SERVICE MANUAL

GT750

Date	Revise Version	Description
2011.08.01	V1.0	Initial Issue

Prepare : *Mina* Check: *Amy* Approve:

Preface

This manual is applied to GT750 projection system. The manual gives you a brief description of basic technical information to help in service and maintain the product.

Your customers will appreciate the quick response time when you immediately identify problems that occur with our products. We expect your customers will appreciate the service that you offer them.

This manual is for technicians and people who have an electronic background. Please send the product back to the distributor for repairing and do not attempt to do anything that is complex or not mentioned in the troubleshooting.

Notice: The information found in this manual is subject to change without prior notice. Any subsequent changes made to the data herein will be incorporated in future edition.

GT750 Service Manual

Manual Version 1.0

Table of Content

Chapter 1

Introduction

1-1 Highlight

No	Item	Description
1	Technology	● 0.65” WXGA, S450, Dark Chip 3
2	Dimension (W x D x H)	● 324 x 234 x 97 mm
3	Weight	● 6.5 lbs
4	Power Supply	● Auto-ranging: 100V~ 240V ± 10%, 50~ 60Hz
5	Keystone Correction	● +/- 40 degree is the scaler spec, ● +/- 15 degree is for system angle of v-keystone. (Image distortion <= 1%)
6	Resolution	● Native Resolution: 1280x800
7	Power consumption	● Full Mode: (Typ) 310W, (Max) 340W @ 110VAC ● ECO Mode:(Typ) 255W, (Max) 280W @ 110VAC
8	Throw ratio	● 0.72 (Distance/Width)
9	Projection lens	● YM43, F# 2.55, f= 10.19 mm
10	Lamp life	● 2500 Hours Standard@ 230W, 50% Survival Rate(Normal-Mode) ● 4000 Hours Typical @ 190W, 50% Survival Rate(ECO-Mode)
11	Offset	● 112.4%±5%
12	Video compatibility	● NTSC: NTSC M/J, 3.58 MHz, 4.43 MHz ● PAL: PAL B/D/G/H/I/M/N, 4.43 MHz ● SECAM: SECAM B/D/G/K/K1/L, 4.25/4.4 MHz ● Component: 480i/p, 576i/p, 720p(50/60Hz), 1080i(50/60Hz), 1080P(50/60Hz)
13	Aspect ratio	● 4:3, 16:9, 16:10, Native, Auto
14	Lamp	● 230 W OSRAM Lamp E20.8 elliptic
15	Color Wheel	● 6 Segments; RGBYW; Filter Diameter 40 mm ● R81G84B71C31Y41W52 ● 2x, 7200 RPM
16	System Controller	● DDP2431

No	Item	Description
17	Input Connections	● VGA-in: VGA-in x 1 (RGB) ● Composite video: Composite Video x 1 ● S-video: Mini-DIN 4 pin x 1 ● VESA mini 3 pin x 1 ● RCA Audio in: RCA Audio in x 2 (R & L) ● HDMI: HDMI v1.4A (compatible with video and audio)
18	Temperature	● Operating (Full-power-mode): 5~ 40 °C ● Non-operation (storage): -10°C~ 60°C
19	Altitude	● Operating: 0 ~ 2,500 ft, for 5°C~ 40°C 2500 ft ~ 5,000 ft, for 5°C~ 30°C 5,000 ft ~ 10,000 ft, for 5°C~ 25°C

1-2 Compatible Mode

Computer Compatibility (Analog/Digital)

Compatibility	Resolution	V-Sync [Hz]	H-Sync [KHz]
PAL/SECAM	640 x 350	31.5	70
	640 x 350	37.9	85
	640 x 400	37.9	85.1
	720 x 400	31.5	70
	720 x 400	37.9	85
VGA	640 x 480	31.5	60
	640 x 480		67
	640 x 480	37.9	72.8
	640 x 480	37.5	75
SVGA	800 x 600	35.2	56.3
	800 x 600	37.9	60.3
	800 x 600	46.9	75
	800 x 600	48.1	72.2
	800 x 600		120
	832 x 624		75

Compatibility	Resolution	V-Sync [Hz]	H-Sync [KHz]
XGA	1024 x 768	48.4	60
	1024 x 768	56.5	70.1
	1024 x 768	60	75
	1024 x 768		120
	1152 x 870		75
HD720	1280 x 720		120
WXGA-800	1280 x 800		60
SXGA	1280 x 1024	64	60
	1366x768		60
	1440x900	55.935	60
	1680 x 1050		60
UXGA	1600 x1200	75	60
HDTV	1920 x 1080	33.8	30
	1920 x 1080i		50
	1920 x 1080i		60
	1920 x 1080p		24
	1920 x 1080p		25
	1920 x 1080p		30
	1920 x 1080p		50
	1920 x 1080p		60
	1280 x 720	45	60
	1280 x 720p		50
	1280 x 720p		60
SDTV	720 x 576i		50
	720 x 576p		50
	720 x 480i		60
	720 x 480p		60

Note: If the Computer Compatibility supportive signal is different from User's Manual, please refer to User's Manual.

Chapter 2

Disassembly Process

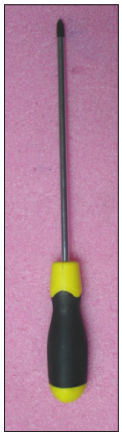
2-1 Equipment Needed & Product Overview

1. Screw Bit (+): 105
2. Screw Bit (+): 107
3. Screw Bit (-): 107
4. Hex Sleeves: 5 mm
5. Tweezers
6. Projector

** Before you start: This process is protective level II. Operators should wear electrostatic chains.*

** Note: - If you need to replace the main board, you have to record the lamp usage hour.*

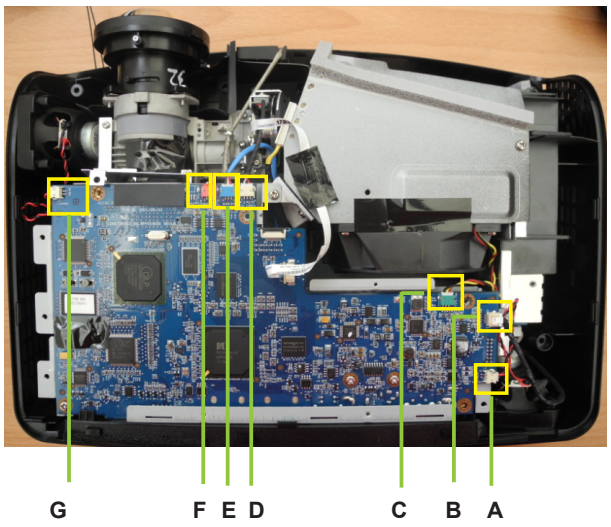
- Some related contents please refer to common SM chapter 2.

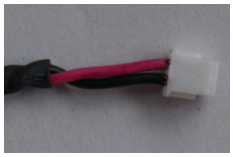
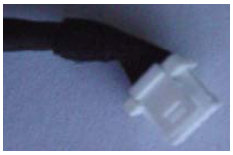
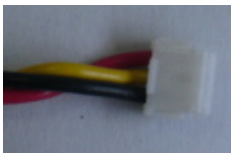
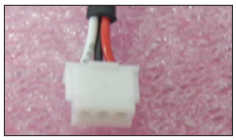
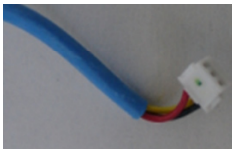





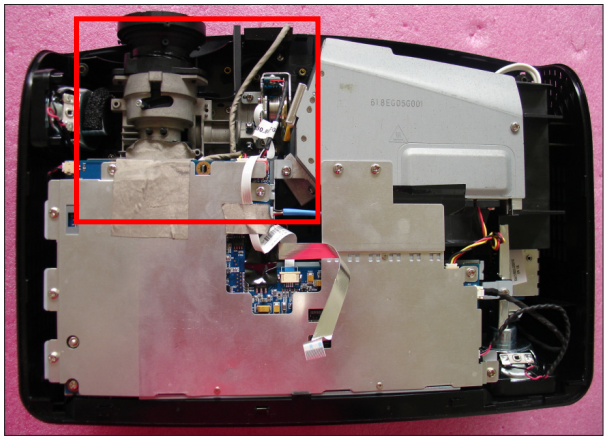
2-2 Repair notice
Disassemble Main Board

Please refer to the below table details of each connector on Main Board.



Item	Male Connector on Main Board	The key feature	Figure
A & G	Speaker	Compose of Red/Black Wire and Black wire tube (2 pin)	
B	Lamp Driver	Black wire tube (5 pin)	
C	System Fan	Compose of Red/Yellow/Black Wire (3 pin)	
D	Photo Sensor	Compose of Red/Black/White Wire and Black wire tube (3 pin)	
E	Blower	Compose of Black/Yellow/Red Wire and Blue wire tube (3 pin)	
F	IR	Compose of Black/Yellow/Red Wire and Gray wire tube (3 pin)	

2-3 Rod Adjustment



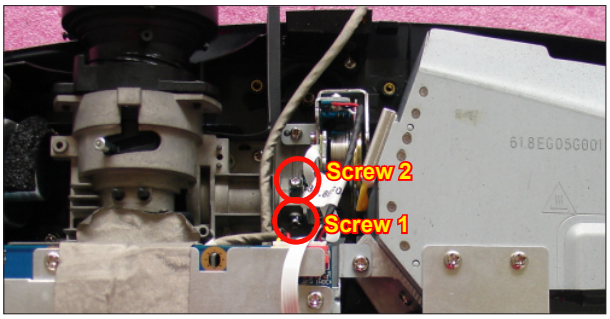
1. Environment Adjustment

   - The distance between the engine and the screen is 93 CM.
   - This process should be done at a dark environment (under 10 Lux).

2. Procedure Adjustment

   - Change the screen to "white screen".
   - Adjust the screws on the engine module to readjust the image.

   ("screw 1" should be adjusted first, and then "screw 2". Adjust until the yellowish or bluish parts disappeared.)



3. Abnormal image inspection

   - It should not have any abnormal color at the rim of the image by estimating through the eyes.

Note: - To avoid over adjusting the rod.

- After the operation, please use the glue to fix the screws.

2-4 Re-write Lamp Usage Hour

1. Get into Service Mode

   - Press "Power", "Left", "Left" and "Menu" buttons sequentially to get into Service Mode.

2. Re-write Lamp Hours (Normal)

   - Use "up" or "down" buttons to select "Lamp Hours (Normal)", then use "left" or "right" buttons to re-write the Lamp Hours.

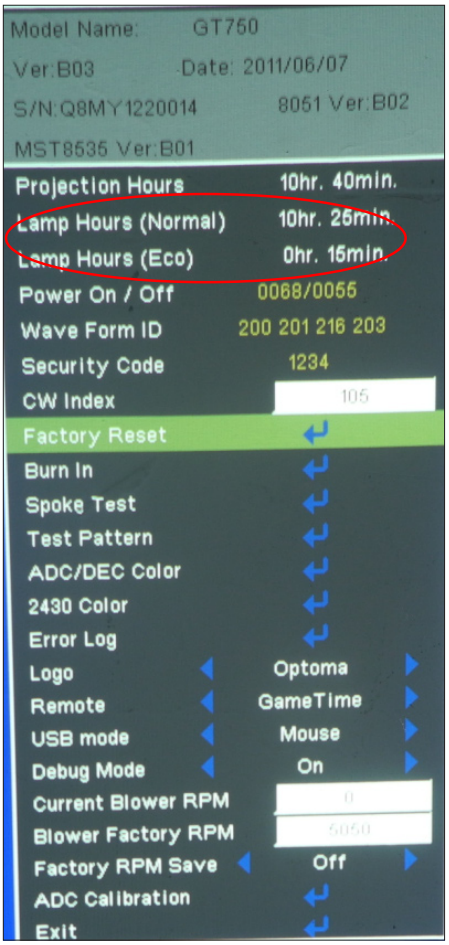
3. Re-write Lamp Hours (ECO)

   - The way of re-write "Lamp Hours (ECO)" is the same as "Lamp Hours (Normal)".

4. Exit Service Mode

   - Use "up" or "down" buttons to select "Exit", then press "Enter" to exit the Service Mode.

Note: left key = decrease lamp hour
right key =increase lamp hour



2-5 Repair Action

Repair action	Change parts							Software		Description page
	Main Board	Lamp Module	Engine Module	Lamp Driver	Blower	Color Wheel	I/O Board	Firmware	EDID	
System Firmware Update	v							v	v	chapter 5-section 1
Color Wheel Index	v					v				Chapter 4-3-1.7
OSD Reset	v							v	v	Chapter 4-5.2
Video Calibration	v		v					v	v	Chapter 4-6
VGA Calibration	v		v					v	v	Chapter 4-6
EDID	v									Chapter 6
Re-write Lamp Hours Usage	v									Chapter 2-4
Video Performance	v					v	v			chapter4-3-3
Restore Blower Speed	v				v			v	v	Chapter 4-7
Optical Performance Measure			v							Chapter 4-3-1

Chapter 3

Trobleshooting

3-1 LED Lighting Message

Message	ON/STANDBY LED (Red/Green)	Temp LED (Red)	Lamp LED (Red)
Standby State (Input power cord)	✱ (Red)	O	O
Power on (Warming)	Flashing (Green)	O	O
Power on and Lamp lighting	✱ (Green)	O	O
Power off (Cooling)	Flashing (Green)	O	O
Error (Lamp failed)	Flashing (Red)	O	✱ (Red)
Error (Fan failed)	Flashing (Red)	Flashing (Red)	O
Error (Over Temp.)	Flashing (Red)	✱ (Red)	O

Note: ✱ *Steady light* O *No light*

3-2 Main Procedure

No	Symptom	Procedure
1	Auto Shut Down	- Check LED status a. Lamp Fail: ON/STANDBY LED (flashes red); Lamp LED (lights red) - Check Lamp - Check Lamp Driver - Check Main Board - Check Color Wheel - Check Photo Sensor b. Over Temp: ON/STANDBY LED (flashes red); Temp LED (lights red) - Check Thermal Switch - Check Fan - Check Main Board c. Fan Fail: ON/STANDBY LED (flashes red); Temp LED (Flashes red) - Check Fan - Check Main Board
2	3D Image Abnormal	- Ensure the using 3D glasses is good and you must face the projection. - Ensure the CD in DVD is HQFS format or the graphic card from PC can support 3D format. - Ensure your standing distance is less than 6m from screen. - Ensure the 3D function is on and execute “3D sync invert” in OSD menu. - Check main board.

Chapter 4

Function Test & Alignment Procedure

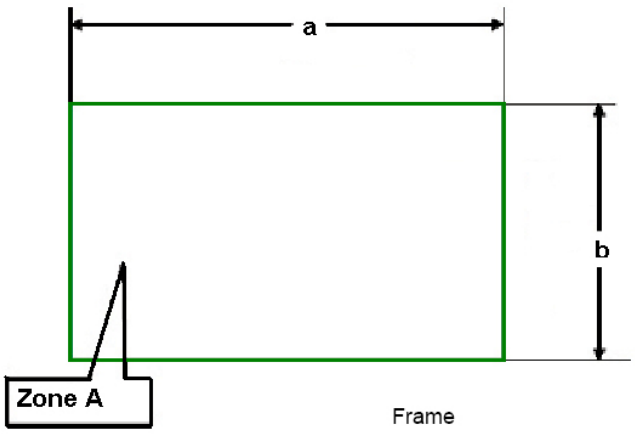
4-1 Test Equipment Needed

- IBM PC with HDTV resolution
- DVD player with Multi-system, equipped “Component”, “Composite”, “S-Video” and “HDMI”.
- HDTV Source (720P,1080P,1080i)
- Minolta CL-100
- Quantum Data 802B or CHROMA2327 (Color Video Signal & Pattern Generator)

4-2 Test Condition

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

Zone Definition

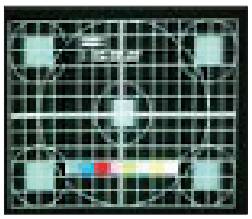


< Figure: Zone A(as green line) Definition >

4-3 I/O Port Test

4-3-1 VGA Port Test

Note:GT750 the native resolution of test signal is 1280x800@60HZ.



General-1

Master

1. Frequency and tracking boundary

Procedure
- Test equipment: video generator.
- Test signal: analog 1280x800@60Hz
- Test Pattern: general-1 or master
- Check and see if the image sharpness is well performed.
- If not, re-adjust by the following steps:
  (1) Select “Frequency” function to adjust the total pixel number of pixel clock in one line period.
  (2) Select “Tracking” function and use right or left arrow key to adjust the value to minimize video flicker.
- Adjust Resync or Frequency/Tracking/H. Position/V. Position to the inner screen.

Inspection item
- Eliminate visual wavy noise by Resync, Frequency or Tracking selection.
- Check if there is noise on the screen.
- Horizontal and vertical position of the video should be adjustable to the screen frame.

Criteria
- If there is noise on the screen, the product is considered as failure product.
- If there is noise on the screen, use auto or manual “frequency” function or “tracking” function to adjust the screen.
- The PC mode functionally sure be workable include support format with frequency and auto detected functional will be workable.

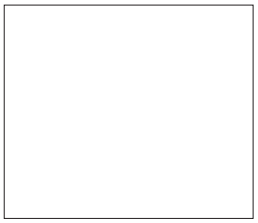
2. Bright Pixel

Procedure	- Test equipment: video generator. - Test signal: analog 1280x800@60Hz - Test Pattern: gray 10
Inspection item	- Bright pixel check.
Criteria	- Bright pixel is unacceptable in the active zone; 1 pixel is allowed on the frame. - Ref. Defect specification table

Gray 10

3. Dark Pixel

Procedure	- Test equipment: video generator. - Test signal: analog 1280x800@60Hz - Test Pattern: full white
Inspection item	- Dead pixels check. - White pattern (IRE=100)
Criteria	- The dark blemish should be no more than 7 under white pattern. - Adjacent pixels are unacceptable. - Ref. Defect specification table



Full white

4. Bright Blemish

Procedure	- Test equipment: video generator. - Test signal: analog 1280x800@60Hz - Test Pattern: gray 10
Inspection item	- Bright blemish check.
Criteria	- The bright blemish should be no more than 4 under gray 10 pattern. - Ref. Defect specification table

Gray 10

5. Dark Blemish

Procedure	- Test equipment: video generator. - Test signal: analog 1280x800@60Hz - Test Pattern: blue 60
Inspection item	- Dark blemish check
Criteria	- The bright blemish should be no more than 4 under blue 60 pattern. -

Blue 60

Pixel specification

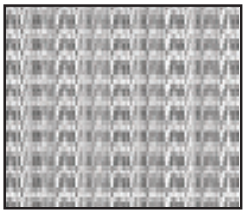
Order	Symptom	Pattern	Criteria
1	Bright pixel (dots)	Gray 10 pattern	A=0
2	Dark pixel(dots)	White pattern	A≤7
3	Unstable pixel (dots)	Any pattern	A=0
4	Adjacent pixel (dots)	Any pattern	A=0
5	Bright blemish (Dirty)	Gray 10 pattern	A≤4 (diameter<1 inch)
6	Dark Blemish(Dirty)	Blue 60 pattern	A≤4 (diameter<1 inch)
7	Bright pixel on frame	Gray 10 pattern	≤1

6. Focus Test

Procedure
- Test equipment: video generator.
- Test signal: analog 1280 x 800@60Hz
- Test Pattern: full screen

Inspection item
- Focus check

Criteria
- From screen 0.65 M via visual to check the focus, look at the entire screen, focus shall be clear, crisp, and sharp over the entire surface of the display pattern. (Blur word on one of the corner after adjustment is acceptable. However, the word should at least be recognizable.)



Full screen

7. Color Performance

Procedure
- Test equipment: video generator.
- Test signal: 1280 x 800@60Hz, 1080i
- Test Pattern: Master, 64 gray RGBW

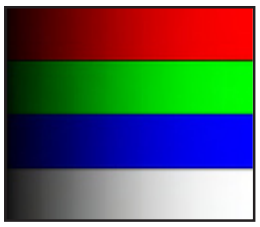
Please get into service mode.Use 720p & 1080p signal, master pattern to do HDTV test. Color cannot discolor to purple and blue.

Inspection item
- Check if each color level is well-functioned.
- Color saturation

Criteria
- Screen appears normal. It should not have any abnormal condition, such as lines appear on the screen and so on.
- Color appears normal.

Master

- It is unacceptable to have few lines flashing.
- RGBW should all appear normal on the screen and sort from R -G-B-W.
- Color levels should be sufficient and normal. (The unidentified color levels on both left and right sides should not over 4 color levels.)
- Gray level should not have abnormal color or heavy lines.
- If color appears abnormal, please get into service mode to do color wheel index adjustment.



64 gray RGBW

8. Optical Performance

Inspection Condition
- Environment luminance: 2 Lux
- Product must be warmed up for 5 minutes
- Distances from the screen: 0.8M
- Screen Size: 60 inches diagonal

a. Measure setting

Procedure

- Please get into OSD menu, select “Lamp Setting” under “Options”, press “Enter” button, then select “Bright” of “Bright mode”.
- Press “Power→ Left→ Left→ Menu” to get into service mode.
- Test equipment:Select “Spoke Test”

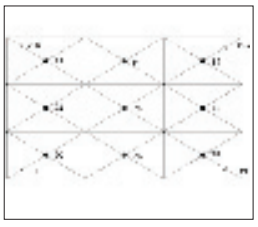
b. Brightness

Procedure

- Full white pattern
- Use CL100 to measure brightness values of P1~P9.
- Follow the brightness formula to calculate brightness values.

☼ Brightness Formula

Avg. (P1~P9)*1.1m^2



Full white pattern

Criteria • 1300 ANSI lumen

c. Full On/Full Off Contrast

Full black pattern

Procedure
- Full white pattern & Full black pattern
- Use CL100 to measure brightness values of full white pattern P5 & full black pattern B5 (see image: full white)
- Follow Contrast formula to calculate contrast values.

☼ Contrast Formula

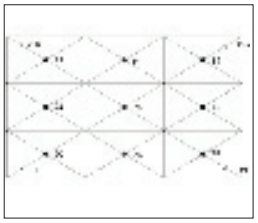
P5/B5

Note: P5 = Lux of center in full white pattern

B5 = Lux of center in full black pattern

Criteria • 1750:1

d. Uniformity



Full white pattern

Procedure
- Full white pattern
- Use CL100 to measure brightness values of P1~P9 (see image: full white).
- Follow the Uniformity formula to calculate average values.

☼ Uniformity Formula

JBMA Uniformity = Avg. (P1, P3, P7, P9) / P5 *100%

Criteria • 70%

4-3-2 Composite Port and Audio Test

Motion video

Procedure
- Test equipment: DVD Player
- Test signal: CVBS

Inspection item - Audio performance test

Inspection Distance - 0.46M ~0.56M

Criteria
- Check the sound from speaker
- Plug Audio cable into Audio in port, check whether “Volume” is normal.
- Adjust the volume to “0→ 9” by using the remote controller.

- Check the sound from speaker.
- Check whether the “mute” is normal.

4-3-3 Video Port Test

Procedure	- Test equipment: DVD player
	- Test signal: Video
Inspection item	- Video performance test
Inspection Distance	- 0.46M ~0.56M
Criteria	- Check any abnormal color, line distortion or any noise on the screen.
	- Check the sound from speaker.

4-3-4 Component Port Test

Procedure	- Test equipment: DVD player
	- Test signal: Ycbcr/YPbPr
Inspection item	- HDTV performance test
Inspection Distance	- 0.46M ~0.56M
Criteria	- Check any abnormal color, line distortion or any noise on the screen.

4-3-5 HDMI Port Test

Procedure	- Test equipment: DVD Player with HDMI output.
	- Test signal: 720p, 1080p, 1080i
Inspection item	- HDMI performance test.
Inspection Distance	- 0.46 M ~0.56 M.
Criteria	- Ensure the image is well performed and the color can not discolor.
	- Check whether "mute" is normal.

4-3-6 3D Test

Procedure	- Test equipment: 1. DVD Player & PS3 &HQFS format CD or 2. PC with 3D Graphic card - Test signal: 1080p@24Hz(for 3D movie) 720p@60HZ(for 3D game)
Inspection item	- 3D test
Inspection Distance	- 3~5 M
Criteria	- The image should not appear noise, flicker shadow, shocking, abnormal color.

4-4 Run In Test

- Temperature: 15°C~35°C
- Circumstance brightness: Normal environment
- Screen size: No concern
- Display mode: ECO mode

After repairing each unit, a Run-in test is necessary (refer to the below table).

Symptom	Run-in Time
Normal repair	2 hours
NFF	4 hours
Auto shutdown	6 hours

- Get into Burn-In Mode

** Cycle setting is based on the defect symptoms. ie: If it is NFF, the run-in time is 4 hours. You have to set the lamp on for 50 min. and lamp off for 10 min for 4 cycles.*

Press power > Left > Left >Menu buttons sequentially on remote controller to get into service mode	
Choose Burn-In Test > enter	
Lamp On	Press right key to adjust the time (50)
Lamp Off	Press right key to adjust the time (10)
Set burn in cycle	Press right key to adjust the cycle
After setting up the time, choose “Get into Burn-In Mode” and press enter	

4-5 Test Inspection Procedure

1. Check Points

Check item	Check point
Firmware version	All firmware version must be the latest version
TB implementation	Related TB must be implement
Cosmetic	Cosmetic can not be broken
Logo	Missing logo, missing prints and blurry prints are unacceptable
Lamp cover	It should be locked in the correct place.
Zoom in/out	The function should work smoothly
Keypad	All keypad buttons must operate smoothly

2. OSD Reset

After 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:

(1) Please enter OSD menu.

(2) Choose "Option" and then execute "Reset" function

4-6 ADC Calibration

1. VGA Calibration

Note: After replacing main board or upgrading firmware, the VGA calibration should be done.

White/Black

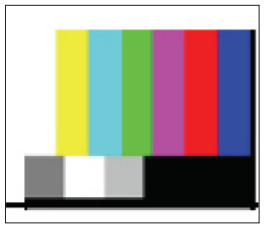
Procedure
- Test equipment: video generator
  (1) Test signal: 1280 x 800@60Hz
  (2) Test Pattern:White/Black
- Note
  (1) Calibration pattern should be in full screen mode.
  (2) Please get into service mode, then get into “ADC Adjustment”, and choose “RGB Calibration”.

Inspection item
- Check if there is lines or noise on the screen.
- Horizontal and vertical position of the video should be adjustable to the screen frame.

Criteria
- If there is noise on the screen, the product is considered as failure product.
- The screen appears normal, it shouldn’t appear any abnormal condition, such as lines and so on.
- Check if the projection is same as monitor displayed.

2. Video Calibration

Note: After replacing main board or upgrading firmware, the Video calibration should be done.



SMPTE BAR

Procedure
- Test equipment: video generator.
  (1) Test signal: 480i
  (2) Test Pattern: SMPTE BAR
- Note
  (1) Calibration pattern should be in full screen mode.
  (2) Please get into Service Mode select ‘‘ADC Adjustment”, and choose “Video Calibration”.

Inspection item
- Color saturations

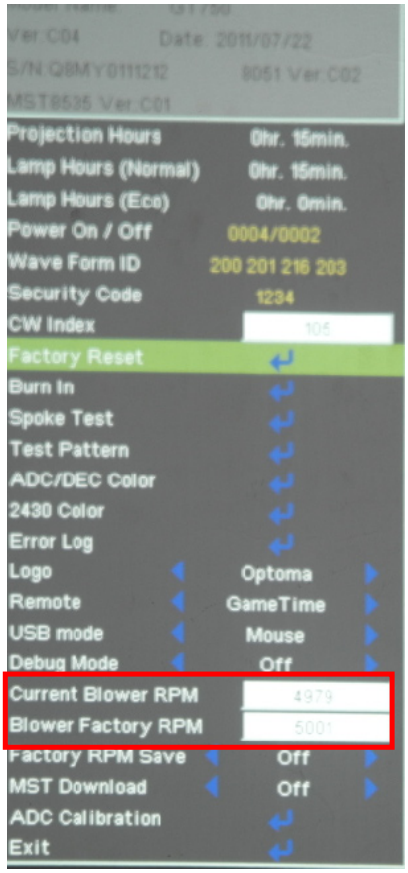
Criteria
- There should not have any lack of SMPTE BAR.Color levels should be sufficient and normal.
- There is not any abnormal lines on the image.

4-7 Restore Blower Speed

After replacing main board, blower or upgrading the firmware, please follow steps as below:

1.Hold on “left” button,then Plug in the power cord and press “power” button,when the “temp” LED and “lamp” LED lighted red, loosen “left” button.

2.Wait a moment, please get into service mode to check the “Blower Factory RPM” (as Picture A shown).



Note:

- *If the Factory FAN RPM Value doesn’t show in service mode, please repeat the step again.*
- *Make sure the “ Blower Factory RPM” is 3500-6600.*

Chapter 5

Firmware Upgrade

Section 1: System Firmware Upgrade

5-1-1 Equipment Needed

Software: (DDP3021-RS232)

- DLP Composer Lite V10.0
- Firmware (*.img)
- library (library 10.0)

Hardware:

- Projector
- Power Cord (42.50115G001)
- RS232 Cable 9PIN to 9PIN: 42.85H02G001
- PC or Laptop

Note1: we will show the hot key of service mode and how to check FW version,the other contents please refer to common service manual 5-1 .

Note2: During FW upgrade procedure,please select "32KB" in "Skip Boot Loader Area".

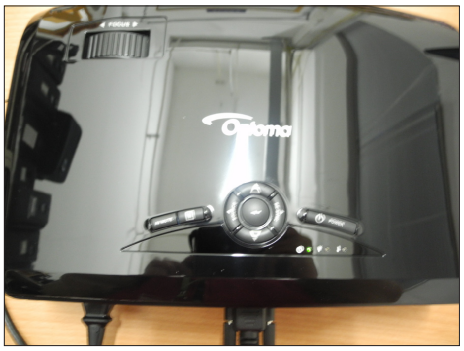
5-1-2 Get into FW mode

1.Set up

- Hold on “POWER” button and plug in the power cord, until the power LED will flash green then loosen the “POWER” button

- Connect projector with PC by RS232 cable.

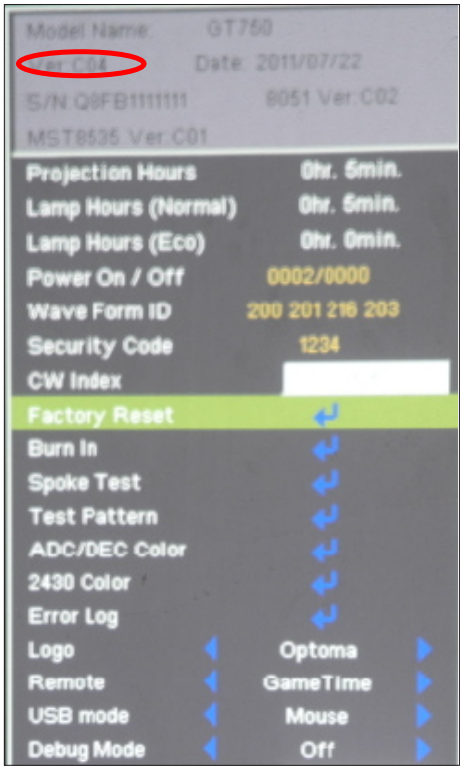
Note: - The system fan and the lamp will not operate.



5-1-3 Check FW version

1.Power on the projector and get into the Service Mode (Press Power --> Left --> Left --> Menu).

2.The firmware version will be shown as red circle on the screen.



Section 2: 8051 FW Upgrade

5-2-1 Equipment Needed

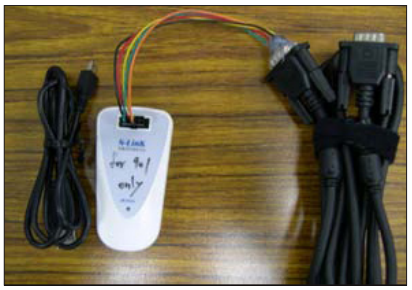
Software: (N79A901R-USB)

- Setup _NLINK_en
- Manley USB Driver_NLINK
- xxx_8051_xx.hex

Hardware:

- Projector
- Power cord: 42.50115G001
- USB Cable mini USB to USB (A) (42.00284G001)
- NLINK Fixture
- PC or Laptop

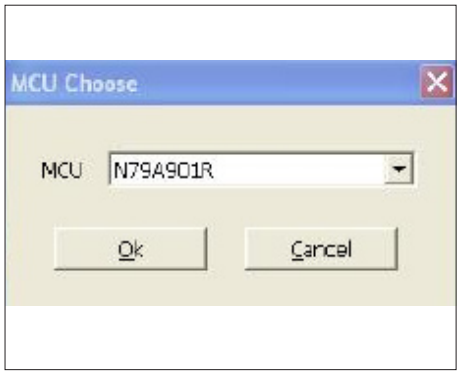





5-2-2 8051 Firmware Upgrade Procedure

1. Set-up

   - Plug in the power cord, the power LED will light on red.
   - Connect VGA-IN Port of projector with NLINK Fixture.
   - Connect NLINK Fixture with PC by USB cable.

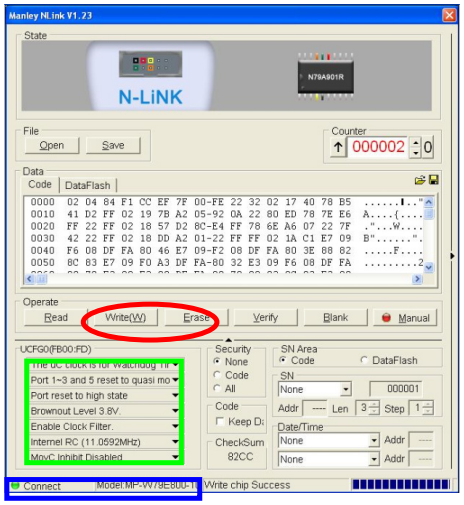


2. Execute 8051 FW Program

   - Double click “NLINK V1.2” to execute NLINK program.

3. Choose the right type of MCU

   - “MCU Choose” picture will appear on the screen, select “N79A901R”.
   - Click “OK”.



4. Program settings

   Ensure NLINK Fixture and PC is securely connected: the indicator lights on green, and the state is “Connect” (as blue square).

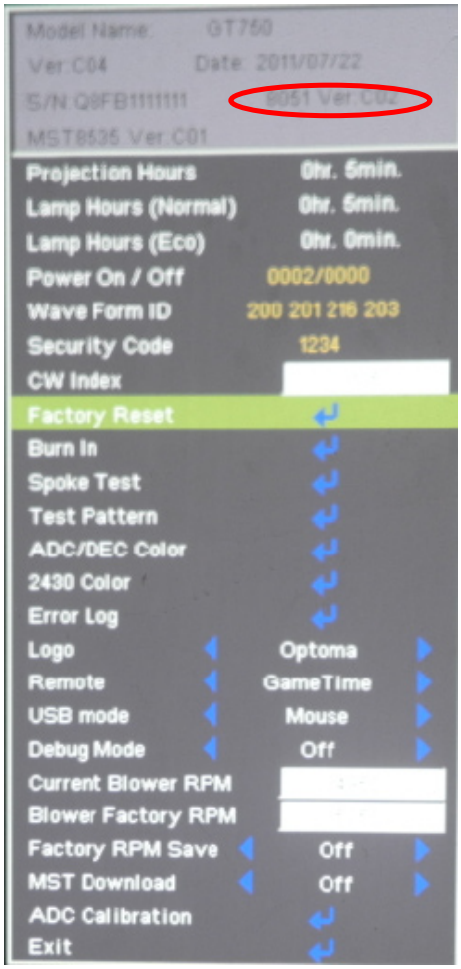
   - Select “Brownout Level 3.8V” (as green square).
   - Select “Internel RC(11.0592MHz)” (as green square).
   - Click “Erase/Write(W)” to execute 8051 FW upgrade (as red circle).

Note: Another contents please refer to common service manual 5-Section 4.

5-2-3 Check 8051 FW version

1.Power on the projector and get into the Service Mode (Press Power --> Left --> Left --> Menu).

2. The firmware version will be shown as red circle on the screen.



Section 3: MST8535 Firmware FW Upgrade Procedure

5-3-1 Equipment Needed

Software :

- GT750 MST8535 FW file(.BIN)
- Debug Board Driver
- ISP_Tool V4.4.9.0.exe

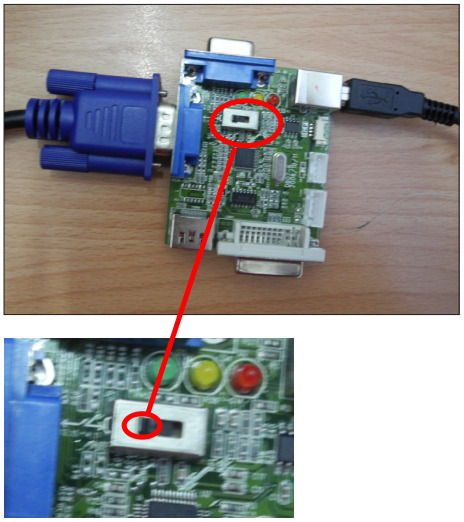
Hardware :

- Projector (GT750)
- Debug Board (75.8GA01GR01)
- USB cable (42.00281G102)
- VGA Cable (42.00200G004)
- Monitor
- PC






5-3-2 USB Driver Upgrade Procedure



1. Set-up

(1) Insert one side of the VGA cable into the debug board and connect it to PC by USB cable.

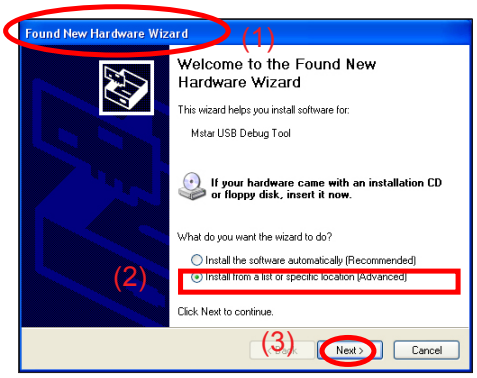
Note:-The VGA cable is special,the PN is 42.00200G004.
-The position of fixture's pin as right picture shown.

(2) Insert another side of the VGA cable and power cable into projector.

(3) Press "power button" and power on the projector.

2. Execute Program

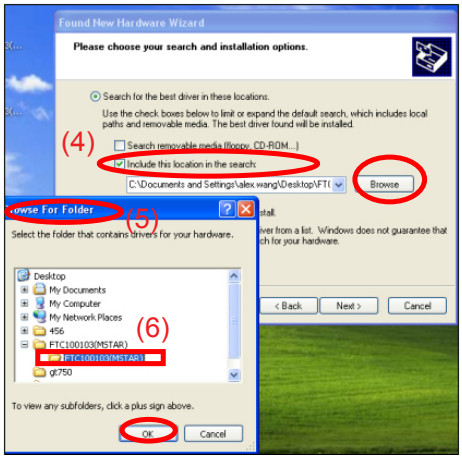
(1) "Found New Hardware Wiszard" picture will appear on the screen.



(2) Select "Install from a list or specific location (Advanced)".

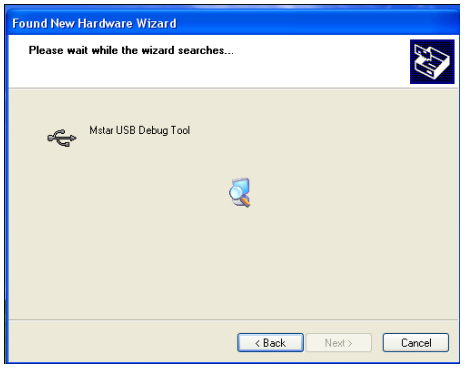
(3) Click "Next".

4) Select “Include this location in the search”, then click “Browse”.

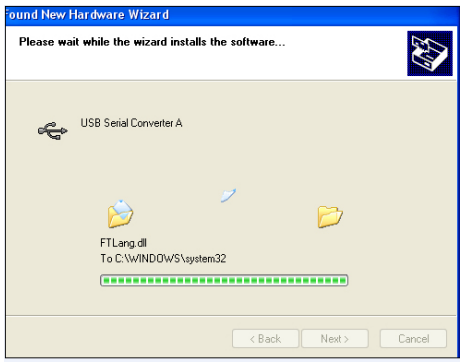


(5) "Browse For Folder" picture will appear on the screen.

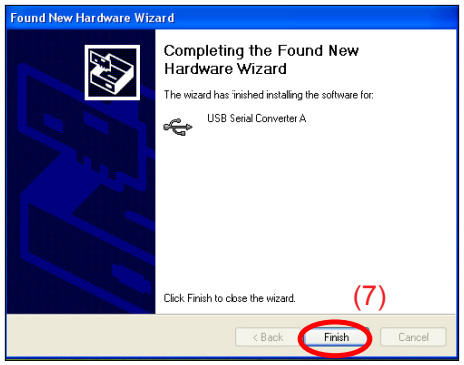
(6) Select "FTC100103(MSTAR)" folder, then click "OK".



(7) Click "Finish".

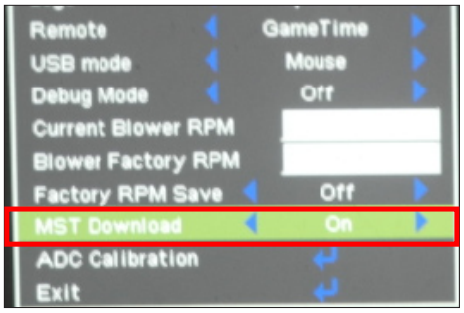


Note: If the PC appear "Found New Hardware Wiszard" picture again, repeat step 2 to install USB Drivier once more.

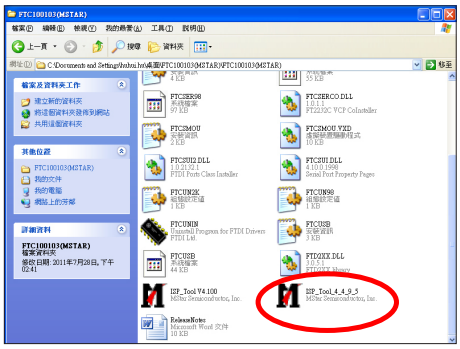


5-3-3 MST8535 Firmware Upgrade Procedure

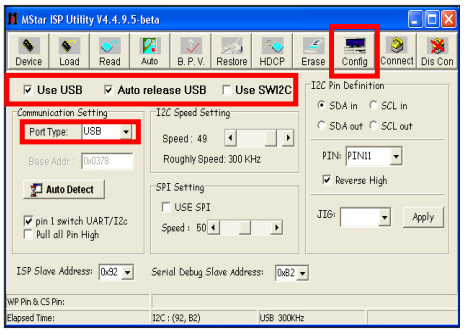
(1) Enter the Service Mode (Press Power --> Left --> Left--> Menu),then select ”MST Download ON”.



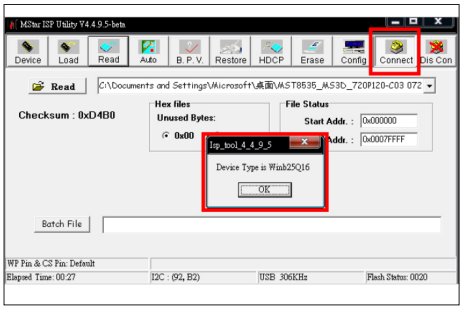
(2) Unzip the "FTC100103(MSTAR).zip" and double click "ISP_Tool_4_4_9_5.exe".



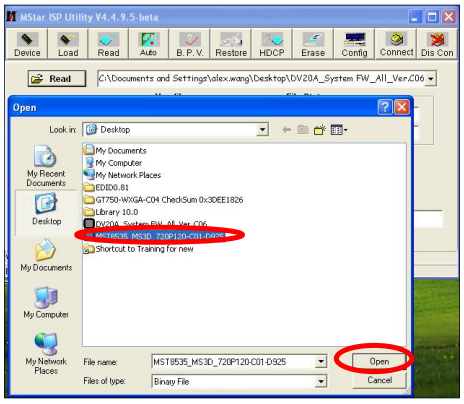
(3) Choose "Config" icon,then do the settings as right picture show.



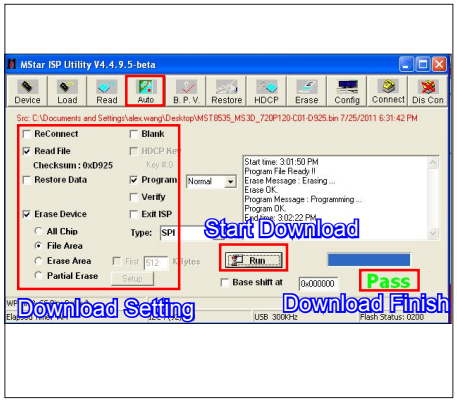
(4) Choose "Connect" icon,then a small window will show "Device Type is Win25Q16"and click "OK".



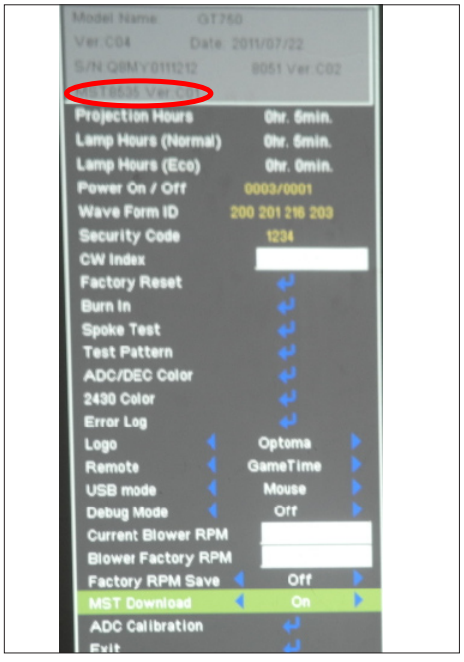
(5) Choose "Read" icon,then click " Read " to select a MST8535 FW file (*.BIN) and click "Open".



(6) Choose "Auto" icon and do the "Download Setting",then click " Run " to "Start Download".When "Download Finish",the green character "Pass" will show.



(7) After firmware upgrade, enter the Service Mode (Press Power --> Left --> Left--> Menu),then the firmware version will be shown as red circle on the screen.



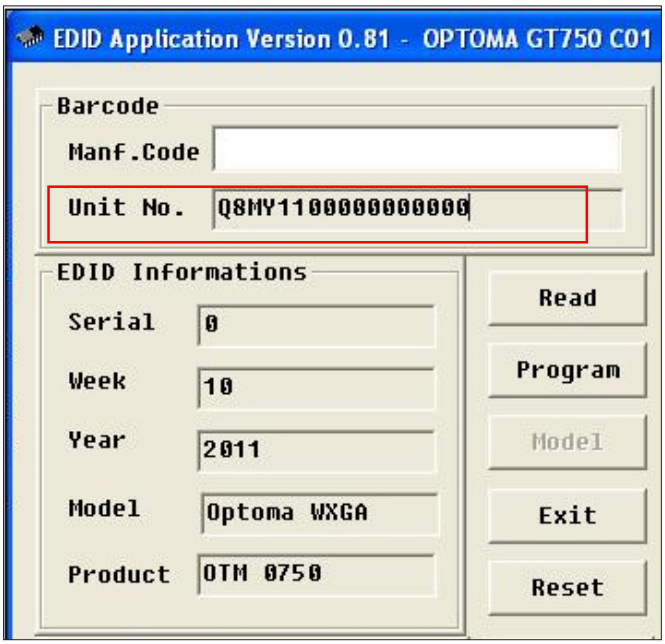
Chapter 6

EDID Upgrade

6-1 EDID Upgrade Procedure

- *The upgrade procedure for VGA and HDMI ports please refer to common service manual chapter 6.*

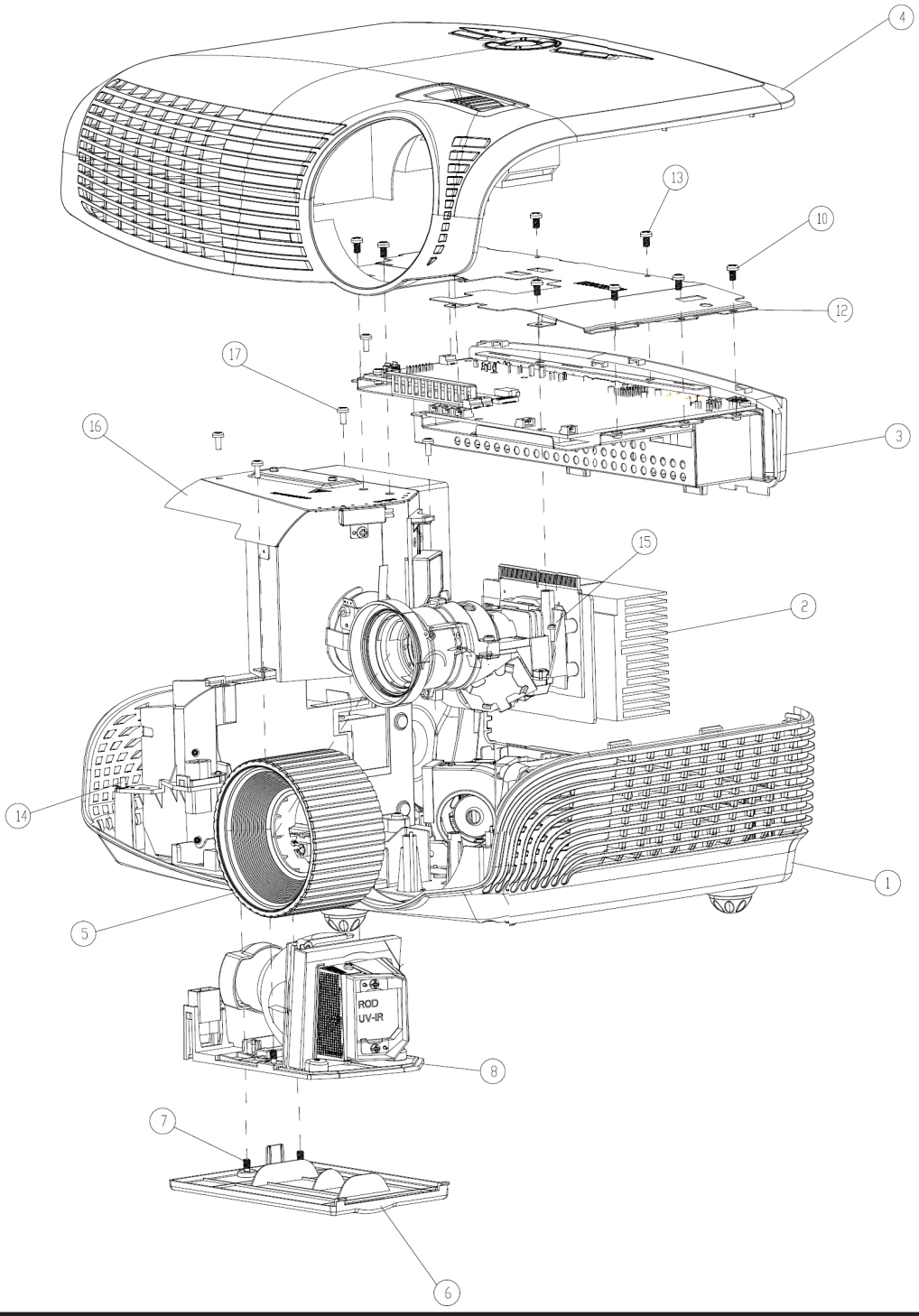
- *Please use " EDID 0.81.exe" Program and Key in the serial number into the "Unit No" blank space.*



Appendix A (Exploded Image)

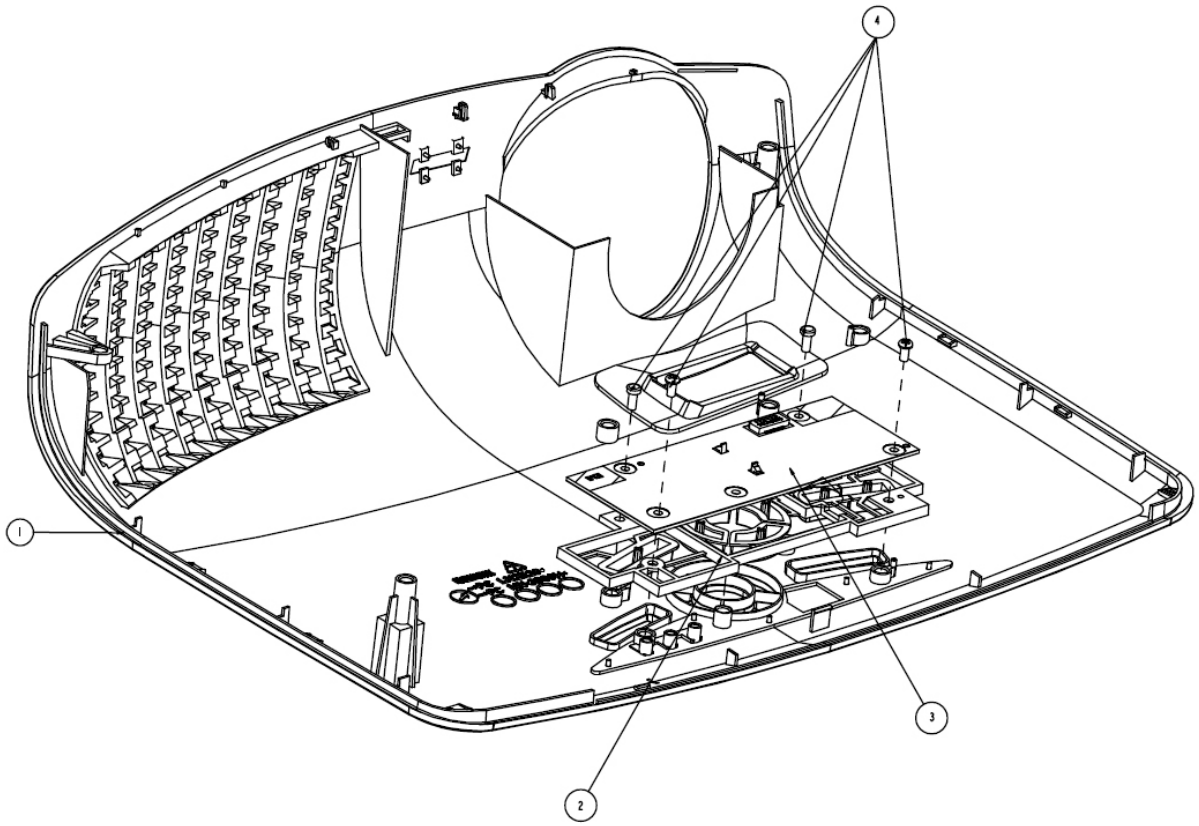
Note: This chapter is only designed to show the exploded image of the projector. For updated part numbers, please refer to RSPL report.

D.C.



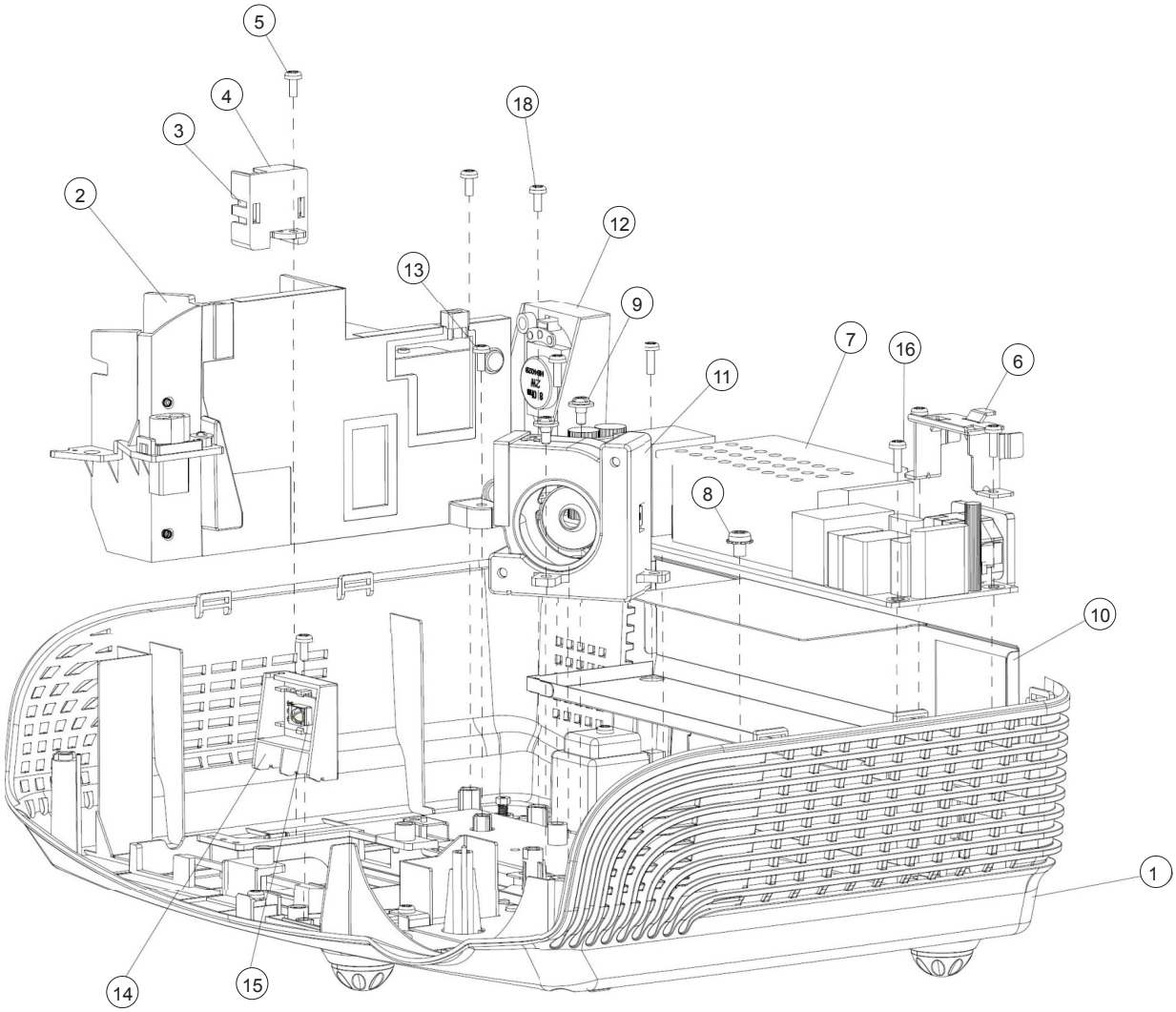
Item	P/N	Description	Parts Supply
1	70.8MY04G001	ASSY BOTTOM HOUSING MODULE GT750	
2	70.8MY01G001	ASSY OPTICAL ENGINE MODULE GT750	
3	70.8MY05G001	MAIN BOARD ASSEMBLY GT750	
4	70.8MY09G001	ASSY TOP COVER AND ZOOM RING GT750	
5	51.8HA01G011	FOCUS RING EW533ST BLACK	
	70.8EF45GR01	ASSY LAMP COVER BLACK EX615 (SERVICE)	V
6	51.8EG03G111	LAMP COVER BLACK EX615(LGSM)	
7	61.00018G003	LOCK SCREW PAN MECH M3*8.5-3.5 BLACK(1018+HEAT TREATMENT)	
8	SP.8MY01GC01	LAMP MODULE FOR PROJECTOR GT750	V
9	41.87F04G001	EMI TAPE L25*W16	
10	85.1A123G050	SCREW PAN MECH M3*5 Ni	
11	85.60426G090	SCREW HEX ZN M2.6 L9MM	
12	61.8EG03G001	TOP SHIELDING HD20	
13	85.0A122G030	SCREW DOUBLE FLAT MECH M2*3Ni	
14	85.1A323G080	SCREW PAN MECH M3*8 BLACK “GREEN”	
15	85.1A526G060	SCREW PAN MECH M2.6*6 Ni NYLOK	
16	70.8MY11G001	ASSY 8525 FAN SHIELDING MODULE GT750	
17	85.1A123G060	SCREW PAN MECH M3*6 NI	

Assy TOP COVER MODULE



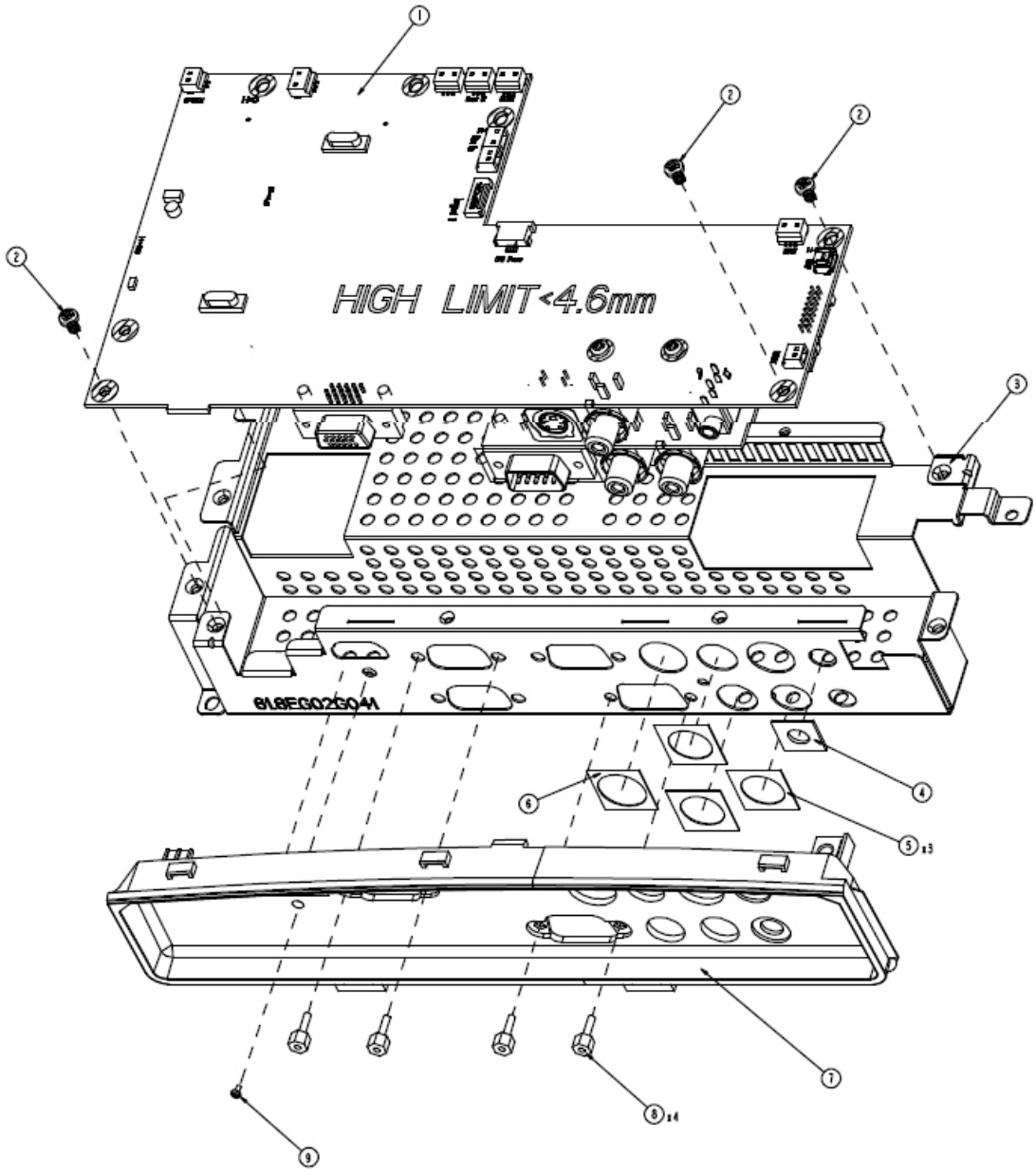
Item	P/N	Description	Parts Supply
1	75.8EG01G143	TOP COVER ASSEMBLY EW533ST BLACK(LGSM)	V
2	51.8EG14G111	KEYPAD PLATE ENTER EX612(LGSM)	
3	80.8MY03G001	PCBA KEYPAD BD FOR GT750 WXGA PROJECTOR	V
4	85.1A123G050	SCREW PAN MECH M3*5 Ni	

ASSY BOTTOM COVER MODULE



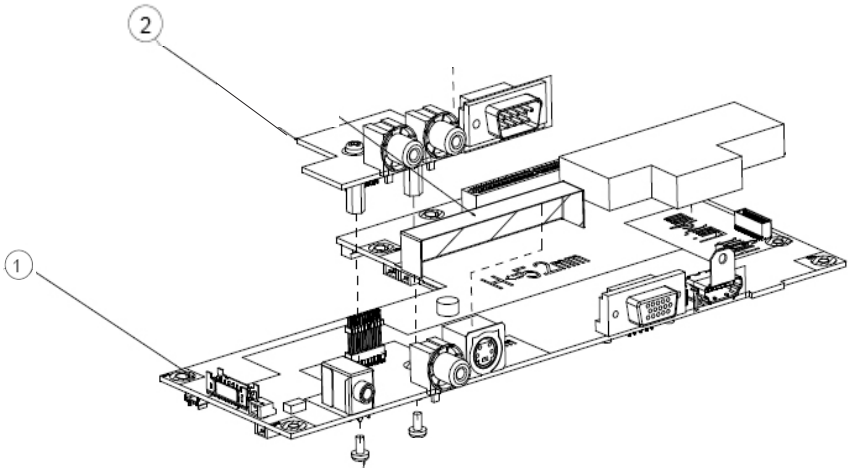
Item	P/N	Description	Parts Supply
1	51.8EG01G113	BOTTOM COVER BLACK LN2520 EX612-(LGSM)	V
	70.8MY17GR01	ASSY OSRAM LAMP DRIVER 230W 8MY (SERVICE)	V
2	75.8BW01G002	ASSY OSRAM LAMP DRIVER O3 MID 230W(Gen5_Panyu+E20.8)	
3	75.8AA04G001	BUY ASSY INTERLOCK SWITCH 1409X	
4	51.89W18G001	LIMIT SWITCH HOLDER PC MN3600H BLACK TDP-SP1	
5	85.WA126G060	SCREW PAN HEAD TAP M2.6*6	
6	61.88T19G001	AC INLET BRACKET FOR X1160E	
7	75.8MQ01GP01	ASSY YGE 230W LVPS FOR HD20_S600 WITH EUP	V
8	85.1C224G051	SCREW PAN MECH M4*5 COLOR W/TOOTH WASHER Cr3+	
9	61.87340G001	STAND OFF M3*4L D8.0 2100MP	
10	51.8EG20G001	230W LVPS MYLAR PC T=0.43 HD20	
11	70.8EG14G001	ASSY 4520 BLOWER MODULE HD20	
12	49.8GZ01G001	SPEAKER 5W 8ohm Zylux	V
13	85.WA123G060	SCREW PAN TAP M3*6 Ni	
14	51.8EG05G001	IR FRONT BOTTOM HOLDER MN3600H BLACK	
15	80.88N05G001	PCBA IR BOARD FOR EP721	
16	85.1F123G060	SCREW PAN MECH W/SF M3*6 Ni GREEN	
17	42.00440G001	CABLE W.A 2P #20 165mm LVPS TO LAMP DRIVER FOR EX612	
18	85.1F123G060	SCREW PAN MECH W/SF M3*6 Ni GREEN	
19	42.81G01G001	CABLE W.A. 2P #20 160mm LAPS TO BALLAST PD120	
20	51.8EF12G001	FRONT LIGHT CLOSE 5W SPEAKER	
21	51.8GZ01G001	AIR STOP MYLAR ES523ST	
22	51.8EF08G001	LIGHT LEAK MYLAR HEATSINK EX615	

ASSY MAIN BOARD AND IO BOARD MODULE



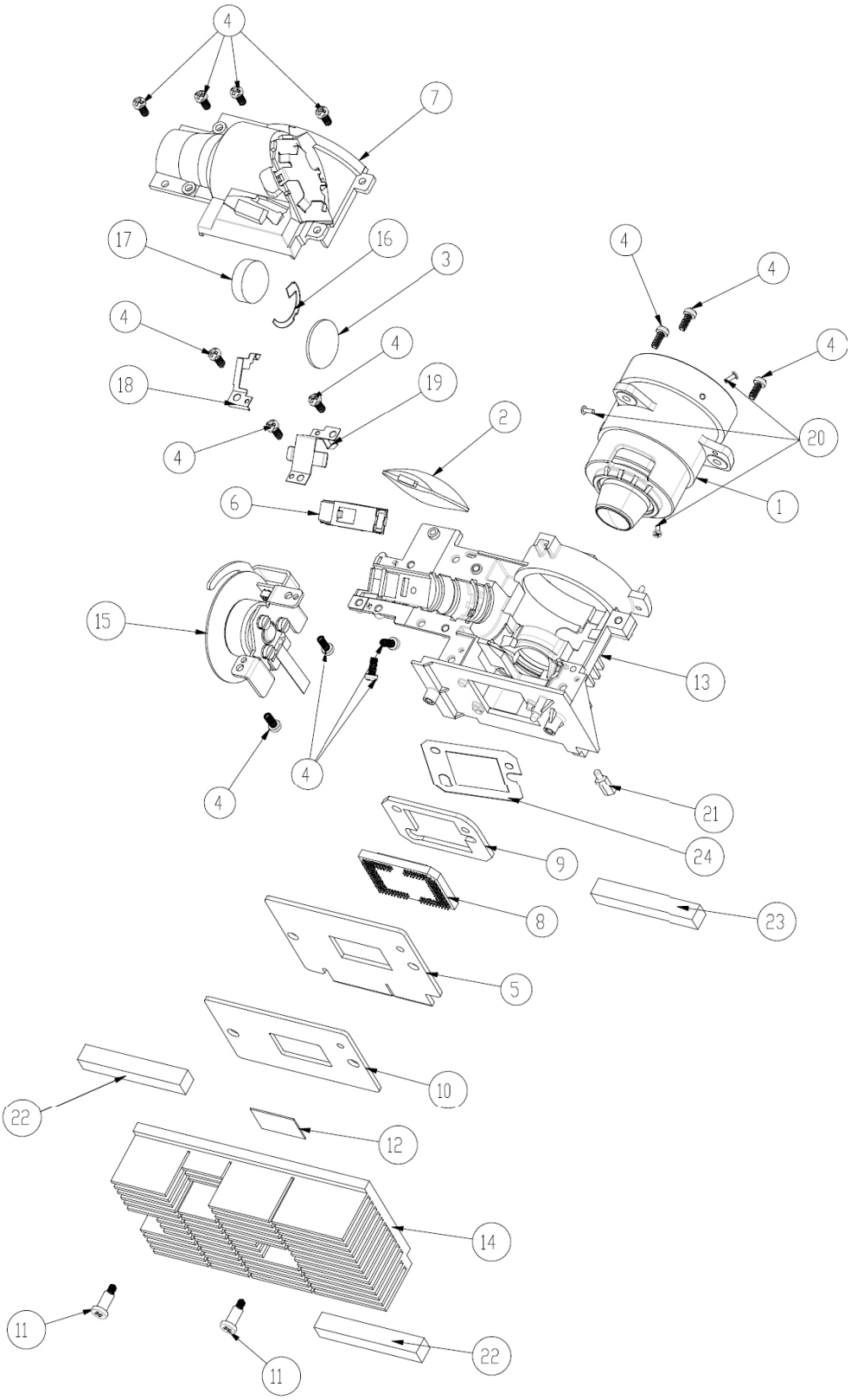
Item	P/N	Description	Parts Supply
1	70.8MY06G001	ASSY MAIN BOARD AND IO BOARD GT750	
2	85.1A123G050	SCREW PAN MECH M3*5 Ni	
3	61.8EG02G041	MAIN BOARD SHIELDING ES523ST	
	70.8MY20GR01	ASSY IO COVER MODULE 8MY BLACK (SERVICE)	V
4	41.8MY02G001	ADUIO I/O PORT EMI GASKET W13*H3*L13mm diameter 6.5mm	
5	41.85Y04G002	EMI GASKET (S-VIDEO & S-VIDEO) W18*H0.35*L17 mm	
6	41.8EF02G001	I/O GASKET W16.5*L18*H0.35MM DIAMETER 14.5MM	
7	51.8EG10G051	STAND OFF H=6.0 M2/M3*L6 Sn EP910	
8	85.005AGG408	SCREW HEX I/O #4-40 H4*L8 NI NYLOK	
9	86.0A123G024	HEX NUT M3*5.5*0.5P L2.4 Ni	
10	85.1A123G050	SCREW PAN MECH M3*5 Ni	

ASSY MAIN BOARD MODULE



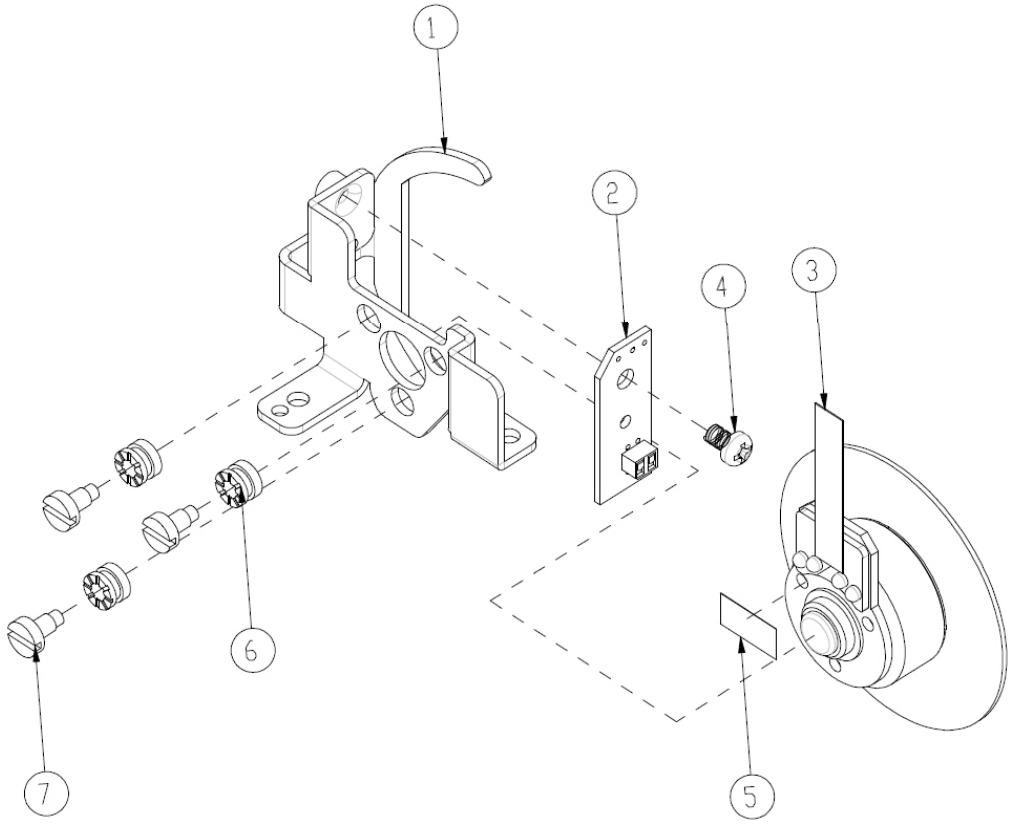
Item	P/N	Description	Parts Supply
1	80.8MY01G001	PCBA MAIN BOARD FOR GT750 WXGA PRO-JECTOR	V
2	80.8MY06G001	PCBA DAUGHTER BD FOR GT750 WXGA PRO-JECTOR	V

ASSY OPTICAL ENGINE MODULE



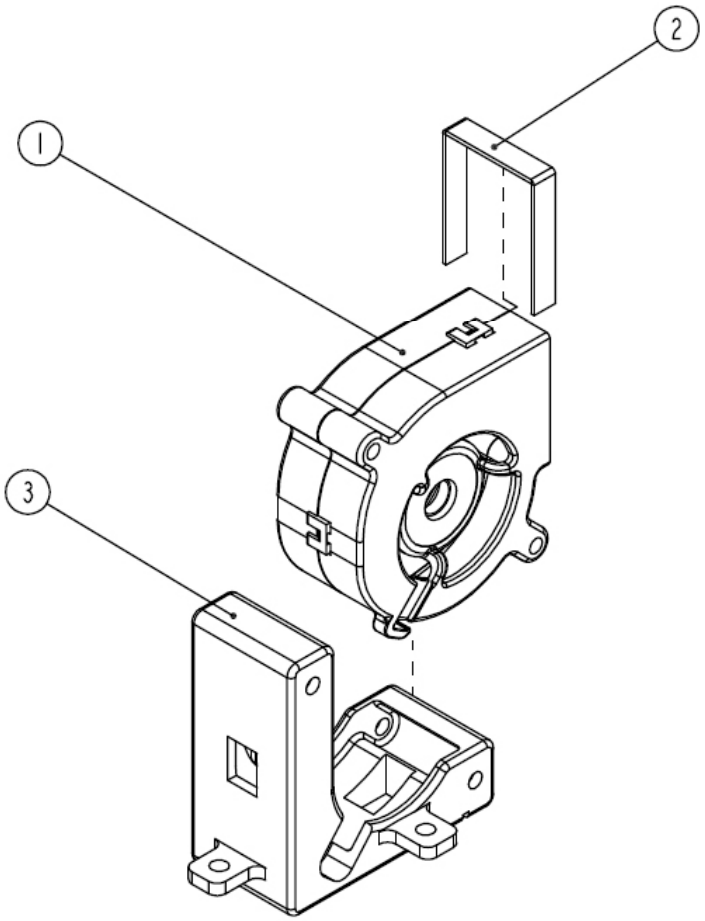
Item	P/N	Description	Parts Supply
1	23.8CP01G003	YO YM43 PROJECTION LENS FIXED LENS_TR 0.72	
2	70.8LM03G001	ASSY RELAY MODULE EW762	
	70.8MY18GR01	ASSY OPTICAL ENGINE MODULE 8MY(SERVICE)	V
3	23.8AH20G011	YO CONDENSER 1 FOR A15W	
4	85.1A526G060	SCREW PAN MECH M2.6*6 Ni NYLOK	
5	80.8EF02G001	PCBA DMD BD FOR X15-II XGA	V
	70.8HA19GR01	ASSY ROD MODULE FOR EW533ST (SERVICE)	V
6	70.8HA02G001	ASSY ROD MODULE EW533ST	
7	70.8EF32G001	ASSY ENGINE BOTTOM COVER Z15II	
8	48.8EJ01G001	0.65'' WXGA 2xLVDS SERIES 450 DMD -8 TI 1280-603cB	V
9	52.8CP01G011	DMD RUBBER EX615	
10	52.8CP02G001	DMD BOARD RUBBER X1161	
11	85.4A826G118	STEP SCREW FOR TYPEX DMD M2.6*11.8mm, X15	
12	52.8CP04G001	S450 0.55" XGA/SVGA DMD thermal pad, FUJIPO-LY, Sarcon XR-HE, 18.4x12.5x0.5 mm	
13	70.8HA01G001	ASSY ENGINE BASE ES533ST	
14	61.8CP02H002	DMD HEATSINK AL-ALLOY Z15 X1161	
15	70.8FB19G001	ASSY COLOR WHEEL MODULE EX762	
16	61.8EF03G001	CONDENSER LIGHT STOP EX615	
17	23.8AH20G012	YO CONDENSER 2 FOR A15W	
18	61.8FF01G001	ROD COVER FOR EW536	
19	61.88N12G021	ROD SPRING SUS301 3/4H,X15	
20	85.WA321G040	SCREW PAN TAP M1.7*4 BLACK	
21	85.00823G080	HEX SCREW M3*H8*L5.3,BRASS	
22	41.83C01G001	EMI GASKET W13*H15*L40	
23	41.8BV01G001	EMI GASKET W6*H13*L40	
24	61.8CP02H002	DMD HEATSINK AL-ALLOY Z15 X1161	

ASSY COLOR WHEEL MODULE



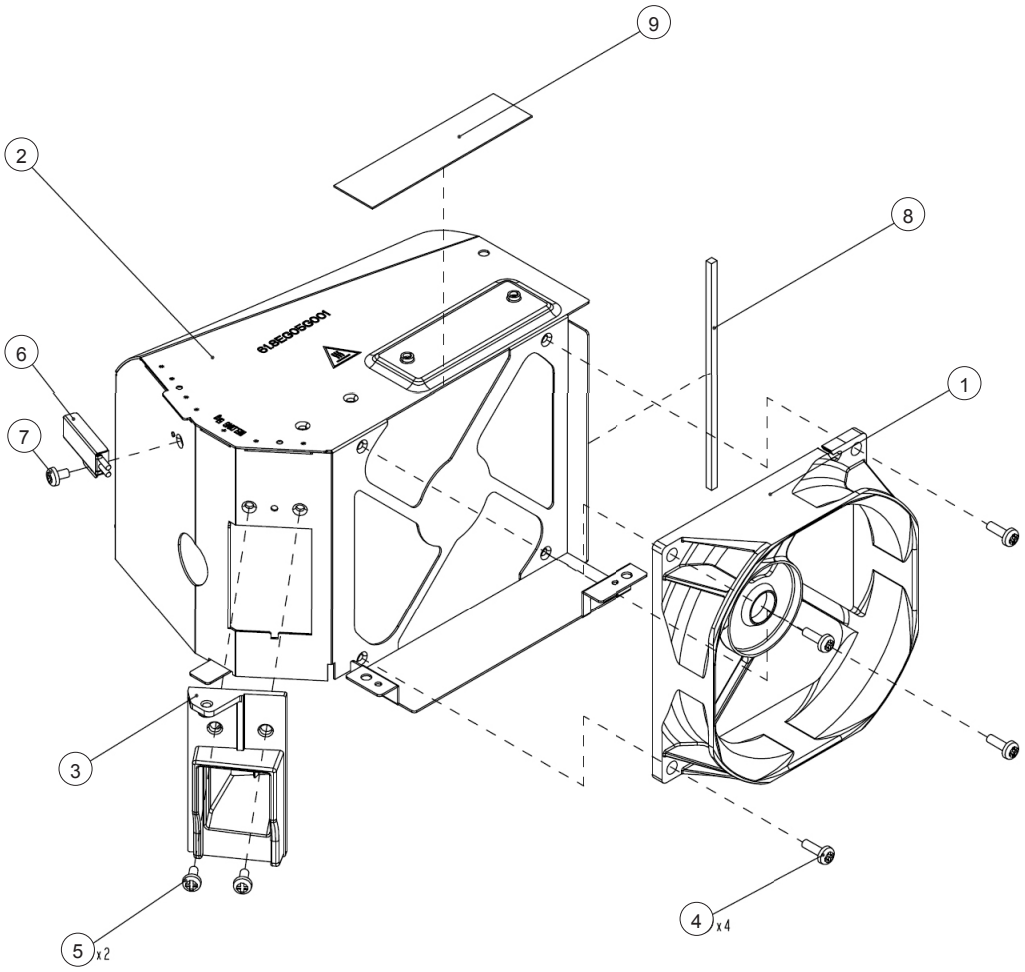
Item	P/N	Description	Parts Supply
	70.8MY19GR01	ASSY COLOR WHEEL MODULE 8MY R81Y41G84C31 (SERVICE)	V
1	61.8CP03G011	CW HOLDER SECC 4220	
2	80.8LM04G001	PCBA PHOTO SENSOR BOARD FOR EW762 PRO-JECTOR	V
3	23.8EF19G001	YO 6S R81Y41G84C31W52B71_HE3 CW	
4	85.1A526G060	SCREW PAN MECH M2.6*6 Ni NYLOK	
5	51.82Y29G001	TAPE 3M J350 10*5mm FOR COLOR WHEEL DP715	
6	52.83615G001	COLOR WHEEL DISC RUBBER, EzPro755	
7	61.83628G001	COLOR WHEEL SHOULDER SCREW,EzPro755	

ASSY BIOWER MODULE



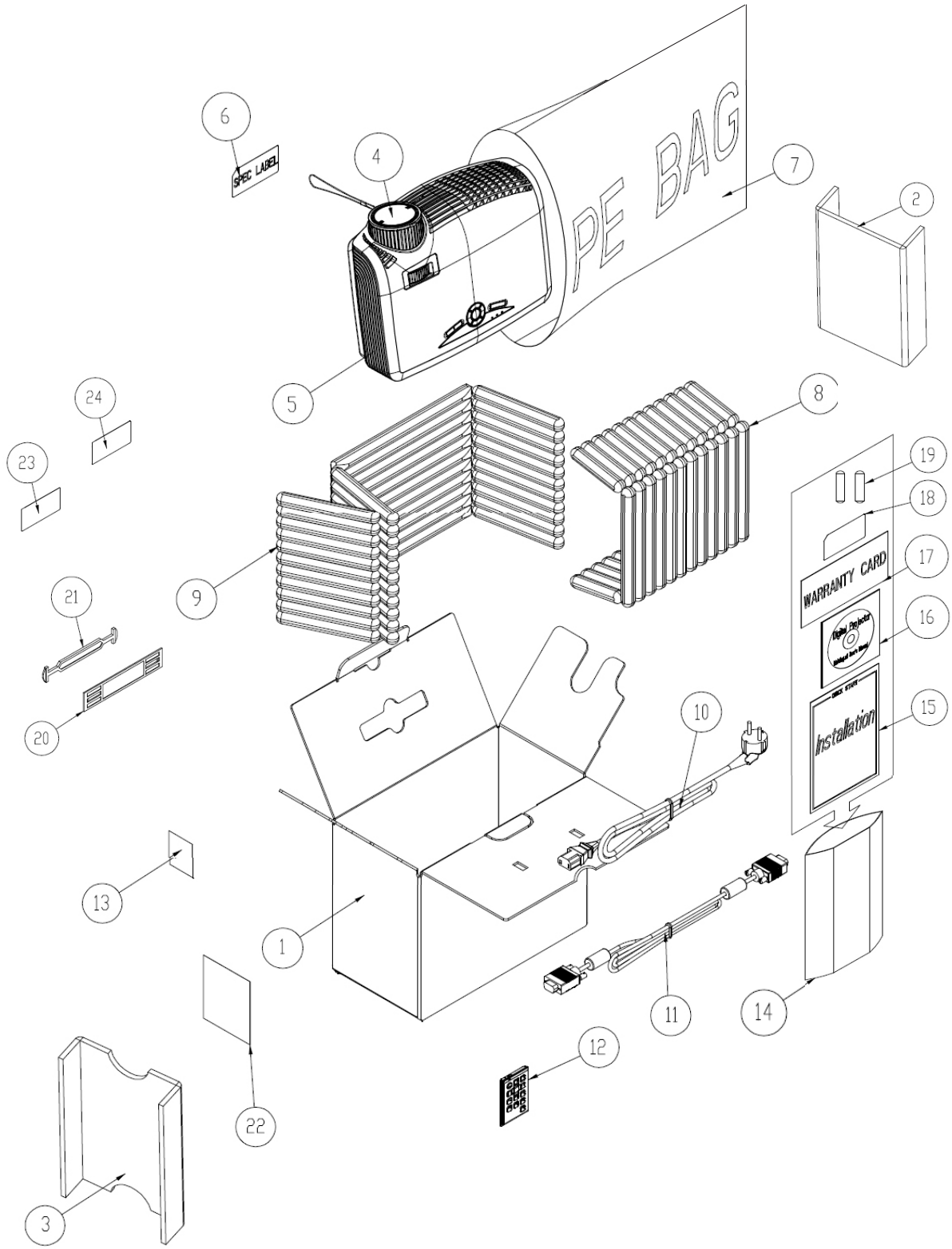
Item	P/N	Description	Parts Supply
1	49.8EF04G001	SUNON 45*20mm GB1245PKVX-8 F-TYPE BLOWER	V
2	52.89T01G001	BLOWER AIR TIGHT F12 H5350	
3	52.82G08G001	BLOWER 4520 RUBBER EP7190	

ASSY FAN SHIELDING MODULE



Item	P/N	Description	Parts Supply
1	49.8EF03G001	SUNON KDE1285PTV1 AXIAL FAN-LOW COST	V
2	61.8EG05G011	7020 FAN SHIELDING EX542	
3	61.8EG11G001	LAMP BLOWER DUCT HD20	
4	85.1A123G080	PAN SCREW M3*8 FOR YM-64 FRONT CELL&SP	
5	85.1A123G060	SCREW PAN MECH M3*6 NI	
6	43.8EG17G001	THERMAL SWITCH WITH BRACKET (KLIXON YS11) HD20 100C	V
7	85.1A123G040	SCREW PAN MECH M3*4 Ni	
8	51.81540G001	TAPE 3M J350 17*60mm	
9	41.8EF01G001	EMI GASKET W5*H4*L80m	

A.K.



Item	P/N	Description	Parts Supply
1	55.8MY01G001	CARTON OUTSIDE BOX AB FLUTE GT750 USA	V
2	55.8EG02G001	PARTITION PAPER RIGHT HD20	
3	55.8EG03G001	PARTITION PAPER LEFT HD20	
4	75.8HA01G011	LENS CAP ASSEMBLY EW533ST BLACK	
5	DC.8EF01G001	D.C. EX615	
6	35.86301G001	SPEC LABEL BLANK PD120	
7	51.00027G003	PE BAG ZIPPER 33cm*25cm SIZE GREEN FOR OPTOMA	
8	56.8EF01G001	AIR BAG BOTTOM	
9	56.8EF02G001	AIR BAG TOP EX615	
	SP.80N03GC01	CABLE POWER CORD 1830mm SP30+IS14;BC-PU-PIXY01	V
10	42.50115G001	CABLE POWER CORD 1.8M SP30+IS14 US	V
	SP.8MY02GC01	INFRARED REMOTE CONTROL FOR GT750 Black	V
12	45.8MY01G001	INFRARED REMOTE CONTROL GT750 Black	V
13	57.00001G001	PACK SIO2 DRIER 20g	
14	51.00027G003	PE BAG ZIPPER 33cm*25cm SIZE GREEN FOR OPTOMA	
15	36.8HA02G001	QUICK START CARD MULTILINGUAL EX523ST/ EW533ST	
16	36.8MY01G001	USER'S GUIDE MULTILINGUAL (CD) GT750	V
17	36.00024G001	WARRANTY CARD US FOR LPP SERIES, 1 YEAR	
18	36.00018G001	EXTENDED WARRANTY ; REGISTRATION FORM,USA FOR LPP SERIES	
19	46.80S01G101	BATTERY #7 1.5V NOVACELL	
20	51.00200G001	HANDLE BAR 2. PE HD70	
21	51.00201G001	HANDLE BAR 1.PE HD70	
22	35.82001G111	AK LABEL 3"*3" BLANK	
23	35.00040G001	LABEL 30mm,GREEN	
24	35.52302G091	LABEL CARTON 108*92 BLANK	

Appendix B

I. Serial Number System Definition

Serial Number Format for Projector

Q 8MY 1 15 AAAAA C 0001

(1) (2) (3) (4) (5) (6) (7)

(1) : Q = Optoma

(2) : 8MY = Project Code

(3) : 0 = Last number of the manufacture year (ex: 2011 =1)

(4) : 15 = week of the manufacture year (ex: the fifteenth week of the year = 15)

(5) : AAAAA = not-defined

(6) : C = Manufacture factory (CPC)

(7) : 0001 = Serial Code

EX: Q8MY115AAAAAC0001

This label "Q8MY115AAAAAC0001" represents the serial number for GT750. It is produced at CPC on fifteenth of 2011. Its serial code is 0001.

II. PCBA Code Definition

PCBA Code for Projector

A	B	XXXXXXXXXX	C	XXX	EEEE
1	2	3	4	5	6

1 : ID

2 : Vendor Code

3 : P/N

4 : Revision

5 : Date Code

6 : S/N