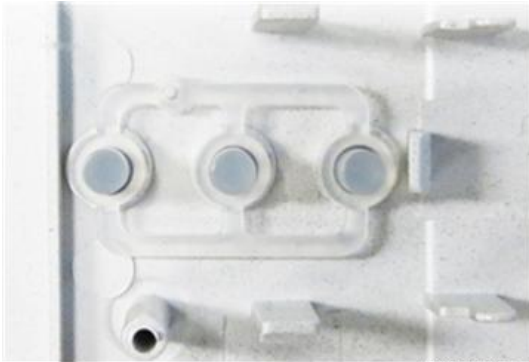


Y0375019

## 5. Keypad and the LED guide.



Y0375021



Y0375021a

3









## Main Board Assembly





1. Remove the 16 connectors (including the 3 flat cable type connectors at the center) connected to the main board shown in the blue circle.



Y0375022

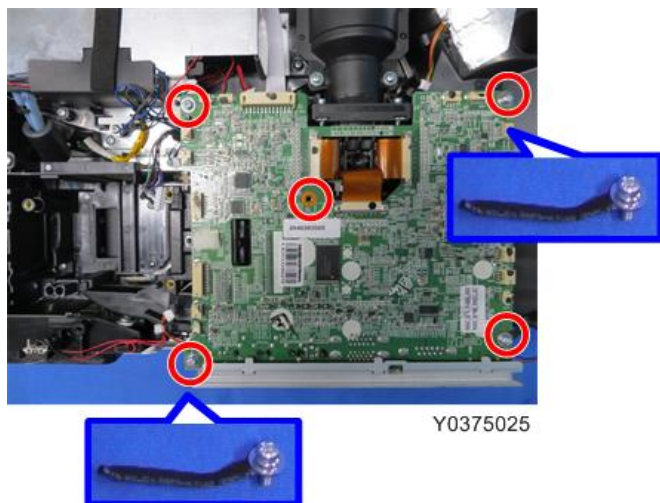
## Connector list

No.	Appearance	Connector (male) name	Feature
1	 Y0375107	Exhaust Fan	Black and blue wires (3-pin) x2 positions
2	 Y0375108	IRIS	Black, white, green, blue, and red wires (7-pin) (Y38 only)
3	 Y0375109	Key Pad	Red (10-pin) wires
4	 Y0375110	Fan(intake)	Red, yellow, and black (3-pin) wires x2 positions
5	 Y0375111	Interlock Switch	Red (2-pin) wires
6	 Y0375112	Speaker	Red and black (2-pin) wires x2 positions
7	 Y0375113	Fan(Lamp cooling)	Red (6-pin) wires
8	 Y0375114	Power	White (12-pin) wires

9	 Y0375115	Ballast	Red and black (5-pin) wires
10	 Y0375116	G (Green) video signal	Flat cable 1
11	 Y0375117	B (Blue) video signal	Flat cable 2
12	 Y0375118	R (Red) video signal	Flat cable 3

3

## 2. Main board unit ( with washer x 6).

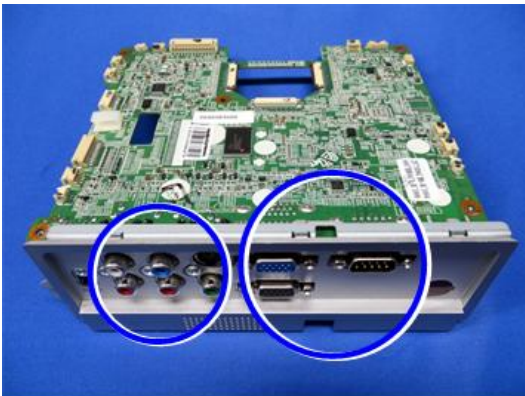


One of these screws with spring lock washer is located at the position shown in the red circle below.



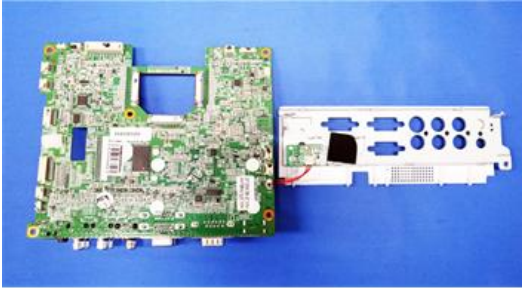
Y0375026

3. Remove the 4 screws shown in the blue circles (left of picture).
4. Remove the 4 screws that hold connectors shown in the blue circles (right of picture).



Y0375028

## 5. Disassemble into the main board unit and IR receiver (rear).



Y0375029

3

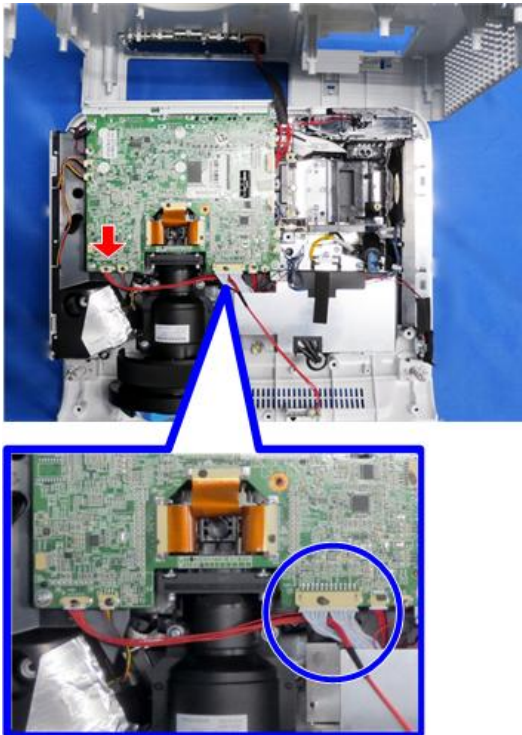
## Remote Control (IR) Receiver Unit

### Front

#### 1. Disconnect the connector on the main board.

##### Note

- This connector cable is wired through the other connector cable shown in the blue circle.



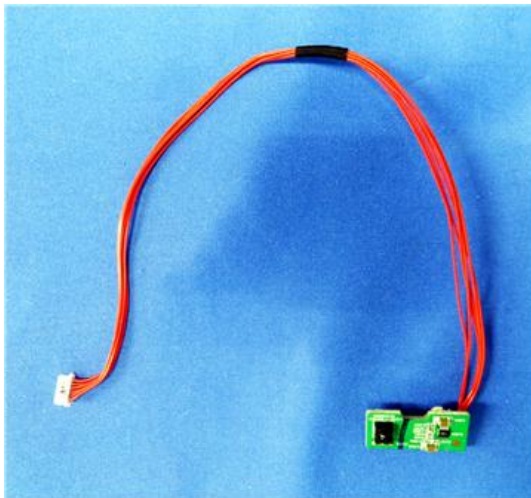
Y0375030

**2. Disengage the tab of the IR receiver.**



Y0375032

**3. Pull the IR receiver upward to remove.**



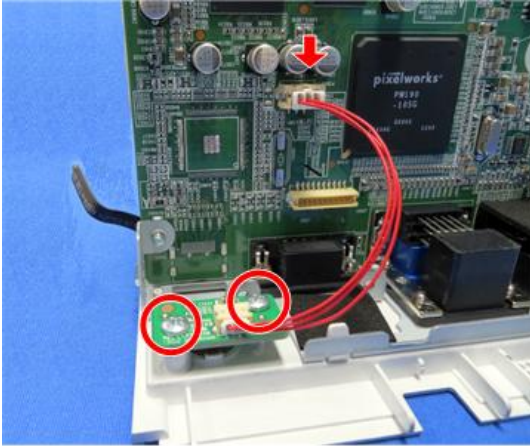
Y0375034

## Rear

---

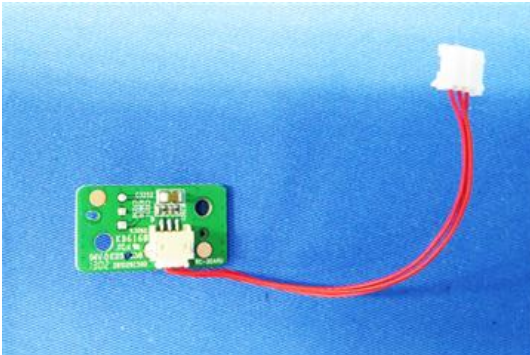
**1. Disconnect the connector inside the main board.**

2. Remove the 2 screws on the IR receiver (rear).



Y0375035

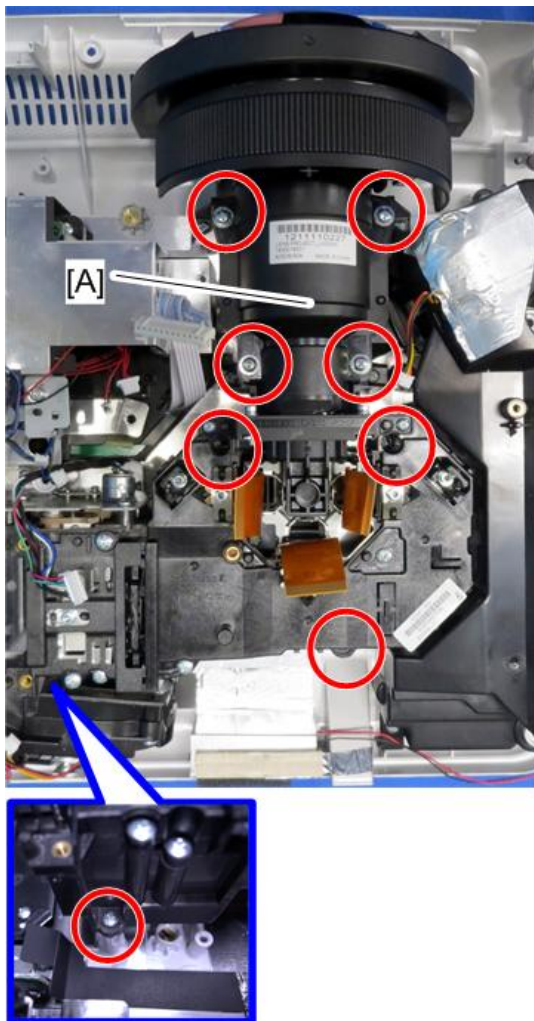
3. IR receiver (rear).



Y0375036

## Optical Engine

1. Remove the 8 screws.



y0375038

## 2. Optical engine.



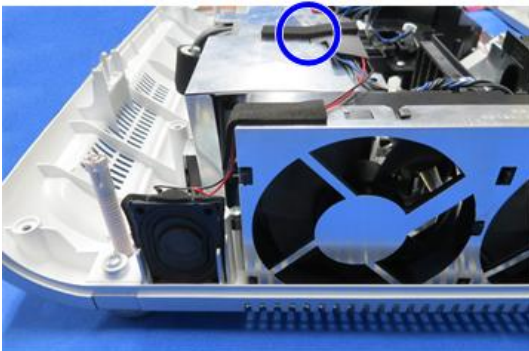
Y0375039

3

## Speaker

### Front Speaker (L output for stereo)

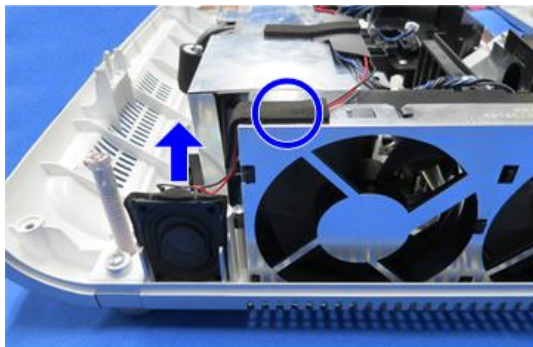
1. Remove the sponge tape on the ballast part.



Y0375040

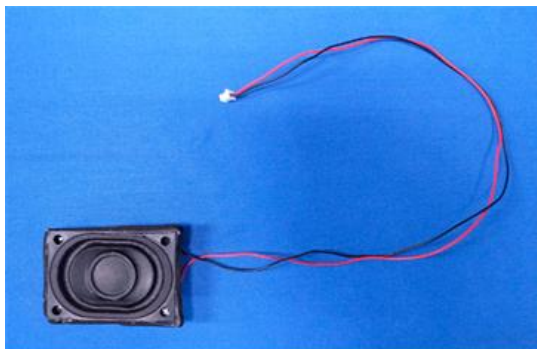
2. Lift the cover and release the wires.

3. Remove the sponge tape on the exhaust fan part shown in the blue circle to release the wires.



Y0375041

4. Pull the speaker upward to remove.



Y0375042

### Rear Speaker (R output for stereo)

---

1. Remove the fixing tape attached on the base part.

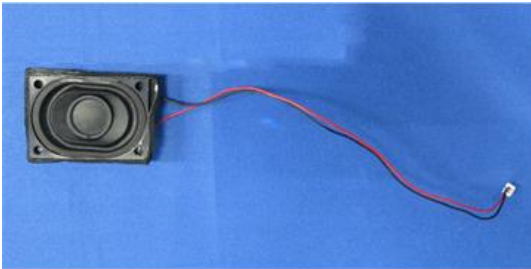


Y0375043

2. Pick up the sponge cover, and remove the speaker by releasing it from the adhesive tape.



Y0375044



Y0375045

**Note**

- The speaker is attached to the unit with the adhesive agent.

## Exhaust Fan

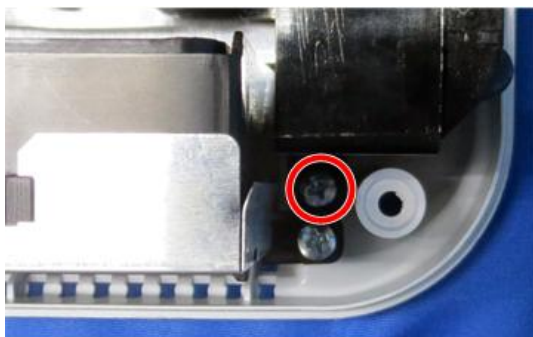
1. Remove the 3 screws.



Y0375047



Y0375048



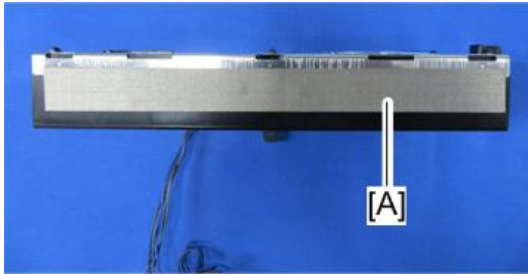
Y0375049

## 2. Exhaust fan unit.



Y0375050

3. Remove the tape [A] on the bottom.

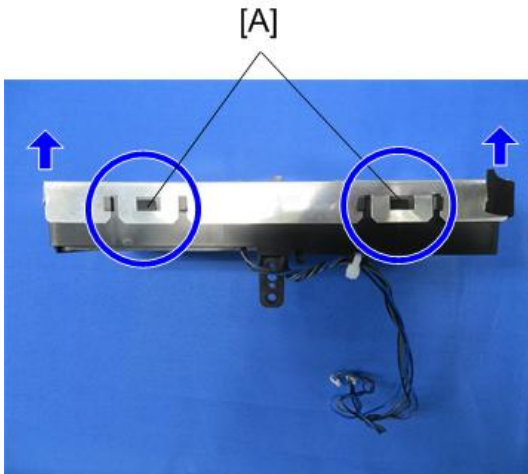


Y0375053

4. Disengage the 2 tabs [A].

↓ Note

- Disengage the 2 tabs, and then move the cover with the blue arrow.



Y0375055

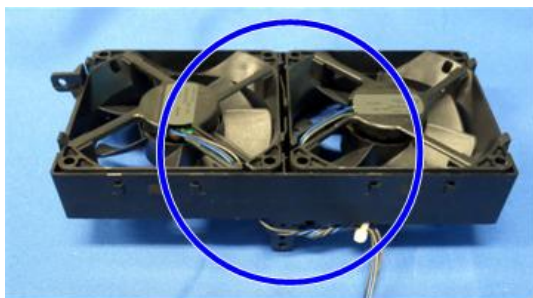
**5. Disassemble into the fan unit and the cover.**



**Note**

- When assembling, be careful with the mounting orientation of the 2 fan motors.
- Mount them so that the label attached on the fan motor faces the cover.

**6. Cut the banding band on the fan cable shown in the blue circle.**



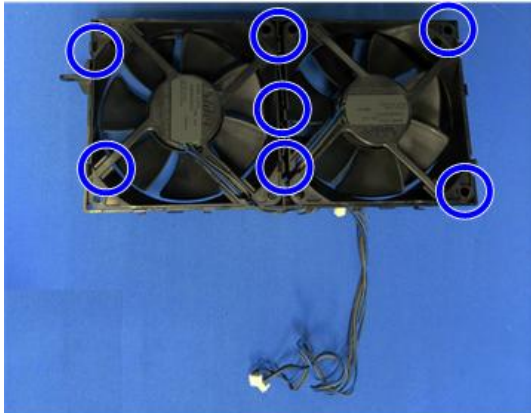
**Note**

- When assembling, use a new banding band.



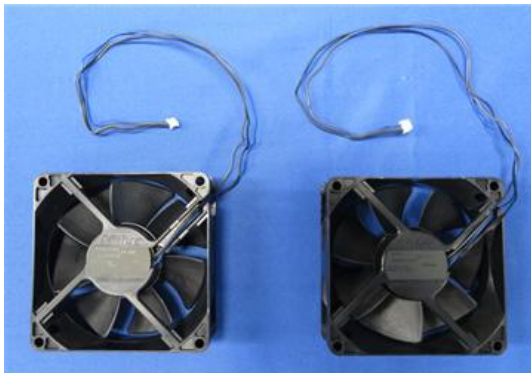
Y0375056

7. Disengage the 7 tabs (4 on the left, 3 on the right) on the fan housing fixing the fan motors.

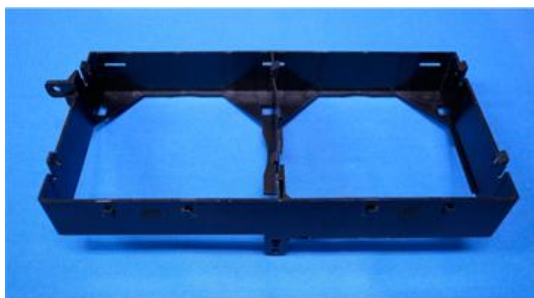


Y0375057

8. Remove the fan motors from the fan housing.



Y0375058



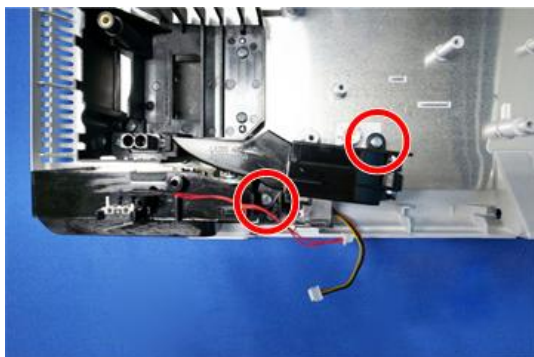
Y0375123

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## Lamp Blowers

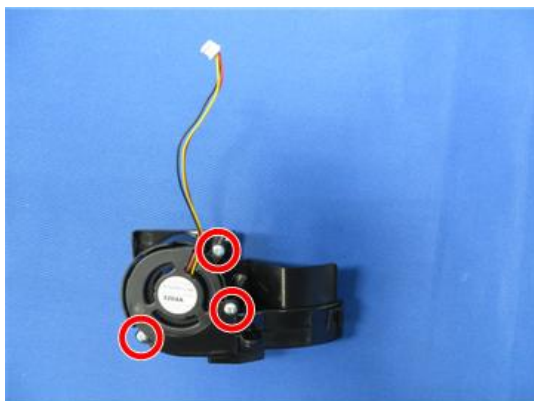
---

1. Lamp blower (  x 2 ) .



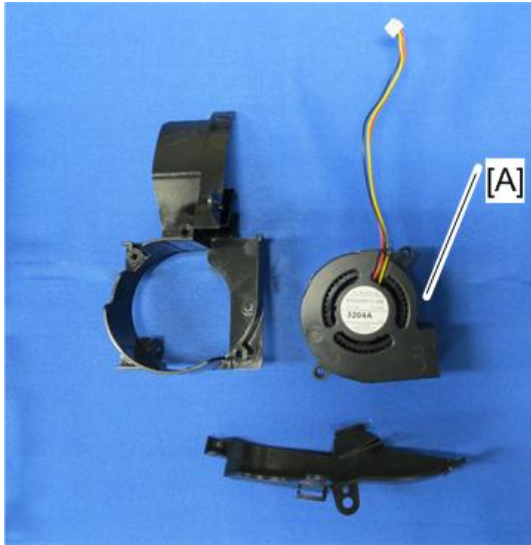
Y0375059

2. Remove the 3 screws.



Y0375061

### 3. Blower motor [A].

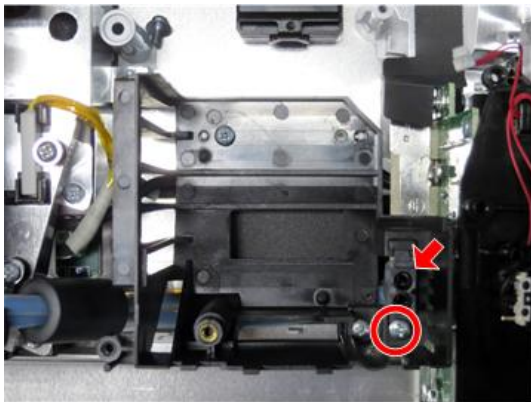


Y0375063

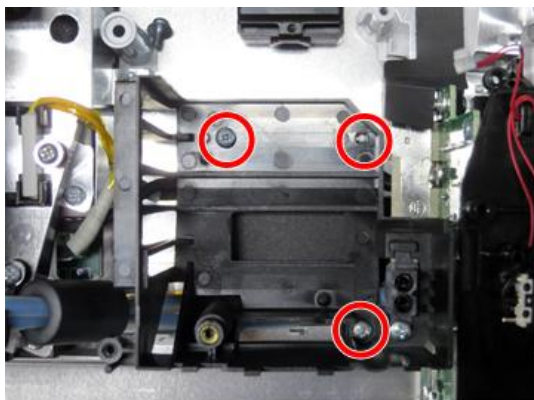
3

## Lamp Housing

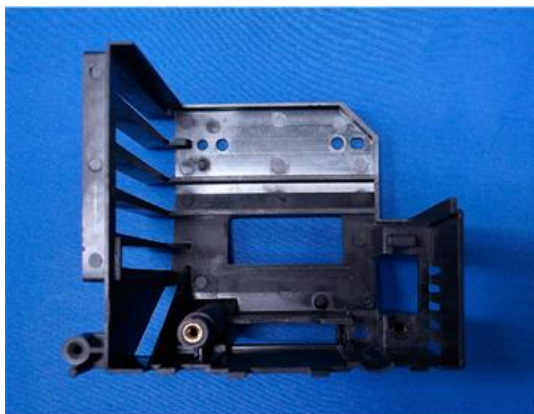
### 1. Lamp housing ( x 4, x 1 ).



Y0375065



Y0375064



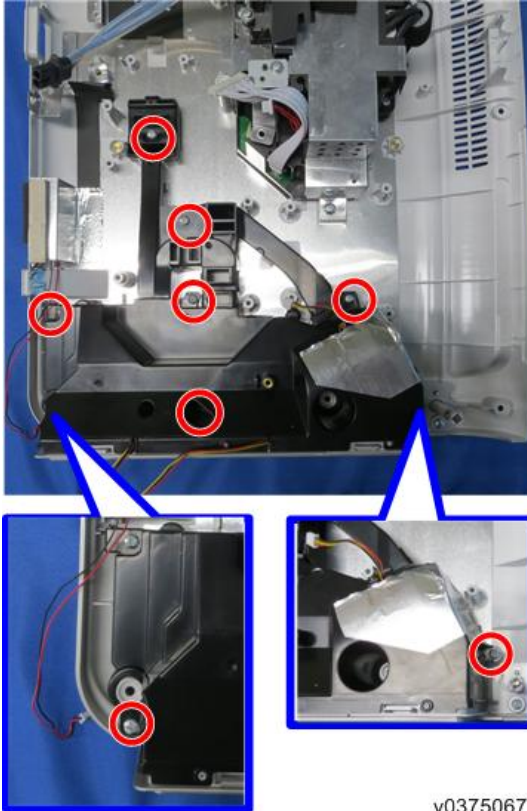
y0375134



Y0375066

## LCD Cooler

1. Remove the 8 screws.



y0375067

2. Remove the fixing tape.



Y0375124

### 3. Blowers.

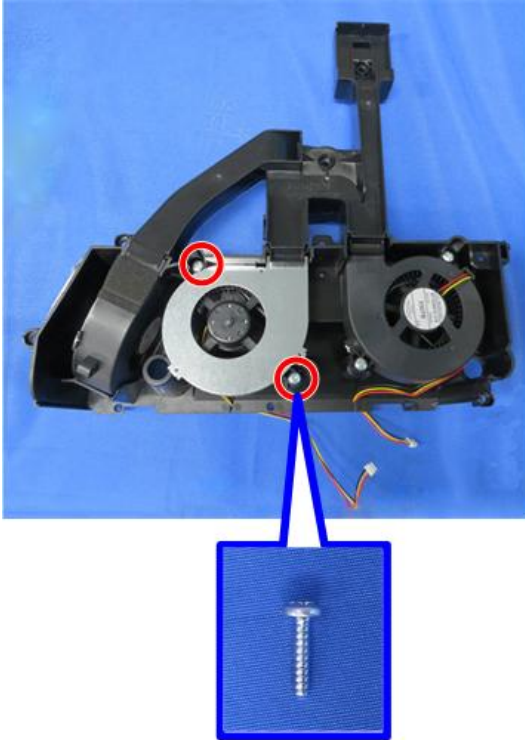


Y0375105

#### ↓ Note

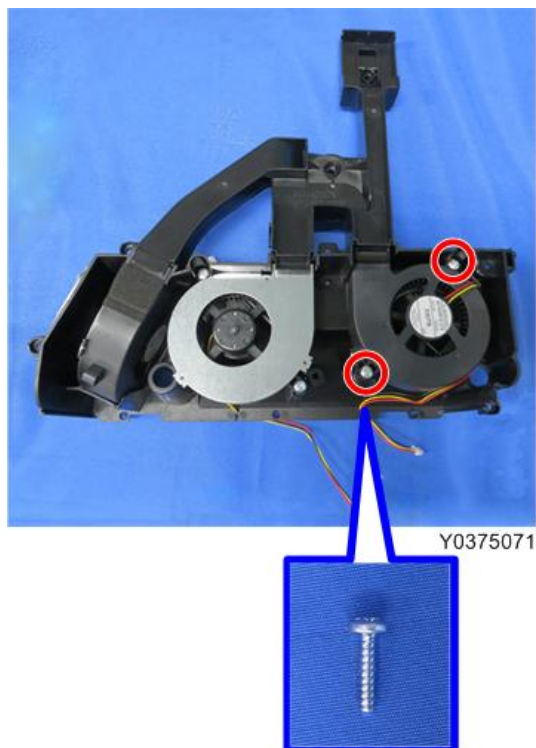
- There are 3 blowers.

4. Remove the 2 screws(M4x12) on the center blower.

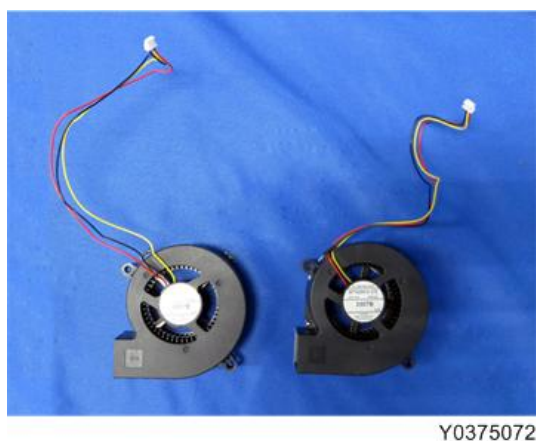


y0375070

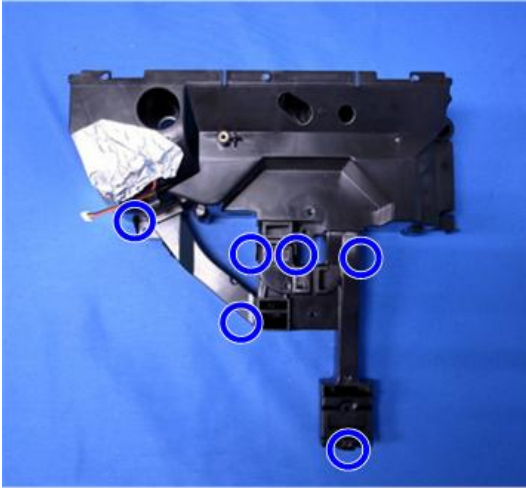
5. Remove the 2 screws(M4x12) on the right blower.



6. 2 blowers (for cooling).

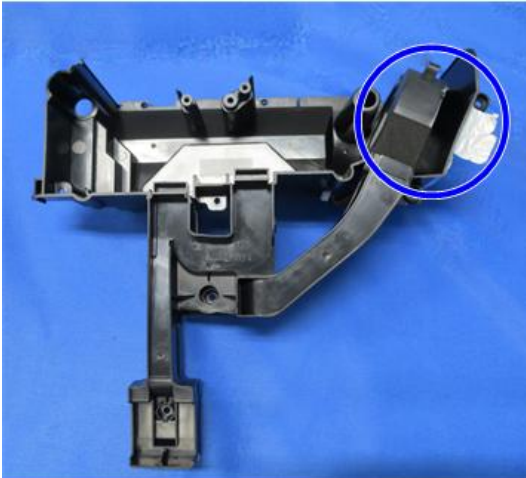


7. Disengage the five tabs on the blower cover.



Y0375073

8. Disassemble the blower cover.
9. From the blower cover shown in the blue circle, remove the third blower (for axial flow).



Y0375074

3



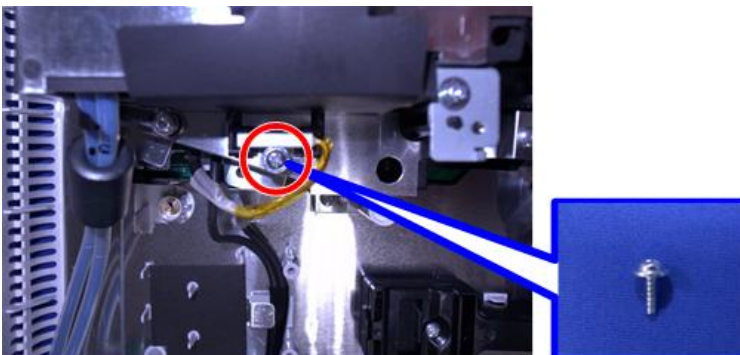
Y0375075



Y0375106

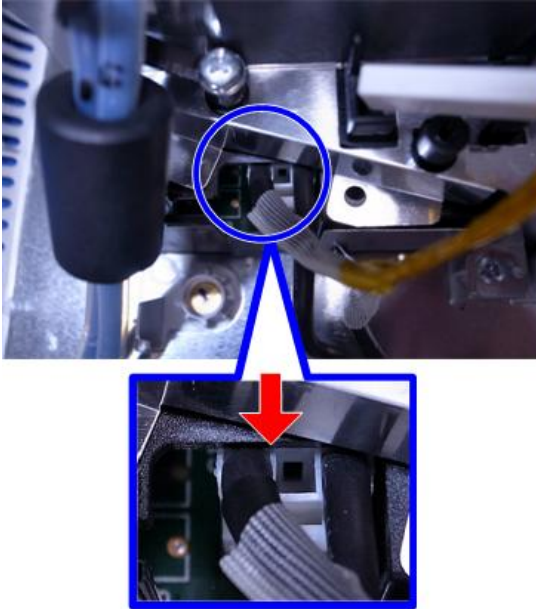
## PSU and Ballast for Projector Lamp

1. Remove the screw.



y0375150

2. Remove the thermo sensor connector.



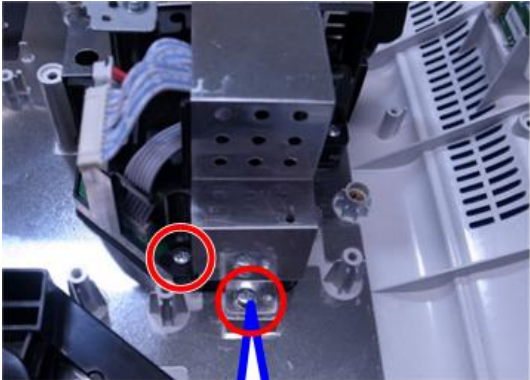
y0375151

3. Remove the 9 screws of PSU/Ballast shown in the blue circle.

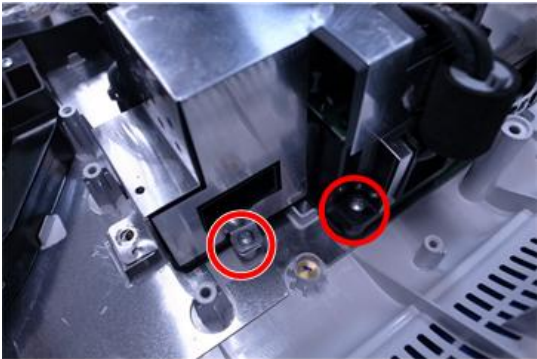


y0375152

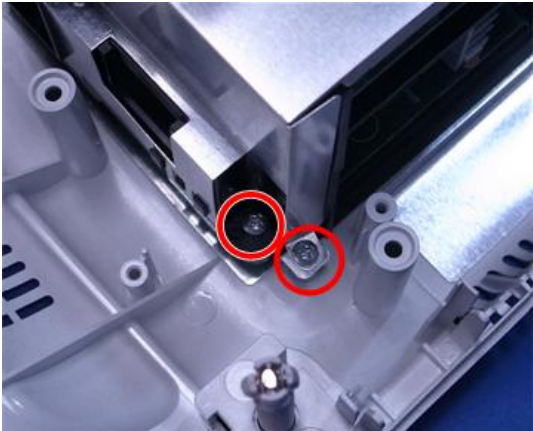
3



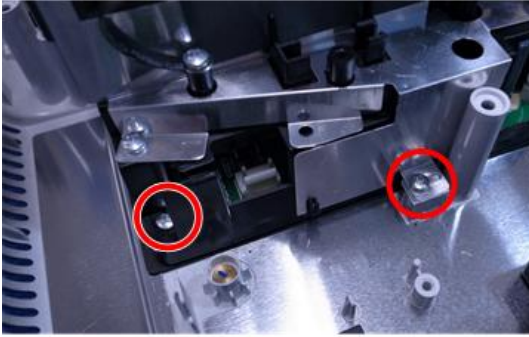
y0375153



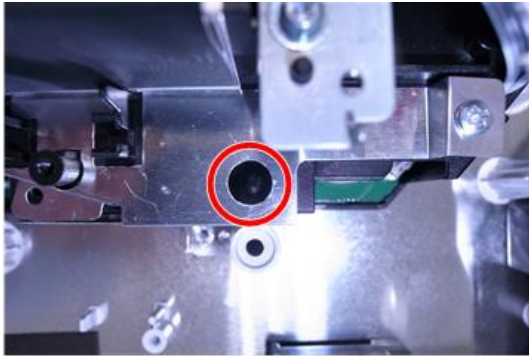
y0375154



y0375155

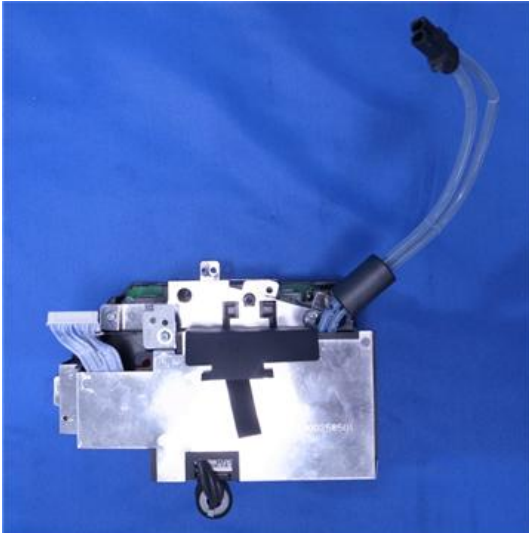


y0375157



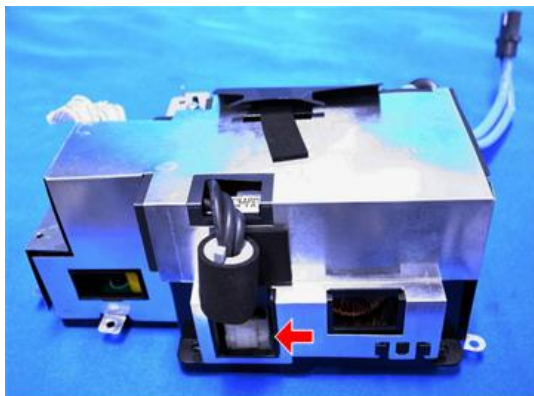
y0375158

#### 4. PSU/Ballast.



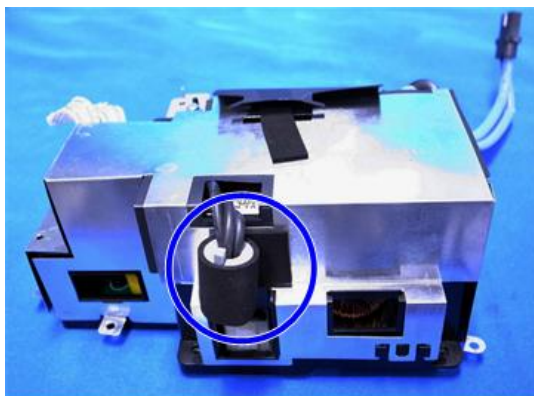
y0375159

5. Remove the connector on the PCU side.



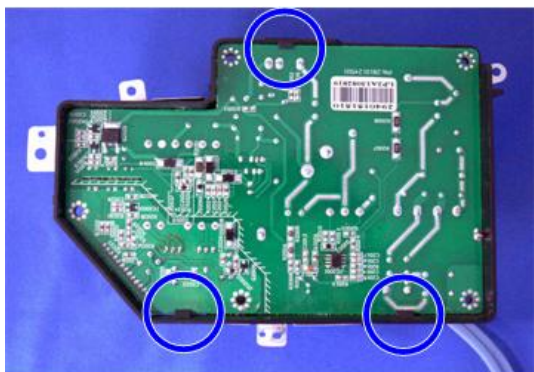
y0375160

6. Remove the tape fixing the connector on the high voltage line side and the shield hold cover.

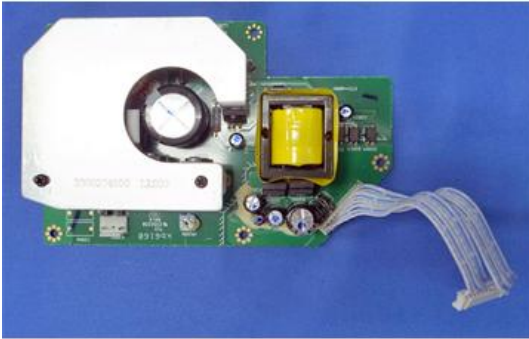


y0375161

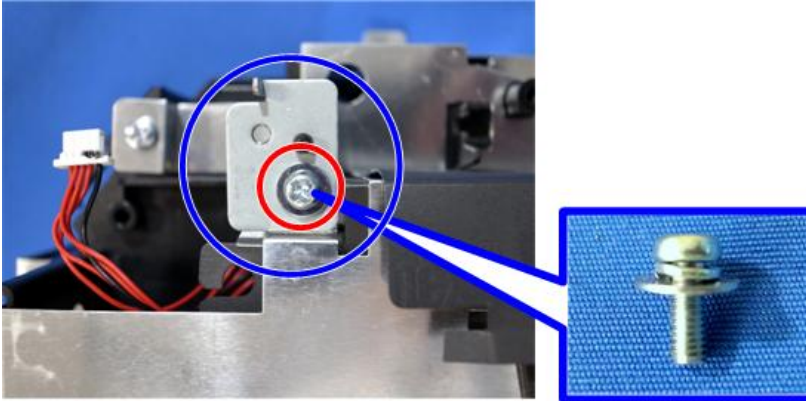
7. Remove the 3 tabs of the base.



y0375162

**8. PSU.**

y0375163

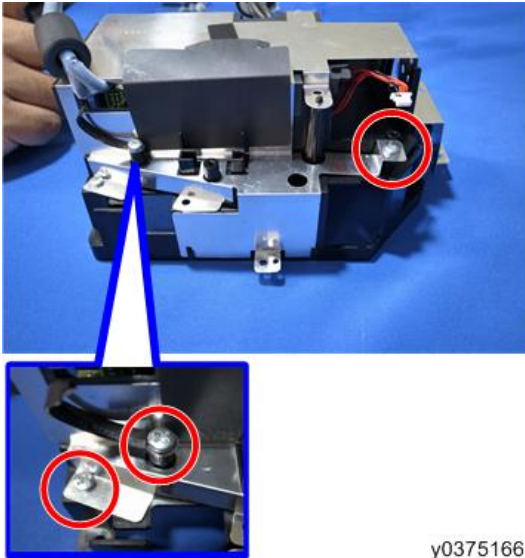
**9. Remove the screw, fixing the bracket shown in the blue circle.**

y0375164

**10. Bracket.**

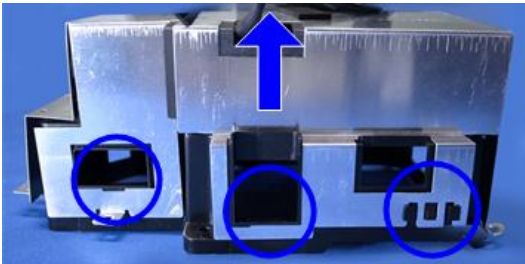
y0375165

**11. Remove the 3 screws.**



y0375166

**12. Remove the 3 tabs and then float the shield hold cover.**



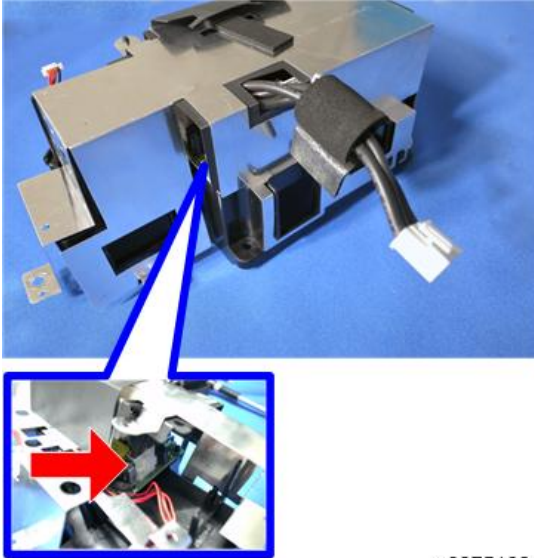
y0375167

**13. Remove the lamp power connector with floating the shield hold cover.**



y0375168

14. Remove the high voltage line connector on the ballast side shown with the red arrow with floating the shield hold cover.



y0375169

★ Important

- The connector is longer on the ballast side and shorter on the PSU side.

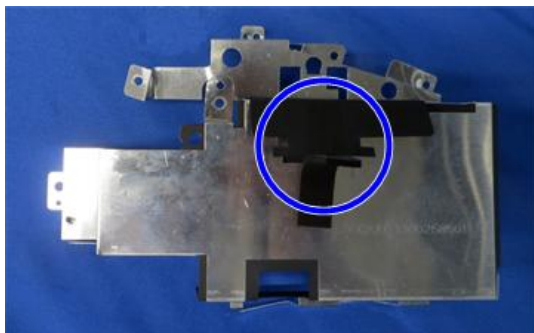


y0375170

[A]: To ballast,

[B]: To PSU

15. Remove the fixing tape and then remove the shield hold cover



y0375171

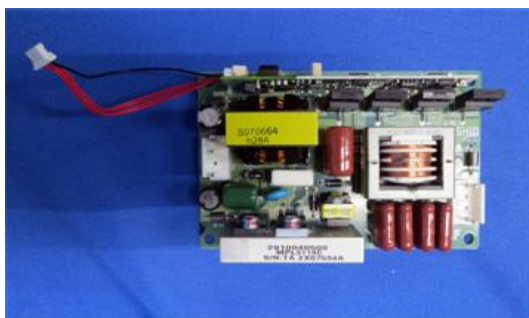
16. Remove the 2 screws on the ballast.



y0375172

17. Disassemble the ballast into the upper board [A] and base [B].

[A]



y0375173

[B]

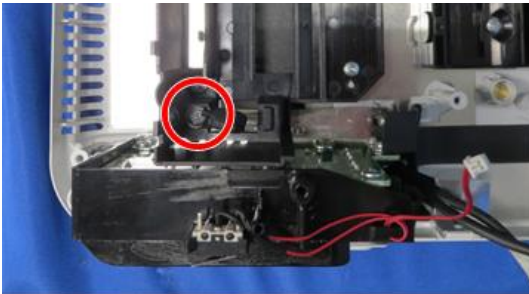


y0375174

3

## Line Filter

1. Remove the 4 screws (one of these is placed inside).



Y0375088

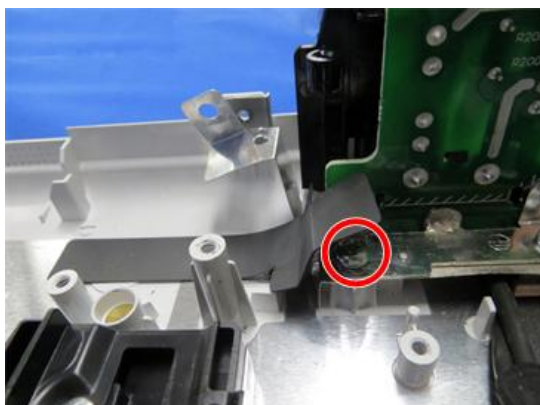


Y0375089



Y0375090

3



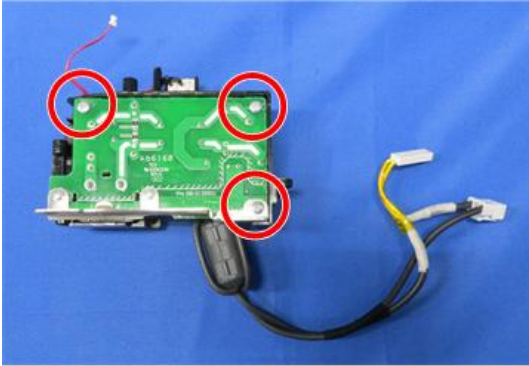
Y0375091

## 2. Line filter unit.



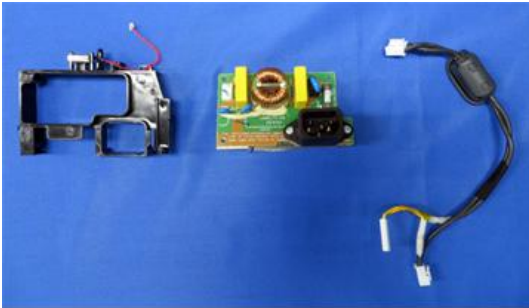
Y0375092

### 3. Remove the 3 screws on the board.



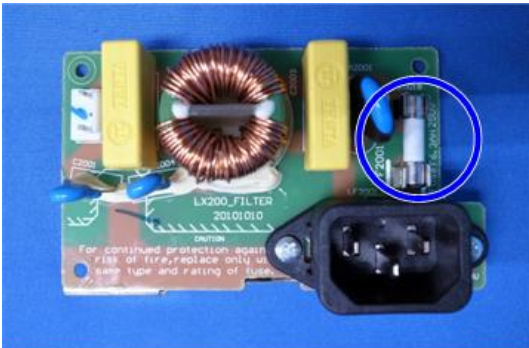
Y0375094

### 4. Disassemble into the housing, board and connector.



Y0375095

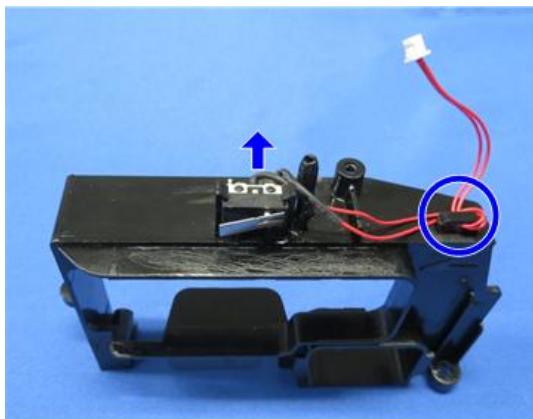
When replacing the fuse, remove it shown in the blue circle.



Y0375133

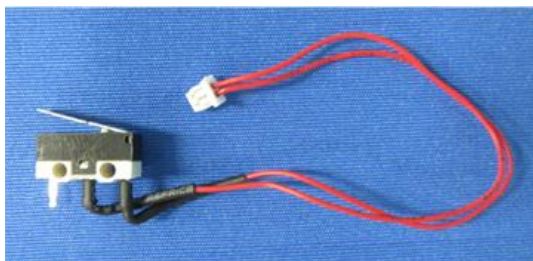
## Interlock Switch

1. Untie the wire wound at the position shown in the blue circle.



Y0375096

2. Pull the interlock unit upward to remove.



Y0375097

## Air Filter

1. Lightly lift the 2 tabs and pull them toward you to remove.



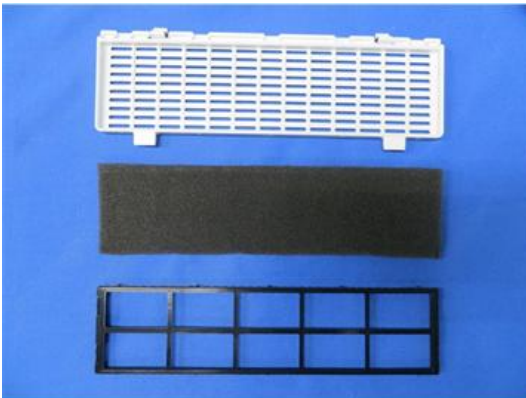
y0375098

2. Disengage the tabs for the filter holder and remove it from the cover.



Y0375100

3. Disassemble into the cover, sponge filter, and filter holder.



Y0375101

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## Adjustable Feet

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1. Remove the rubber pad on the bottom of the adjustable foot.



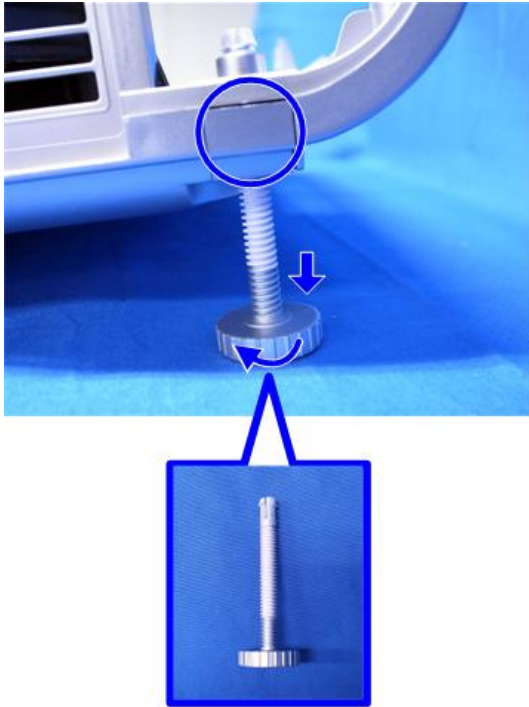
Y0375102

2. Core metal .



Y0375103

3. Remove the adjustable foot while pushing and unlocking the lock shown in the blue circle.



Y0375135



## 4. System Maintenance

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### Service Mode

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#### Reset the Filter Counter

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##### How to enter the Expert Mode

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Be sure to reset the Filter counter after replacing the Filter

1. Press MEMU button to display the menu.  
Press Point ▲▼ to select Setting, and then press SELECT button.
2. Press Point ▲▼ to select Filter, press Point or SELECT button. Press Point ▲▼ to select Filter counter, press SELECT button.  
A dialog box saying "Reset the filter counter" appears. Select "Yes" to continue.
3. Another confirmation dialog box appears, select [Yes] to reset the Filter counter.

---

#### Lamp Replacement

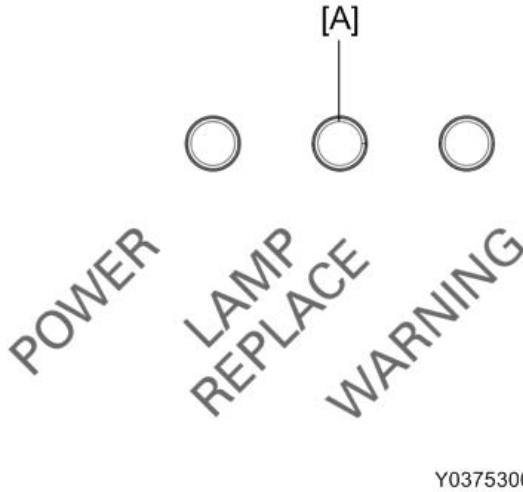
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##### ★ Important

- If the filter is clogged by dust, fan cooling effect will reduce, internal heat will accumulate, which will shorten the life of the lamp. Cleaning the filter after replacing lamp is suggested.

When the projection lamp of the projector reaches its end of life, the Lamp replacement icon appears on the screen and LAMP REPLACE indicator lights yellow. Replace the lamp with a new one promptly.

The timing when the LAMP REPLACE indicator should light is depending on the lamp mode.



[A] Lamp replacement indicator

### **WARNING**

- Allow a projector to cool for at least 60 minutes before you open the Lamp Cover. The inside of the projector can become very hot.
- For continued safety, replace with a lamp of the same type. Do not drop a lamp or touch a glass bulb! The glass can shatter and may cause injury.
- When replacing the lamp because it has stopped illuminating, there is a possibility that the lamp may be broken. If replacing the lamp of a projector which has been installed on the ceiling, you should always assume that the lamp is broken, and you should stand to the side of the lamp cover, not underneath it. Remove the lamp cover gently. Small pieces of glass may fall out when the lamp cover is opened. If pieces of glass get into your eyes or mouth, seek medical advice immediately.

### Follow these steps to replace the lamp.

1. Turn off the projector and unplug the AC power cord.  
Let the projector cool for at least 45 minutes.
2. Loosen the screw and open the lamp cover.
3. Loosen the three (3) screws that secure the lamp. Lift the lamp out of the projector by using the handle.
4. Replace the lamp with a new one and secure the three (3) screws. Make sure that the lamp is set properly. Close the lamp cover and secure the screw.
5. Connect the AC power cord to the projector and turn on the projector.
6. Reset the lamp counter.

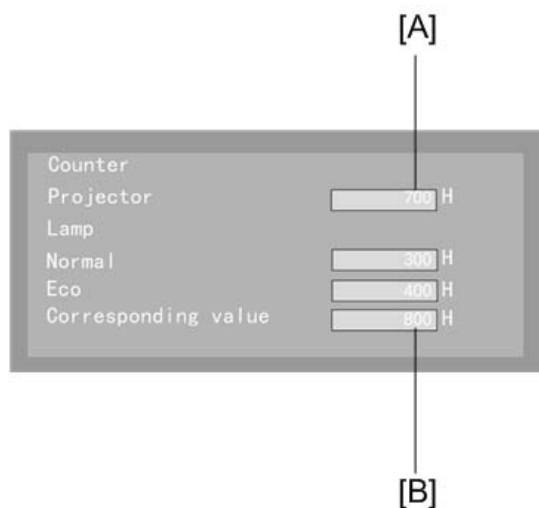
## Check the lamp used time

The LAMP REPLACE indicator will light yellow when the total lamp used time (Corresponding value) reaches 4,000 hours. This is to indicate that lamp replacement is required.

The total lamp used time is calculated by using the below expression,

Teco : used time in the Eco1 and Eco2 mode

Tnormal : used time in the Normal mode and Auto mode



Y0375301

[A] Projector used time

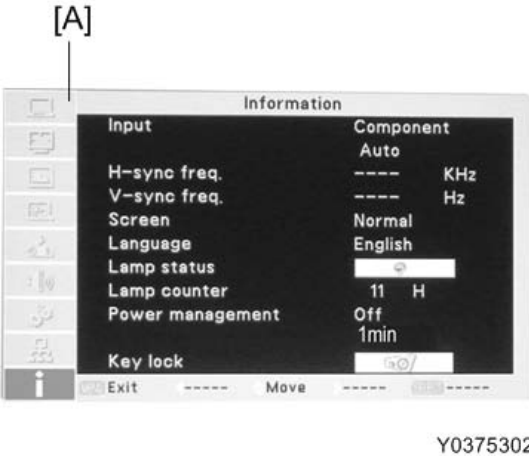
[B] Lamp used time

Please check the lamp used time with the procedure below:

Press INFO. button or MENU button on the remote control to display the information, select "Lamp Counter".

Please rest lamp counter with followings:

1. Hold pressing the ON-STANDBY button for more than 20 seconds.
2. Lamp used time and reset hint will display on the screen for 5 seconds.
3. Press SELECT button for 5 seconds.



[A] Information display

## Security Notice

This projector provides security functions such as "Key lock", "PIN code lock" and "Logo PIN code lock". When the projector has set these security function on, you are required to enter correct PIN code to use the projector. If you do not know the correct PIN code to the projector, the projector can no longer be operated or started. In this case, you must reset those function first according to the resetting procedure described below and then check up on the projector.

Function	Description
Key lock	Locks operation of the side control or the remote control. If the Key lock is enabled with side control lock, the projector can no longer be started. Initial setting: Key lock function is disabled
PIN code lock	Prevents the projector from being operated by an unauthorized person. Initial code: " 1 1 1 "

## PIN code reset

1. Disconnect the AC power cord from the AC outline.
2. Press POWER and SELECT button together and connect AC power cord.

### Note

- After releasing the KEY Lock function, PIN Code Lock function will be reset to initial code.

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## ON STANDBY Notice

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This function is used when operating the projector via network.

Normal..... Even if the projector is turned off, the network function is still active, you can turn on the projector after projector is turned off.

Eco..... When select Eco mode, some functions will be restricted.

Restricted functions in Eco mode

Function	Eco mode
Serial command control	Restricted
Monitor Out	Not restricted
Audio Out	Restricted
On Start	Restricted

# Firmware Update

A RS-232C cable (cross-type) is needed to upgrade the firmware.

Before upgrading the firmware, make sure to prepare the following:

- RS-232C cable
- Notebook PC (on which Internet Explorer 6.0 or later is installed)

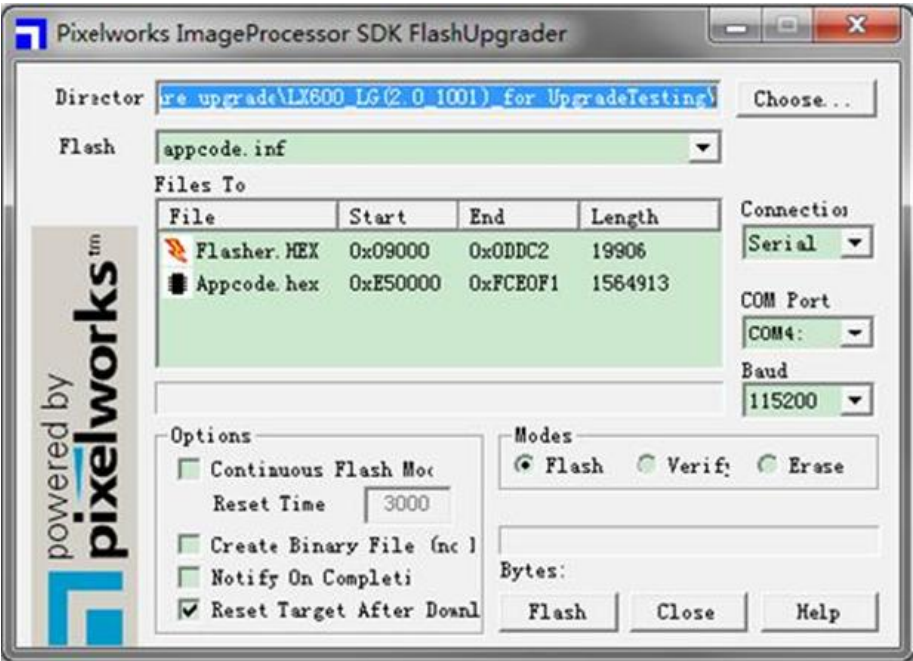
## Updating the firmware

4

1. Connect RS-232 cable (cross-type) .

Then open the device manager to view the port number.

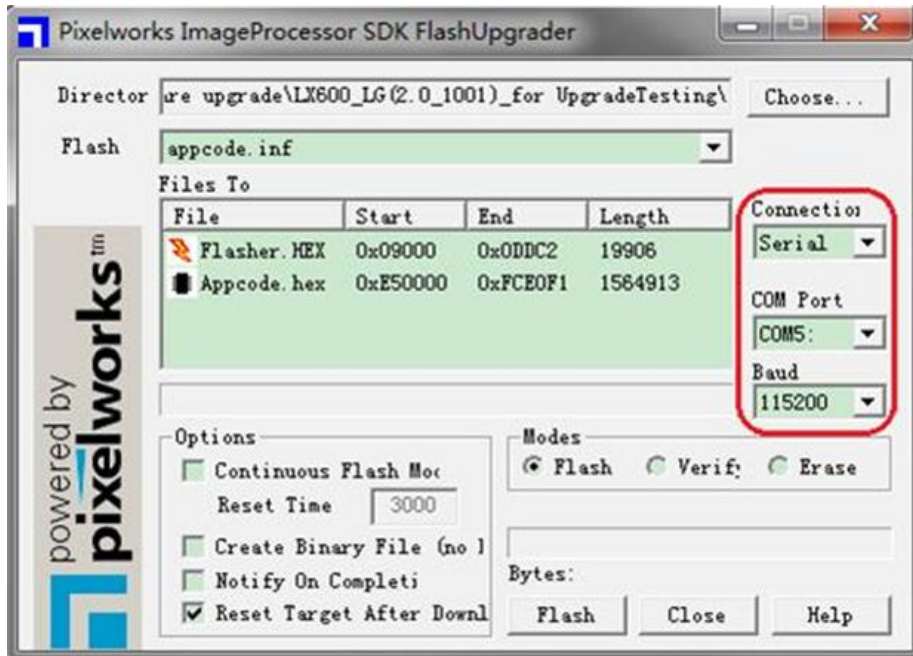
2. Run "FlashUpgrader.exe".



Y0375126

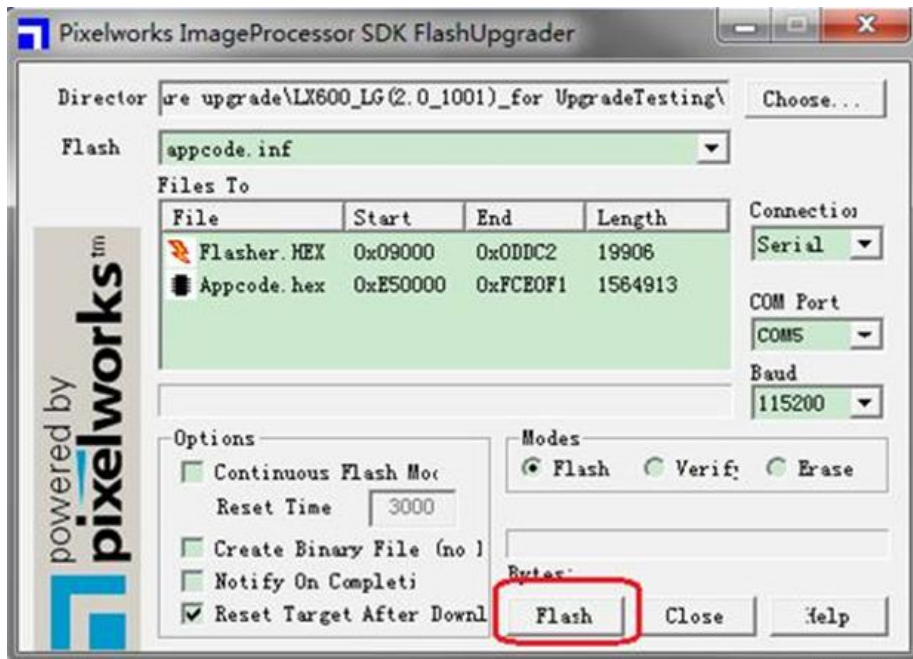
3. Connection : Serial COM Port: The port number got in Step 1.

Baud: 115200



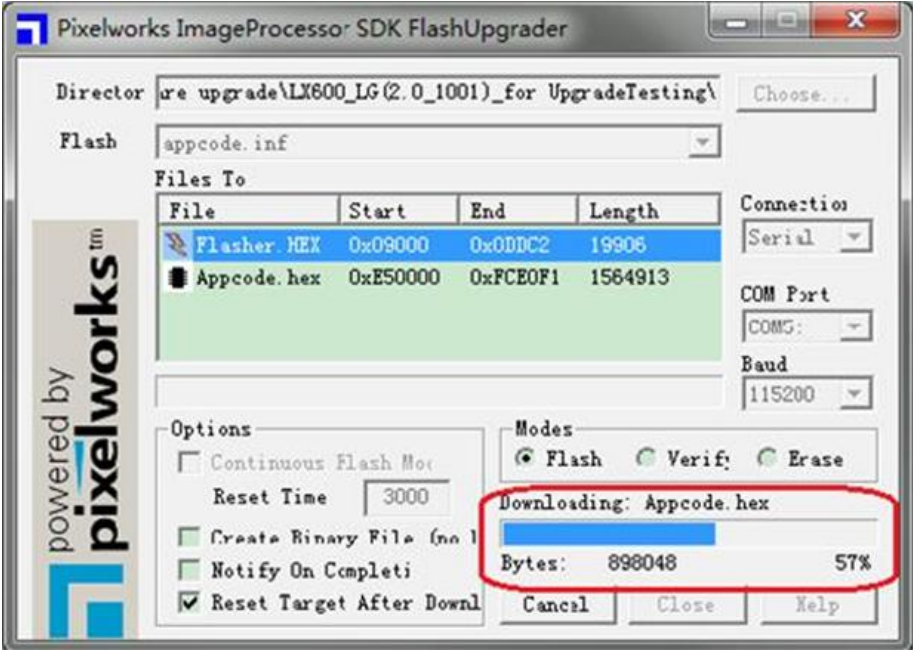
Y0375127

- Press "Flash" to start and AC power on Projector.



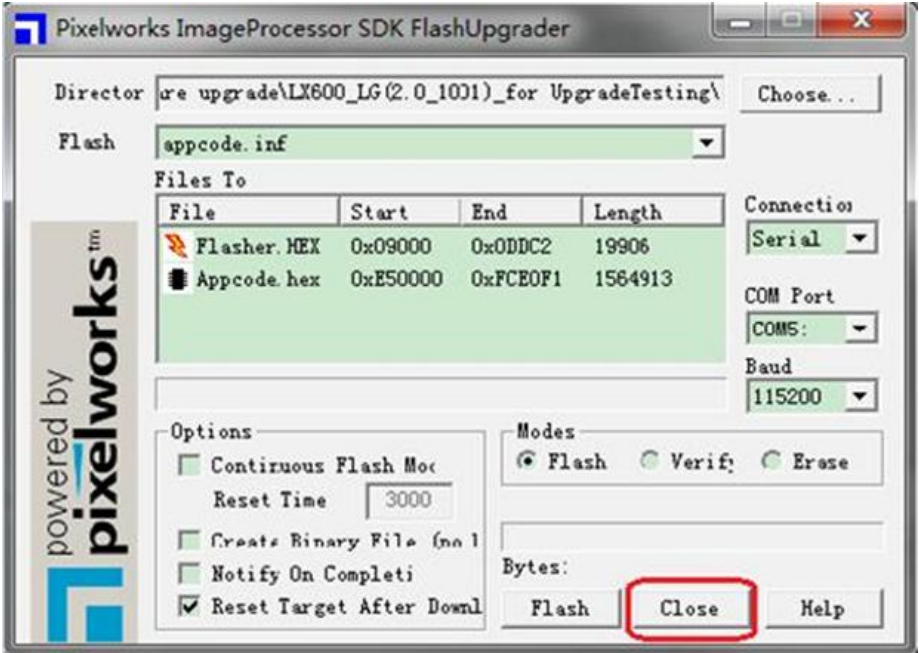
Y0375129

Waiting for a moment...



Y0375130

5. OK. Press "Close" to cancel. Now you can open the projector.



Y0375131

# 5. Troubleshooting

## LED Display

### Indicator and projector state

Check the indicator to know about the state of projector.

Indicator			State of projector
Power green/red	Temp red	Lamp yellow	
Off	Off	Off	In power-off state (AC power cord not connected).
Red	Off	Off	In standby state. Press Power button to power on the projector.
Green	Off	Off	In normal working state.
Flash red	Off	Off	Ready to be in standby mode or the projection lamp is being cooled. Before you power on the projector, you should wait till the lamp is cool enough and the power indicator flashes.
Flash green	Off	Off	In suspension state.
Flash red	Flash red	Off	Internal temperature too high. can't be powered on. When the projector is cool enough, the temperature is restored to the normal value and the power indicator is illuminated red, you can then power on the projector (The Temp indicator keeps on flashing).
Red	Off	Off	When the projector is cool enough, the temperature is restored to the normal value and the power indicator is illuminated red, you can then power on the projector, At the time, the Temp indicator stops flashing.
Off	Red	Off	Can't be powered on because error is detected. You should unplug the power cord. Then insert it again and power on the projector. If the projector is powered off again, you should cut off the power and contact the local distributor or repair center. In this case, stop the projector. Otherwise, electric shock or fire may occur.

Off	Off	Yellow	The service life of the lamp is over. You should replace it with a new one in time.
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# Troubleshooting Guide

## Main board

Troubleshooting	Reason	Resolving
Indicators not light on after turning on	1. S6V Error	<ol style="list-style-type: none"> <li>1. Check pin 5 and pin 6 of P3003.</li> <li>2. Check L3015 and L3016.</li> <li>3. Check whether S6V is short.</li> </ol>
	2. Not programmed	<ol style="list-style-type: none"> <li>1. Check IC1004(Flash).</li> <li>2. SUB is not programmed, program on SUB or replace IC1006 or check IC1004.(replace the programmed IC)</li> <li>3. Check CS3_3VD_PW.</li> </ol>
	3. 3-3V_MUC	Check IC1011 and the peripheral circuit.
WARNING indicator blinking red after turning, fans accelerate rotating, lamp can not be turned on	Fans abnormal	<ol style="list-style-type: none"> <li>1. Check whether the pin 2 of FN4001, FN4002, FN4003, FN4004, FN4005 and FN4006 is low level, if the voltage is about 1.1V, fans don't rotate, please replace the fans.</li> <li>2. Fan detect circuit abnormal, check Q3009.</li> <li>3. Power supply abnormal: check the voltage of R1072. [normal: two terminals both 3.3V; abnormal: one terminal 3.3 V and the other 0.7V]</li> </ol>

Fans accelerate rotating and WARNING indicator blinks after turning on	External temperature detects abnormally. (temperature sensor IC on RC board is abnormal)	<ol style="list-style-type: none"> <li>1. Check whether P3004 is cold joint.</li> <li>2. Check the connecting cable of P3004.</li> </ol>
Image turnover abnormal	Image turnover IC abnormal	<ol style="list-style-type: none"> <li>1. Check whether the voltage of R1009 is 3.3V</li> <li>2. Replace IC1009</li> </ol>
Indicators are normal but lamp can not turn on after starting the projector.	Not signal for turning on lamp	<ol style="list-style-type: none"> <li>1. Check P3001 and P3002.</li> <li>2. Check the connection between ballast and lamp.</li> </ol>
Key abnormal	1. Key quality	Replace the key
	2. S3_3V Error	Check IC1011 and the peripheral circuit.
	3. S2_5V Error	Check IC1010 and the peripheral circuit.
	4. BGA cold joint	Weld IC1001 again.
	5. Triode Q3005-Q3008	Check whether the triodes are abnormal
	6. Key1, Key2 is short	-
Remote control doesn't work	1. IC3008	Check IC3008 and the peripheral circuit
	2. IC3008 damaged	Replace IC3008
	3. RC board power supply	Check the voltage for pin 1 of P3004.
Serial port doesn't work	1. IC3002 damaged	Replace IC3002
	2. S5V Error	Check IC4001 and the peripheral circuit
VGA1 image is a little dim	S-5V Error	Check whether the Voltage of pin 9, P3003 is -5V.

Triode (Q9001, Q9002, Q9201, Q9202, Q9401 and Q9402)	1. LCD cable is damaged or short	Replace the damaged triode and connect properly.
	2. 40 pin connector (J900, J9201, J9401) is short or cold joint.	Correct the connector, replace the damaged triodes together.
No image after turning on the projector	1. 15_5V Error	1. Check S16V 2. Check whether ON_15 V is high level.
	2. BGA IC8001 cold joint	Replace C8001
Vertical line	1. Red pattern: Q9001, Q9002 damaged. 2. Green pattern: Q9201, Q9202 damaged. 3. Blue pattern: Q9401, Q9402 damaged.	Replace the damaged triode.
	IC9001, IC9201, IC9401 works abnormally	Replace the abnormal IC
One or two indicators can not light while initialing	1. LED damaged	Replace LED
	2. LED control circuit abnormal	Check Q3005, Q3006, Q3007, Q3008 and the peripheral circuit

## Power board

Troubleshooting	Reason	Resolving
No voltage output(375V, 14V, 16V,6V,-5V)	Filter circuit, rectifier circuit abnormal	<ol style="list-style-type: none"> <li>1. Check the fuse, if it is damaged or not connected well, replace it.</li> <li>2. Check whether D2001 is broken down: replace the broke D2001.</li> <li>3. Check whether Q2001 is broken down: replace the broke Q2001.</li> <li>4. Check whether C2007 is inserted properly.</li> <li>5. Check whether PTH2001 is open or not connected well: replace PTH2001.</li> </ol>

Indicators are off while turning on the projector, can not turn on the projector	Feedback circuit abnormal, can not bear the loads.	<ol style="list-style-type: none"> <li>1. Check whether the components on power board are cold joint.</li> <li>2. Check C2019.</li> <li>3. Check the locations of F2003 and C2036, make sure the location is correct.</li> <li>4. Check B2001.</li> </ol>
375V reduces to 300V	Hi-voltage oscillating circuit abnormal	<ol style="list-style-type: none"> <li>1. Check whether Q2001, Q2002, IC2001 is broken down, replace the broken one.</li> <li>2. Check D2004 and the peripheral circuit.</li> </ol>
19V, 16V, 6V, -5V error	Low-voltage oscillating circuit abnormal	<ol style="list-style-type: none"> <li>1. Check F2003, R2036 and the peripheral circuit.</li> <li>2. Check IC2002 and the peripheral circuit.</li> <li>3. Check C2019, C2021, C2025 and the peripheral circuit.</li> </ol>
Hi-Voltage (375V increases to 400V)	Hi-voltage oscillating circuit abnormal	<ol style="list-style-type: none"> <li>1. Check R2005, R2006, R2009, R2011, VR2001 and the peripheral circuit.</li> <li>2. Check C2013 and the peripheral circuit.</li> <li>3. Check pin 8 of IC2001.</li> <li>4. Check C2001, Q2001, B2001 and the peripheral circuit.</li> </ol>
Power sounds abnormal	Current oscillating	<ol style="list-style-type: none"> <li>1. Check L2003 and the peripheral circuit.</li> <li>2. Check Q2003 and the peripheral circuit.</li> </ol>

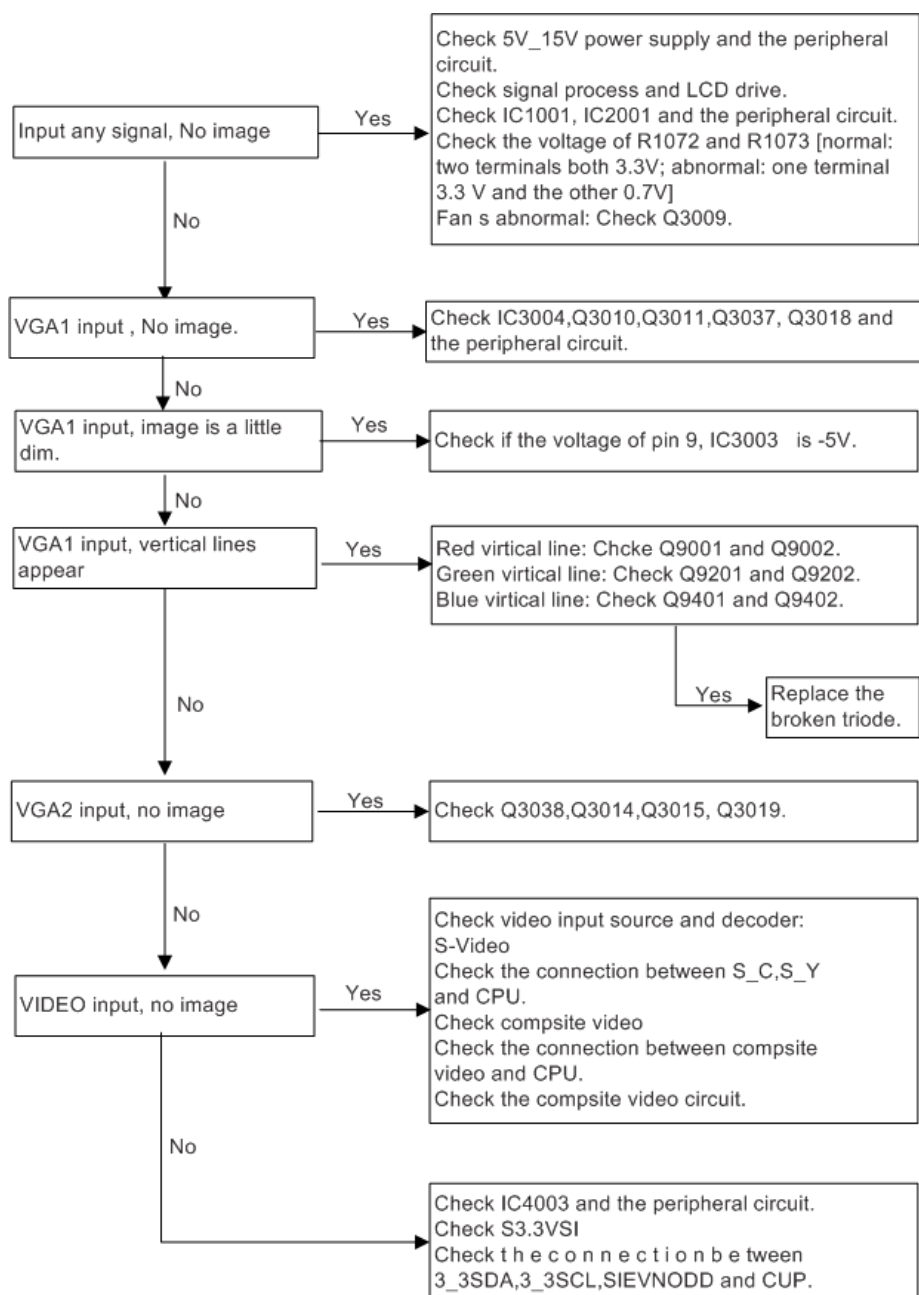
### The Phenomenon caused by fault engine parts

Troubleshooting	Reason	Resolving
color cast	LCD, Polaroid, color separation filter	often display yellow
miss color pure	LCD, color separation filter	-
image blurring	PBS LENS and The compound eye lens	-
dark image	all parts of engine	-

failure starting	IRIS	some models will not appear this phenomenon without IRIS
automatic closing	IRIS	-
poor convergence	LCD	LCD loose
poor focusing	lens	-
part color cast	LCD, Polaroid, color separation filter	caused by dust

## Image

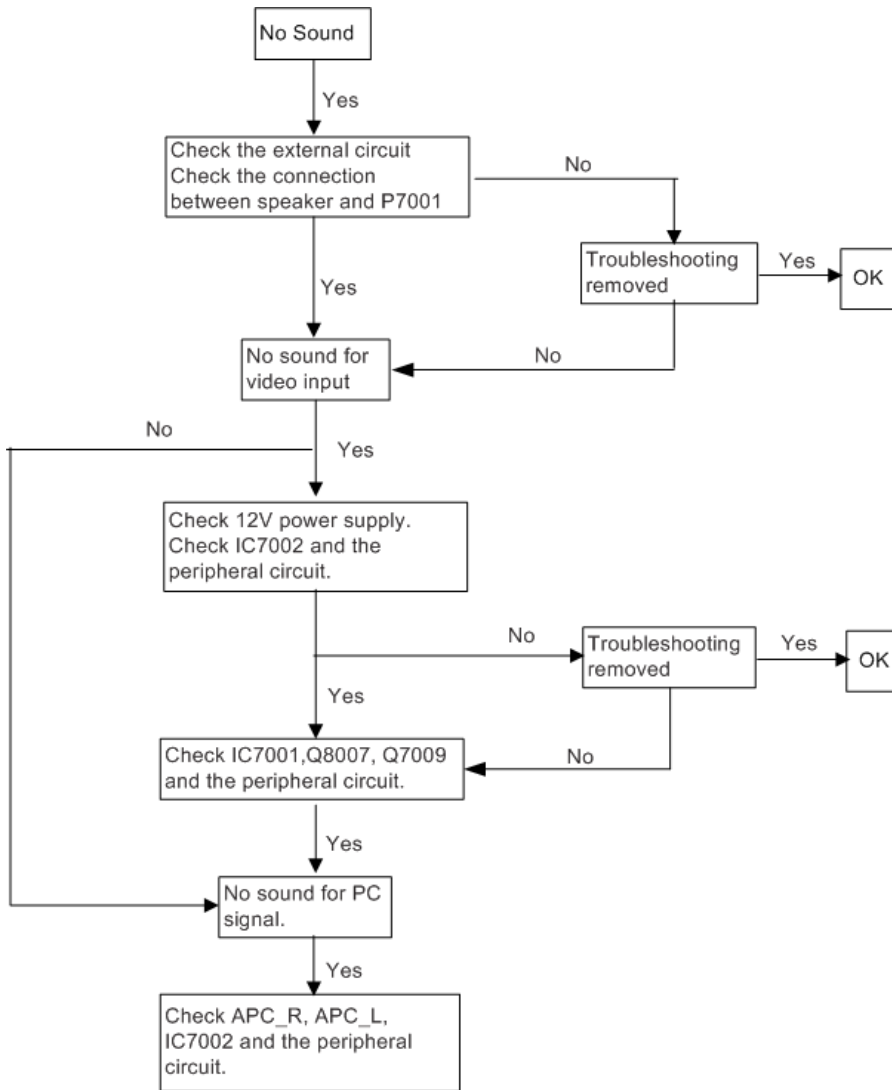
Please check as follows:



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## Abnormal sound

Please check as follows:



Y0375601

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MEMO