Model Shaula-PJ1

RICOH PJ X5770/WX5770/WU5760/ X600/KW600/KU600/KU650

Machine Codes: Y0BG/Y0BH/Y0BJ/Y0BM/ Y0BN/Y0BP/Y236

Field Service Manual

May, 2017

Important Safety Notices

Important Safety Notices

Prevention of physical injury

- 1. Before disassembling or assembling parts of the main machine and peripherals, make sure that the power cord of the main machine 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.



 To prevent a fire or explosion, keep the machine away from flammable liquids, gases, and aerosols.

Health safety conditions

• This machine, which uses a high voltage power source, can generate ozone gas. High ozone density is harmful to human health. Therefore, the machine must be installed in a well-ventilated room.

Observance of electrical safety standards

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

Safety and Ecological Notes for Disposal

• Dispose of replaced parts in accordance with local regulations.

Symbols, Abbreviations and Trademarks

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

6) ^m	Screw
Ð	Shoulder screw
(C)P	Black screw (TCRU)
S.	Connector
613	FFC (Flat Film Connector)
ŝ	Harness clamp
Ŵ	Clip
B	E-ring
Ô	C-ring
\bigcirc	Timing belt
COMP.	Spring

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1. Introduction

Overview/Specifications

Refer to the user's manual.

1

Before Handling the Unit

🔁 Important

 About the handling of this machine, follow the contents with reference to Safety Information in the user manual.

Installation

The user must set this projector up.

Refer to the user's manual if related action is needed.

Precautions

Please follow all warnings, precautions and maintenance as recommended in this manual.

WARNING

• This apparatus must be earthed.

WARNING

• Do not look into the projector's lens when the lamp is on. The bright light may hurt your eyes.

WARNING

• To reduce the risk of fire or electric shock, do not expose this projector to rain or moisture.

WARNING

• Do not open or disassemble the projector as this may cause electric shock.

WARNING

 When replacing the lamp, allow unit to cool down at least 60 minutes, and follow all replacement instructions.

WARNING

• Do not use lens cap when projector is powered on.

WARNING

 When the lamp reaches the end of its life, it will burn out and may make a loud popping sound. If this happens, the projector will not turn back on until the lamp module has been replaced. To replace the lamp, follow the procedures listed under "page 24 "Lamp Cover, Lamp Module"" in "Part Replacement".

🕂 WARNING

• This product should be operated only from the type of power source which does not exceed the voltage range specified on the rating label and the power cord.

MARNING

• Do not use the polarized plug with an extension cord, receptacle, or other outlet unless the blades can be inserted completely with three wire grounding type to prevent blade exposure. Failure to follow these instructions may result in fire or electric shock.

🕂 WARNING

• Plastic bags can be dangerous; please do not leave near babies and young children. To avoid the threat of suffocation, please keep away from their nose and mouth.

WARNING

• Do not ingest battery, Chemical Burn Hazard. Keep new and used batteries away from children. If the battery compartment does not close securely, stop using the product and keep it away from children. If you think batteries might have been swallowed or placed inside any part of the body, seek immediate medical attention.

WARNING

- Installing the Projector on a Wall or Ceiling:
 - 1. Do not attempt to clean or replace parts for a machine that is installed in a high location on a wall or ceiling. Doing so may cause it to fall down, resulting in an injury.
 - Do not open the lamp cover of a machine that is installed on a wall or ceiling. Doing so may
 cause the lamp cover to fall down. If the lamp is broken, pieces of glass may fall and cause
 an injury.
 - 3. If a machine is incorrectly installed on a wall or ceiling, it may fall down and cause an injury.
 - Do not obstruct the machine's vents. Doing so risks fire caused by overheated internal components.
 - Use brackets that are strong enough to support the projector. The projector weighs about 4.7 kg (10.36 lb.).
 - 6. The projector must be installed in a location that is sturdy enough to support the full weight of the projector and brackets.
 - Use only the screws (three M4×16 screws) provided with the projector to attach the brackets to the projector.
 - 8. Use all three of the projector's screw holes to attach the brackets. The locations of the screw holes are shown in the illustration below. Make sure that the screws are tightened firmly.

• This projector will detect the life of the lamp itself. Be sure to change the lamp when it shows warning messages.

• Never operate this unit on AC power during a thunderstorm. If you see lightning or hear thunder, never touch the unit, cables and/or peripherals. An electric surge caused by the storm, may result in an electrical shock or damage to the unit.

• Never push objects of any kind into this product through openings 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 product.

• Do not place or keep the projector within the reach of the children. It may fall or tip over, possibly causing serious injury.

• Do not stack other equipment on this product and do not place this product on other equipment. The top and bottom surface of this product increase in temperature during normal use and may damage the other unit.

• Do not use attachments not recommended by RICOH. Use of incompatible attachments could cause hazards or damage to the product.

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

- Unplug this product from the wall outlet if you encounter any of the following conditions:
 - 1. The power supply cord or plug is damaged.
 - 2. Liquid has been spilled, or objects have fallen into the product.
 - 3. The product has been exposed to rain or water.
 - 4. The product has been dropped or damaged in any way. (If the cabinet should break, please handle with care to avoid injury.)

1

• This product incorporates glass components, including a lens and a lamp. Avoid any broken pieces of glass since they may cause injury. In the unlikely event that the lamp ruptures, thoroughly clean the area around the projector and discard any edible items placed in that area since they may be contaminated.

• Do not place anything in front of the lens while the projector is operating. Things placed in front of the lens may overheat and burn or start a fire.

• Unauthorized substitutions may result in fire, electric shock, or other hazards. (Only the replacement of the lamp should be made by users.)

• Upon completion of any service or repairs to this product, perform safety checks to verify that the product is in proper operating condition.

• Do not leave thermal paper documents or easily deformed items on top of the unit or near the air exhaust for long periods of time.

• The heat from the unit could erase the information on the thermal paper, or cause deformation or warping.

• Do not use the product in a closed installation location. Do not place the product in a box or in any other closed installation location. Otherwise it may overheat, which could result in a risk of fire.

Do

- Turn OFF and unplug the power plug from the AC outlet before cleaning the product.
- Use a soft cloth moistened with mild detergent to clean the display housing.
- Disconnect the power plug from AC outlet if the product is not being used for a long period of time.

Do not

- Block the slots and openings on the unit provided for ventilation.
- Use abrasive cleaners, waxes or solvents to clean the unit.

- Use under the following conditions:
 - Extremely heat, cold or humidity.
 - Ensure that the ambient room temperature is within 0°C to 40°C
 - Relative humidity is 10% to 80%
 - In areas susceptible to excessive dust and dirt.
 - Near any appliance generating a strong magnetic field.
 - In direct sunlight.

2. Replacement

Special Tools

Make sure that engineers are equipped with the following tools, which will be necessary in order to update the firmware, and to perform adjustments that are necessary after replacing the main board (page 34 "Main Board (Including HDBaseT Board (WUXGA model only) and Sub Board)").

- 1. USB Cable mini USB to USB (A)
- 2. Laptop
- 3. LAN Cable

Parts List

Service Parts List

ltem	Description
Lens cap	page 23 "Lens Cap"
Filter	page 23 "Filter"
Adjustable foot (front)	page 24 "Adjustable Feet (Front x1, Rear x2)"
Adjustable foot (rear) x2	page 24 "Adjustable Feet (Front x1, Rear x2)"
Lamp cover	page 24 "Lamp Cover, Lamp Module"
Protection sheet	page 24 "Lamp Cover, Lamp Module"
Lamp module	page 24 "Lamp Cover, Lamp Module"
Top cover	page 26 "Top Cover (Including Mini HDMI Cable and Keypad Rubber)"
Mini HDMI cable	page 28 "Mini HDMI Cable"
Keypad rubber	page 28 "Keypad Rubber"
Left fan 1/2	page 29 "Left Fans (1 and 2)"
Color wheel module	page 30 "Color Wheel Module (Including Photo Sensor and Color Wheel)"
• Photo sensor	page 31 "Photo Sensor"
Bracket for color wheel module	page 32 "Color Wheel"
Color wheel	page 32 "Color Wheel"
Color wheel housing	page 32 "Color Wheel"
Front cover	page 32 "Front Cover (Including IR Sensor and IR Sensor Cover)"
IR sensor	page 34 "IR Sensor and IR Sensor Cover"
IR sensor cover	page 34 "IR Sensor and IR Sensor Cover"

ltem	Description
Main board	page 34 "Main Board (Including HDBaseT Board (WUXGA model only) and Sub Board)"
HDBaseT board (only for WUXGA model) (* 1)	page 36 "HDBaseT Board (Only for WUXGA model)"
Hexagon posts x2 (for HDBase-T board) (* 1)	page 36 "HDBaseT Board (Only for WUXGA model)"
Sub board	page 37 "Sub Board"
Shielding Bracket	page 40 "Shielding Bracket with Rear Cover and LVPS"
Hexagon posts x2 (for shielding bracket)	page 40 "Shielding Bracket with Rear Cover and LVPS"
Rear cover	page 40 "Shielding Bracket with Rear Cover and LVPS"
LVPS	page 40 "Shielding Bracket with Rear Cover and LVPS"
Cable (LVPS to main board)	page 40 "Shielding Bracket with Rear Cover and LVPS"
Spacer x4 (plastic hex screws)	page 40 "Shielding Bracket with Rear Cover and LVPS"
Right Fan	page 43 "Right Fan "
Speaker (front) and speaker rubber	page 44 "Speaker (Front) and Speaker Rubber"
Speaker (rear) and speaker rubber	page 46 "Speaker (Rear) and Speaker Rubber"
Lamp housing	page 46 "Lamp Housing"
Lamp cable	page 47 "Lamp Cable"
Optical system unit	page 48 "Optical System Unit (Including Focus Ring, Zoom Lever, Lens Shift Dial, Lens)"
• Focus ring	page 50 "Focus Ring, Spacer, Zoom Lever, Lens Shift Dial, Lens"

ltem	Description
• Spacer	page 50 "Focus Ring, Spacer, Zoom Lever, Lens Shift Dial, Lens"
• Zoom Lever	page 50 "Focus Ring, Spacer, Zoom Lever, Lens Shift Dial, Lens"
Lens shift dial and bracket	page 50 "Focus Ring, Spacer, Zoom Lever, Lens Shift Dial, Lens"
• Lens	page 50 "Focus Ring, Spacer, Zoom Lever, Lens Shift Dial, Lens"
Blower unit	page 51 "Blower Unit (Including Thermistor and Interlock Switch)"
• Thermistor	page 53 "Thermistor and Interlock Switch"
Interlock switch	page 53 "Thermistor and Interlock Switch"
PSU	page 53 "PSU"
Harness (PSU to main board)	page 53 "PSU"
Harness (PSU to LVPS)	page 53 "PSU"
Cable clamp for lamp cable	page 53 "PSU"
AC inlet	page 56 "AC Inlet"
Bracket for AC inlet	page 56 "AC Inlet"
Bottom shielding plate	page 58 "Bottom Shielding Plate"
Bottom cover	page 59 "Bottom Cover"

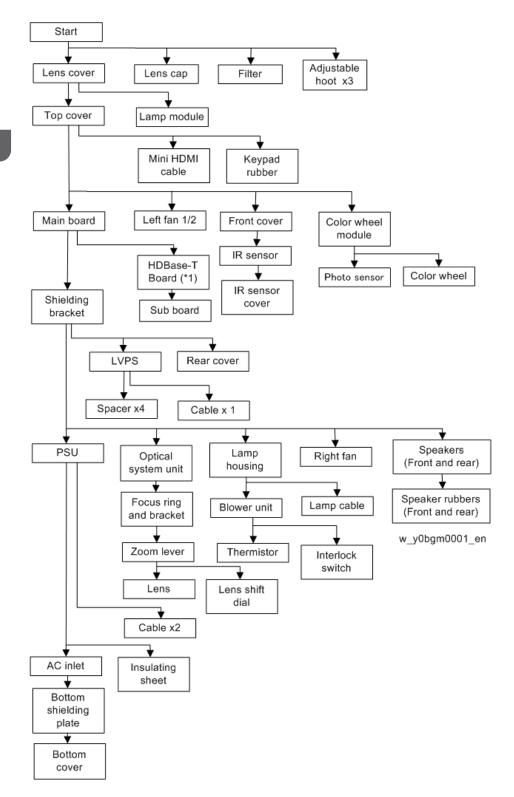
*1: Only for WUXGA model.

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., Lens cap) 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.



* 1: Only for WUXGA model.

Equipment Needed

- 1. Screw bit (+): +No.2 or +No.1
- 2. Screw bit (+): +No.0
- 3. Hex sleeves 5 mm
- 4. Projector



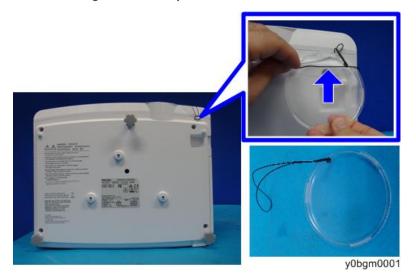
Part Replacement

C Important

• This process is protective level II. Operators should wear electrostatic chains.

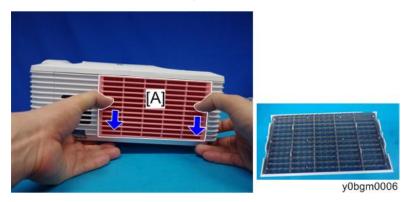
Lens Cap

1. Untie the string of the lens cap from the bottom cover.



Filter

1. Remove the filter [A] from the right cover.



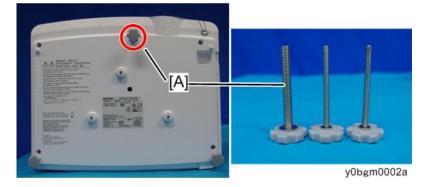
Adjustable Feet (Front x1, Rear x2)

1. Remove the 3 adjustable feet [A] from the bottom cover [B].



Note

• The foot at the front [A] is thicker than the other feet.



Lamp Cover, Lamp Module

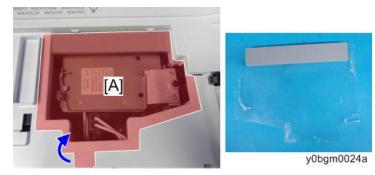
1. Loosen the 2 screws. (S ×2)



2. Remove the lamp cover [A].



3. Remove the protection sheet [A].



4. Disconnect the connector. (\mathfrak{V}^* ×1)



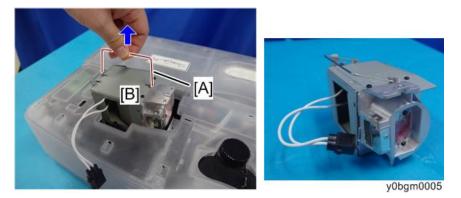
y0bgm0003

5. Loosen the screw. (@ ×1)





6. Lift up the lamp handle [A] and remove the lamp module [B].

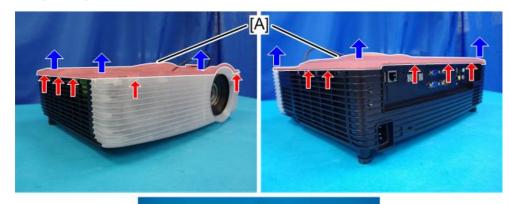


Top Cover (Including Mini HDMI Cable and Keypad Rubber)

- 1. Remove the lamp cover. (page 24 "Lamp Cover, Lamp Module")



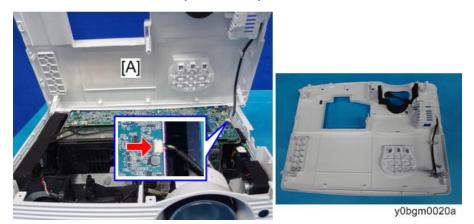
y0bgm0018



3. Lift up the top cover [A].(hook \times 10)



- y0bgm0020
- 4. Disconnect the connector to separate the top cover [A]. (55 ×1)

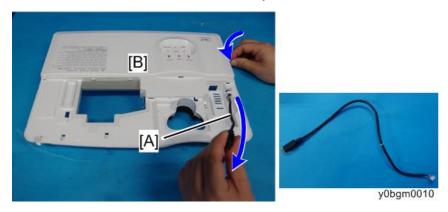


Mini HDMI Cable

1. Release the mini HDMI cable [A] from the cable guides on the top and bottom of the top cover.

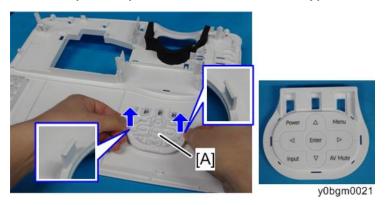


2. Pull out the mini HDMI Cable [A] from the top cover [B].



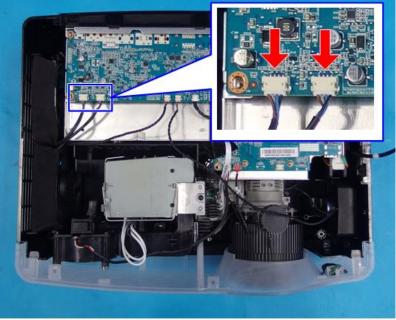
Keypad Rubber

1. Place the top cover upside down, and remove the keypad rubber [A]. (hook x 2)



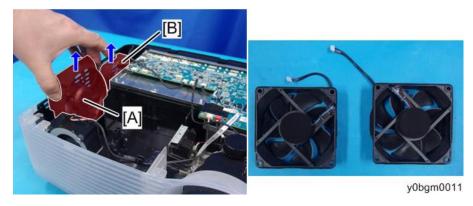
Left Fans (1 and 2)

- 1. Remove the lamp cover. (page 24 "Lamp Cover, Lamp Module")
- Remove the top cover. (page 26 "Top Cover (Including Mini HDMI Cable and Keypad Rubber)")
- 3. Disconnect the 2 connectors. (😂 ×2)



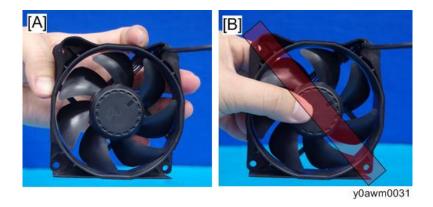
y0bgm0028

4. Remove the left fans 1 [A] and 2 [B].



Note

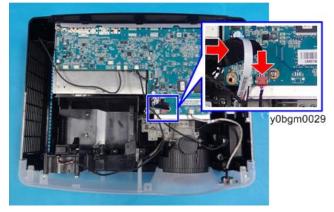
- Each fan is fixed with adhesive from the bottom.
- Hold the frame of the fan [A]. Holding the fan shaft [B] may break the faan.

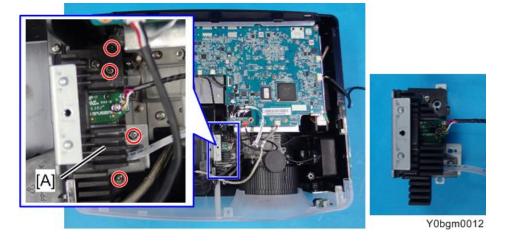


Color Wheel Module (Including Photo Sensor and Color Wheel)

- 1. Remove the lamp cover and lamp module. (page 24 "Lamp Cover, Lamp Module")
- 2. Remove the top cover. (page 26 "Top Cover (Including Mini HDMI Cable and Keypad Rubber)")



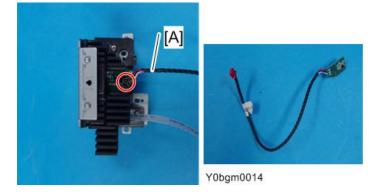




4. Remove the color wheel module [A]. (🕅×4)

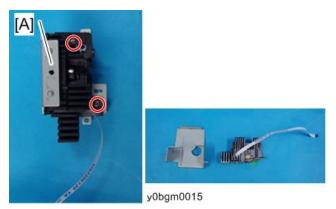
Photo Sensor

1. Remove the photo sensor [A]. (\mathfrak{O}^{\times} ×1)

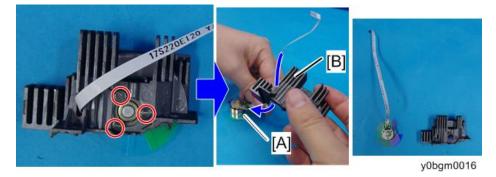


Color Wheel

1. Remove the bracket [A]. (🕬×2)

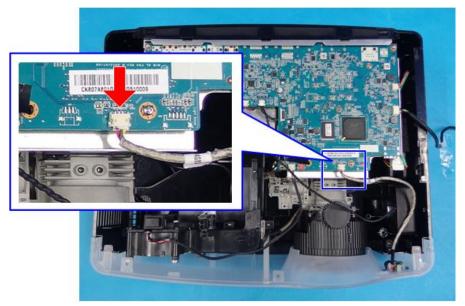


2. Separate the color wheel [A] from the housing [B]. (**3)



Front Cover (Including IR Sensor and IR Sensor Cover)

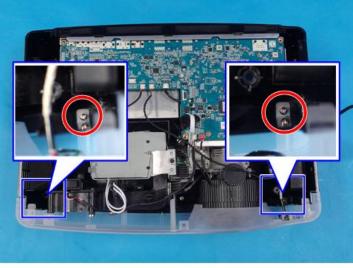
- 1. Remove the lamp cover. (page 24 "Lamp Cover, Lamp Module")
- Remove the top cover. (page 26 "Top Cover (Including Mini HDMI Cable and Keypad Rubber)")



3. Disconnect the connector. (SF×1)

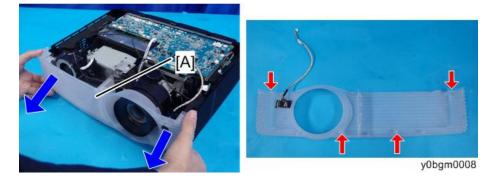
y0bgm0027

4. Remove the 2 screws. (🗊 x 2)



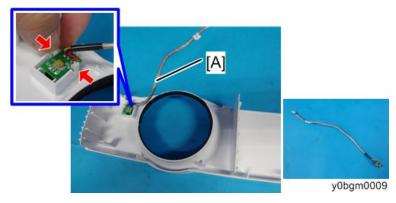
y0bgm0007

5. Remove the front cover [A]. (hook x 4)

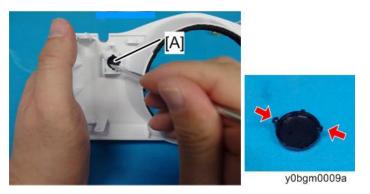


IR Sensor and IR Sensor Cover

1. Remove the IR sensor [A] (hook x2).



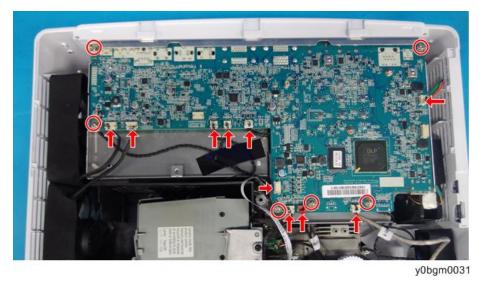
2. Remove the IR sensor cover [A] (hook x2).



Main Board (Including HDBaseT Board (WUXGA model only) and Sub Board)

1. Remove the lamp cover. (page 24 "Lamp Cover, Lamp Module")

- 2. Remove the top cover. (page 26 "Top Cover (Including Mini HDMI Cable and Keypad Rubber)")
- 3. Remove all screws and all connectors. (@ x 6, & x9, x1)

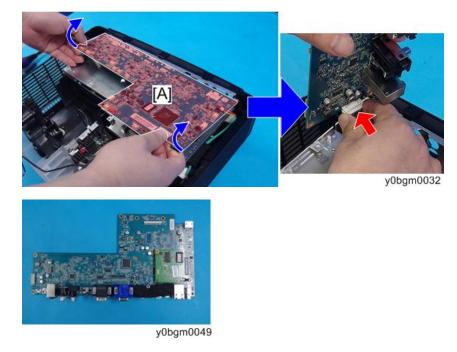


4. Remove 4 screws (red circles) and 8 hex screws (yellow circles). (If x 4, hex screws x8)



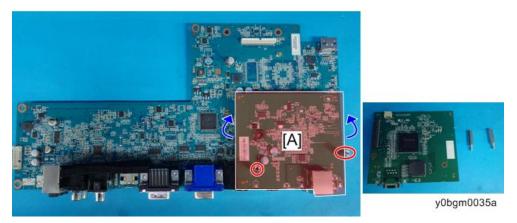
y0bgm0033

5. Remove the main board [A]. (State x1)



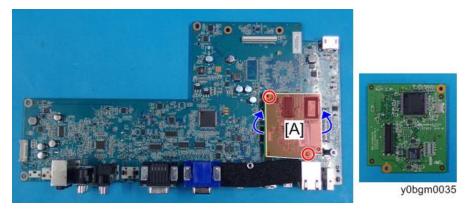
HDBaseT Board (Only for WUXGA model)

Place the main board upside down, and remove the HDBaseT board [A]. (hexagonal post x 2)



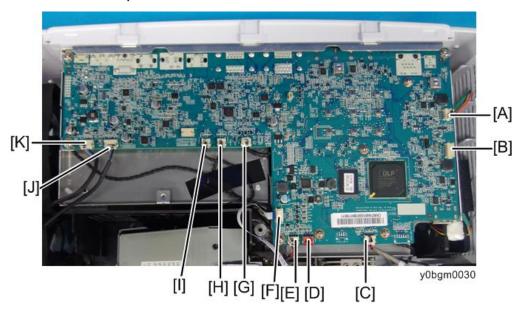
Sub Board

1. Place the main board upside down, and remove the sub board [A]. (M x 2)



Connector List

Connectors on the top side



Connectors on the bottom side



y0bgm0030a

Refer to the table as below for details of each connector.

ltem	Connector on Main Board	Key Feature	Figure
A	Right fan	Red/Black/Yellow wire, with green wire tube (3 pin)	Y0bgm0036
В	USB cable	Red/White/Black/Green wire, with black wire tube (4 pin)	Y0bgm0037
С	IR sensor	Red/Black/Yellow wire, with silver wire tube (3 pin)	Y0bgm0038
D	Filter sensor	Red/Black/White wire, with white wire tube (3 pin)	y088z3077

ltem	Connector on Main Board	Key Feature	Figure
E	Interlock switch	Red/Blue wire, black wire tube (2 pin)	Y0bgm0040
F	Color wheel	FFC	y088z3078
G	LVPS cable	Black wire tube (5 pin)	Y0bgm0041
н	Right speaker	Red/Black wire, black wire tube (2 pin)	Y0bgm0042
I	Left speaker	Red/Black wire, black wire tube (2 pin)	Y0bgm0043
J	Left fan	Red/Black/Yellow wire, with green wire tube (3 pin)	Y0bgm0036
к	Left fan	Red/Black/Yellow wire, with green wire tube (3 pin)	Y0bgm0036
L	PSU	Black wire tube (16 pin)	y088z3080

Note

• Each end connector of the harness linking the main board and PSU must be connected to the matching board. After disconnecting the harness, if you connect the main board to the PSU, the power will fail to turn on. Mark the connectors and boards as shown in the red frame so as to indicate the matching pairs of connectors and boards.

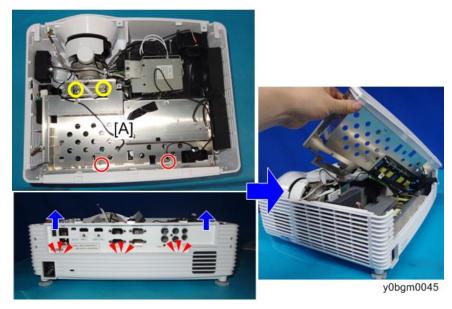


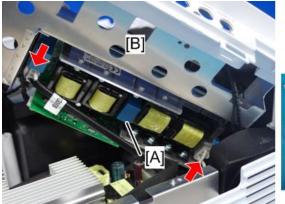
y0bgm0030b

Shielding Bracket with Rear Cover and LVPS

- 1. Remove the lamp cover. (page 24 "Lamp Cover, Lamp Module")
- Remove the top cover. (page 26 "Top Cover (Including Mini HDMI Cable and Keypad Rubber)")
- 3. Remove the main board. (page 34 "Main Board (Including HDBaseT Board (WUXGA model only) and Sub Board)")

4. Turn over the shielding bracket [A]. (x 2 (red circles), hexagon postx2 (yellow circles), hook x3)

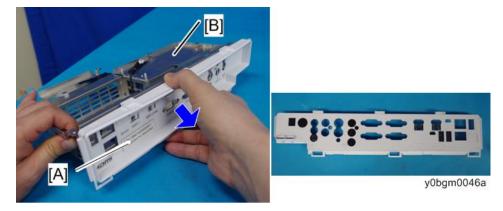






y0bgm0046

6. Separate the rear cover [A] from the shielding bracket [B].

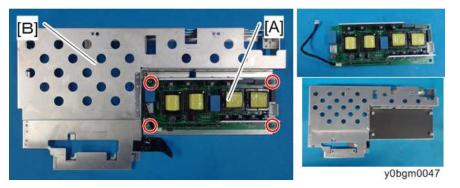


Note

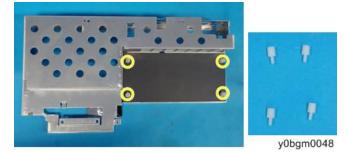
• The rear panel is fixed to the bracket with adhesive at the areas shown by red squares (back of the HDMI 1/2 port).



7. Separate the LVPS [A] from the shielding bracket [B].(🕸 x4)



8. Remove the 4 spacers (yellow circles) from the shielding bracket. (Plastic hex screw x4).



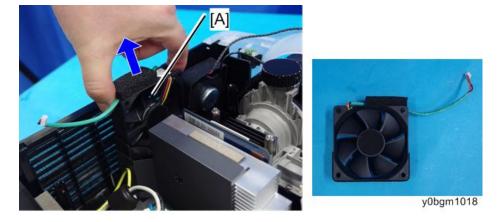
9. Remove the cable [A] from the LVPS. (Star)



Right Fan

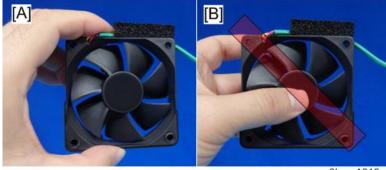
- 1. Remove the lamp cover. (page 24 "Lamp Cover, Lamp Module")
- Remove the top cover. (page 26 "Top Cover (Including Mini HDMI Cable and Keypad Rubber)")
- 3. Remove the main board. (page 34 "Main Board (Including HDBaseT Board (WUXGA model only) and Sub Board)")
- 4. Remove the shielding bracket. (page 40 "Shielding Bracket with Rear Cover and LVPS")

5. Remove the right fan [A].



• Note

• Hold the frame of the fan [A]. Holding the fan shaft [B] may break the fan.



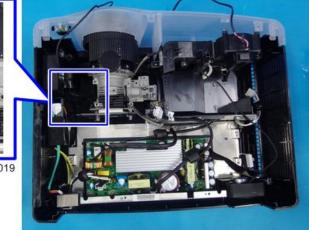
y0bgm1018a

Speaker (Front) and Speaker Rubber

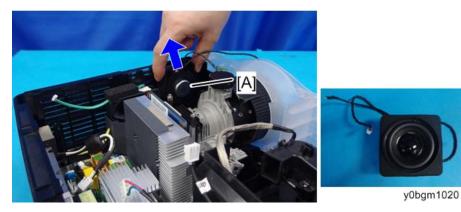
- 1. Remove the lamp cover. (page 24 "Lamp Cover, Lamp Module")
- Remove the top cover. (page 26 "Top Cover (Including Mini HDMI Cable and Keypad Rubber)")
- 3. Remove the main board. (page 34 "Main Board (Including HDBaseT Board (WUXGA model only) and Sub Board)")
- 4. Remove the shielding bracket. (page 40 "Shielding Bracket with Rear Cover and LVPS")

y0bgm1019

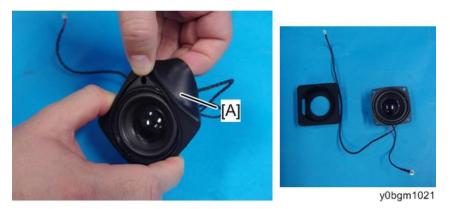
5. Release the grounding wire [A]. () ×1)



6. Remove the speaker (front) [A].



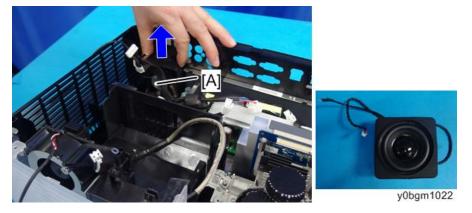
7. Remove the speaker rubber [A] from the speaker.



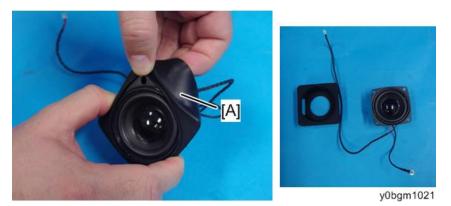
2

Speaker (Rear) and Speaker Rubber

- 1. Remove the lamp cover. (page 24 "Lamp Cover, Lamp Module")
- Remove the top cover. (page 26 "Top Cover (Including Mini HDMI Cable and Keypad Rubber)")
- 3. Remove the main board. (page 34 "Main Board (Including HDBaseT Board (WUXGA model only) and Sub Board)")
- 4. Remove the shielding bracket. (page 40 "Shielding Bracket with Rear Cover and LVPS")
- 5. Remove the speaker (rear) [A].



6. Remove the speaker rubber [A] from the speaker.



Lamp Housing

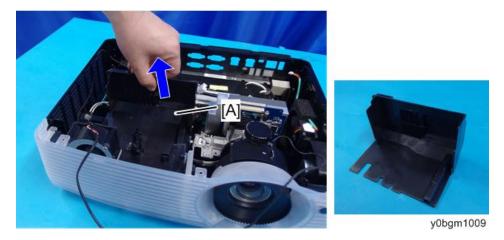
- 1. Remove the lamp cover and lamp module. (page 24 "Lamp Cover, Lamp Module")
- Remove the top cover. (page 26 "Top Cover (Including Mini HDMI Cable and Keypad Rubber)")

- Remove the main board. (page 34 "Main Board (Including HDBaseT Board (WUXGA model only) and Sub Board)")
- 4. Remove the shielding bracket. (page 40 "Shielding Bracket with Rear Cover and LVPS")
- Remove the color wheel module. (page 30 "Color Wheel Module (Including Photo Sensor and Color Wheel)")
- 6. Remove the 3 screws. (⁽⁾x3)



y0bgm1008

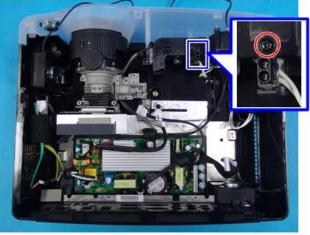
7. Remove the lamp housing [A].



Lamp Cable

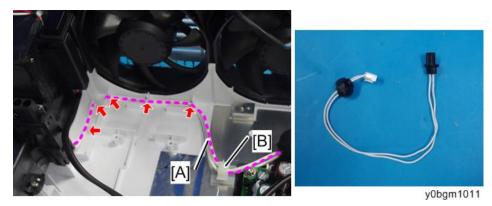
- 1. Remove the lamp cover and lamp module. (page 24 "Lamp Cover, Lamp Module")
- Remove the top cover. (page 26 "Top Cover (Including Mini HDMI Cable and Keypad Rubber)")

- Remove the main board. (page 34 "Main Board (Including HDBaseT Board (WUXGA model only) and Sub Board)")
- 4. Remove the shielding bracket. (page 40 "Shielding Bracket with Rear Cover and LVPS")
- Remove the color wheel module. (page 30 "Color Wheel Module (Including Photo Sensor and Color Wheel)")
- 6. Remove the lamp housing. (page 46 "Lamp Housing")
- 7. Remove a screw ($\mathfrak{O}^{\mathfrak{P}} \times 1$).



y0bgm1010

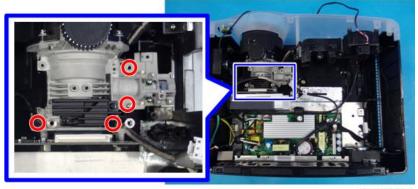
8. Release the lamp cable [A] from the cable clamp [B] and harness guides.



Optical System Unit (Including Focus Ring, Zoom Lever, Lens Shift Dial, Lens)

- 1. Remove the lamp cover and lamp housing. (page 24 "Lamp Cover, Lamp Module")
- Remove the top cover. (page 26 "Top Cover (Including Mini HDMI Cable and Keypad Rubber)")

- 3. Remove the color wheel module. (page 30 "Color Wheel Module (Including Photo Sensor and Color Wheel)")
- 4. Remove the main board. (page 34 "Main Board (Including HDBaseT Board (WUXGA model only) and Sub Board)")
- 5. Remove the shielding bracket. (page 40 "Shielding Bracket with Rear Cover and LVPS")
- 6. Remove the 4 screws. (@ ×4)



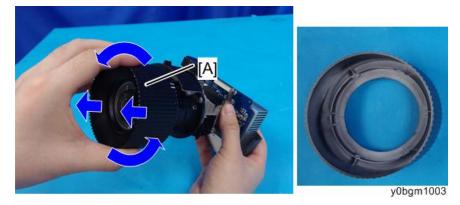
y0bgm1001

7. Remove the optical system unit [A].



Focus Ring, Spacer, Zoom Lever, Lens Shift Dial, Lens

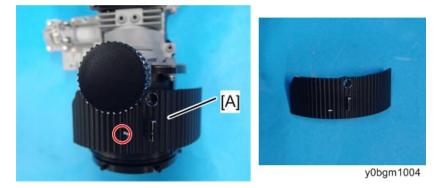
1. Fully rotate the focus ring [A] counter-clockwise, and pull it out.



2. Remove the spacer [A].



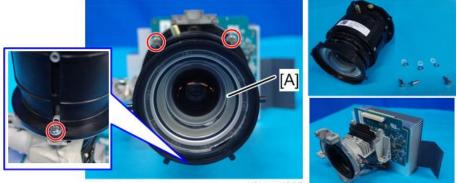
3. Remove the zoom lever. ($\mathfrak{O}^{\mathcal{P}} \times 1$)



4. Remove the lens shift dial [A] and bracket [B]. (🖤 ×2)



5. Remove the lens [A]. (⁽⁾⁾ ×3)



y0bgm1005

Blower Unit (Including Thermistor and Interlock Switch)

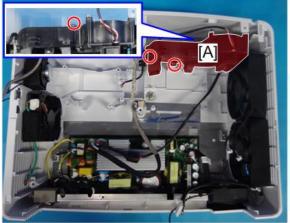
- 1. Remove the lamp cover and lamp module. (page 24 "Lamp Cover, Lamp Module")
- Remove the top cover. (page 26 "Top Cover (Including Mini HDMI Cable and Keypad Rubber)")
- Remove the main board. (page 34 "Main Board (Including HDBaseT Board (WUXGA model only) and Sub Board)")
- 4. Remove the shielding bracket. (page 40 "Shielding Bracket with Rear Cover and LVPS")
- Remove the color wheel module. (page 30 "Color Wheel Module (Including Photo Sensor and Color Wheel)")
- Remove the optical system unit. (page 48 "Optical System Unit (Including Focus Ring, Zoom Lever, Lens Shift Dial, Lens)")
- 7. Remove the lamp housing. (page 46 "Lamp Housing")
- 8. Remove the lamp cable. (page 47 "Lamp Cable")

9. Disconnect the 2 connectors on the PSU and release the ground wire.($\Im x2$, $\Im x1$)



y0bgm1012

10. Remove the blower unit [A]. (🖤 x3)

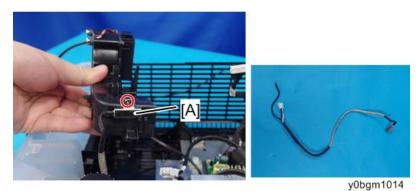




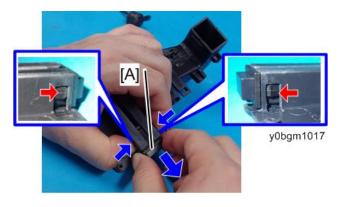
2

Thermistor and Interlock Switch

1. Remove the thermistor [A]. (S ×1)



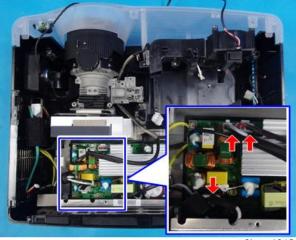
2. Remove the interlock switch [A] from the duct [B].



PSU

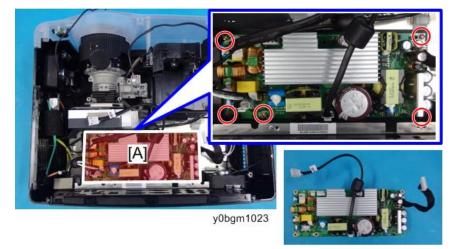
- 1. Remove the lamp cover. (page 24 "Lamp Cover, Lamp Module")
- Remove the top cover. (page 26 "Top Cover (Including Mini HDMI Cable and Keypad Rubber)")
- 3. Remove the main board. (page 34 "Main Board (Including HDBaseT Board (WUXGA model only) and Sub Board)")
- 4. Remove the shielding bracket. (page 40 "Shielding Bracket with Rear Cover and LVPS")

5. Disconnect the 3 connectors on the PSU.(\Im x3)

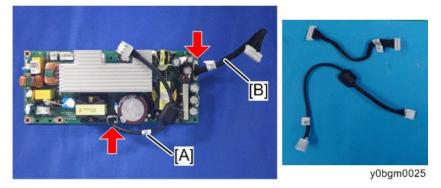


y0bgm1012a

6. Remove the PSU [A]. (🖤 ×5)

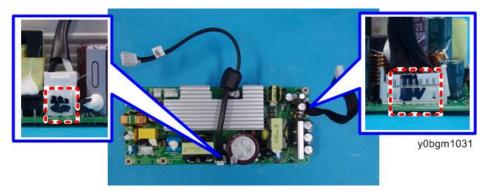


7. Remove the cables [A] (to the main board) and [B] (to the LVPS) from the PSU. (😂 ×2)



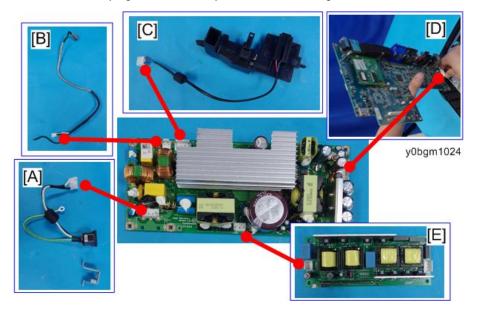
Vote

• Each end connector of the harness linking the main board and PSU, or LVPS and PSU, must be connected to the matching board. After disconnecting the harness, if you connect the main board or LVPS to the PSU, the power will fail to turn on. Mark the connectors and boards as shown in the red frame so as to indicate the matching pairs of connectors and boards.



Details of Each Connector on the PSU

Make sure cables plug into the correct ports when assembling the unit.

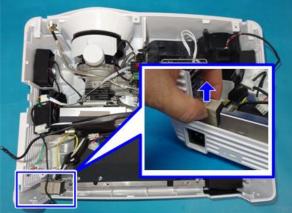


ltem	Destination	The connector feature	Figure
A	To power connector	Black/White wire, white connector and black wire tube (2-pin)	y0bgm1026
В	To thermistor	Black/White wire, white connector and Black/Silver wire tube (2-pin)	y0bgm1027
С	To safety interlock switch (on the blower duct)	Red/Blue wire, white connector and black wire tube (2-pin)	y0bgm1028
D	To main board (downside)	White connector and black wire tube (16- pin)	y0bgm1029
E	To LVPS	Black/White wire, white connector and black wire tube (2-pin)	y0bgm1030

AC Inlet

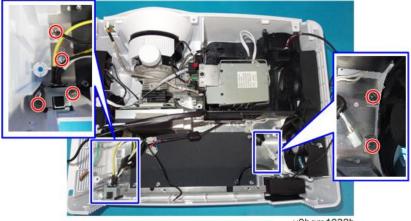
- 1. Remove the lamp cover. (page 24 "Lamp Cover, Lamp Module")
- Remove the top cover. (page 26 "Top Cover (Including Mini HDMI Cable and Keypad Rubber)")
- 3. Remove the main board. (page 34 "Main Board (Including HDBaseT Board (WUXGA model only) and Sub Board)")
- 4. Remove the shielding bracket. (page 40 "Shielding Bracket with Rear Cover and LVPS")
- 5. Remove the PSU. (page 53 "PSU")

6. Remove the cushion [A], which is fixed with adhesive at the bottom.

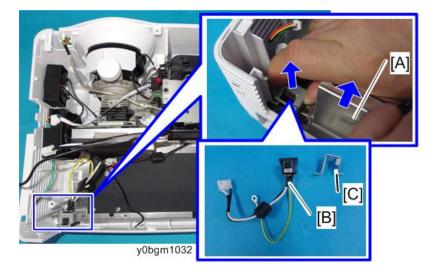


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7. Remove the 6 screws. (S x6)



y0bgm1032b

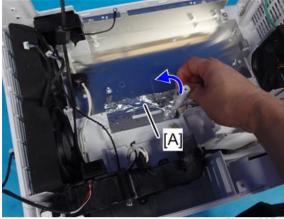


8. Slightly lift up the insulating plate [A], and remove the AC inlet [B] and bracket [C].

Bottom Shielding Plate

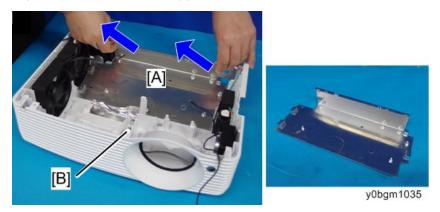
- 1. Remove the lens cap. (page 23 "Lens Cap")
- 2. Remove the lamp cover and lamp module. (page 24 "Lamp Cover, Lamp Module")
- Remove the top cover. (page 26 "Top Cover (Including Mini HDMI Cable and Keypad Rubber)")
- Remove the main board. (page 34 "Main Board (Including HDBaseT Board (WUXGA model only) and Sub Board)")
- 5. Remove the shielding bracket. (page 40 "Shielding Bracket with Rear Cover and LVPS")
- Remove the color wheel module. (page 30 "Color Wheel Module (Including Photo Sensor and Color Wheel)")
- 7. Remove the rear speaker. (page 46 "Speaker (Rear) and Speaker Rubber")
- 8. Remove the right fan. (page 43 "Right Fan ")
- 9. Remove the lamp housing. (page 46 "Lamp Housing")
- Remove the optical system unit. (page 48 "Optical System Unit (Including Focus Ring, Zoom Lever, Lens Shift Dial, Lens)")
- 11. Remove the PSU and insulating sheet. (page 53 "PSU")
- 12. Remove the AC inlet. (page 56 "AC Inlet")

13. Peel off the aluminum tape [A] as much as needed.



y0bgm1035a

14. Separate the bottom shielding plate [A] from the bottom cover [B].



Bottom Cover

- 1. Remove the lens cap. (page 23 "Lens Cap")
- 2. Remove the filter. (page 23 "Filter")
- 3. Remove the adjustable hoot. (page 24 "Adjustable Feet (Front x1, Rear x2)")
- 4. Remove the lamp cover and lamp module. (page 24 "Lamp Cover, Lamp Module")
- Remove the top cover. (page 26 "Top Cover (Including Mini HDMI Cable and Keypad Rubber)")
- 6. Remove the left fans. (page 29 "Left Fans (1 and 2)")
- Remove the color wheel module. (page 30 "Color Wheel Module (Including Photo Sensor and Color Wheel)")

- Remove the front cover. (page 32 "Front Cover (Including IR Sensor and IR Sensor Cover)")
- 9. Remove the main board. (page 34 "Main Board (Including HDBaseT Board (WUXGA model only) and Sub Board)")
- 10. Remove the shielding bracket. (page 40 "Shielding Bracket with Rear Cover and LVPS")
- 11. Remove the rear speaker. (page 46 "Speaker (Rear) and Speaker Rubber")
- 12. Remove the front speaker. (page 44 "Speaker (Front) and Speaker Rubber")
- 13. Remove the right fan. (page 43 "Right Fan ")
- 14. Remove the lamp housing. (page 46 "Lamp Housing")
- 15. Remove the lamp housing. (page 47 "Lamp Cable")
- Remove the optical system unit. (page 48 "Optical System Unit (Including Focus Ring, Zoom Lever, Lens Shift Dial, Lens)")
- Remove the blower unit. (page 51 "Blower Unit (Including Thermistor and Interlock Switch)")
- 18. Remove the PSU and insulating sheet. (page 53 "PSU")
- 19. Remove the AC inlet. (page 56 "AC Inlet")
- Separate the bottom shielding plate from the bottom cover. (page 58 "Bottom Shielding Plate")



y0bgm1035b

LED Display

LED status and meanings

	Powe	r LED	Lamp LED	Temp LED
Message	Red Blue		Red	Red
Standby state (Input power cord)	Steady light	-	-	-
Power on (Warming up)	-	Flashing (0.5 sec)	-	-
Power on & lamp lighting	-	Steady light	-	-
Power off (Cooling down)	Flashing (0.5 sec)	-	-	-
Programming	Steady light	Steady light	Steady light	Steady light
Temperature error (Over temperature)	-	Steady light	-	Steady light
Lamp error (Lamp failed)	-	Steady light	Steady light	-
Fan error (Fan failed) - Stear		Steady light	-	Flashing (0.5 sec)

Main Procedures

No.	Symptom	Procedure
	No power	 Ensure the power cord and AC power outlet are securely connected
1		 Ensure all connectors are connected securely and correctly, and aren't broken
	1	Check LVPS
		Check PSU
		Check Main board
		 Ensure the projector is not put on a soft pad and the air vent is not blocked
	Auto shutdown	a. Lamp failed: Power LED (flashes red), Lamp LED (lights red)
		Check Lamp
		Check LVPS
		Check Main board
		b. Fan failed: Power LED (flashes red), Temp LED (lights in red)
2		 Check whether have execute "Fan Calibration" (page 74 "Waveform Download and Fan Calibration")
		Check System fan and Blower fan
		Check Main board
		Check Color wheel module
		Check Photo sensor board
		c. Over Temp: Power LED (flashes red), Temp LED (lights in red)
		Check System fan and Blower fan
		Check Main board

No.	Symptom	Procedure
3	No light on	 Ensure all connectors are connected securely and correctly, and aren't broken Check Lamp cover, Interlock switch Check Lamp module Check LVPS Check PSU Check Main board Check Color wheel Check Photo sensor board
4	No image	 Ensure the signal cables and source work (If you connect multiple sources at the same time, use the "Source" button switch) Ensure all connectors are connected securely and correctly, and aren't broken Check Main board Check Optical system unit Check Color wheel
5	Mechanical noise	Check Color wheelCheck System fan and Blower fan
6	Line bar/Line defect	Check Main board
7	Image flicker	 Do "Reset" of the OSD menu (page 84 "OSD Reset") Ensure that the signal cables and source work as well Check Lamp module Check Color wheel Check Photo sensor and clean Photo sensor Check Main board
8	Color abnormal	 Do "Reset" of the OSD menu (page 84 "OSD Reset") Adjust "Color Wheel Index" (page 81 "Color Wheel Index") Check Main board Check Color wheel

No.	Symptom	Procedure
9	Poor uniformity/ Shadow	 Ensure the projection screen without dirt Ensure the projection lens is clean Ensure the brightness is within spec Check rod alignment (page 83 "Rod Adjustment") Check Optical system unit
10	Dead pixel/Dust (Out of spec.)	 Ensure the projection screen without dirt Ensure the projection lens is clean Clean Optical system unit Check Optical system unit
11	Garbage image	Ensure that the signal cables and source work as wellCheck Main board
12	Remote controller failed	 Remote controller a. Check Battery b. Check Remote controller c. Check IR sensor board d. Check Main board
13	Function abnormal	Do "Reset" of the OSD menu (page 84 "OSD Reset")Check Main board
14	Audio abnormal	 Ensure that the signal cables and source work as well Ensure that your projector is not in "Mute" mode Check Main board Check Speaker
15	3D image abnormal	 Ensure the using 3D glasses is good and you must face the projection Ensure the signal source is 3D format Ensure the 3D function of projector OSD is on and 3D sync invert is on Check Main board

Required Action after Replacing Parts

Changed parts Software Action after Description After Optical Main Lamp Blower Color repair page system LVPS firmware fan wheel board module unit update Chapter 4. (page 74 Fan "Waveform 4 calibration Download and Fan Calibration") Chapter 4. PC (page 75 **√**(*) **√**(*) calibration "PC Calibration") Chapter 4. Re-write (page 78 lamp usage V "Re-write hours Lamp Hours Usage ") Chapter 4. (page 81 Color wheel 7 V "Color index Wheel Index") Chapter 4. Rod (page 83 **√**(*) adjustment "Rod Adjustment")

After replacing parts, please execute the related items shown in the table below.

	Changed parts					Software		
Action after repair	Main board	Optical system unit	Lamp module	Blower fan	Color wheel	LVPS	After firmware update	Description page
OSD reset	V		~				~	Chapter 4. (page 84 "OSD Reset")
Firmware update	V						-	Chapter 5. (page 87 "Firmware Update")

(*) This action is not always required. Perform it only if the situation demands it.

Vote

- After parts replacement or repair, check that the projector works properly.
- Project images on the screen and check that they are not faulty.
- If color appears abnormal after changing the main board, do the color wheel index adjustment. (page 81 "Color Wheel Index")

Test Equipment and Conditions

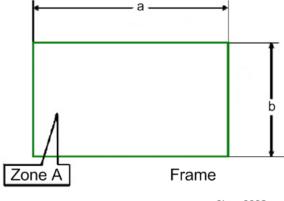
Test Equipment Needed

- PC support HDTV resolution & Independent graphic card
- Blue- ray DVD player support "S-Video", "3D source files", "HDMI" and "Video"
- Illuminance meter
- Video generator

Recommended Test Condition

- Ambient brightness: Dark room less than 2 lux.
- Product must be warmed up for 3 minutes.
- Screen size: 60 inches diagonal.

Zone Definition



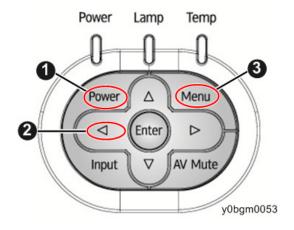
w_y0bgm0002_en

< Figure: Zone A (as green line) Definition >

Service Mode

How to Enter the Service Mode

- 1. Turn on the projector.
- Press the "Power [1]", "Left [2]", "Left [2]" and "Menu [3]" keys sequentially. The service menu appears.



3. Adjust the settings as needed.

RICOH PJ WU5760				
DDP Ver B011T04 < Feb 7 2017-16:28 >				
MCU Ver.M01 LAN	Ver. L05			
Waveform ID	255 1 2 3 4 5			
System Hours(total)	0:35			
Lamp Hours(DD+ED)	0:00			
Lamp Hours(full)	0:20			
Lamp Hours(eco)	0:00			
Factory Reset				
Burn In Test				
Failure Log F	P:4 S1:0 S2: -2			
Analog Settings				
Optical Settings				
Other Settings				
Read SNID	1606X8000010			
Color Wheel Index	293			
Factory Brower RPM	2350			
Extreme Dimming Mode	On			
Password	123456			
Exit				
	y0bgm0054			

• Note

- You can use the remote controller to enter the service mode in the same way.
- To exit from the service mode, press the "Power" key.

4

Service Mode Settings

Vote

• Here is a summary of common terms.

Term	What It Means
DFU	Denotes "Design/Factory Use". Do not change this value.

Service Menu

Setting Item	Description
Model Name	Read only
	Shows the name of the projector.
	Read only
DDP ver.	Shows the present firmware version of the projector.
	(page 87 "System Firmware Update")
	Read only
MCU ver.	Shows the present MCU firmware version of the projector.
	(page 99 "MCU Firmware Update")
	Read only
LAN ver.	Shows the present LAN firmware version of the projector.
	(page 101 "Network Firmware Update")
Waveform ID	Read only
System Hours (total)	Read only
Lamp Hours (DD+ED)	Read only
Lamp Hours (full)	Read only
Lamp Hours (eco)	Read only
Factory Reset	DFU
Burn In Test	DFU
Failure Log	Records the times of the failure of power on of the projector such as excessive temperature, lamp failure or fan lock.

Setting Item	Description
Analog Settings	See the below table.
Optical Settings	See the below table.
Other Settings	See the below table.
Read SNID	DFU
Color Wheel Index	Use this to adjust the R/G/B value to improve the image when the color reproduction is not correct. (page 81 "Color Wheel Index")
Factory Blower RPM	Read only Shows the factory blower RPM values of the projector.
Extreme Dimming Mode	DFU
Password	DFU

Analog Settings

Setting Item	Description		
PC Calibration	Use this to adjust the R/G/B balance of the input signal from the PC. A White/Black test pattern should be used in this calibration. (page 75 "PC Calibration")		
Video Calibration	DFU		
PC Red Offset	DFU		
PC Green Offset	DFU		
PC Blue Offset	DFU		
Red Gain	DFU		
Green Gain	DFU		
Blue Gain	DFU		
Video Red Offset	DFU		
Video Blue Offset	DFU		
Reset Calibration Data	DFU		

Optical Settings

Setting Item Description	
Waveform ID	Read only
Color Wheel Index	Use this to adjust the R/G/B value to improve the image when the color reproduction is not correct. (page 81 "Color Wheel Index")
Spoke On	DFU
Test Pattern	DFU
Waveform Index	DFU
Sequence Group	DFU
Gamma	DFU
Lamp Power Gain	DFU
Lamp Power Mode	DFU

Other Settings

Setting Item	Description		
System Hours (total)	Use this to change operating hours of the projector. (page 78 "Re-write Lamp Hours Usage ")		
Lamp Hours (DD+ED)	Use this to change the working hours of the projector in DD + ED. (page 78 "Re-write Lamp Hours Usage ")		
Lamp Hours (full)	Use this to change the working hours of the projector in full mode. (page 78 "Re-write Lamp Hours Usage ")		
Lamp Hours (eco)	Use this to change the working hours of the projector in eco mode. (page 78 "Re-write Lamp Hours Usage ")		
VGA Out (Standby)	DFU		
Closed Caption Select	DFU		
SOG Slicer Threshold	DFU		

Setting Item	Description
Component Phase	DFU
Boot/Init access time(ns)	Read only
Thermal Setting	See the below table.
EQ Setting	See the below table.
Dust Chamber Test	DFU

Thermal Settings

Setting Item	Description
System Fan Volt (1/10)	Read only
System Fan RPM	Read only
Factory Blower RPM	Read only
Lamp Blower Fan Volt (1/10)	Read only
Lamp Blower Fan RPM	Read only
Temperature Degree	Read only
Current Lamp Voltage	Read only
Fan Zeta Value (1/100)	DFU
High Altitude	DFU
Lamp Power Mode	DFU

EQ Settings

Setting Item	Description
Set EQ Value	DFU
Get EQ Value	Read only
EQ_Red	Read only
EQ_Green	Read only
EQ_Blue	Read only

Calibration

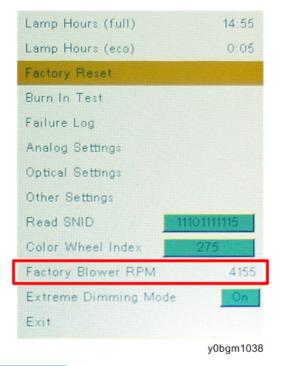
Waveform Download and Fan Calibration

After replacing LVPS, the main board, the blower fan, or updating the firmware, do the following steps.

- 1. While pressing the "Power" key, plug in the power cord.
- 2. When the "Power LED" flashes blue, release the "Power" key.
- 3. When the "Power LED" flashes red, press the "Power" key.

The projector will run and finish fan calibration and waveform download automatically.

- 4. After several minutes, the projector power will turn on automatically and the fan Information will appear on the screen, the fan calibration and auto waveform is finished.
- 5. Get into service mode. (page 68 "How to Enter the Service Mode")
- 6. Check that the "Factory Blower RPM" is between "4000" to "4800".



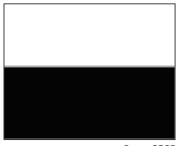
Vote

• If the factory fan value doesn't show in service mode, repeat the step 1-5 again.

PC Calibration

After replacing the Main Board, PC Calibration should be done as well.

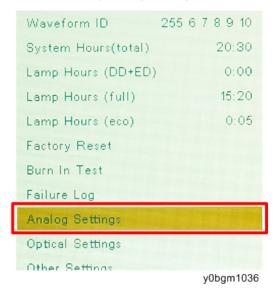
- Test equipment: video generator
- Test signal analog: 800 x 600@60Hz
- Test Pattern:94% White (up)/6% Black (down) (See below.)



y0awm0203

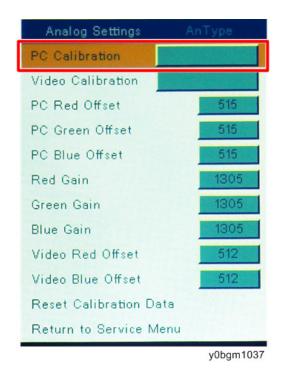
Calibration Procedure

- 1. Get into service mode. (page 68 "How to Enter the Service Mode")
- 2. Choose "Analog Settings" and press the "Enter" button.



3. Select "PC Calibration".

When "Success" appears, it means "PC Calibration" is OK.



- 4. Select "Return to Service Menu" and press "Enter" to confirm the setting.
- Vote
 - The calibration pattern should be in full screen.

Pattern Check

After finishing PC calibration, check the 64 gray RGBW pattern.

- Test signal: 800 x 600 @60Hz
- Test pattern: 64 gray RGBW (see below.)

y0awm020

- Inspection item: Color saturation
- Criteria:

- There should not be any lack of RGBW. The color should appear normal and sort in the right order.
- Color levels should be sufficient and normal. (The unidentified color levels on both left and right sides should not be over 8 color levels.)

Re-write Lamp Hours Usage

After replacing the main board or optical system unit, you must rewrite the lamp hours.

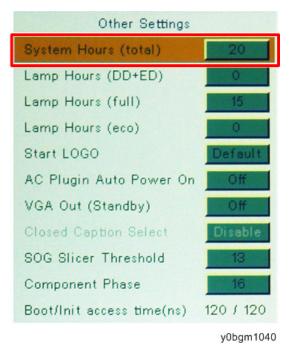
Write down the lamp hours before the replacement and put back the same value after replacing the board.

- 1. Get into service mode. (page 68 "How to Enter the Service Mode")
- 2. Select "Other Settings", and then press the "Enter" key.



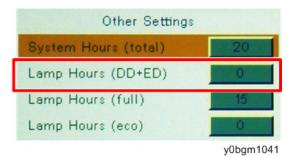
y0bgm1039

3. Select "System Hours (total)", then use the "Left" or "Right" keys to re-write the System Hours.

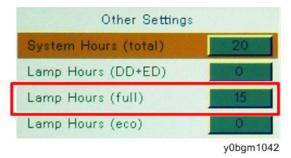


Note

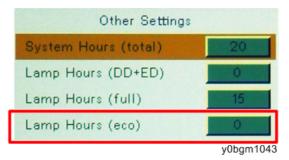
- "Left" key = decrease lamp hours
- "Right" key = increase lamp hours
- By repeatedly pressing the "Enter" key, you can select the order of magnitude. Each press steps to the next order in the sequence "1" to "10" to "100" to "1000" and back to "1".
- Select "Lamp Hours (DD+ED)", then use the "Left" or "Right" keys to re-write the Lamp Hours.



5. Select "Lamp Hours (full)", then use the "Left" or "Right" keys to re-write the Lamp Hours.



6. Select "Lamp Hours (eco)", then use the "Left" or "Right" keys to re-write the Lamp Hours.

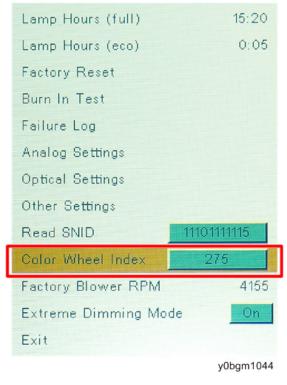


7. Select "Return to Service Menu" and press "Enter" to confirm the setting.

Color Wheel Index

After replacing the main board, optical system unit, or color wheel, "Color Wheel Index" should be done.

- 1. Get into service mode. (page 68 "How to Enter the Service Mode")
- 2. Select "Color Wheel Index", and then use the "Left" or "Right" keys to adjust the color balance of the projected image.





• By pressing the "Enter" key, the test pattern can be projected.

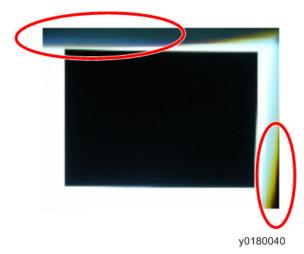
Room Puttick 224 DDP Ver A00 (May 27 20 MCD Ver MIN	the second se
Waveform (D 255	67.8 B W
Sectors Hours(Intal)	20.00
Larra Haves (00+ED)	0.00
Lang Hours (full)	15.20
Larry Hours (era)	0.05
Faitury Reset	
Burn In Test	
Failure Log.	
Analog Settings	
Optical Dettings	
Other Settings	and the second
Head STRD	
Cular Wheel Index	075
Factory Blasser 5352	4155
Extreme Direment Shale	
Ent	

y058m5004

• This adjustment procedure can be executed as well in the following steps: Optical Settings > Color wheel Index

Rod Adjustment

If either of the defects ringed in red appears when projecting an image, perform the adjustment described below.



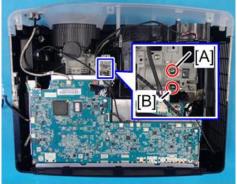
Environment

- The size of screen is 60.
- This process should be done in a dark environment (under 2 lux).

Procedure

- 1. Display a "white" pattern.
- 2. Adjust the screws [A] and [B] to readjust the image.

Screw [A] should be adjusted first, and then screw [B]. Adjust until the yellowish or bluish parts disappear.



y0bgm0052

Test Inspection Procedure

Check Points

Check item	Check point	
Firmware version	All firmware version must be the latest version	
TB implementation	Related TB must be implemented	
Exterior	The exterior must be undamaged.	
Logo	Missing logo, missing prints and blurred prints are unacceptable	
Lamp cover	It should be locked in the correct place.	
Zoom in/out	The function should work smoothly	
Keypad	All keypad keys must operate smoothly	

OSD Reset

After the final QC step, we have to erase all saved change again and restore the OSD default setting. The following actions will allow you to erase all end-users' settings and restore the default setting:

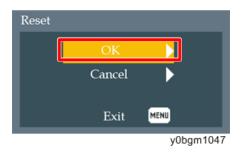
Method 1

1. Press the "Menu" key to enter the OSD menu.

2. Select "Setting" and then execute the "Reset" function.



3. Select "OK" and press"Enter".



Method 2

1. Get into service mode. (page 68 "How to Enter the Service Mode")

2. Select "Factory Reset", and then press the "Enter" key.

RICOH PJ WU5	760
DDP Ver B011T04 < Feb 7	2017-16:28>
MCU Ver.M01 LAN \	/er. L05
Waveform ID	255 1 2 3 4 5
System Hours(total)	0:35
Lamp Hours(DD+ED)	0:00
Lamp Hours(full)	0:20
Lamp Hours(eco)	0:00
Factory Reset	
Burn In Test	
Failure Log P:4	¥ S1:0 S2: −2
Analog Settings	
Optical Settings	
Other Settings	
Read SNID	1606X8000010
Color Wheel Index	293
Factory Brower RPM	2350
Extreme Dimming Mode	
Extreme Driming Mode	On
Password	<u>On</u> 123456

y0bgm1045

3. Select "OK" and press "Enter" key.



5. Firmware Update

System Firmware Update

Equipment Needed

Software

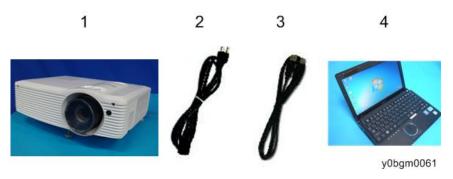
- DLP Composer Lite
- Firmware (*.img)
- FlashDeviceParameters.txt

Note

• Download "DLP Composer Lite" and "FlashDeviceParameters.txt" from website before you start the update FW procedure.

Hardware

- 1. Projector
- 2. Power cord
- 3. USB Cable mini USB to USB (A)
- 4. PC / Laptop



Preparation

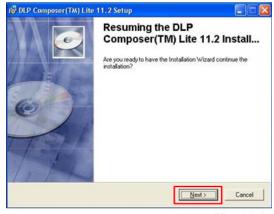
DLP Composer Lite Setup Procedure

DLP composer lite: Software for firmware writing

1. Execute "DLP Composer Lite v** Setup" Program.

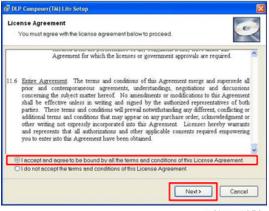


2. Click "Next".



y0bgm1049

3. Read the "License Agreement", and then choose "I accept and agree to be bound by all the terms and conditions of this License Agreement" and click "Next".



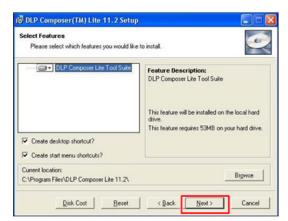
y0bgm1050

4. Click "Next".



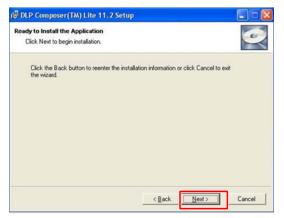
y0bgm1051

5. Click "Next".



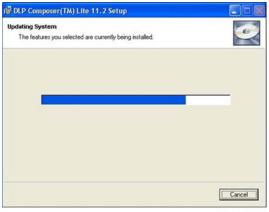
y0bgm1052

6. Click "Next".



y0bgm1053

The program is executing "installing" status.



y0bgm1054

7. Click "Finish".



y0bgm1055

Getting into Firmware Download Mode

Set up the following procedure.

1. While holding down the "Power" key, plug in the power cord.

The status of the LEDs changes as follows:

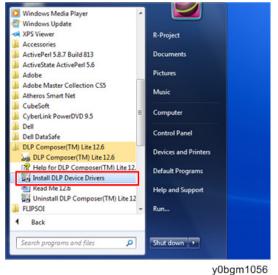
- 1. Power LED flashes red and blue alternately.
- 2. Power LED flashes blue.
- 3. Power LED flashes red.
- 4. All LEDs light red.



2. After all LEDs light red, as shown in the photo below, release the "Power" key.

USB Driver Update Procedure

1. Execute "Install DLP Device Drivers" in the start menu.



, - - 3

- 2. Select one of the following depending on the OS type, then click "install".
 - For 32bit OS: Jungo WinDriver (WinVista/Win7)



y0bgm1057

• For 64bit OS: Microsoft WinUSB



y0bgm1058

3. Click "Next".



4. Click "Finish".



Connection to the PC

- 1. Get into firmware download mode. (page 90 "Getting into Firmware Download Mode")
- 2. Connect the Projector and PC with a mini USB cable.

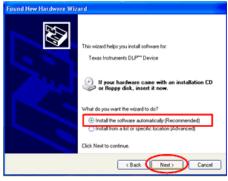
The Found New Hardware Wizard appears.

3. Select "No, not this time", then click "Next".



y0200036

4. Select "Install the software automatically (Recommended)", then click "Next".



y0200037

5. Click "Finish".



Firmware Update Procedure

Updating the System Firmware

- 1. Get into firmware download mode. (page 90 "Getting into Firmware Download Mode")
- 2. Connect the Projector and PC with a mini USB cable.
- 3. Execute the "DLP ComposerTM Lite **" file.



y0bgm1061

- 4. Select the file "FlashDeviceParameters.txt".
- 5. Put "FlashDeviceParameters.txt" file into the folder where you set up "DLP Composer Lite **".

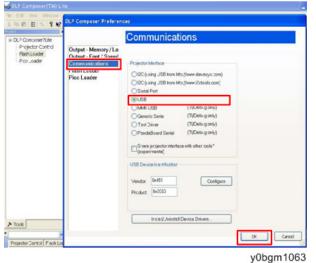
Favorites Desktop Downloads Downloads Recent Places Documents Music Pictures Videos Videos Computer	Trivers Trivers DLP Lite Software Manifest big DLPUSECV.dll UTIlashDeviceParameters MFC71.dll msvc71.dll stibwapi.dll	CompHelpLite CompHelpLite DEPCompLite diplete.ing forward forward forward forward movcp71.dll Treadme-lite		
Network				

6. Click "Edit" and "Preferences".

EDE View V	er(TW) Lite				- 1e
	Window Melp				
Fields	Colur .				
Cut	Chief -				
Copy	Objec Colory				
	CONVY				
Preferences					
Tools					
	Q Find Tex	- Dim Date	2 Film Review (HTML) +	In that Y day of the to	
minutes (Control W7.1	Cree Dear	The second secon	a de tran Bran	
	opector files:				
scent Pro					
arcent Pro					
	i Fleih Loader				62.04

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7. Click "Communications" and select "USB" then click "OK".

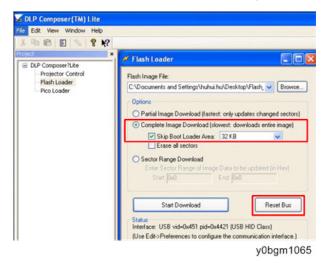


- yobgiirio
- 8. Choose "Flash Loader" and click "Browse".
- 9. Search the firmware file (*.img) and click "Open".

Ø 1	ash Loader	E		
larh Loader co Loader Or	ficre	n/Desktop/P130 V Browne		1
	Desktop	nts m Places Cache	vi Aloto ang	
	ty Computer File name: File soft type:	Rash_X316_05RAM_190w_51 Risch Image Files (* ing)	_20130813_V 💌	Open

- 10. Select the item "Complete Image Download".
- 11. Select the item "Skip Boot Loader Area" and select "64KB".

12. Click "Reset Bus" to erase the flash memory.

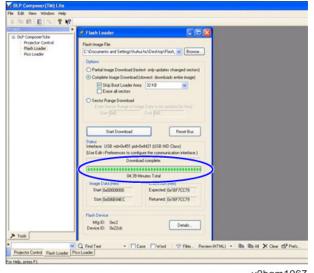


- 13. If the firmware is ready, click "Start Download" to execute the firmware update.
- 14. Click "Yes" to erase the flash memory. .

	🖉 Hack Looder 💦 🗖 🔀	
Projector Control Projector Control Flash-Loader Peo Loader	Flash Image File	
	C1Documents and Setting/Valva hu/Denitog/Valvh v Browse	
- Coader	Calora	
	Partial Image Download (Italient, only-updates changed sectors)	
	Conglete Image Download Lifewent, downloads entire image!	
	Sing face Lander Area. 22/13	
	C Sector Range Deveload Line Sector Range of Honge Date to be updated being that [Bit] Each [Bit]	
	Stat Doveload Rend Re	
	Start Doveload Reset But	
	DLP Composity (186)	
	Warning: If you continue, the contents of Rath memory will be replaced by the contents of the facts mean life. Since the distribution of and take means increase and provide and the stress stand.	
	Do you want to continue?	
	76 10	
	Serverment Factority ALA	
	Sox 52002142C Returned	
	Path Device	
	MuD. outroop	
	Detah.	

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It takes about several minutes, the firmware update process is finished, "Download completed" will appear on the screen.



y0bgm1067

15. Unplug the USB cable and power cord.

Version Check after Updating

- 1. Re-connect the power cord, and then restart the projector.
- 2. Get into the Service Mode. (page 68 "How to Enter the Service Mode")
- 3. Check the system firmware version.

RICOH PJ WU5760		
DDP Ver B011T04 < Feb 7 2017-16:28 >		
MCU Ver.M01 LAN Ver. L05		
Waveform ID	255 1 2 3 4 5	
System Hours(total)	0:35	
Lamp Hours(DD+ED)	0:00	
Lamp Hours(full)	0:20	
Lamp Hours(eco)	0:00	
Factory Reset		
Rum In Test		

y0bgm1068

MCU Firmware Update

After updating the system firmware, continue to update the MCU (micro controller) firmware by the following procedure.

Equipment Needed

Hardware

- 1. Projector with system firmware update
- 2. Power cord



Firmware Update Procedure

Updating the MCU Firmware

- 1. Power off the projector and disconnect the power plug.
- 2. While holding down the "Power" key, plug in the power cord.

The Power indicator flashes red and blue alternately at 0.5 second intervals.

3. Release the [Power] button within 1 second after step 2.

Each indicator is in the following state.

- Power indicator: flashes blue at 1 second intervals
- Lamp indicator, Temp indicator: flashes red at 1 second intervals
- 4. Press the Power key once while each indicator is blinking.

Each indicator is in the following state.

- Power indicator: lights in blue
- Lamp indicator, Temp indicator: flashes red at 0.5 second intervals

5

5. Wait until the status of each indicator is as shown below.

Update of MCU firmware is completed and the unit is automatically in standby mode.

- Power indicator: lights in red
- Lamp indicator, Temp indicator: off

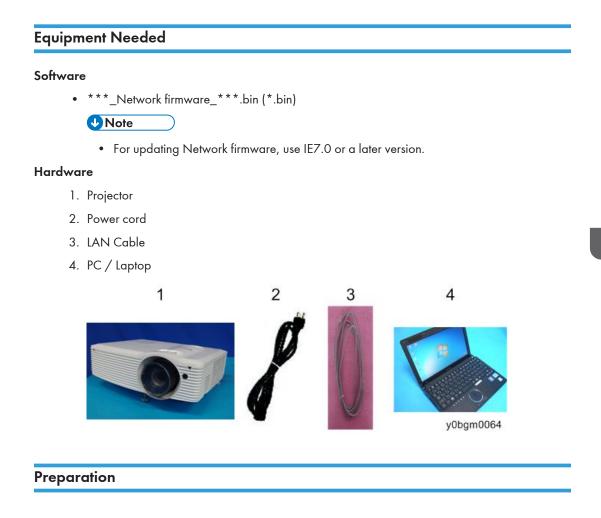
Version Check after Updating

- 1. Re-connect the power cord, and then restart the projector.
- 2. Get into the Service Mode. (page 68 "How to Enter the Service Mode")
- 3. Check the system firmware version.

RICOH PJ W	J5760
DDP Ver B011T04 < Feb	7 2017-16:28>
MCU Ver.M01 LAN	N Ver. L05
Waveform ID	255 1 2 3 4 5
System Hours(total)	0:35
Lamp Hours(DD+ED)	0:00
Lamp Hours(full)	0:20
Lamp Hours(eco)	0:00
Factory Reset	
Rum In Test	

y0bgm1069

Network Firmware Update



Projector's IP Address Setting

1. Unzip the LAN firmware update file.

5

2. Plug the LAN cable into the projector.



- 3. Connect the power cord and turn on the projector.
- 4. Press the "Menu" key to get into the OSD menu.
- 5. Use the down key to select "Setting".
- 6. Select "Network", and then press the "Enter" key.



y0bgm0056

- 7. Make sure that these items are set as shown below:
 - DHCP: Off
 - IP address: 192.168.0.100
 - Subnet mask: 255.255.255.0

DHCP	Off
IP Address	192.168.0.100
Subnet Mask	255.255.255.0
Gateway	192.168.0.1
DNS	192.168.0.1
Apply	
MAC Address	00-00-00-00-00
Select 🔶	Enter 🕨 Exit MENU

If you need to change these settings, refer to the user manual.

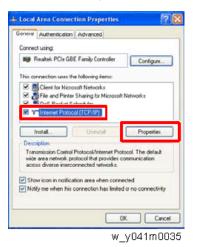
PC Network Setting

1. Double click "Local area connection", then choose "Properties".

Local Area Co	nection Status	6
ienaral Support		
Connection		
Status		Connected
Duration:		01:12.28
Speed		130.0 Mbps
- Adikity -		
	sen — 🗾	- Received
Packetz	13,471	13,838
Properties	Disable	
		Con

w_y041m0034

2. Select "Internet protocol (TCP/IP)", and then click "Properties".



3. Modify the IP address to 192.168.0.101, and modify the subnet mask to 255.255.255.0. The subnet mask of the PC must be the same as the projector.

neral	
	l automatically if your network supports ed to ask your network administrator fo
Obtain an IP address autor	natically
Use the following IP address	£
IP address:	192.168.10.101
Subnet mask:	255.255.255.0
Default gateway:	· · · · ·
Obtain DNS server address	a formatically
Use the following DNS service	er addresses
Preferred DNS server	
Alternate DNS server:	
	Advanced
	OK Cm

- The HOST ID or IP address (192.168.0.XXX) of the PC must be different from the projector IP address written down earlier.
- 4. Click "OK".

Note

5. Click "Close" to quit the setting screen.

Firmware Update Procedure

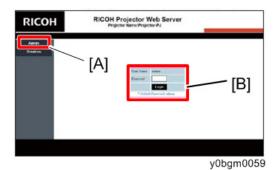
Updating the Network Firmware

1. Open the web browser and visit "http://192.168.0.100".

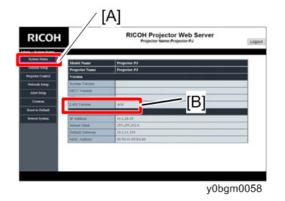
The LAN control top page appears.

2. Choose "Admin" on the left of the page [A], and enter the password in the "Password "field [B].

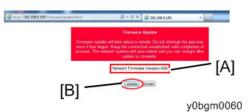
Logs into the LAN control page.



3. Choose "System States" on the left of the page [A] to check the LAN firmware version [B].



4. Visit "http://192.168.0.100/firmwareUpdate.htm". The page for LAN firmware update appears. 5. Check the latest firmware version [A], and click "Update"[B] if it is newer than the currently installed one.



6. Click "Browse".

Angelin 92.168.0.1007 - Microsoft Internet Capturer	
No Edit lines Favorites Tack maip	
Quel - O 🔄 🗟 😚 Part 👷 Frontes 🥝 🔂 - 🛬 🖼 😫	
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Upgende musi NOT be internated 1	



7. Select the network firmware file (*.bin) which you saved, and then click "Open".



- y058m5007
- 8. Click "Update" to start updating.

A progress bar appears while updating.

in Edit thee Paroles Task mag	
3 201 + () · () () () / Diana gerana () () - () () () ()	
daver Compignet Halland	₩ [] ∞
Upgrade Finnerare	
Please select a Na (- both to uppade - C Uncommon and Setting Forena)	
Санси	
Objectating formation man take 60 secondsh	

y058m5008

The following appears when the firmware update procedure is complete.

3 My 11172, 168,0,1005g/uggrade.tgl - Microsoft Internet Explorer	E81
Onto: - O - R R C Plant State	
View Constant Constan	
Please wait. Click on butten to proceed after 8 seconds.	
Petoje	
	y058m5009

Version Check after Updating

1. After finishing updating, click "ReLogin" to re-login to the LAN control page.



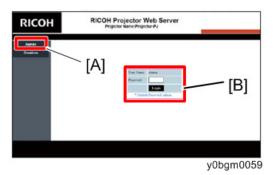
The LAN control top page appears.



• If "ReLogin" does not appear, or you cannot login after choosing "ReLogin", retry updating the LAN firmware.

2. Choose "Admin" on the left of the page [A], and enter the password in the "Password "field [B].

Logs into the LAN control page.

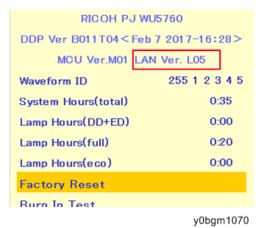


3. Choose "System States" on the left of the page [A] to check the LAN firmware version [B].

RICOH		RICOH Projector Web Server Projector Name:Projector-PJ	Logou
Aprile Sales	Madel Name	Projected PJ	
Cesara Selar	Projector Name	Projector PJ	
Projector Control	Ventes		
Network Simp	System Version		
Abet Setup	MCU Varsion		
Ombras	LAN Version	[B]	
Read to Default	-		
Robust System	IP Address	10.2.28.19	
	Subset Mail.	255.255.252.0	
	Definit Onterny	10.2.31.254	
	MAC Address	00.50.41.85.84.80	

Vote

 You can check the LAN firmware version via the service menu window (page 68 "Service Mode").



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