Service Manual

ViewSonic PJ402D

Model No. VS10400
Portable DLP Projector

Revision History

Revision	SM Editing Date	ECR Number	Description of Changes	Editor
1a	06/14/05		Initial Release	N. Huang

TABLE OF CONTENTS

1. Precautions and Safety Notices

1. When replacing the lamp, use care to avoid burns to your fingers. The lamp becomes very hot during operation.

2. Never touch the lamp with your fingers as body oil transferred to the lamp can damage the lamp's useful life.

3. Never drop the lamp or jar it in any manner. This may cause the lamp to burst.

4. This projector is provided with a high voltage circuit for the lamp. Do not touch any electric part or component after the projector has been turned on and is operating. Doing so could induce a severe shock causing injury or death.

5. Do not touch the exhaust fan, nor block its air flow, during operation, as the fan is hot.

6. The LCD module assembly can be easily damaged during service. If replacing the LCD Lens/Prism assembly, do not hold the FPC of the LCD module assembly.

7. Use only the cables which are included with the projector, or are specified in this manual.

2. System Introduction

Technical Specification

Item	Description
Display Type	Single Panel 0.55" DLP Projector
Lamp Type	NUP 200W
Brightness	1500 Lumen (typical)
Contrast Ratio	1500 : 1(Full on/off)
Resolution(Pixels)	800 x 600(480,000 dot x 1)
Uniformity	80 % (typical)
Optical Compensation	Light Tunnel
Focal Length	20.2 ~ 24.2 mm
Screen Size	30~200 inches
Throw Distance	1.2 ~ 10 Meter
Projection Type	Front, Rear, Ceiling
Compatibility	"Horizontal frequency (31~79KHz")
	"Vertical frequency (50~85Hz")
	Pixel Rate 108 MHz
Keystone Correction	Vertical: +/-15
Audio System	2W x 1
Aspect Ratio	1:1 , 16:9 , 4:3
Video Input	PAL , NTSC , SECAM
Input Source	Computer , HDTV , S-Video , Video
Analog RGB (Input Signal)	D-Sub Connector

Item	Description
Operation Humidity	35~85%
Other Key Feature	3:2 Pull Down
	Progressive Scan
	Blank
	Auto Source Detection
	Freeze
	Auto Tracking/Sync.
	Plastic Body
Sound Noise	34dBA
Power Requirement	100~240v, 50~60Hz
Dimension(W x D x H)	254 x 202 x 98 mm
Weight	2.0 KG (<4.5 lb)
Remote Mouse	Multifunctional
OSD Language	Chinesec, Chinese, English, French, German,Spanish, Italian, Portuguese, Russian, Japanese
Power Consumption	250 W
Operation Temperature	+5 ~ +35C
Certification	UL , CE , FCC Class B , VCCI , C-Tick , CCC
Power Supply	AC 100 - 240 V , 50 - 60 Hz

Lamp Specification

1.Product Scope

The product is a lamp system consisting of a short arc burner within a reflector, and an electric lamp driver.

Lamp type	P-VIP 200/1.0 E 17.5	
	identcode	A390 425 0004
Driver type	PT VIP 3AC/380 O3	
	identcode	A392 891 0027

2. Product Specifications : P-VIP 200/1.0 E 17.5 lamp

2.1 Dimensions and weight

Lamp	see lamp drawing
Reflector type	elliptical
Cable and connector	on request
Lamp weight	< 70g

2.2 Marking on the lamp

Position of marking	On ceramic cap on the backside of reflector
Manufacturer	OSRAM
Type no.	P-VIP 200/1.0 E 17.5
Country of origin	Germany

2.3 Operating and measurement conditions

Ballast type	Test conditions stable at 200W with OSRAM PT VIP 3 AC/380 O3 ballast
Rated lamp wattage	200W
Burner position	0 degree to +20 degree (0 degree optical axis horizontal)
Burning position	horizontal

2.4 Temperature

Lamp burner Mo foil , back	< 350 degree C
Lamp burner Mo wire	< 350 degree C
Lamp burner Mo foil, front	< 350 degree C
Burner bulb (top) temperature	860 degree C - 960 degree C (measured with pyrometer)

Validation of max. permissible temperatures by reference thermocouple measurement based on a referece lamp housing .

2.5 Rise time

Rise time to 80% of the stabilized luminous output is < 90% sec .
Extensive cooling of the bulb during lamp run-up phase has to be avoided .

2.6 Hot restrike

If the unit has been off for more than 60 sec. the lamp must restrike .
(Ignition voltage 5kV +/- 3kV)

2.7 Light output

Ballast type	Test conditions on electronic power supply OSRAM PT VIP 3 AC/380 o3 stable at 200W
Stabilization time	5 min.
Luminous flux (initial values)	typ. : 6300 lm @ 5.0 x 3.8 mm rect. aperture min. : 5800 lm @ 5.0 x 3.8 mm rect. aperture
Color coordinates	typ. x : 0.290 +/- 0.020 typ. y : 0.290 +/- 0.020

2.8 Lamp drawing
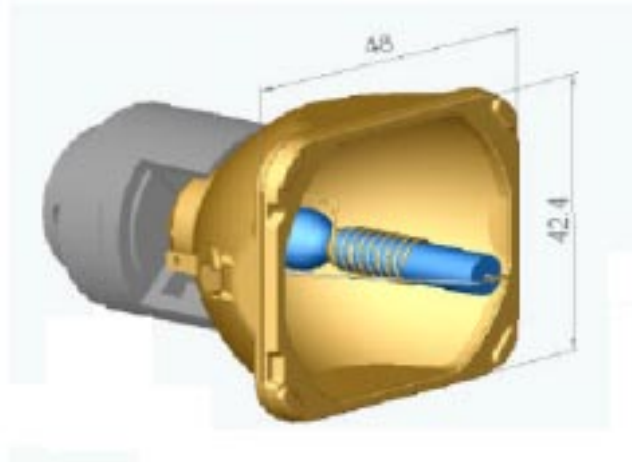
2.9 Instructions for use

1. The lamp becomes high temperature after turning off the projector with the power button. If you touch the lamp, you may scald your finger. When you replace the lamp, wait for at least 45 minutes for the lamp to cool down.

2. Do not touch the lamp glass at any time. The lamp may explode due to improper handling, including the touching of the lamp glass.

3. Lamp lifetime may differ from lamp to lamp and according to the environment of use. There is no guarantee of the same lifetime for each lamp. Some lamps may fail or terminate their lifetime in a shorter period of time than other similar lamps.

4. A lamp may explode as a result of vibration, shock or degradation as a result of hours of use as its lifetime draws to an end. Risk of explosion may differ according to the environment or conditions in which the projector and lamp are being used.

5. Wear protective gloves and eyeglasses when fixing or detaching the lamp.

6. Faster on-off-cycles will damage the lamp and reduce lamp life. Wait at least for 5 minutes to turn off the projector after powering on.

7. Do not operate the lamp in proximity to paper, cloth, or other combustible material nor cover it with such materials. Otherwise it could cause a fire.

8. Do not operate the lamp in an atmosphere containing an inflammable substance, such as thinner. Otherwise it could cause a fire or explosion.

9. Thoroughly ventilate the area or the room when operating the lamp in an oxygen atmosphere (in the air). If ozone is inhaled, it could cause headaches, nausea, dizziness, etc.

10. The inorganic mercury is involved in the lamp. If the lamp bursts, the mercury inside the lamp will go out of the projector. Leave the area immediately if the lamp shatters while being operated and ventilate the area for at least 30 minutes in order to avoid the inhalation of mercury fumes. Otherwise it could be harmful to user's health.

11. Dispose of the used lamp according to local regulations.

12. Ensure that screws are tightened properly. Screws not tightened fully may result in injury or accidents.

13. Since the lamp is made of glass, do not drop the unit and do not scratch the glass.

14. Do not reuse the old lamp. This could cause the lamp to explode.

15. Be sure to turn off the projector and unplug the AC power cord before replacing the lamp.

16. Do not use the projector with the lamp cover removed.

Disposal : For disposal of spent lamps, always consult federal, state, local and provincial hazardous waste disposal rules and regulations to ensure proper disposal.

Caution : This lamp emits ultra violet (UV) radiation and operates at high pressure.
This lamp may only be used in enclosed fixtures that comply with UL1572.
Due to the high luminous efficacy, the UV radiation which the lamp emits and the high pressure within the lamp, P-VIPâ lamps may only be operated within enclosed, purpose-built housings.

System Block Diagram
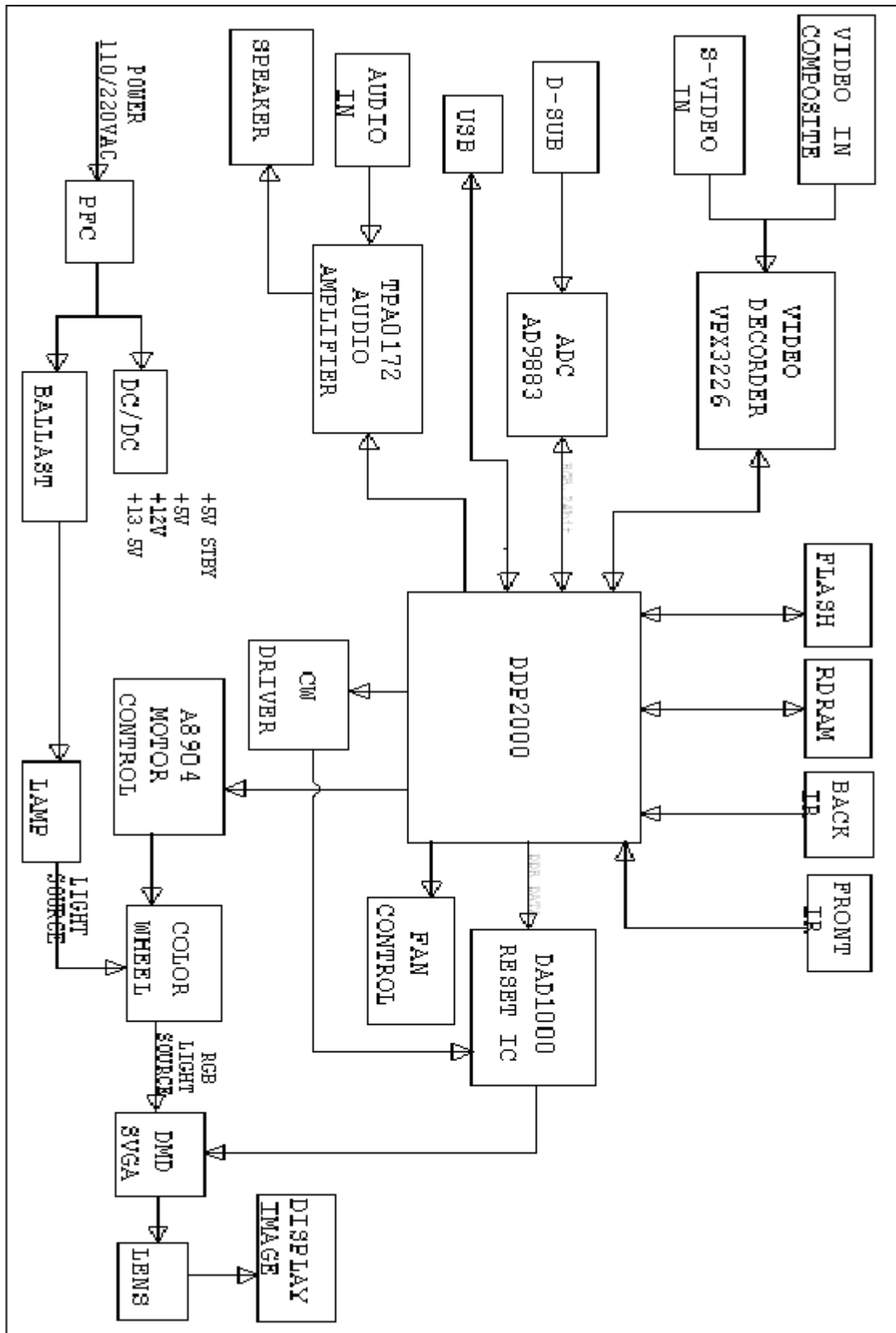
Optics-Conceptual Drawing

P1635-603
Heatsink

P1647-1000
DMD PCB

P1636-701
DMD (0.55 inch)

P1647-1000
Aspherical
Lens-C2

89136-402

P1636-763
Mirror

P1646-6100
Lens Assembly

89136-400
Aspherical
Lens-C1

P1636-762
Light Tunnel

P1636-771
Color Wheel

P1634-201
Lamp Housing

P1647-3000
Thermal PCB

P1636-711
NEC E17.5 Lamp

P1643-0020
FAN
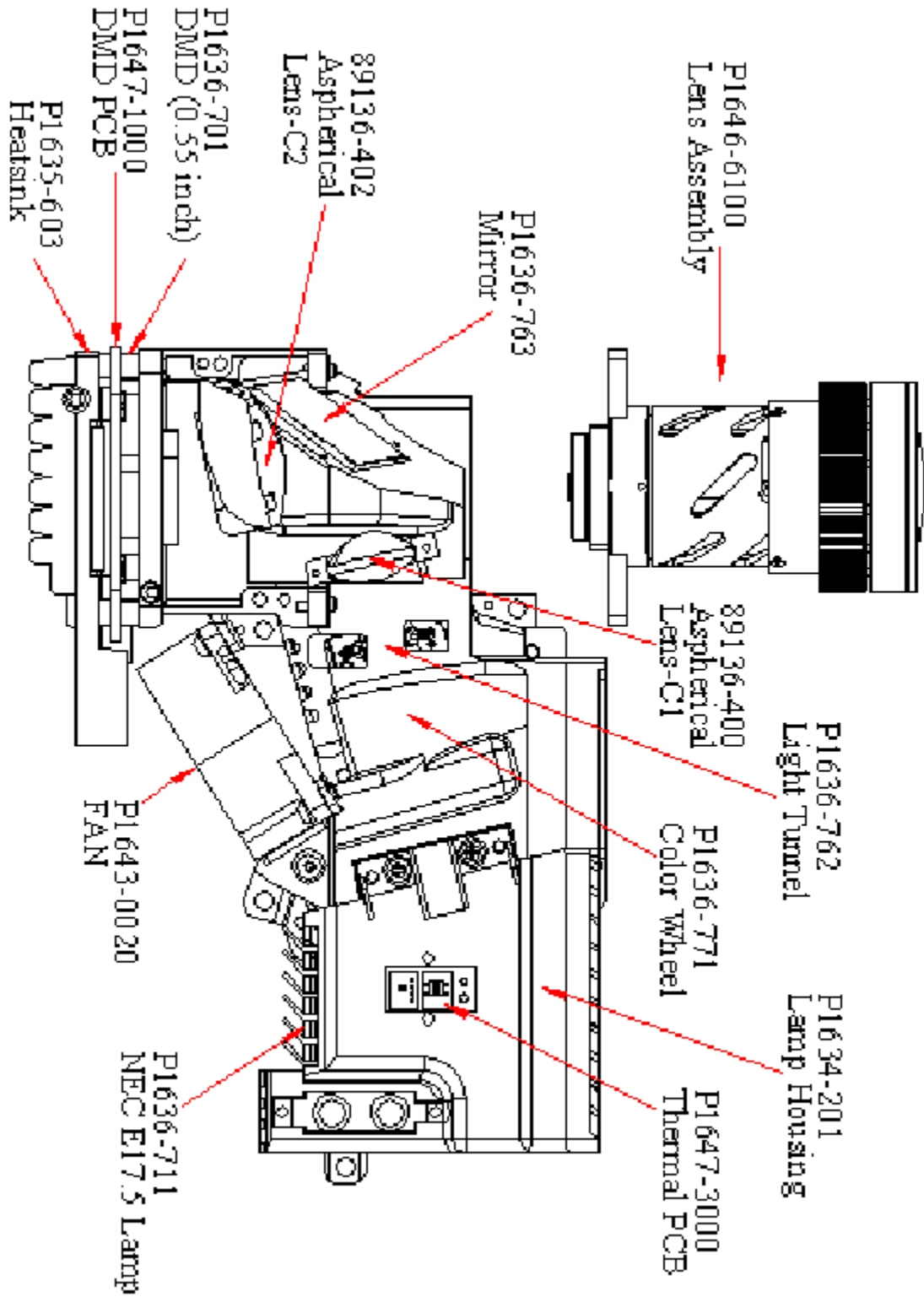
3. Firmware Upgrade

This chapter provides the equipment needed, setup and upgrading procedure for Firmware upgrade.

Setup Tool / Equipment

1. Computer
2. USB Cable (see right picture)
3. Power Coard

Upgrading Procedure

1. Connect Download Cable to projector
2. Open burning programma (DLP Composer Lite)
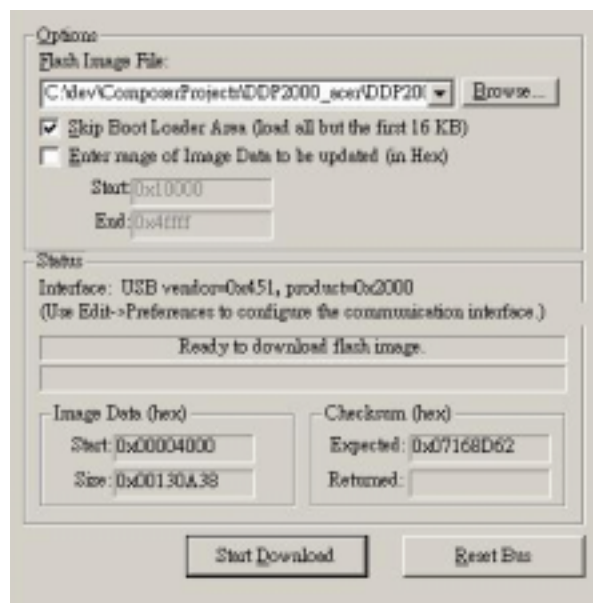
3. Press Power and Menu button together and connect the power cord into the projector . Than release these 2 bottoms .

4. Click the **Start Download** button and then start to burning of program .
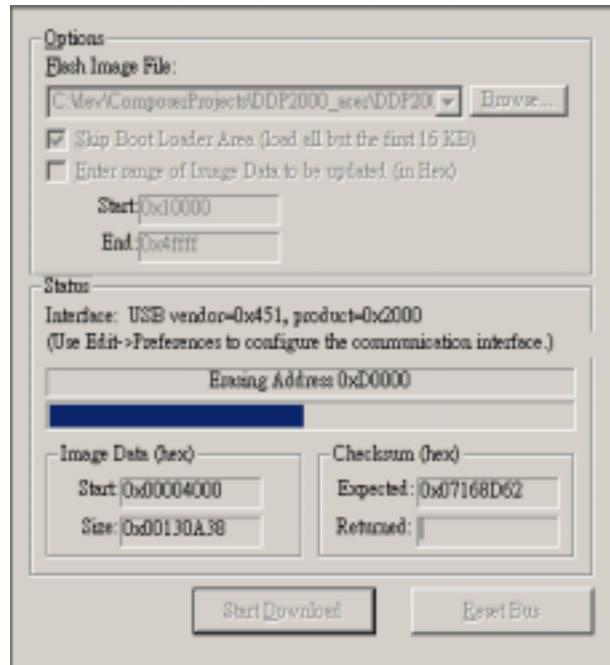
5. Completion of Burning than remove Power Cord and Burning Cord .
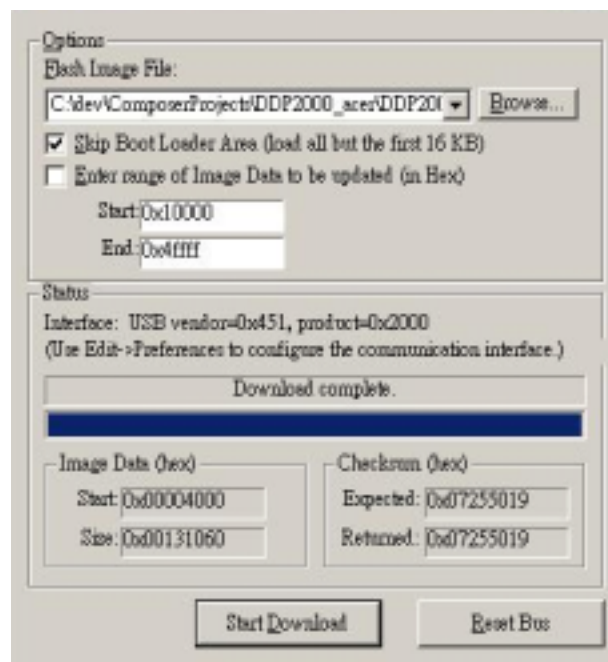
4. Machine Disassembly and Replacement

This section provides disassembly procedures for PD-S600 DLP Projector. Before you begin any of these procedures, be sure to turn off the power, computer system, and other attached devices; then disconnect the power cable from the electronically outlet. Moreover, when you disassemble the projector, be sure to put the screws in a safe place and separate them according to grouping.

Tool Needed

Item	PHOTO
Long Nose Nipper	
Hex Sleeves 5mm	
Screw Bit (+) : 107 Screw Bit (+) : 101 Screw Bit (+) : 102	

General Information

Before You Begin

Before proceeding with the disassembly procedure, make sure that you do the following:

1. Turn off the power to the system and all peripherals.
2. Unplug the AC adapter and all power and signal cables from the system.
3. Wear Anti-static wrist strap.

Disassemble Lamp Module

Note:Unplug all the cord before disaddembling the Projector.

1.   Loosen two screws of Lamp Cover
2.   Remove Lamp Cover
3.   Loosen two screws of Lamp Module .
4.   Grasp the lamp handle and pull out Lamp Module

p.s Related notice of replace lamp pls refer to the **Lamp Specification section** .

01635-366 *2

P1643-0013
Lamp Cover Assembly

01635-366 *2

P1643-0014
Lamp Assembly
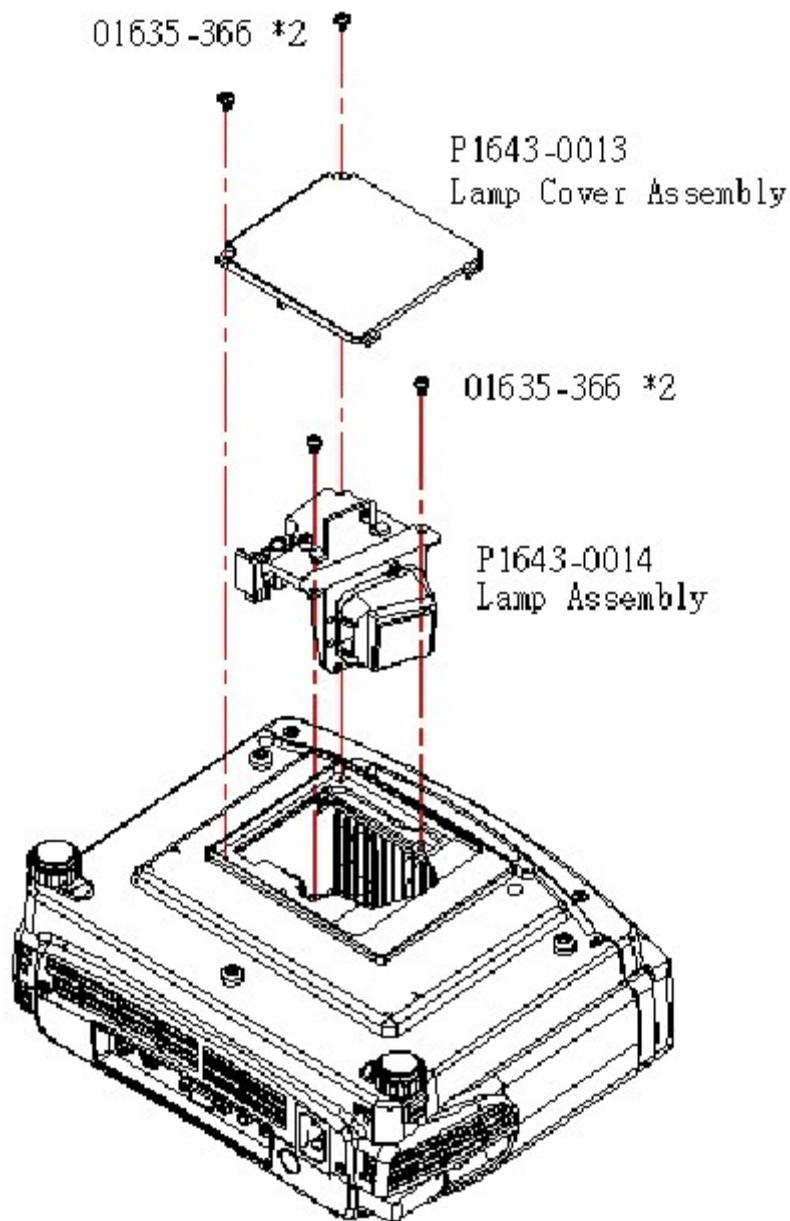
Disassemble FroŠ Top Cover

1. Turn over the Projector.
2. Remove four 4 screws of bottom cover.
3. Remove the front cover set.

01635-C98-N *2   01635-367 *2

P1634-452-99

P1634-458-99

P1634-461-99
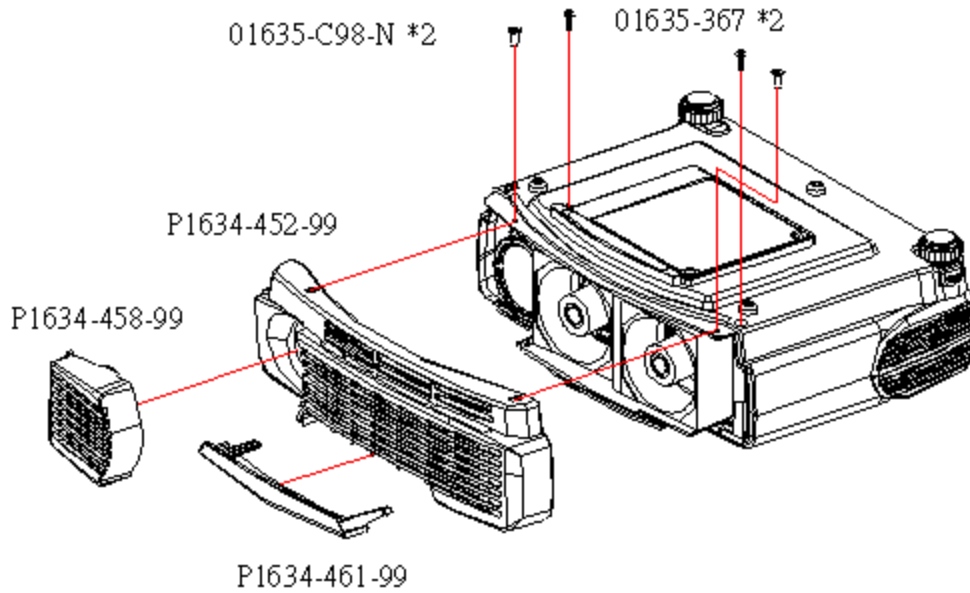
1. Remove the 4 screws of back cover.
2. Life up top cover directly (Be careful there is a internal wire connect with the main board)

P1643-0003

01635-B77 *2

01635-C98-N *2
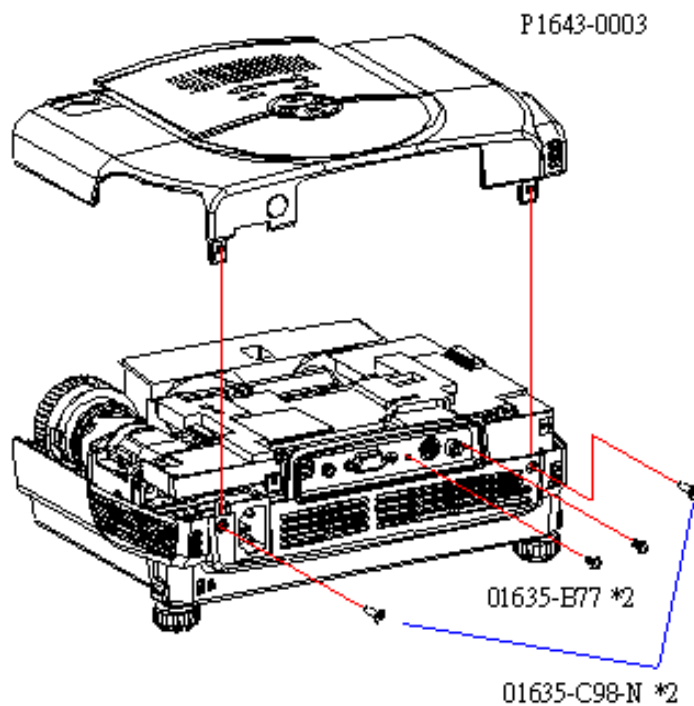
Disassemble Key Pad , Speaker & Front IR Board

1.   Remove the all screws of top cover.
2.   Life up all components include key pad , speaker , front IR board .

02595-0014-00

01635-361 *7
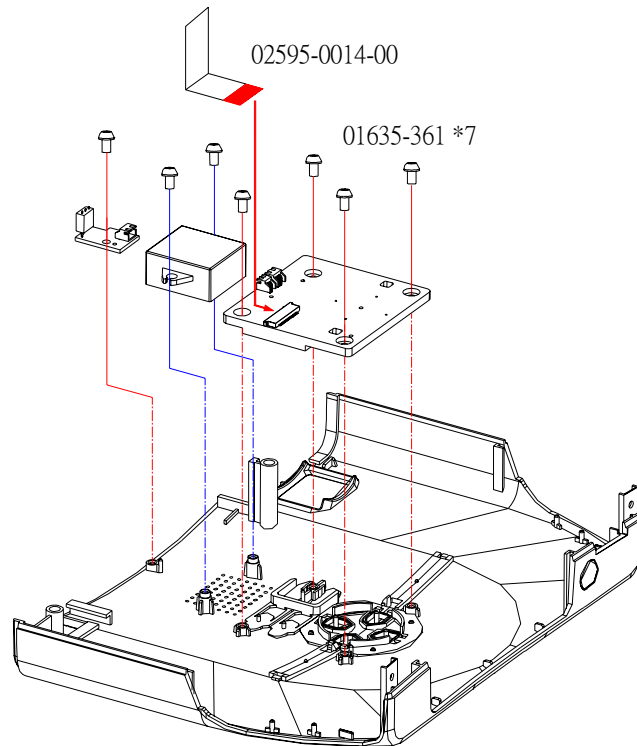
Disassemble Front Fan

1.   Then life up the fan set directly .

P1643-0021
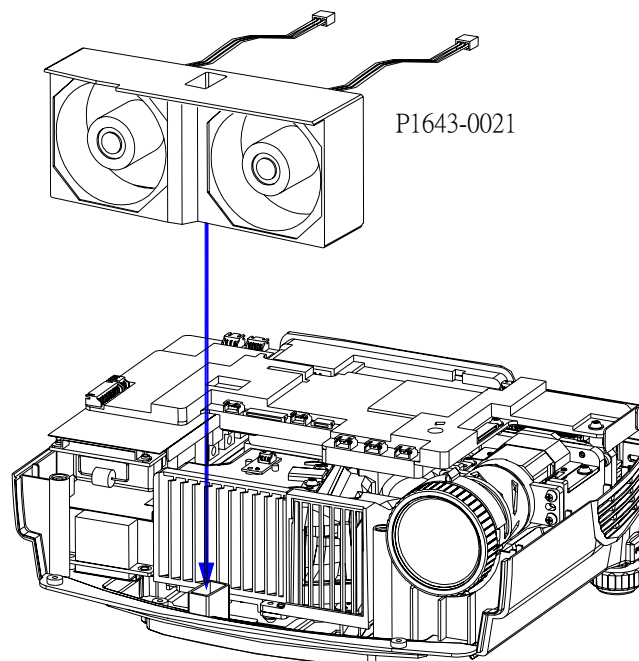
Disassemble Main Board

1. Remove the five screws of main board .
2. Unplug all wires on the board (Main Board PIN location of connectors pls refer to Chapter 5)
3. Remove the Main Board.

01635-366 *4

P1647-0001

01635-366

P1635-056
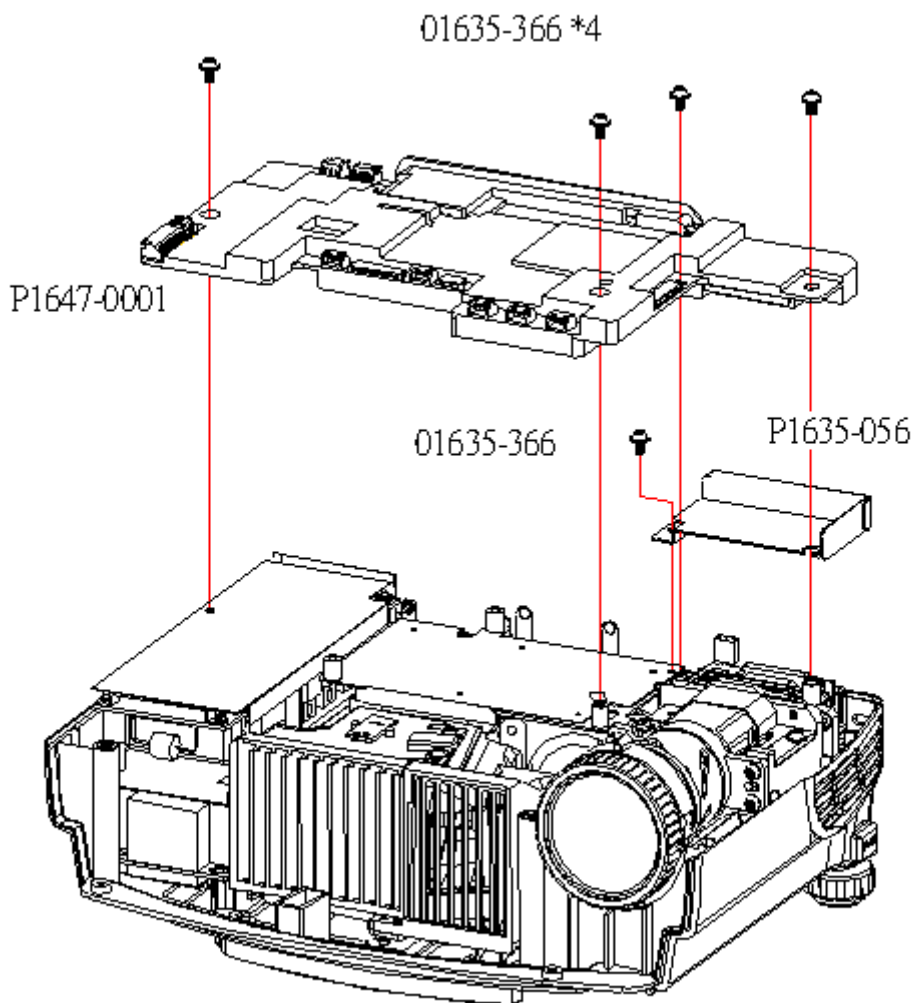
Disassemble IO Cover and Video Baord

1. Unscrew two screws of the IO cover.
2. Separate all parts individually .

P1647-0001

P1634-465-99

Video Board

82035-251 *2

P1635-451-99
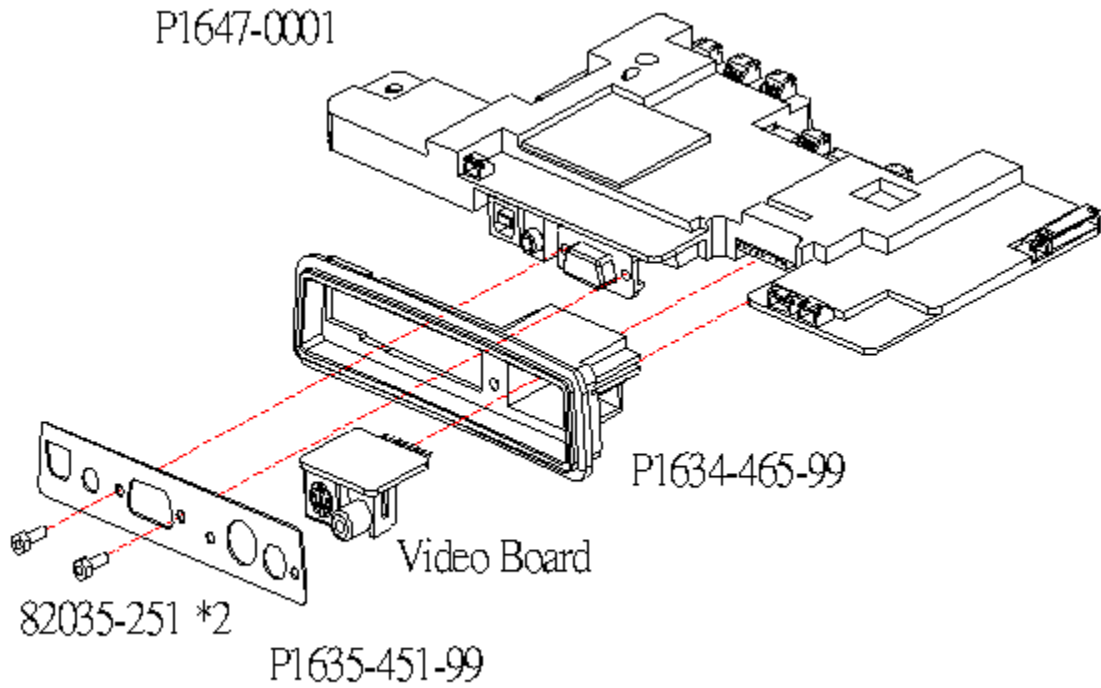
Disassemble Ballast Module

1. Unplug all wires on Ballast Module (Ballast Board PIN location of connectors pls refer to Chapter 5)
2. Unscrew four screws on Ballast Module.
3. Remove the Ballast Module.

01635-361 *2

01635-366 *2

P1643-0016

Unscrew than life up the IR board

01635-A44-N *4

P1647-9000

P1638-152

P1635-055
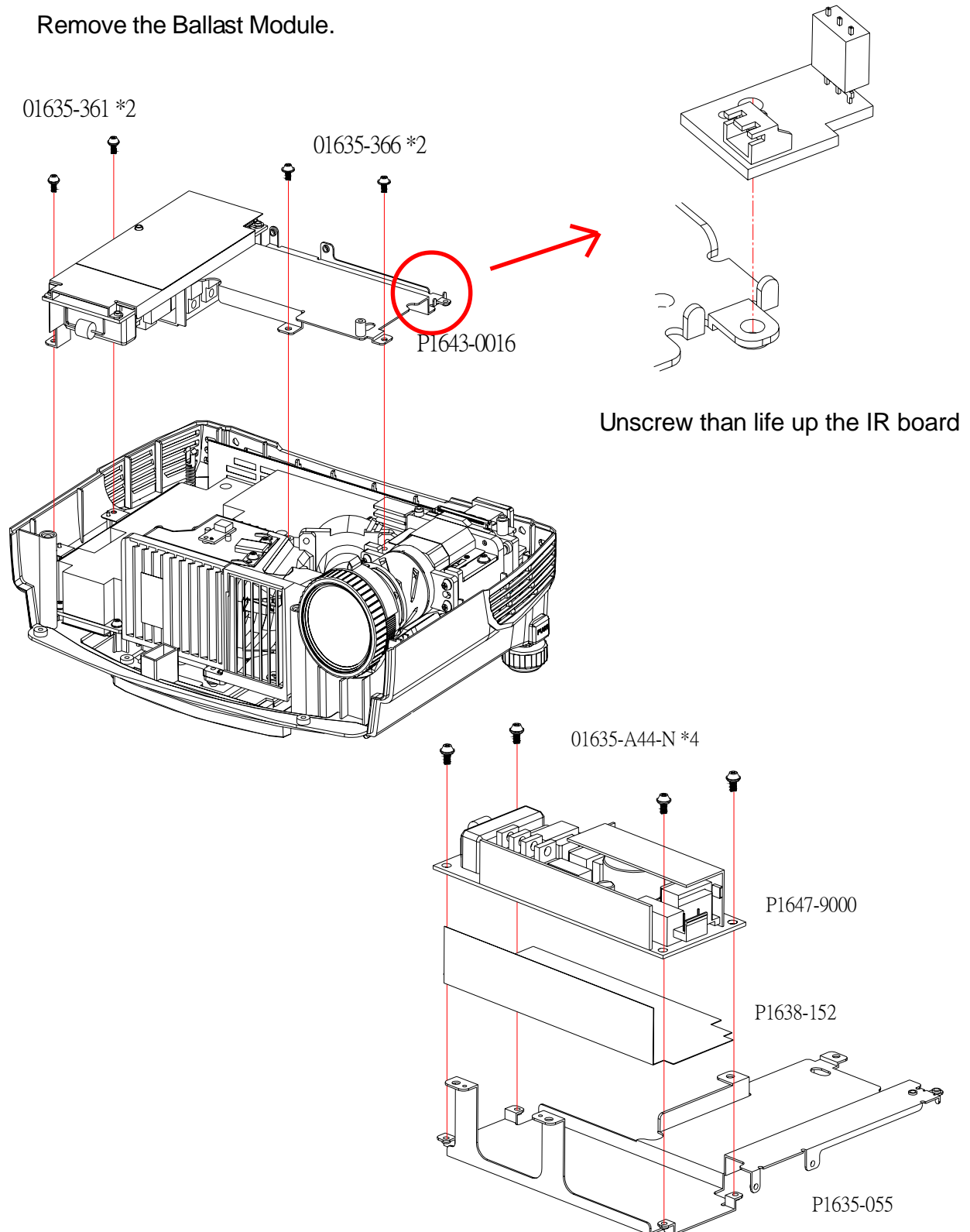
Disassemble Optical Engine

1. Unplug the wire inside.
2.. Unscrew four screws on Optical Engine.
3. Then remove the Engine Module.
4. Be careful don't let the Engine go down due to the heavy machine.

01635-A01 *4

P1643-0002

P1635-600

P1638-102
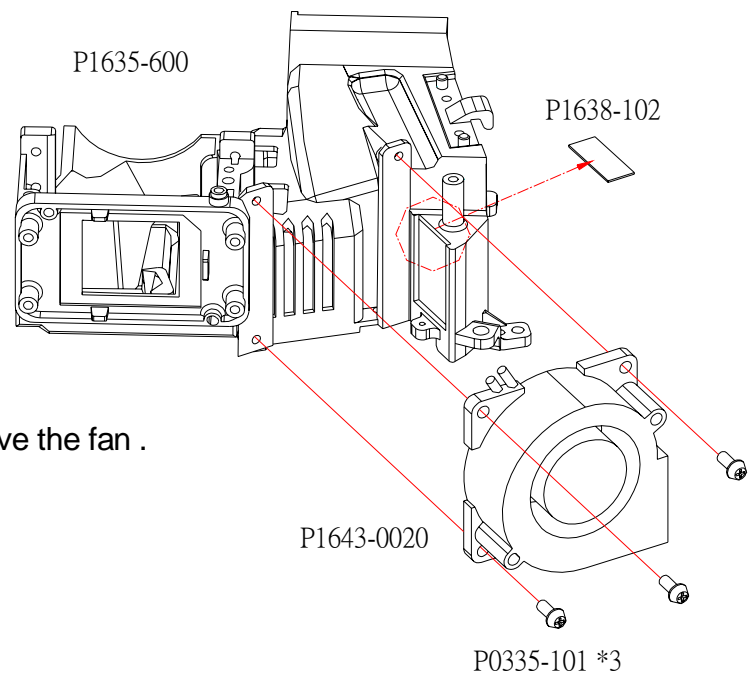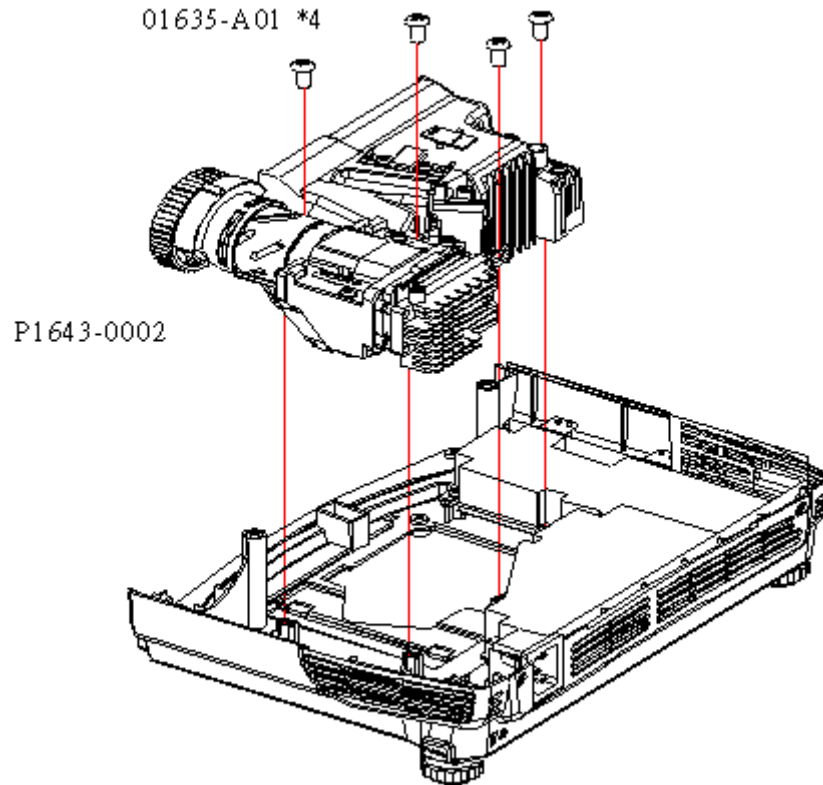
Unscrew three screws than remove the fan .

P1643-0020

P0335-101 *3

Disassemble Power Outlet Set

1. Remove the screw from the bottom of power wires and unplug the connector.
2. Then lift up the power outlet set.

02595-0028-00

01635-A08

01635-705
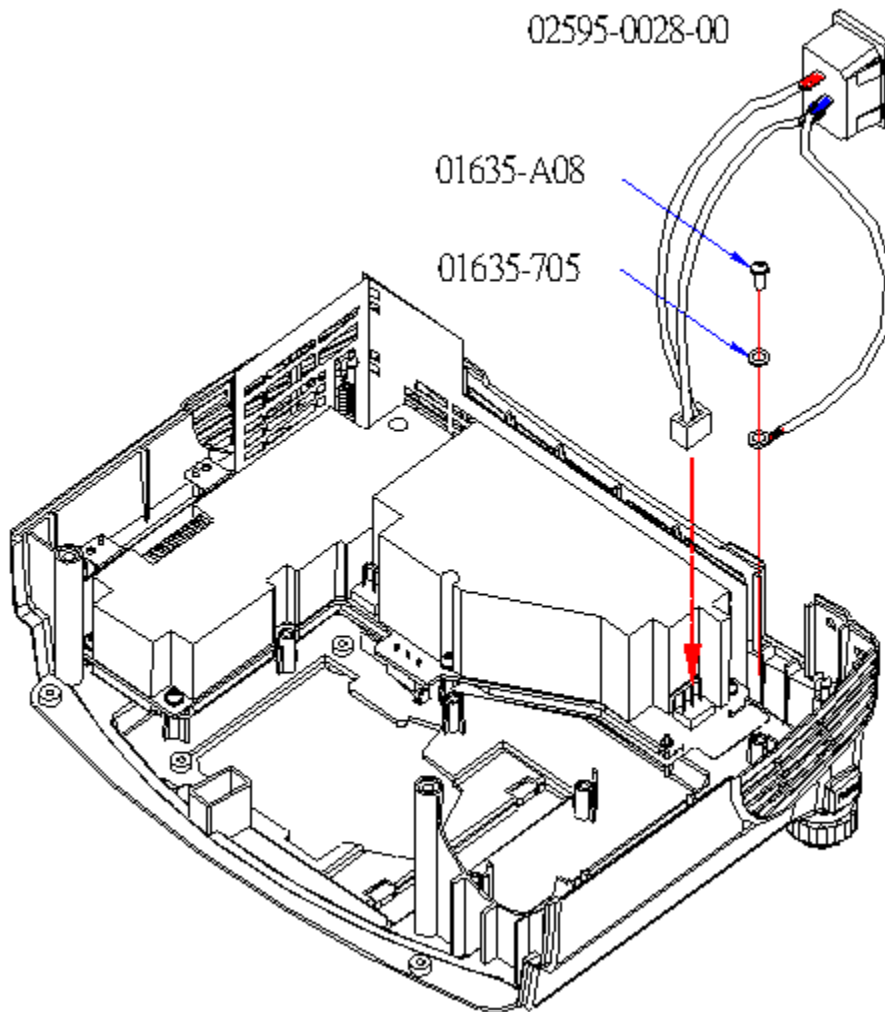
Disassemble Power Board

1.   Unplug all the wires on the board (Power Board PIN location of connectors pls refer to Chapter 5)
2.   Unscrew five screws on Power Board.
3.   Then remove Power Board.

01635-361 *5

P1647-8001
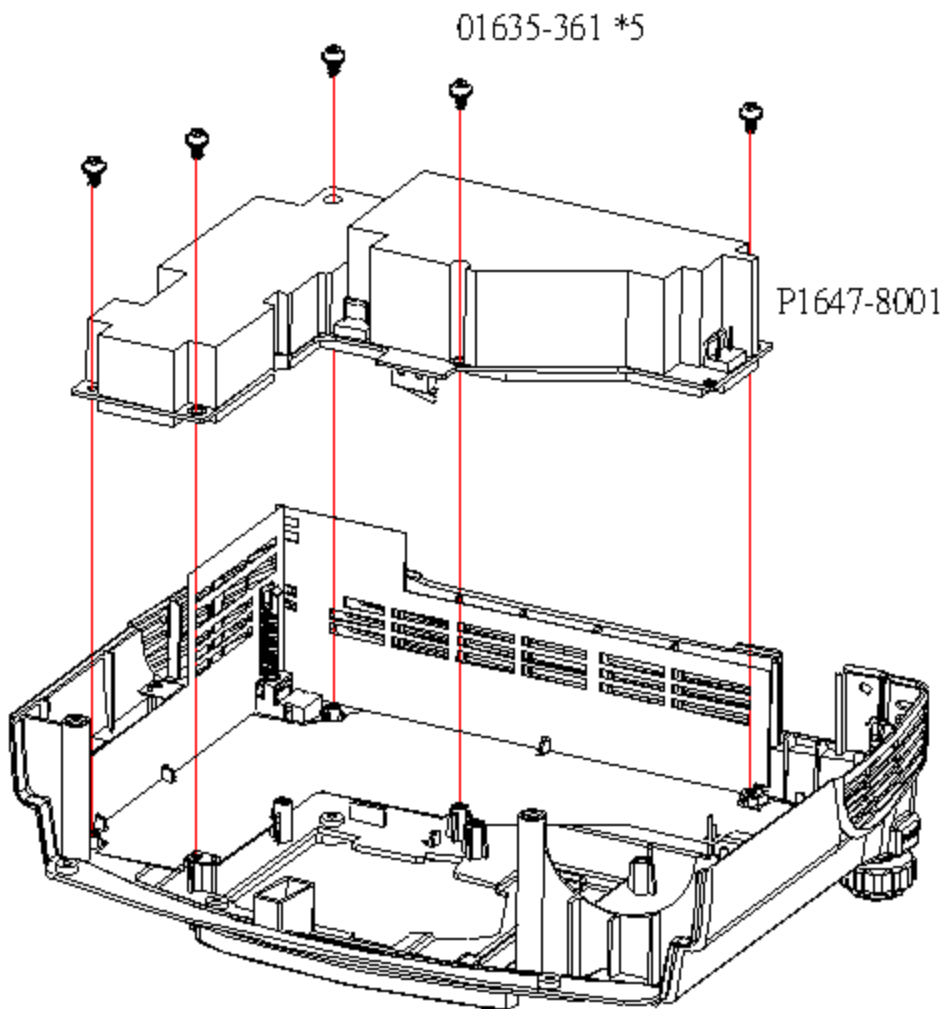
Disassemble Foot Screw Assembly

1. Push buttom let foot screw assembly fall off.
2. Use nipper or tweezers carfully to press the head of foot screw .
3. Then foot screw assembly drop out by itself .

P1643-0012 *2

P1634-464-99 *2

82134-465

82135-351

82134-464-99

P1634-466
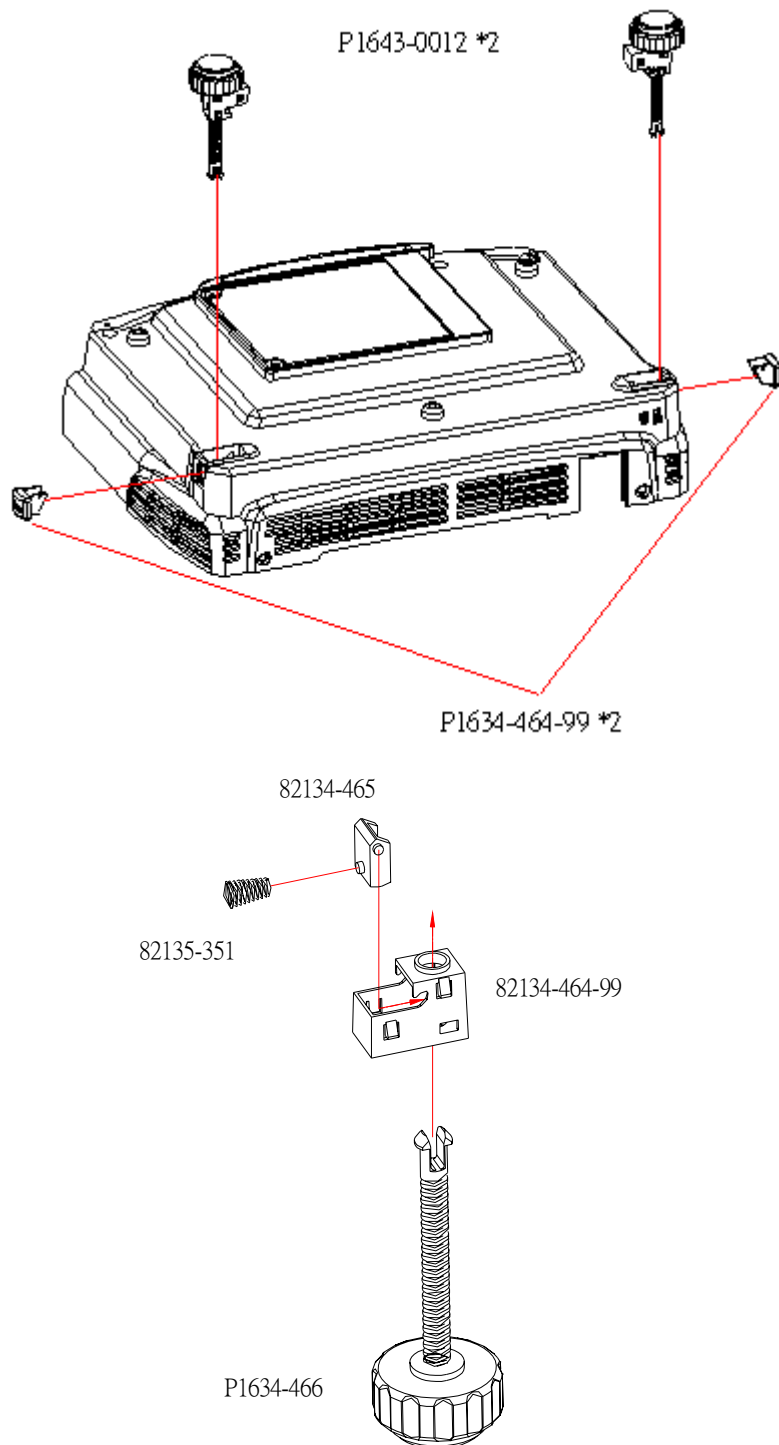
Exploded overview

Ballast exploded overview

P1643-0003

01635-C98-N

01635-B77×2

82035-251

Video Board

01635-366×4

P1634-465-99

P1635-451-99

P1647-0001

P163B-157

01635-361×2

01635-366×3

P1635-056

P1643-0016

01635-A01×4

P1643-0002

P1643-0021

01635-361×5

P1647-B001

02595-0028-00

P163B-156

P163B-150

P1634-458-99

82135-054

P1634-461-99

P1635-052

P1634-464-99×2

P1634-451-99

01635-C9B-N×2

P1634-452-99

P1634-455-99

01635-B77×2

01635-367×2

P1643-0012×2

P1634-050

PJ402D

5. Troubleshooting

This chapter provides technicians and people who have an electronic background a primary description about maintaining the product. Moreover, you can get the appropriate operation to solve some complicated problems of component repairing and professional problems.

The Troubleshooing section focus on below items:
1. Video Signal Troubleshooting
2. Operation Function Troubleshooing
3. Power Source Troubleshooting

Video Signal

Computer No Signal			Video No Signal		
Check Source	**NG** → Turn on Source		Check Source	**NG** → Turn on Source	
OK ↓			**OK** ↓		
Check Cable	**NG** → Replace Cable		Check Cable	**NG** → Replace Cable	
OK ↓			**OK** ↓		
Computer Mode Input	**NG** → Change to Computer Mode		Video Mode Input	**NG** → Change to Video Mode	
OK ↓			**OK** ↓		
Change Main Board			Change Main Board		

```
┌─────────────────┐
│ Fail to light up │
└─────────────────┘
         │
         ▼
    ╱◆╲                    ┌──────────────────┐
   Check      NG           │ Look up user     │
  LED indication ─────────▶│ manual ,and      │
    ╲◆╱                    │ follow indica-   │
                           │ tive action      │
                           └──────────────────┘
    OK │
       ▼
    ╱◆╲                    ┌──────────────────┐
   Check      NG           │ Replace  Lamp    │
   Lamp    ─────────▶      └──────────────────┘
    ╲◆╱
    OK │
       ▼
    ╱◆╲                    ┌──────────────────┐
   Check      NG           │ Replace Fan      │
   Fan     ─────────▶      └──────────────────┘
    ╲◆╱
    OK │
       ▼
    ╱◆╲                    ┌──────────────────┐
   Check                   │ Connect C/W      │
  C/W wire loose or  NG    │ cable completely │
     not    ─────────▶     └──────────────────┘
    ╲◆╱
    OK │
       ▼
    ╱◆╲                    ┌──────────────────┐
   Check      NG           │ Replace          │
   Ballast ─────────▶      │ Ballast          │
    ╲◆╱                    └──────────────────┘
    OK │
       ▼
    ╱◆╲                    ┌──────────────────┐
   Check      NG           │ Replace Main     │
  Main Board ────────▶     │ Board            │
    ╲◆╱                    └──────────────────┘
```

OK ↓

```
    ╱◆╲                    ┌──────────────────┐
   Check      NG           │ Replace Optical  │
  Optical Engine ────────▶ │ Engine           │
    ╲◆╱                    └──────────────────┘
```

No Volume

```
No Volume
   │
   ▼
Check source and mute function ──NG──▶ Input the correct source to Projector
   │ OK
   ▼
Check Top cover's cable ──NG──▶ Replace cable or connect the cable back
   │ OK
   ▼
Check Speaker Connector ──NG──▶ Speaker Connector Become loose
   │ OK
   ▼
Check Speaker ──NG──▶ Replace Speaker
   │ OK
   ▼
Check keypad ──NG──▶ Replace keypad
   │ OK
   ▼
Check Main Board ──NG──▶ Replace Main
```

Color Missing On Screen

```
Color Missing On Screen
   │
   ▼
Check Cable ──NG──▶ Replace Cable
   │ OK
   ▼
C/W Sensor Cable Connector ──NG──▶ Check C/W Sensor Cable Connector become loose or not
   │ OK
   ▼
Check Main Board ──NG──▶ Change Main Board
   │ OK
   ▼
Change Optical Engine
```

Operation Function:

```
┌─────────────────┐                              ┌─────────────────┐
│ Remote Control  │                              │ Button Failure  │
│ Failure         │                              │                 │
└─────────────────┘                              └─────────────────┘
        │                                                │
        ▼                                                ▼
     ╱Check╲          NG    ┌─────────────┐          ╱Check╲            NG    ┌──────────────────┐
    ╱Battery ╲ ───────────► │ Replace     │         ╱Top cover's╲ ───────────► │ Replace cable    │
    ╲ Level  ╱               │ Battery     │         ╲  cable    ╱               │ or connect the   │
     ╲     ╱                └─────────────┘          ╲     ╱                │ cable back       │
        │ OK                                            │ OK               └──────────────────┘
        ▼                                                ▼
     ╱Check╲          NG    ┌─────────────┐          ╱Check ╲           NG    ┌──────────────────┐
    ╱Remote ╲ ───────────► │ Replace Remote│        ╱Button  ╲ ───────────► │ Replace Button   │
    ╲Control ╱               │ Control     │         ╲       ╱               └──────────────────┘
     ╲     ╱                └─────────────┘          ╲     ╱
        │ OK                                            │ OK
        ▼                                                ▼
     ╱Check      ╲     NG   ┌─────────────┐          ╱Check ╲           NG    ┌──────────────────┐
    ╱IR Board or  ╲ ──────► │ Replace IR  │         ╱Keypad  ╲ ───────────► │ Replace Keypad   │
    ╲IR cable    ╱          │ Board or IR │         ╲       ╱               └──────────────────┘
     ╲         ╱            │ cable       │          ╲     ╱
        │ OK               └─────────────┘             │ OK
        ▼                                                ▼
     ╱Main  ╲                                       ┌──────────────────┐
    ╱Board   ╲                                      │ Replace          │
    ╲Fail    ╱                                      │ Main Board       │
     ╲     ╱                                        └──────────────────┘
```

PJ402D

Power Source:

Left flowchart: No Power Source

No Power Source After Turning On
↓
Check Power Cord — **NG** → Replace Power Cord
↓ **OK**
Check Lamp Cover Switch — **NG** → Replace Lamp Cover or Reassembly
↓ **OK**
Check Top Cover (keypad cable...) — **NG** → Replace keypad cable...
↓ **OK**
Check Power Board wire — **NG** → Replace Power Board wire
↓ **OK**
Check Main Board — **NG** → Replace Main Board
↓ **OK**
Check Power Board — **NG** → Replace Power Board

Right flowchart: Fan failure

Fan failure After Turning On
↓
Check Fan Connector — **NG** → Fan Connector Become loose
↓ **OK**
Check Inner Wires — **NG** → Replace Inner Wires
↓ **OK**
Check Fan — **NG** → Replace Fan
↓ **OK**
Check Main Board — **NG** → Replace Main Board
↓ **OK**
Replace Power Baord

Function Test and Alignment

Equipment Needed

Item	Description
1	PC with SVGA resolution (Color Video Signal & Pattern Generator)
2	Remote Controller
3	Test Cable
4	Power Cord
5	DVD Player

Test Condition

| Item	Description
1	Circumstance Brightness : Dark room less than 60 lux
2	Inspection Distance : 1.8m
3	Screen Size : 60 inches diagonal (wide)
4	Before function test and alignment, each PD-S600 should be run-in and warmed-up for at least 5 minutes with following conditions. 1.) In room temperature 2.) With cycled display colors (R,G,B,White) 3.) With cycled display modes 640 x 350 (H=31.5 KHz, V=70 Hz) 640 x 400 (H=31.5 KHz, V=70 Hz) 640 x 480 (H=37.5 KHz, V=75 Hz) 720 x 400 (H=31.5 KHz, V=70 Hz) 800 x 600 (H=53.7 KHz, V=85 Hz) 800 x 600 (H=37.9 KHz, V=60 Hz) 1024 x 768 (H=48.4 KHz, V=60 Hz) 1024 x 768 (H=68.7 KHz, V=85 Hz)
5	Test Display Mode and Pattern

Test Display Modes and Patterns

Compatible Modes

Preset Signal	Sync	Resolution	fV(Hz)	fH(Hz)	Size
VGA	H(+), V(-)	640 x 800	59.94	31.469	800
			72.809	37.861	832
			75	37.5	840
			85.008	43.269	832
SVGA	H(-), V(+)	800 x 600	56.25	35.156	1024
			60.317	37.879	1056
			72.188	48.077	1040
			75	46.875	1056
			85.061	53.674	1048
XGA	H(-), V(-)	1024 x 768	60.004	48.363	1344
			70.069	56.476	1328
			75.029	60.023	1312
			84.997	68.677	1376
SXGA	H(+), V(+)	1152 x 864	70.016	63.995	1472
	H(-), V(-)		75	67.5	1600
	H(-), V(-)		85.057	77.487	1568
SXGA	H(+), V(+)	1280 x 960	60	60	1800
	H(+), V(+)		75	75	1680
SXGA	H(+), V(+)	1280 x 1024	60.02	63.981	1688

PJ402D

Function Test Display Pattern

Item	Test Content	Pattern	Specification	Remark
1	Noise check up	12 squares	(1).Select the "12 squares" BMP file to check if there is any noises during the stage of turning on, and warming up the projector.	Figure 1
		12 squares	(2). The noises appear on the square should be less than three squares.	Figure 1
		800 flicker	(3).Select the " 800 flicker" BMP file. Make sure teach word on the projected image doesn not flicker.	Figure 2
2	Dust check up	Full Black	(1) Select the " Full Black" BMP file to project the image on the screen .Stand 1.8 meters from it and ensure there are no stains .	Figure 3
3	Dust check up	Full White	(1) Select the " Full White" BMP file to project the image on the screen .Stand 1.8 meters from it and ensure there are no stains .	Figure 4
4	Resolution check up	Black and White Word	(1) Select the " black and white word" BMP file. Use the projector to adjust the projected image to the maximum size and minimum size and make sure each word is distinguishable under both conditions.	Figure 5
5	RGB color check up	256RGB	(1) Select the "256RGB" BMP file to check if the color ladder of the image matches the color ladder of the file.	Figure 6
6	Dust check up	Full Gray	(1) Select the " Full Gray " BMP file to project the image on the screen .Stand 1.8 meters from it and ensure there are no stains .	Figure 7
7	Light leakage check up	Boundary Frame	(1) Click on the folder, select the " Boundary Frame " BMP file, press the AUTO button on the projector, check if the lines and colors of the projected image are clear as presented on the BMP file .	Figure 8

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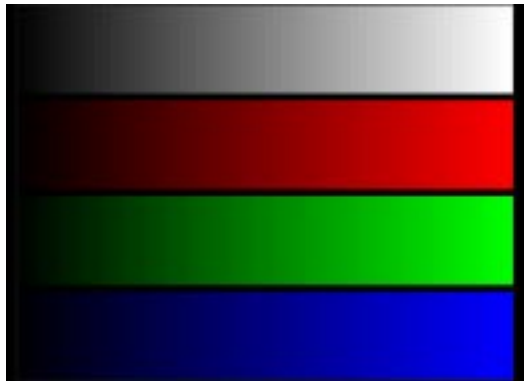
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PJ402D
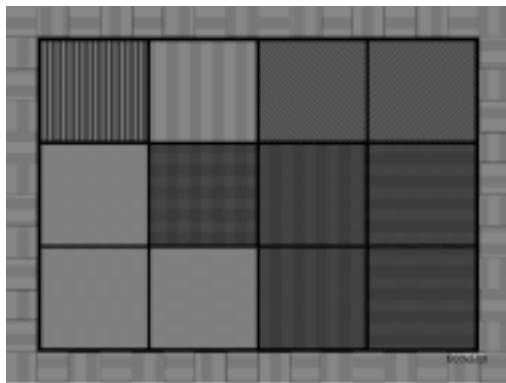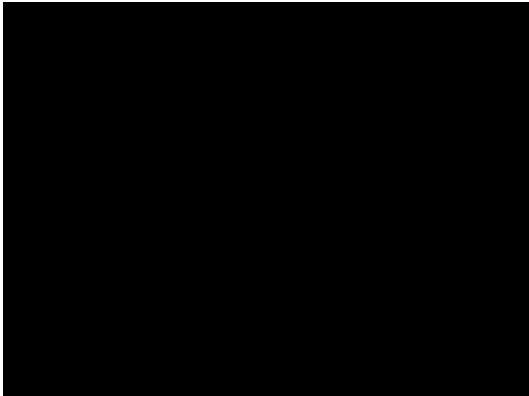
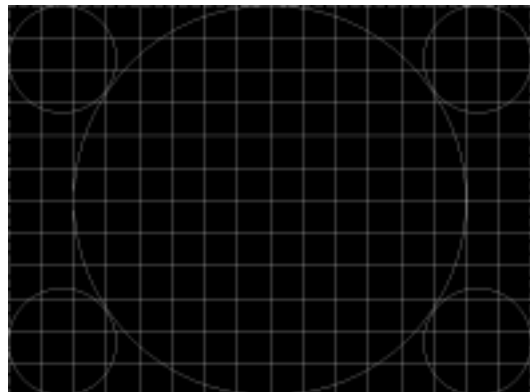Full Black Pattern (Figure 3)

Full White Pattern (Figure 4)

Black and White Word Pattern (Figure 5)

256RGB Pattern (Figure 6)

Gray Pattern (Figure 7)

Boundary Frame (Figure 8)

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PJ402D

6. Connector Information

Introduction

This section provides each connector location on boards, signal and function of each board. They will be useful for your detecting the defective boards.

Main Board

Summarize

Connector	Description
CN1	IR
CN2	Keypad control
CN3	Fan
CN4	Fan
CN5	Fan
CN6	Fan
CN7	IR
J1	Ballast control
J2	Thermal
J3	Vidio & S-Video in
J5	DMD connector
J7	Phone jack stereo-R
J8	Color wheel
J9	Power in
J15	Vidio & S-Video in
JP1	USB
JP3	CW index
JP4	Firmware debug
JP5	Standby run
CON1	D-SUB
CON2	Video
CON3	S-video

The Locations of Connectors
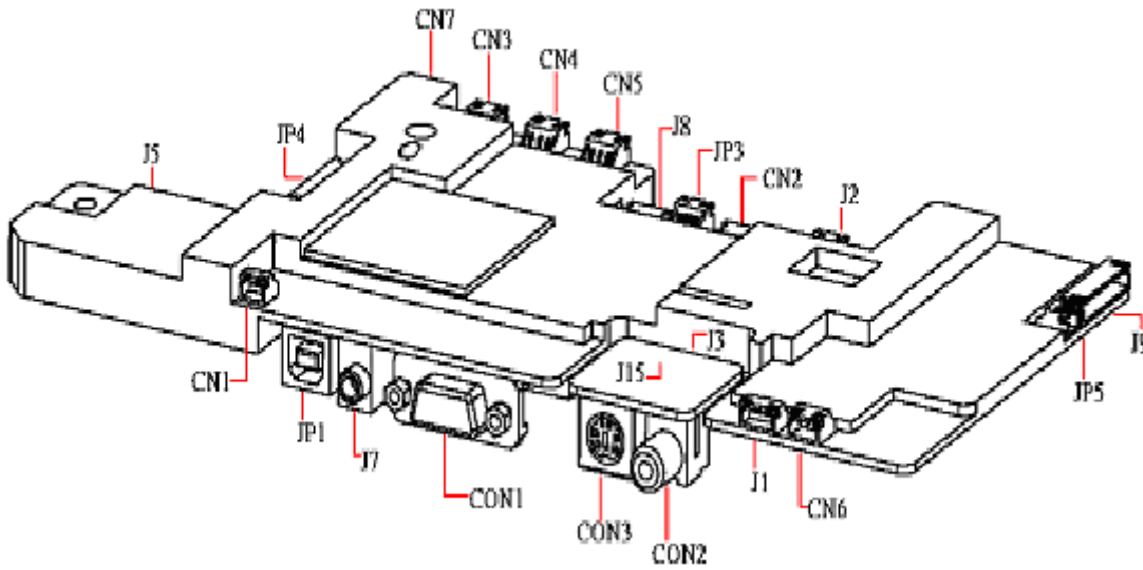
CN1 , CN7 : IR

PIN #	Description
1	IR 0
2	GND
3	+3.3 V

CN3 , CN4 , Cn5 : FAN

PIN #	Description
1	PWM
2	Control
3	GND

J1 :Ballast Control

PIN #	Description
1	12V_S1
2	FAN_FB3
3	GND_PWM3

CN2 : Keypad Control

PIN#	Description
1	GND
2	GND
3	SP_R+
4	SP_R+
5	SP_R-
6	SP_R-
7	SP_L+
8	SP_L+
9	SP_L-
10	SP_L-
11	Keypad_PWR
12	Keypad_Menu
13	Keypad_Up
14	Keypad_Down
15	Keypad_Left
16	Keypad_Right
17	GND
18	GND
19	Power_LED
20	LED_SYS2
21	LED_Lamp1
22	LED_Lamp2
23	P3P3V_STBY_PWR
24	P3P3V_STBY_PWR
25	P3P3V_STBY_PWR
26	Key_Source
27	IR 1
28	Key_Auto

J2 :Thermal

PIN #	Description
1	+ 3.3 V
2	SCL
3	SDA
4	GND

J3 , J15 : Video & S-Videop IN

PIN #	Description
1	COMPVID
2	AGND
3	SVID _LUM
4	AGND
5	SVID _CHR
6	GND
7	+ 3.3 V
8	+ 3.3 V

CON2 : Video

PIN #	Description
1	CVBS
2	AGND

CON3 : S-Video

PIN #	Description
1	AGND
2	AGND
3	SVDOY
4	SVDOC

CON1 : D_SUB

P IN #	Description
1	V- Red
2	V-Green
3	V-Blue
4	N C
5	A GN D
6	A GN D
7	A GN D
8	A GN D
9	+5V
10	DSUB_Detect
11	A GN D
12	V SDA
13	H-Sync
14	V-Sync
15	V SCL

J7 : Phone jack Stereo-R

P IN #	Description
1	G N D
2	A IN C _ L
3	N C
4	A IN C _ R
5	N C

J8 : Color Wheel

P IN #	Description
1	C W C T R
2	C W Y3
3	C W Y2
4	C W Y1

J9 : Power Supply

PIN #	Description
1	+5V_STBY
2	GND
3	GND
4	+5V
5	+5V
6	GND
7	+13.5V
8	GND
9	+12.5V
10	GND

JP1 : USB

PIN #	Description
1	NC
2	USB DATN
3	USB DATP
4	GND
5	GND
6	GND

JP3 : CW Index

PIN #	Description
1	+3.3V
2	+3.3V
3	+3.3V
4	GND

JP3 : CW Index

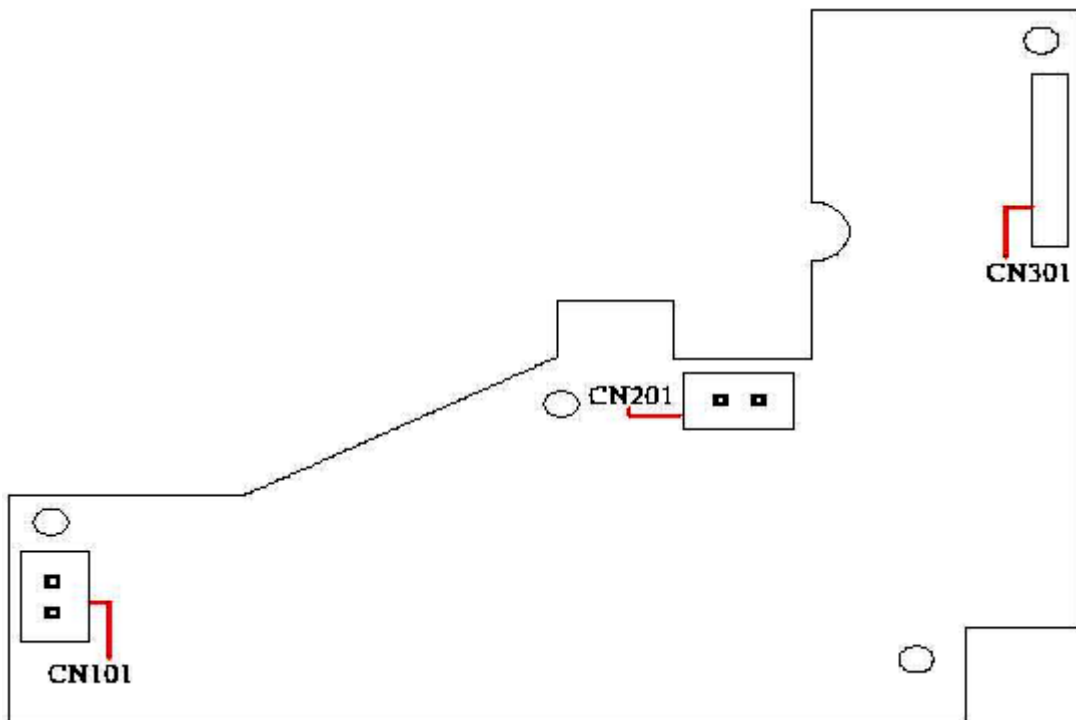| PIN #	Description
1	STBY_PWR
2	GND

JP4 : FirmWare Debug

PIN #	Description
1	GND
2	GND
3	TMS1
4	TDO1_OUT
5	SYSRSTZ
6	TRSTZ
7	TDI
8	TMS2
9	TCK
10	RTCK
11	TDO2
12	ICE_RSTZ
13	TRACEPKT15
14	TRACEPKT14
15	TRACEPKT13
16	TRACEPKT12
17	TRACEPKT11
18	TRACEPKT10
19	TRACEPKT9
20	TRACEPKT8
21	TRACEPKT7
22	TRACEPKT6
23	TRACEPKT5
24	TRACEPKT4
25	TRACEPKT3
26	TRACEPKT2
27	TRACEPKT1
28	TRACEPKT0
29	TRACECLK
30	TRACESYNC
31	PIPESTAT0
32	PIPESTAT1
33	PIPESTAT2
34	+3.3V
35	+3.3V
36	+3.3V

Power Board

Summarize

Connector	Description
CN101	AC Inout
CN201	+380V Output
CN301	DC Output

The Locations of Connectors

CN101 : AC Inout

PIN #	Description
1	Line
2	NEUTRAL

CN201 : +380V Output

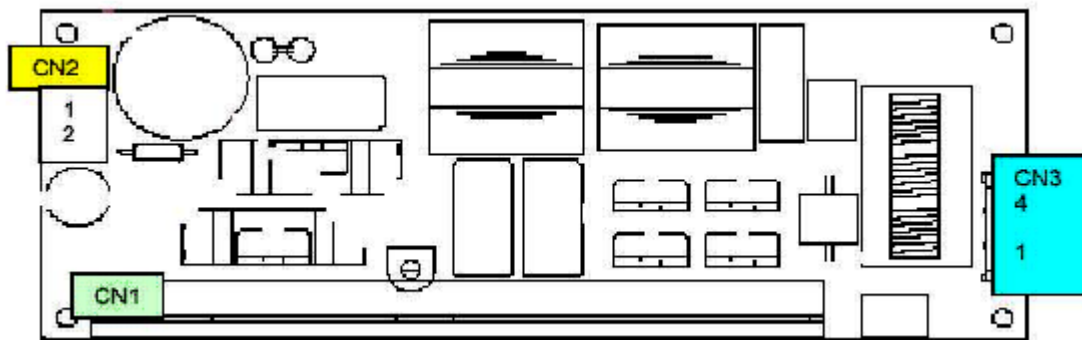| PIN#	Description
1	+380V
2	GND

CN301 :DC Output

PIN#	Description
1	+5V_STBY
2	GND
3	GND
4	+5V
5	+5V
6	GND
7	+13.5V
8	GND
9	+12.5V
10	GND
11	GND
12	STBY_CTRL

Ballast Board

Summarize

Connector	Description
CN100	380V
W03	Lamp Signal

The Locations of Connectors

CN1 : Lamp Signal

PIN #	Description
1	DIM/RXD (Cathode LED)
2	SCI/Sync.(Cathode LED)
3	Common LED+ (Anodes)
4	FLAG/TXD-(Emitter)
5	FLAG/TXD+(Collector)

CN2 : 380V

PIN #	Description
1	GND
2	+380V DC

CN3 : 380V

PIN #	Description
1	Lamp Output
2	Lamp Output

7. FRU (Field Replaceable Unit) List

This chapter gives you FRU (Field Replaceable Unit) listing in global configuration of S600. Refer to this chapter whenever ordering for parts to repair or for RMA (Return Merchandise Authorization). Please note that WHEN ORDERING FRU PARTS, you should check the most up-to-date information available on your regional web or channel. For whatever reasons a part number change is made, it will not be noted on the printed Service Guide. For Premier AUTHORIZED SERVICE PROVIDERS, Premier office may have a DIFFERENT part number code from those given in the FRU list of this printed Service Guide. You MUST use the local FRU list provided by your regional Premier office to order FRU parts for repair and service of customer machines.

NOTE : To scrap or to return the defective parts, you should follow the local government ordinance or regulations on how to dispose it properly, or follow the rules set by your regional Premier office on how to return it.

FRU List

No.	Photo	Part Name	P/N
1		Main Board	P1647-0001
2		Ballast Board	P1647-9000
3		Power Board	P1647-8001
4		Key pad	P1684-0006
5		Front IR Board	P1647-6001
6		Back IR Board	P1647-5001
7		Thermal Board	P1647-3000
8		op cover	P1684-000
9		Bottom cover	P1634-451-99
10		Front cover	P1634-452-99

No.	Photo	Part Name	P/N
11		Front IR cover	P1634-461-99
12		IO cover	P1634-465-99
13		Foot screw assembly	P1643-0012
14		Optical Engine	P1643-0002
15		Lamp Module	P1643-0014
16		FAN x 1	P1643-0020
17		FAN X2	P1643-0021
18		Speaker	02413-0016-00
19		FFC cable	02595-0014-00
20		Wire 4P C/W	02595-0017-00

No.	Photo	Part Name	P/N
21		Wire 3P IR/F	02595-0016-00
22		Wire 3P IR/B	02595-0027-00
23		Wire 5P BST	02595-0015-00
24		Wire 2P-4P Lamp	02595-0025-00
25		Wire 2P 380V	02595-0019-00
26		Wire 12P-10+2P PWR BD	02595-0014-00
27		Wire 2P AC Socket	02595-0028-00

8. Recommended Spare Parts List

RECOMMENDED SPARE PARTS LIST (PJ402D-1)

ViewSonic Model Number: VS10400-1W

Rev: 1a

Item	Description		ViewSonic P/N	Ref. P/N	Q'ty	MOQ
1	**Accessories:**	AC POWER CORD	A-00003061	According to POI		
2		LAMP MODULE	RLC-001	P1684-0001	1	1
3		REMOTE CONTROLLER	A-00003062	82143-4000	1	1
4	**PC Board Assembly:**	MAIN BOARD	B-00003063	P1684-0000	1	1
5		OSRAM BALLAST	B-00003064	P1684-0005	1	1
6		PD-S600 IR PCB/F	B-00003065	P1647-6001	1	1
7		PD-S600 IR PCB/R	B-00003066	P1647-5001	1	1
8		PD-S600 KEYPAD+METAL DOME	B-00003067	P1684-0006	1	1
9		PD-S600 PFC, POWER	B-00003068	P1684-0007	1	1
10		PD-S600 THERMAL PCB	B-00003069	P1647-3000	1	1
11	**Cabinets:**	BACK IR COVER	C-00003070	P1634-462	1	1
12		BOTTOM COVER	C-00003071	P1684-0004	1	1
13		FRONT COVER	C-00003072	P1684-0002	1	1
14		FRONT IR COVER	C-00003073	P1634-461	1	1
15		IO COVER	C-00003074	P1634-465	1	1
16		LAMP COVER + ISOLATOR	C-00003075	P1643-0013	1	1
17		LENS COVER	C-00003076	P1634-458	1	1
18		TOP COVER (include keystroke , back IR cover ,side cover)	C-00003077	P1684-0003	1	1
19	**Cables:**	AUDIO CABLE	CB-00003078	According to POI		
20		FFC CABLE 0.5P 28P	CB-00003079	02595-0014-00	1	1
21		S-VIDEO CABLE	CB-00003080	02547-1007	1	
22		VGA (D-SUB) to HDTV(RCA) CABLE	CB-00003081	According to POI		
23		VGA CABLE	CB-00003082	According to POI	1	
24		WIRE CON-CON 12P-10+2P PWR BD	CB-00003083	02595-0014-00	1	1
25		WIRE CON-CON 2P 380V	CB-00003084	02595-0019-00	1	1
26		WIRE CON-CON 2P AC SOCKET	CB-00003085	02595-0028-00	1	1
27		WIRE CON-CON 2P-4P LAMP	CB-00003086	02595-0025-00	1	100
28		WIRE CON-CON 3P IR/F	CB-00003087	02595-0016-00	1	1
29		WIRE CON-CON 3P IR/R	CB-00003088	02595-0027-00	1	1
30		WIRE CON-CON 4P C/W	CB-00003089	02595-0017-00	1	1
31		WIRE CON-CON 5P BST	CB-00003090	02595-0015-00	1	1
32	**Documentation:**	CD ROM	DC-00003091	P1639-A001-00	1	1
33		Instruction manual	DC-00003092	P1639-406-VIE	1	1
34	**Electronics:**	OPTICAL ENGINE (include Fan)	E-00003093	P1684-0008	1	1
35		SPEAKER	E-00003094	02413-0016-00	1	1
36	**Hardware:**	CU FOOT SCREW	M-SCW-0824-6923	01635-B77	17	1
37		S: M1.7*2 BL	M-SCW-0824-6913	01635-366	56	1
38		S: M3*10*A2 BL	HW-00003095	P0335-101	25	1
39		S: M3*18*A2 NI	HW-00003096	01635-A44-N	15	1
40		S: M3*28.5*E1.2 BL	HW-00003097	01635-C98-N	16	1
41		S: M3*6*A2 BL	HW-00003098	01635-C01	12	1
42		S: M3*6*D2 BL	HW-00003099	82035-251	8	1
43		S: M4*6*A3 NI	M-SCW-0824-6918	01635-A08	3	1
44		S: T3*5*A3 BL	HW-00003100	01635-353	18	1
45		S: T3*8*A2 NI	M-SCW-0824-6917	01635-A01	3	1
46		S: T4*10*A2.5 NI	M-SCW-0824-6910	01635-361	48	1
47		SHD-PWR-BD-PD-S600	HW-00003105	P1635-052	1	1
48		WSC:8*4.3*1FE/NI S-GTY	M-SCW-0824-6916	01635-705	3	1
49	**Miscellaneous:**	FAN (OE) FAL3F12LLSC Assy	M-00003101	P1643-0020	1	1
50		FAN MODULE_PD-S600	M-00003102	P1643-0021	1	1
51		MESH	M-00003103	P1638-156	1	1
52		MYLAR-POWER-BD-PD-S600	M-00003104	P1638-150	1	1
53		UV/IR FILTER	M-00003106	P1636-764	1	1

Item	Description		ViewSonic P/N	Ref. P/N	Q'ty	MOQ
54	**Packing Material:**	CABLE BAG	P-00003107	04039-184	1	1
55		EPE	P-00003108	04039-544	2	1
56		OUTER CARTON	P-00003109	P1639-6003-00	1	1
57		PAD	P-00003110	P1639-690	1	1
58		PE BAG	P-00003111	04039-145	1	1
59		POUCH	P-00003112	P1639-306-VIE	1	1
60	**Plastics:**	FOOT ASSEMBLY	PL-00003113	P1643-0012	1	1
61		FUNCTION KEYSTROKE	PL-00003114	P1634-460	1	1
62		KEYSTROKE	PL-00003115	P1634-459	1	1

Reader's Response

Dear Readers:

Thank you in advance for your feedback on our Service Manual, which allows continuous improvement of our products. We would appreciate your completion of the Assessment Matrix below, for return to ViewSonic Corporation.

Assessment

A. What do you think about the content of this Service Manual?

Unit	Excellent	Good	Fair	Bad
1. Precautions and Safety Notices				
2. System Introduction				
3. Firmware Update				
4. Machine Disassembly and Replacement				
5. Troubleshooting				
6. Connector Information				
7. FRU (Field Replaceable Unit) List				
8. Recommended Spare Parts List				

B. Are you satisfied with this Service Manual?

Item	Excellent	Good	Fair	Bad
1. Service Manual Content				
2. Service Manual Layout				
3. The form and listing				

C. Do you have any other opinions or suggestions regarding this service manual?

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After completing this form, please return it to ViewSonic Quality Assurance in the USA at facsimile 1-909-839-7943. You may also e-mail any suggestions to the Director, Quality Systems & Processes (marc.maupin@viewsonic.com)