SERVICE MANUAL

EH1020

Date	Revise Version	Description
2010.6.7	V1.0	Separate from Optoma HD20_HD200X_HD2200_ EH1020 V4.0 (DDP 3021, 36.8EG08G001) Service Manual

Prepared: Amy Check: Approved:

Preface

This manual is applied to EH1020 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 is 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.

EH1020 Service Manual

Manual Version 1.0

Table of Content

Chapter 1

Introduction

1-1 Highlight

No	Item	Description
1	Dimensions (WxDxH)	• 324x234x97mm
2	Power Supply	• Auto-ranging: 100V ~ 240V ± 10%, 50-60Hz
3	Keystone correction	• +/- 20 degree
4	DMD chip	• 0.65” Type A 1080P DC2 DMD -8
5	Throw ratio	• 1.5~1.8
6	Lamp life	• 2500 hrs in standard mode • 4000 hrs in Eco mode
7	Lamp	• 230W Osram E20.8
8	Temperature	• Operating: 5 ~ 40 °C (auto-dimming to STD mode at 35 ~ 40 °C) • Non-operation: -10°C ~ 60°C
9	Input signal spec	• VGA-in: D-sub 15 pin x 1 • VIDEOx1 • Composite: RCA x 1(Y/Pb/Pr) • HDMI: 1 x HDMI v1.3 (HDCP) • S-Video: mini-DIN 4 pin x 1 • Wireless • Audio-in connectivity grouping
10	Power consumption	Full mode: Typ 308w, Max 339w @110Vac Eco mode: Typ 256w, Max 281w @110Vac Standby mode < 1W
11	Video compatibility	NTSC: M 3.58MHz, 4.43MHz PAL: B/D/G/H/I/M/N, 4.43MHz SECAM: B/D/G/K/K1/L, 4.25/4.4 MHz HDMI: 480i/p, 576i/p, 720p(50/60Hz), 1080i/p(24/50/60Hz) (1080P24 must be displayed at 48Hz)
12	Color Wheel	5 Segment (R76G78B76Y32W98) Filter Diameter 42 mm Speed (Hz) : 2X, 7200 RPM

1-2 Compatible Mode

Computer Compatibility

Compatibility	Resolution	V-Sync [Hz]	Analog	Digital
SVGA	800x600	56	V	X
	800x600	60	V	V
	800x600	72	V	V
	800x600	75	V	V
	800x600	85	V	V
XGA	1024x768	60	V	V
	1024x768	70	V	V
	1024x768	75	V	V
	1024x768	85	V	X
WXGA	1280x768	60	V	V
	1280x800	60	V	X
HD	1280x720	60	V	V
	1280x1024	60	V	V
	1280x1024	75	V	V
	1920x1080	24	X	V
	1920x1080	60	X	V
SXGA+	1400X1050	60	V	V
UXGA	1600x1200	60	V	V

Power Book G4

Compatibility	Resolution	V-Sync [Hz]	Analog	Digital
SXGA	800x600	60	V	X
	800x600	75	V	X
	800x600	85	V	X
XGA	1024x768	60	V	X
	1024x768	70	V	X
	1024x768	75	V	X
	1024x768	85	V	X
WXGA	1280 x 768	60	V	X
HD	1280X720	60	V	X
	1280x1024	60	V	X
	1280x1024	75	V	X
SXGA+	1400X1050	60	V	X
UXGA	1600x1200	60	V	X

iMAC

Compatibility	Resolution	V-Sync [Hz]	Analog	Digital
XGA	1024x768	60	V	X

Chapter 2

Disassembly Process

2-1 Equipment Needed & Product Overview

(This section links to common service manual CH2)

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.*

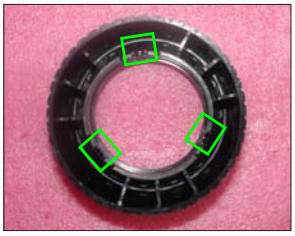


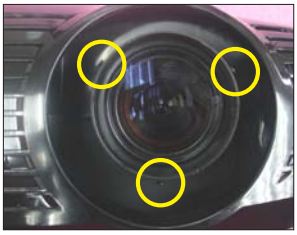



2-2 Repair notice

2-2-1 Disassemble Focus Ring

1. Rotate the Focus Ring clockwise until you cannot rotate any more (as red arrow direction).
2. Pull out the Focus Ring.





Note: - When you assemble the Focus Ring, ensure the 3 card slot (as green square) placed in the 3 double-screw bolt (as yellow circle) properly, and the Focus Ring can be well adjusted.

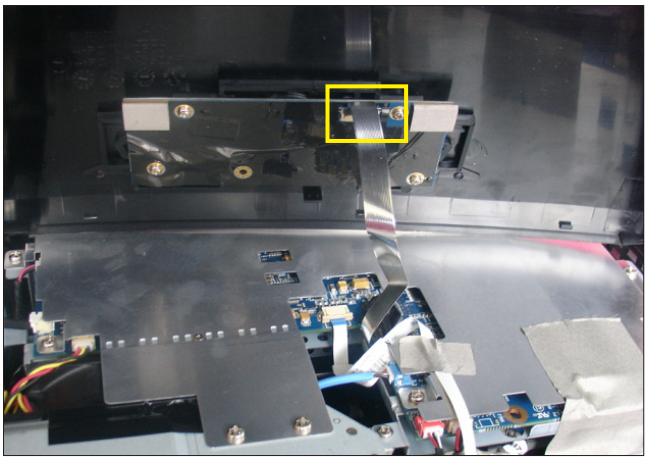
2-2-2 Disassemble Top Cover Module

1. Unscrew 2 screws (as red circle) from the Bottom Cover.
2. Press two sides of the projector as the blue arrows point.
3. Remove the Top Cover Module.

Note: - When you remove the Top Cover, take care the connector (as yellow square) of FPC cable which connect Main Board and Keypad Board Module, then unplug it from Keypad Board Module.

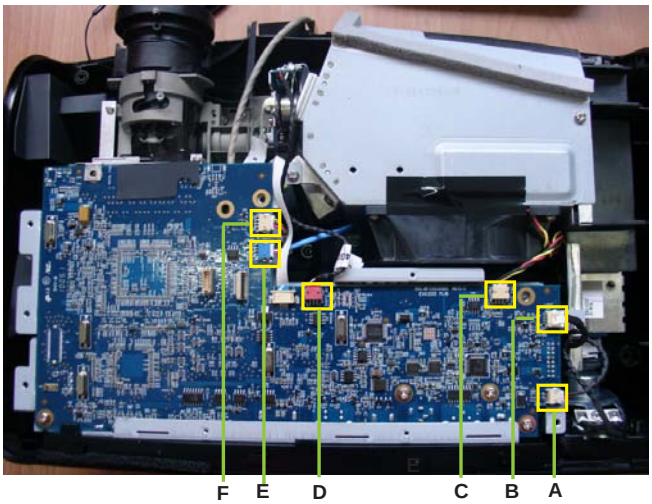
- Avoid damaging by pulling keypad FPC cable.

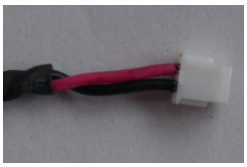
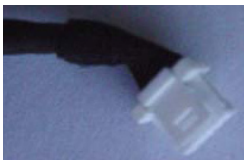
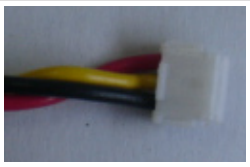
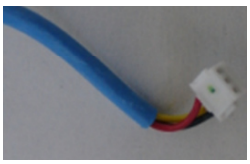
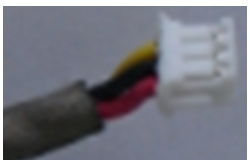
- Make sure the FPC cable plug into the correct ports when assembling it.



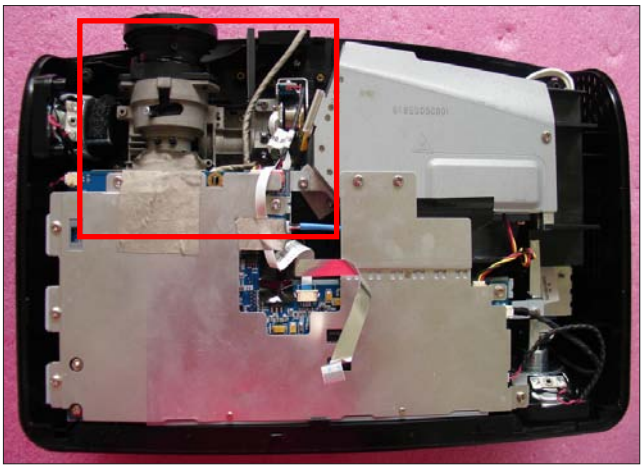
2-2-3 Disassemble Main Board

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



Item	Male Connector on Main Board	The key feature	Figure
A	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 1.95 M.

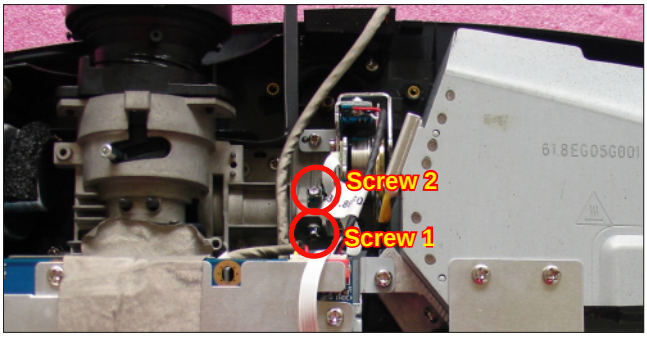
   - This process should be done at a dark environment (under 10 Lux).

2. Procedure Adjustment

   - Change the screen to "white screen".

   - Adjust the screws by using the rod 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.

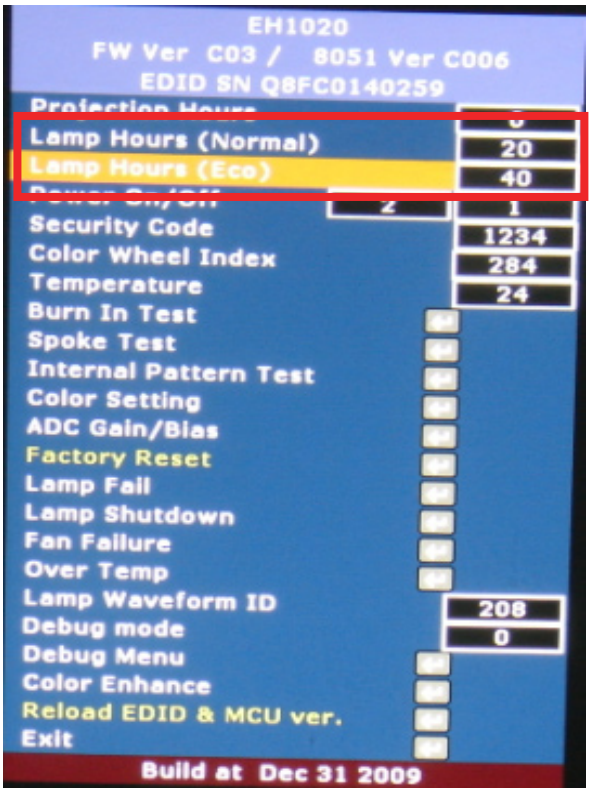
Z type driver

Note: - To avoid over adjusting the rod.

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

- Please use Z type driver to adjust Rod screw 1.

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 1.

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 1.

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

Chapter 3

Trobleshooting

3-1 LED Lighting Message

Message	ON/STANDBY LED (Green/Amber)	Temp LED (Red)	Lamp Led (Red)
Standby State (input power cord)	Amber	O	O
Power on (Warming)	Flashing Green	O	O
Lamp lighting	Green	O	O
Power off (Cooling)	Flashing Green	O	O
Error (Over Temp)	Flashing Amber	☼	O
Error (Fan fail)	Flashing Amber	Flashing	O
Error (Lamp fail)	Flashing Amber	O	☼

*Note: * Steady light =>* ☼, *No light =>* O

** ON/STANDBY LED be ON when OSD appears, be OFF when OSD disappears.*

3-2 Main Procedure

The other troubleshooting procedures please refer to common service manual 3-1.

No	Symptom	Procedure
1	Auto Shut Down	- Check LED Status a. Over Temp: ON/STANDBY LED flashes amber, Temp LED lights on red - Check Fan - Check Thermal Switch - Check Main Board b. Fan fail: ON/STANDBY LED flashes amber, Temp LED flashes red - Check Fan - Check Main Board c. Lamp fail: ON/STANDBY LED flashes amber, Lamp LED lights on red - Check Lamp - Check Lamp Driver - Check Color Wheel - Check Photo Sensor - Check Main Board

Chapter 4

Function Test & Alignment Procedure

4-1 Service Mode Instruction (This section links to common service manual 4-2 Service Mode)

1. Turn on the projector.
2. (1) Press "Power ->Left ->Left ->Menu" button sequentially to get into factory mode 1
   (2) Press "Power ->Left ->Up -> Down" button sequentially to get into factory mode 2
3. Factory mode will be shown. After confirming the configuration, press "Exit" to exit.

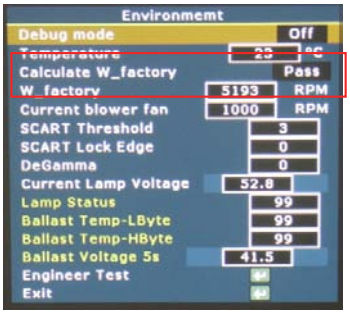
Defect specification table

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

4-2 Fan Speed Saving

To adjust the operation temperature of projector, after replace main board/blower, you need to do:

1. Hold "Left" then press "Power" button, release "Left" button until the "Lamp" and "Temp" LED light red at the same time.

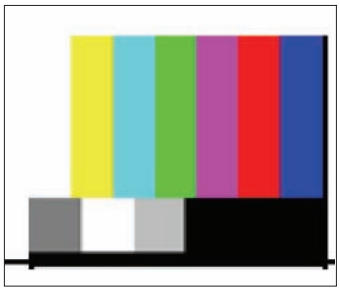


2. Press "Power ->Left ->Up -> Down" button sequentially to get into service mode 2, guarantee that "W-Factory" is greater than 4650 and the "Calculate W-Factory" should show "Pass", if not, please follow step1 to do "fan speed saving" again.

4-3 Calibration

1. Video calibration

Procedure
- Test equipment: video generator.
- Once formatter board is changed, Video calibration should be done as well.
  (1) Test signal: 720p @ 60HZ
  (2) Test Pattern: SMPTE BAR
- Note
  (1) Calibration pattern should be in full screen mode.
  (2) Press "Power ->Left ->Left ->Menu" and choose ‘‘color setting’’.
  (3) Choose and get into ‘‘Video Calibration’’, press “Enter” button to adjust the screen to its normal status. Choose “Menu” or “Exit” to leave service mode 1.



SMPTE BAR

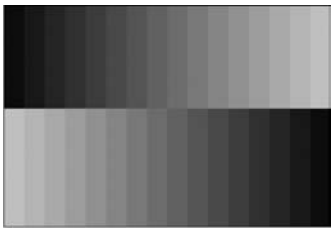
Inspection item
- Color saturation

Criteria
- There should not have any lack of SMPTE BAR. The color should appear normal and sort in right order.

- Color levels should be sufficient and normal.

2. PC calibration

Procedure
- Test equipment: video generator
- Once formatter board is changed, PC calibration should be done as well.
  (1) Test signal analog: 800x600@60Hz
  (2) Test Pattern: 16 Grays
- Note
  (1) Calibration pattern should be in full screen mode.
  (2) Press "Power ->Left ->Left ->Menu" and choose ‘‘color setting’’.
  (3) Choose and get into PC Calibration for correction in service mode 1. Choose “exit” to leave the service mode after all.



16 Grays

Inspection item
- Color saturation

Criteria
- Color levels should be sufficient and normal. (the unidentified color levels on both left and right sides should not be over 2 color levels.)
- Gray level should not have abnormal color or heavy lines.

4-4 PC MODE

For EH1020,the native resolution of test signal is 1920x1080@60HZ. Other contents please refer to common service manual 4-6.

4-5 Optical Performance Measure

1. Test equipment

Procedure
- Press "Power ->Left ->Left ->Menu" to get into service mode 1.

- Select “Spoke Test”

2. Brightness

Criteria: 1200 ANSI Lumens

3. Contrast

Criteria: 1500:1

4. Uniformity

Criteria: 70%

4-6 Test Inspection Procedure

Update	Change parts					
	Main Board	Firmware	Color Wheel	Lamp Module	Engine Module	Blower
Version Update	v	v				
Color Wheel Index	v		v			
PC Calibration	v					
Video Calibration	v					
Reset lamp hour				v		
OSD Reset	v	v				
EDID	v					
Re-write Lamp Hour Usage	v					
Fan Speed Saving	v					v
Rod adjustment					v	

Note: - If Color appears abnormal after changing Main Board Module, please do Color Wheel index adjustment.

- After changing parts, check the information above table.

Chapter 5

Firmware Upgrade

Section 1: System Firmware Upgrade

(This section links to common service manual 5-2 Pixelworks for FW Upgrade (USB))

5-1-1 Equipment Needed

Software : (DDP 3021)

- EH1020_FW_xxx

Note: "xxx" represent software version.

Hardware :

- projector
- Mini USB cable
- PC or Laptop
- Power Cord (P/N 42.50115G001)

Note: we will show the hot key of fw mode, USB drivver Installe and how to check FW version,the other contents please refer to common manual 5-2 .

5-1-2 Setup Procedure

1. Plug Power and mini USB cables in the projector, the ON/Standby LED will display "Amber".

2. Hold "Enter"and "Right" buttons, press "Power" button, then release "Power" button and keep holding "Enter" and "Right" buttons, release the "Enter" and "Right" buttons when the power LED flashes in "Green".

   - The PC will ask to install USB driver (only for the first time). Please refer to 5-1-3 for the installation of USB driver.

Note: The system fan and the light will not operate.

5-1-3 Install USB Driver

1. Click on the "Found New Hardware Wizard".

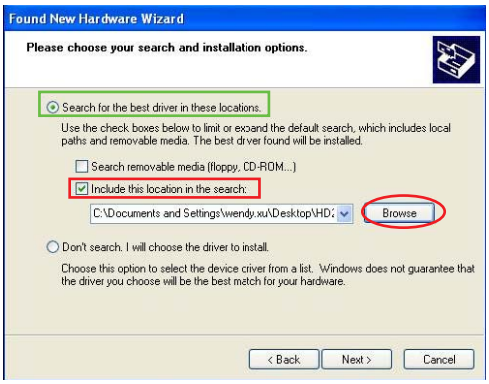
   - Select "Install from a list or special location (Advanced)".

   - Click "Next".

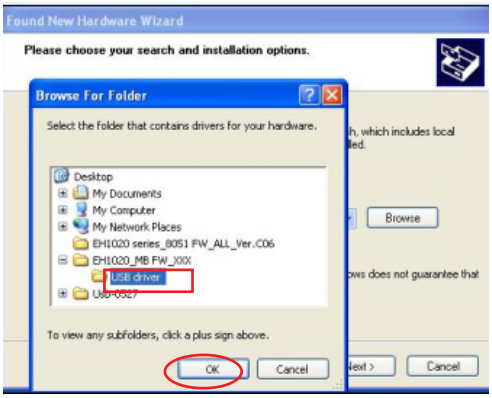
2. Select "Search for the best driver in these locations."

   - Choose "Include this location in the search".

   - Click "Browse".



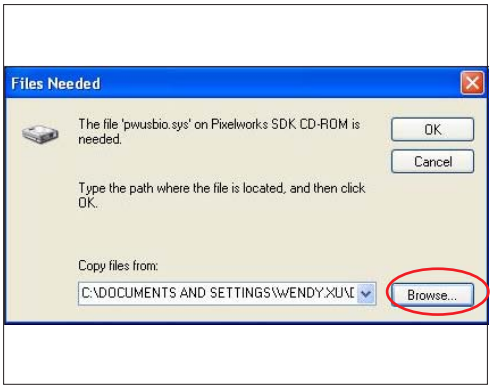
3. Select the folder that contains the driver for your hardware. Click "OK".



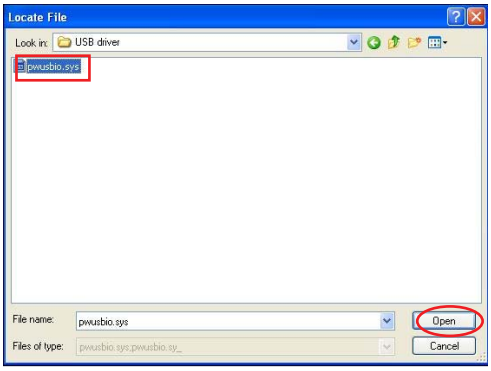
4. Wait for several seconds.

5. Click "Continue Anyway".

6. Click "Browse".



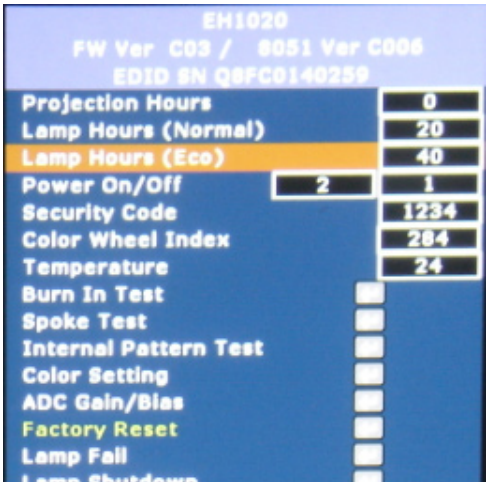
7. Choose the file "pwusbio.sys" and open it.



8. Click "Finish".

5-1-4 Firmware Version Check

1. After firmware flash,Press “Power”, “Left”, “Left” and “Menu” button to get into service mode to check firmware version.



Section 2: 8051 Firmware Upgrade Procedure

(This section links to common service manual 5-4 8051Firmware Upgrade (NLINK))

5-2-1 Equipment Needed

Software: (DDP 3021)

- Setup _NLINK_en
- Manley USB Driver_NLINK
- HD20_8051_xxx.hex

Hardware:

- Projector
- Power cord: 42.50115G001
- Mini USB cable
- NLINK Fixture
- NLINK Cable
- PC or Laptop



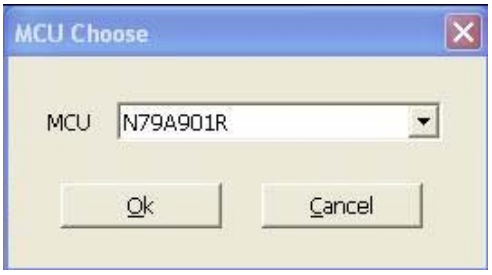


5-2-2 8051 Firmware Upgrade Procedure Note

Note: Plug in the power cord, connect VGA out Port of projector with NLINK Fixture .

1. Choose the right type of MCU

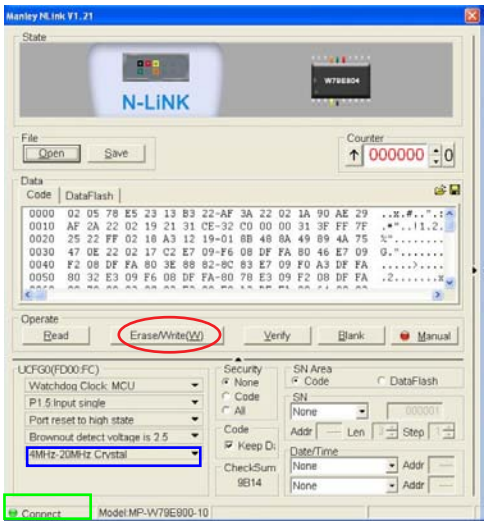
   - "MCU Choose" picture will appear on the screen, select "N79A901R".



2. Program settings

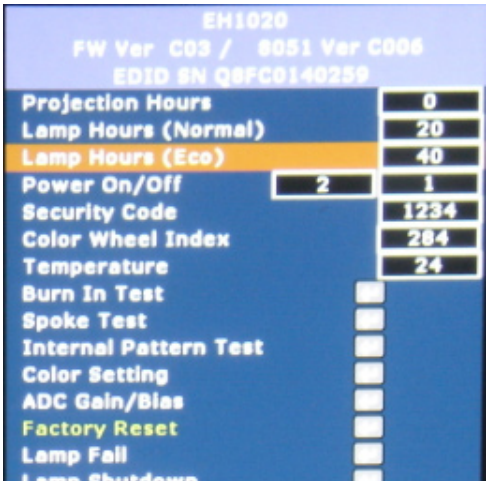
   - Ensure NLINK Fixture and PC are securely connected: the indicator lights on green, and the state is "Connect"(as green square).

   - Select "4MHz-20Mhz Crystal" as blue square.



3. Check 8051 FW version

   - Press “Power”, “Left”, “Left” and “Menu” button to get into service mode 2 to check firmware version.



Chapter 6

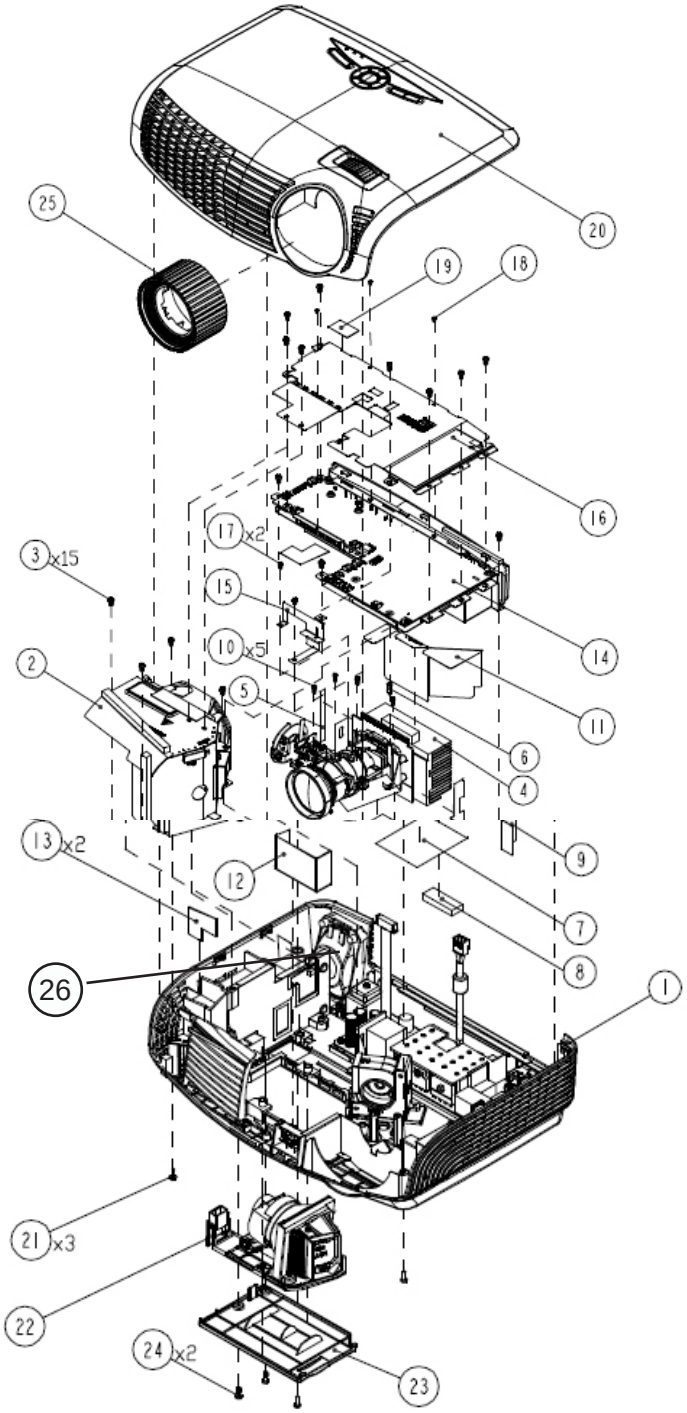
EDID Upgrade

6-1 EDID Upgrade Procedure

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

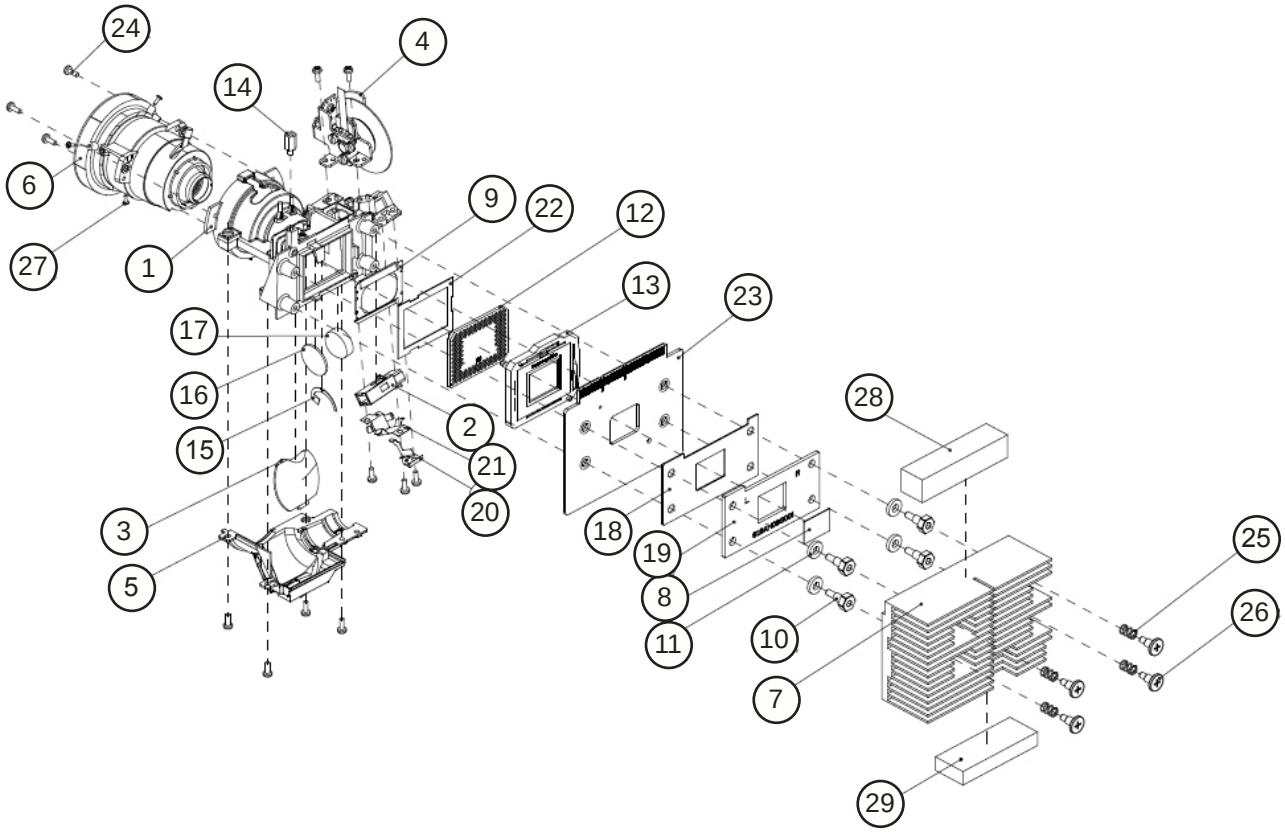
Appendix A

D.C.EH1020



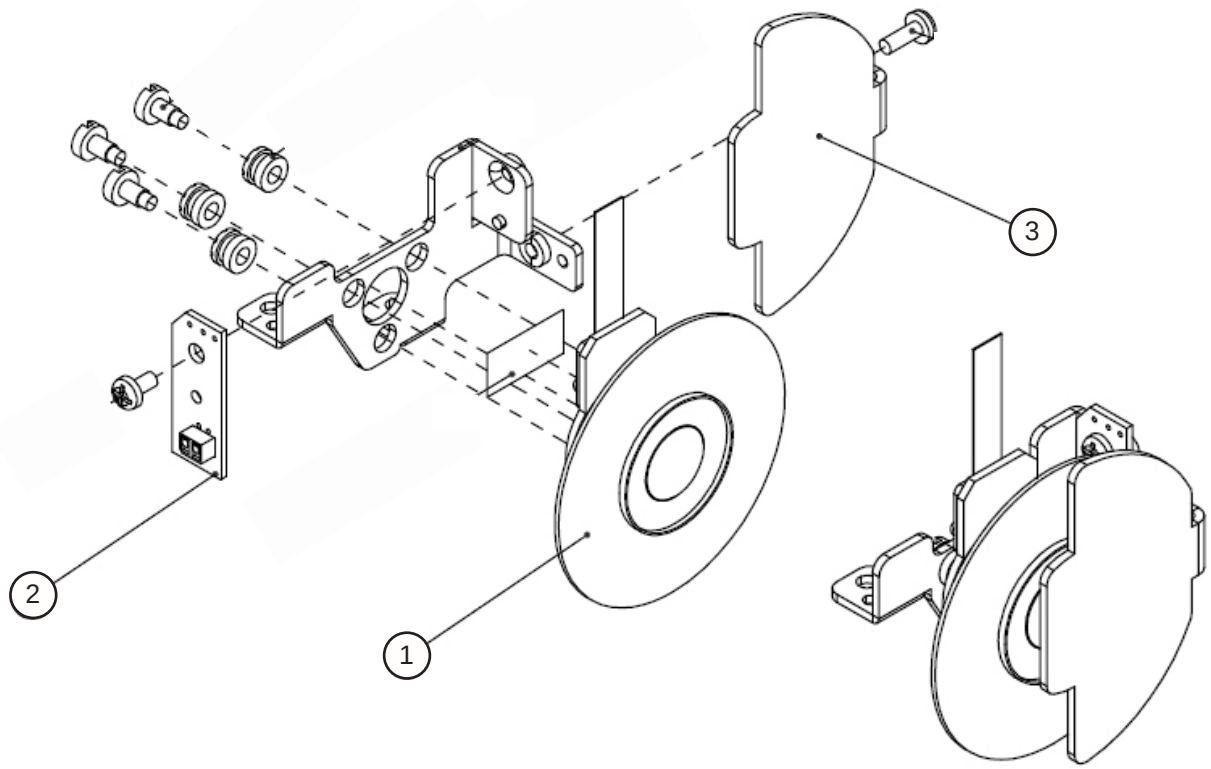
Item	P/N	Description	Parts Supply
1	70.8FC06G001	ASSY BOTTOM HOUSING MODULE EH1020	
2	70.8FC13G001	ASSY 8525 FAN SHIELDING MODULE EH1020	
3	85.1A123G050	SCREW PAN MECH M3*5 Ni	
4	70.8FC01G001	ASSY OPTICAL ENGINE MODULE EH1020	
5	51.8EF08G001	LIGHT LEAK MYLAR HEATSINK EX615	
6	85.00826G080	HEX SCREW M2.6*H8*L4,BRASS	
7	41.80F02G001	EMI TAPE 50*60mm	
8	41.87Y03G001	EMI GASKET W13*H6*L35	
9	51.8EG39G001	RIGHT SIDE LIGHT LEAK MYLAR HD20	
10	85.1A526G060	SCREW PAN MECH M2.6*6 Ni NYLOK	
11	51.8FC03G001	EH1020 DMD MYLAR	
12	51.8EG41G001	TOP COVER AND BOTTOM COVER MYLAR FOR HD20	
13	51.8EG35G001	DRIVER THERMAL MYLAR HD20	
14	70.8FC03G001	MAIN BOARD ASSEMBLY EH1020	
15	61.8EG14G001	EMI SPRING HD20	
16	70.8FC16G001	TOP SHIELDING AND MYLAR ASSY EH1020	
17	85.1A123G040	SCREW PAN MECH M3*4 Ni	
18	85.0A122G030	SCREW DOUBLE FLAT MECH M2*3Ni	
19	41.87F04G001	EMI TAPE L25*W16	
20	70.8FC09G001	ASSY TOP COVER AND ZOOM RING MODULE EH1020	
21	85.1A123G080	PAN SCREW M3*8 FOR YM-64 FRONT CELL & SP	
	SP.8EG01GC01	LAMP MODULE FOR PROJECTOR HD20/EX615/EX612	V
22	70.8FC13G001	ASSY ORSAM E20.8 230W LAMP MODULE HD20	
	70.8EF45GR01	ASSY LAMP COVER BLACK FOR EX615 (SERVICE)	V
23	51.8EG03G011	LAMP COVER BLACK EX615	
24	61.00018G003	LOCK SCREW PAN MECH M3*8.5-3.5 BLACK(1018+HEAT TREATMENT)	
25	51.8EG16G031	FOCUS RING BLACK HD200X (FOR YM40)	
26	49.8EM01G011	SPEAKER 8FB 8W 8-OHM PDG-DWL100	V

Assy Optical Engine Module



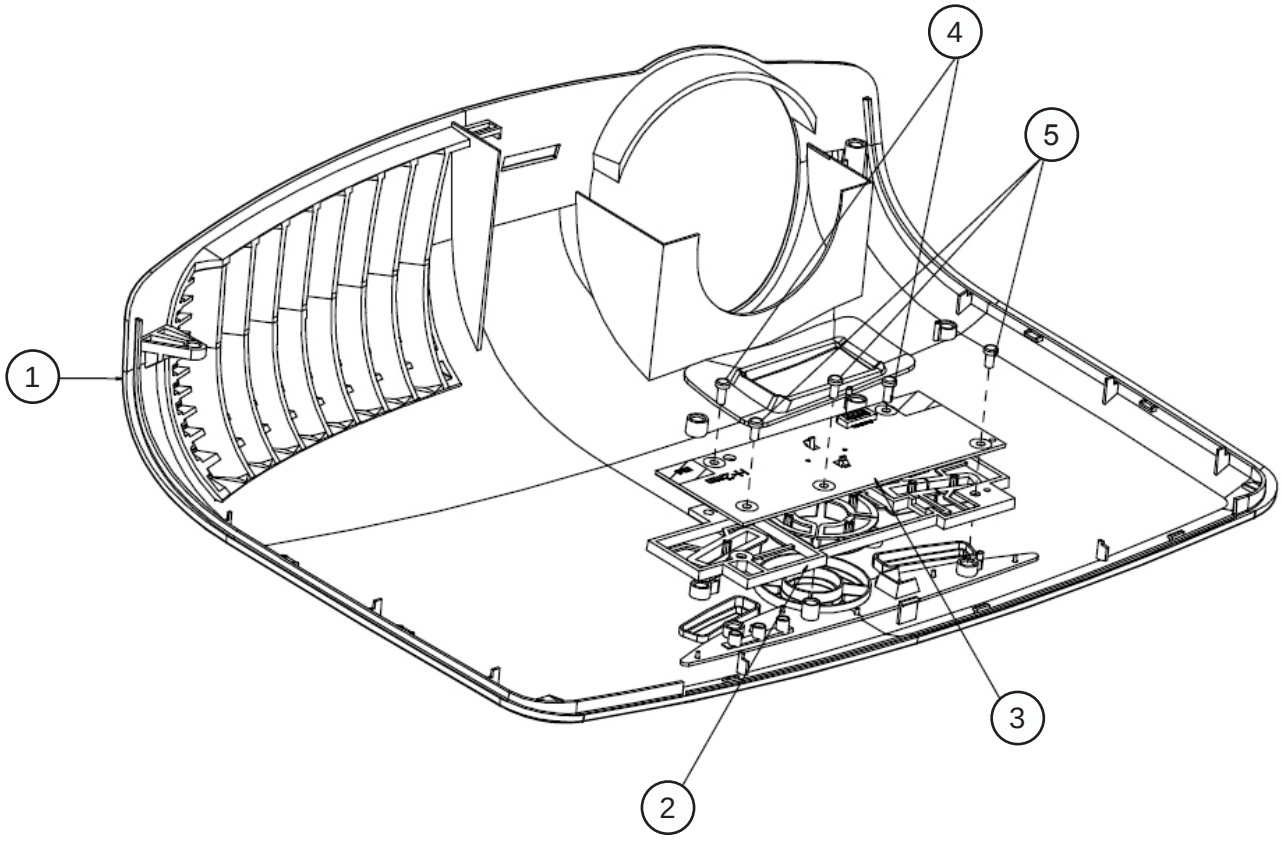
Item	P/N	Description	Parts Supply
	70.8FC21GR01	ASSY OPTICAL ENGINE MODULE EH1020(SERVICE)	V
1	70.8EG16G001	ASSY ENGINE BASE HD20	
	70.8EG32GR01	ASSY ROD MODULE FOR HD20 (SERVICE)	V
2	70.8FC14G001	ASSY ROD MODULE EH1020	
3	70.8EG18G001	ASSY RELAY MODULE HD20	
	70.8FC22GR01	ASSY COLOR WHEEL MODULE FOR EH1020(SERVICE)	V
4	70.8FC02G001	ASSY COLOR WHEEL EH1020	
5	70.8EG22G001	ASSY ENGINE BOTTOM HD20	
6	23.8CV01G001	PROJECTION LENS YM40	
7	61.8FC01G001	DMD HEATSINK AL6063 EH1020	
8	52.87319G001	DMD THERMAL PAD 18*13*0.5t	
9	61.8FC02G001	DMD LIGHT MASK EH1020	
10	61.88611G001	DMD SCREW Ivy10X	
11	51.00210G001	DMD SCREW WASHER A39	
12	48.8EG01G001	DMD 0.65” 1080P 2xLVDS DC2 TYPE A 1910-6127 WITH SINGLE DDP3021 TI	V
13	11.009F0G007	CNNT F 203P FOR 720P LGA DMD SOCKET PE020323-03040-10;FOXCO	
14	85.00826G080	HEX SCREW M2.6*H8*L4,BRASS	
15	61.8AS03G001	CONDENSER LIGHT STOP SUS304 0.3t 1609WX	
16	23.8AH20G001	CONDENSER1 FOR A15W	
17	23.8AH20G002	CONDENSER 2 FOR A15W	
18	51.8EG34G001	DMD INSULATION SLICE HD20	
19	61.8AH08G001	DMD PLATE AL A6061 M409WX	
20	61.8AH05G001	ROD COVER SUS301 0.25t 3/4H M409WX	
21	61.8EG18G001	ROD SPRING SUS301 HD20	
22	52.80J01G001	DMD ANTIDUST RUBBER 739 SILICONE RUBBER	
23	80.8EG02G001	PCBA DMD BOARD FOR HD20	V
24	85.1A526G060	SCREW PAN MECH M2.6*6 Ni NYLOK	
25	61.8AH13G001	DMD HEATSINK SPRING SUS304 M409WX	
26	61.85927G001	DMD SHOULDER SCREW SB21	
27	85.WA321G040	SCREW PAN TAP M1.7*4 BLACK	
28	41.83F16G001	GASKET W*10 H*10 L*40	
29	41.87Y03G001	EMI GASKET W13*H6*L35	

Assy Color Wheel Module



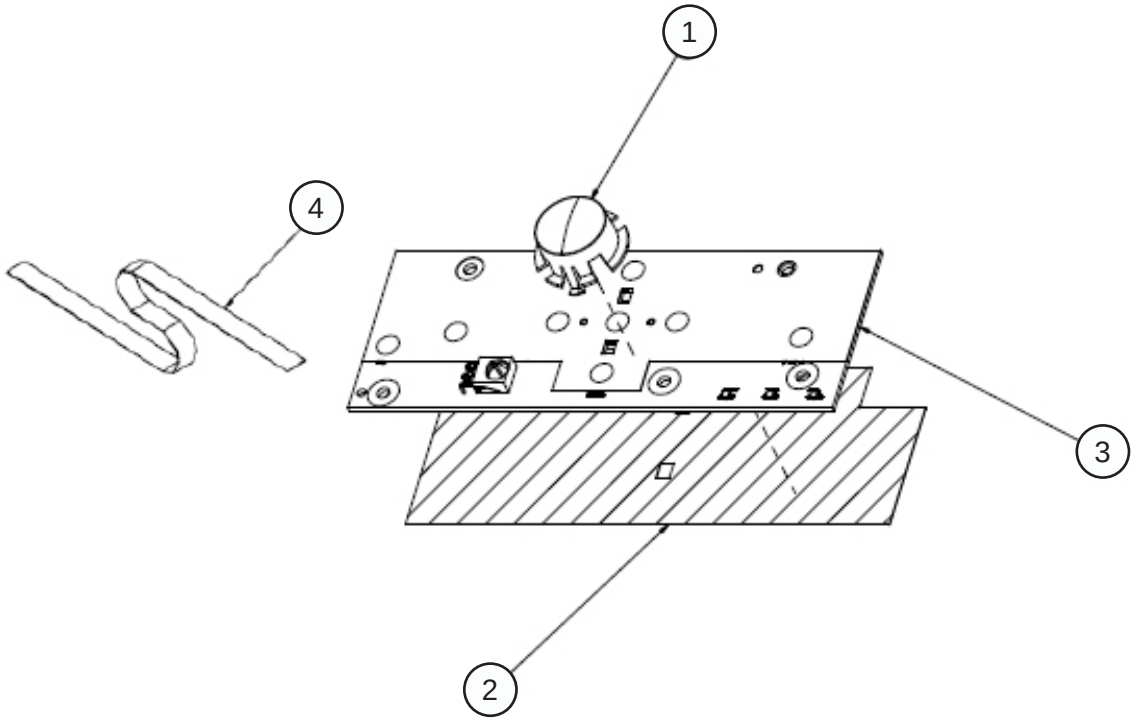
Item	P/N	Description	Parts Supply
1	23.8EG19G013	CW Φ42 R62G64B54R62G64B54 URD20 OERLIKON	
2	80.8EG04G001	PCBA PHOTO SENSOR BOARD FOR HD20	V
3	61.8EG07G001	D42 CW HOLDER COVER HD20	

Top Cover Assembly



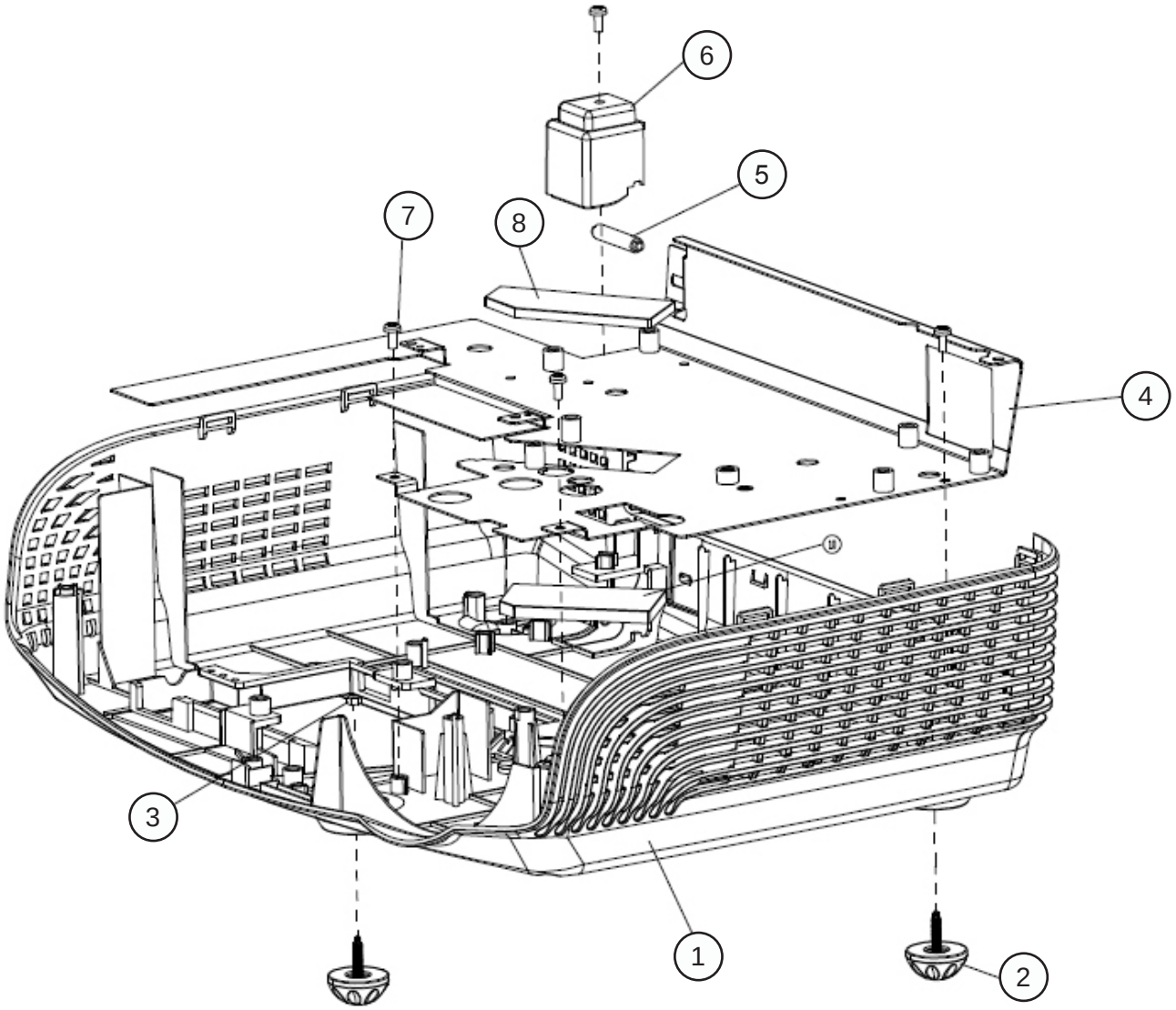
Item	P/N	Description	Parts Supply
1	75.8EG01G033	TOP COVER ASSYEMBLY EX762 BLACK	V
2	51.8EG13G011	KEYPAD PLATE EX615	
3	70.8EF29G001	KEYPAD ASSY EX615	
	80.8EF03G001	PCBA KEY PAD BOARD FOR EX615	V
4	85.1A126G060	SCREW PAN MECH M2.6*6 Ni	
5	85.1A926G050	SCREW PAN MECH PLASTIC M2.6*5 LT20	

Keypad Assembly



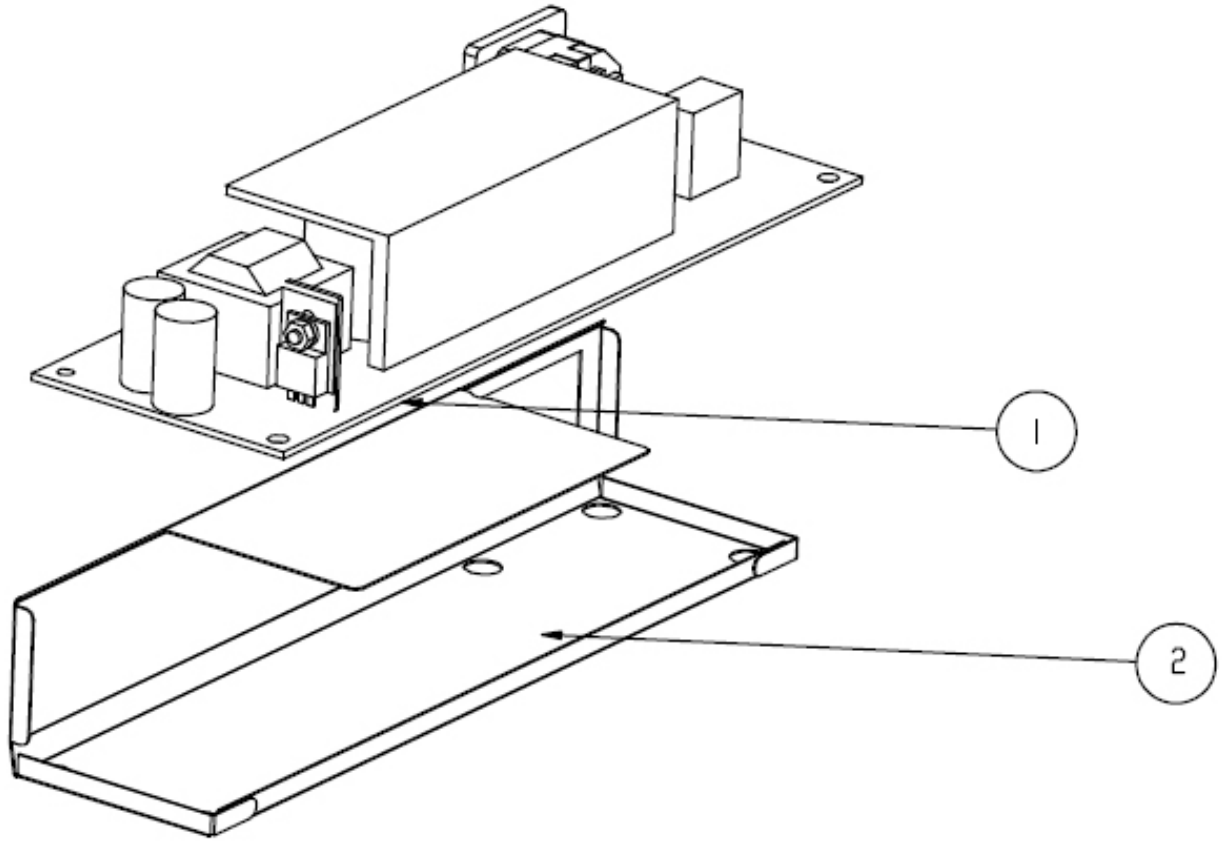
Item	P/N	Description	Parts Supply
1	51.8EG14G001	KEYPAD PLATE ENTER HD20	
	70.8EG34GR01	ASSY PCBA KEYPAD BD MODULE FOR HD20 (SERVICE)	V
2	51.8EG23G001	KEYPAD 3M TAPE HD20	
3	80.8EG03G001	PCBA KEYPAD BD FOR SC 1080P	
4	42.00304G001	FFC KEYPAD TO FORMATTER BD 16P P=0.5 122mm HD80	

Assy Bottom Cover Module



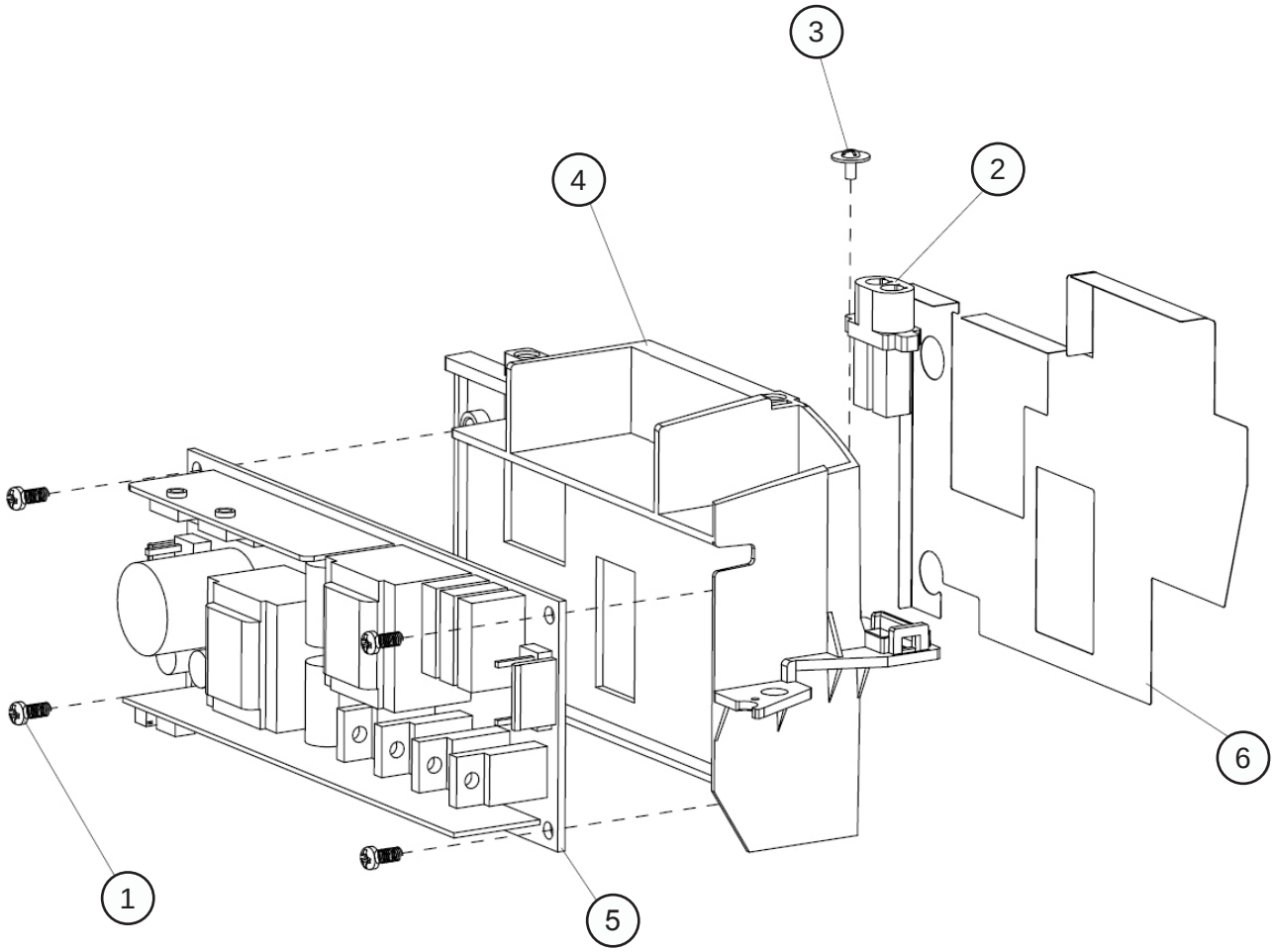
Item	P/N	Description	Parts Supply
	70.8FC20GR01	ASSY BOTTOM COVER MODULE FOR EH1020(SERVICE)	V
1	51.8EG01G012	8FC BOTTOM COVER BLACK LN2520	
2	52.8BA02G011	ADJUST FOOT EX615	
3	86.00122G015	NUT HEX M2.0*0.4P L15 Ni	
4	61.8EG01G031	BOTTOM SHIELDING T=0.6MM EH1020	
5	61.8BB09G001	SECURITY BAR EX525ST	
6	51.8BB15G001	SECURITY BAR CAP PC MN3600H BLACK EX525ST	
7	85.WA123G050	SCREW PAN TAP M3*5 Ni	
8	41.89K04G001	EMI GASKET W8*H6*L150	

Assy LVPS Module



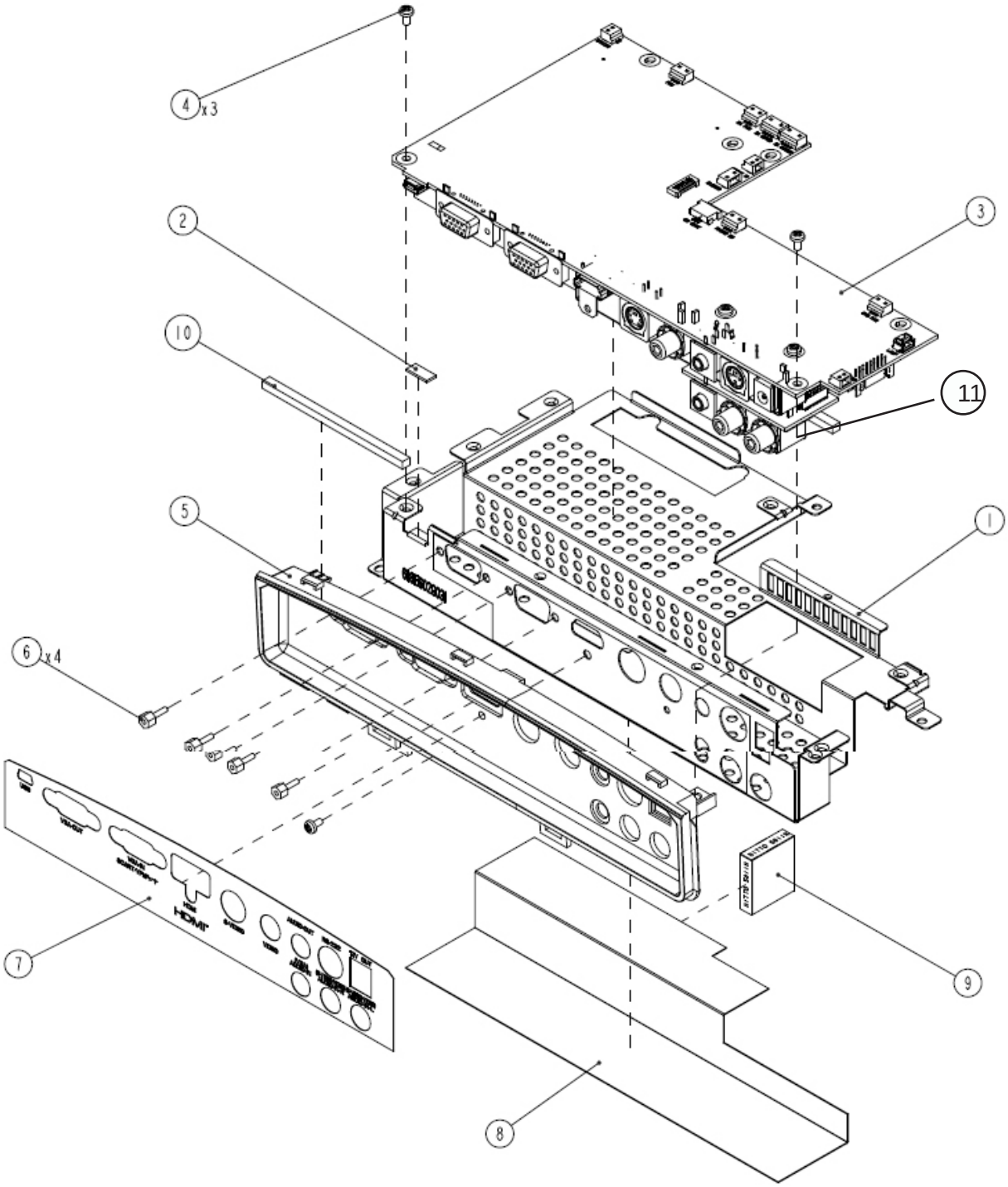
Item	P/N	Description	Parts Supply
1	75.8FC01GP01	ASSY MATRITEK LVPS FOR EH1020 12V/6A(AC INLET)	V
2	51.8FC01G001	LVPS MYLAR EH1020	

Assy Lamp Driver Holder Module



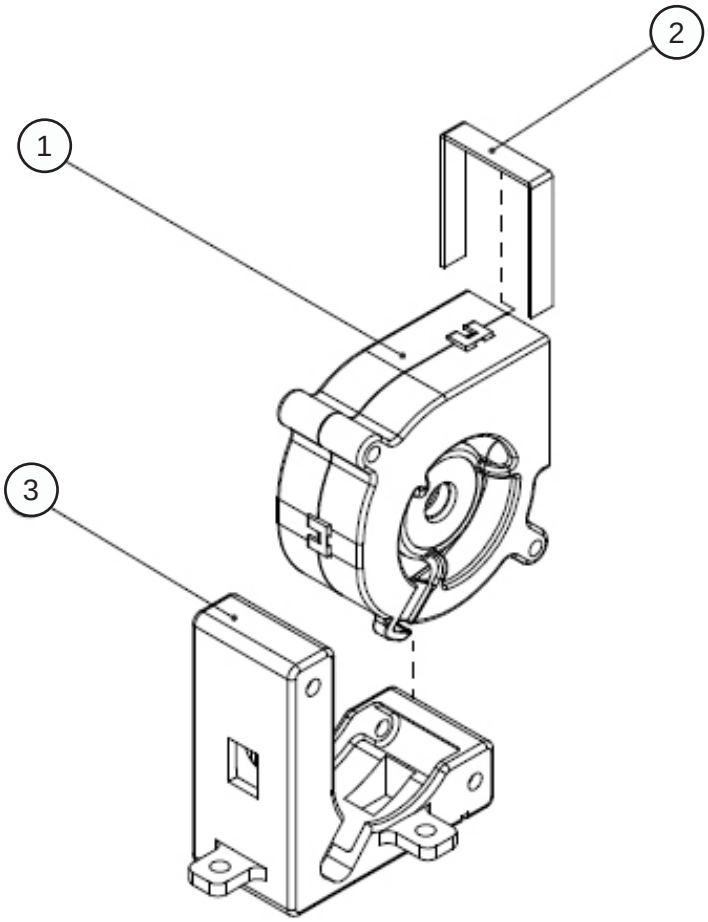
item	P/N	Description	Parts Supply
1	85.1A123G050	SCREW PAN MECH M3*5 Ni	
2	42.0043RG001	W.A. 2P #22 FEMALE 6KV 150C 95mm FOR LAMP DRIVER PDG-DSU30	
3	85.3A122G040	SCREW CAP MECH M2*4 Ni	
4	51.8EG04G001	HD20 LAMP DRIVER HOLDER PPS+40%GF	
5	70.8EG38GR01	ASSY LAMP DRIVER WAVERFORM MODULE FOR EH1020(SERVICE)	V
6	61.8EG09G001	LAMP DRIVER ALUMINUM HD20	

Assy Main Board Module



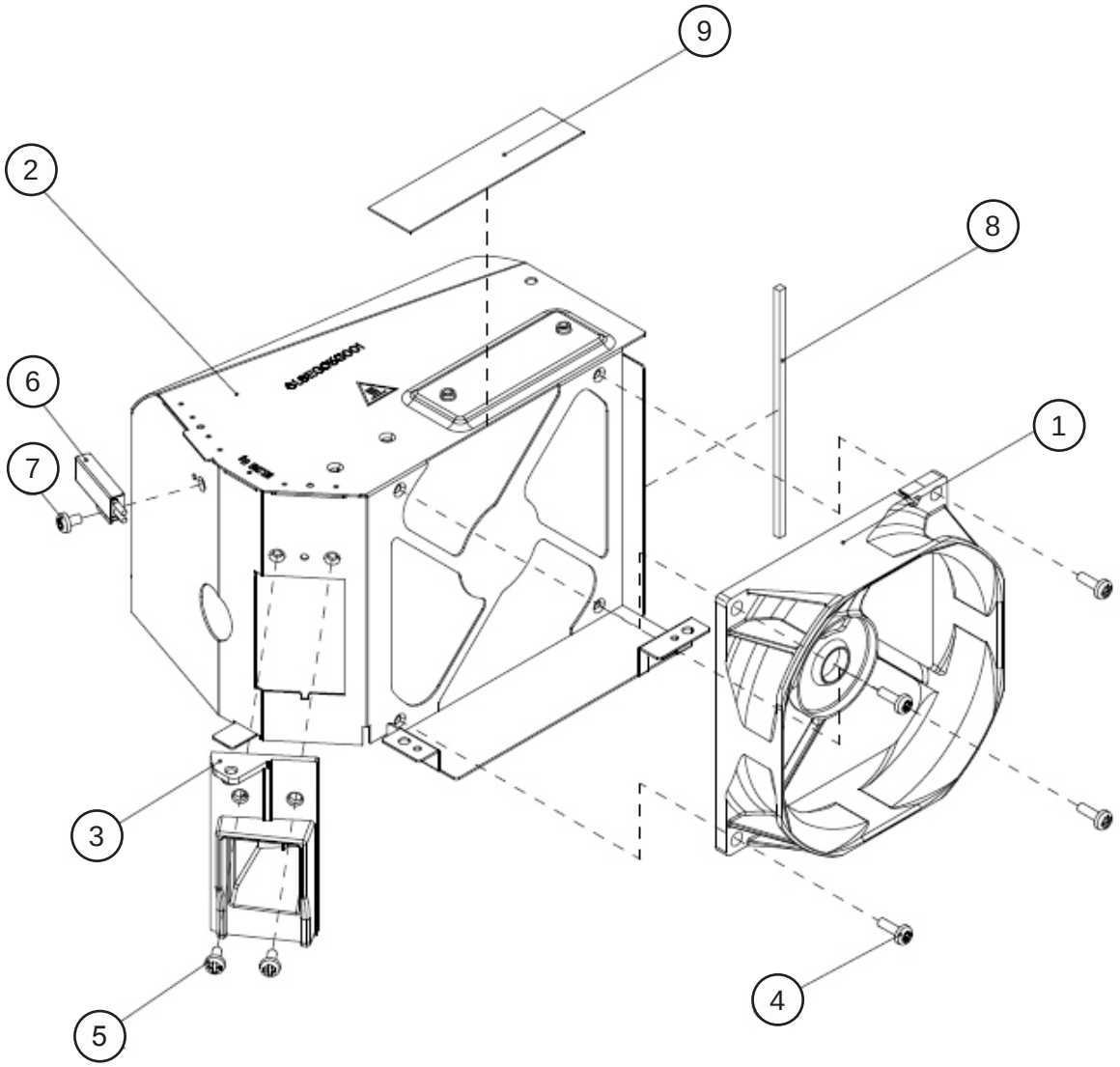
Item	P/N	Description	Parts Supply
1	61.8EG02G031	MAIN BOARD SHIELDING EH1020	
2	41.83J07G001	EMI TAPE W5*H1.0*L11mm PD527	
	70.8FC17GR01	ASSY PCBA MAIN BD MODULE FOR EH1020 (SERVICE)	V
3	80.8FC01G002	PCBA MAIN BD FOR EH1020	
4	85.1A123G050	SCREW PAN MECH M3*5 Ni	
	70.8FC18GR01	ASSY IO COVER MODULE FOR EH1020(SERVICE)	V
5	51.8EG10G001	IO COVER HD20	
6	85.005AGG408	SCREW HEX I/O #4-40 H4*L8 NI NYLOK	
7	35.8FC01G001	IO COVER LABEL EH1020	
8	51.8FC04G001	MAIN SHIELDING MYLAR	
9	52.8FC03G001	MAIN SHIELDING SPONGE	
10	52.8EG16G001	IO COVER SPONGE	
11	80.8FC06G001	PCBA I/O BOARD FOR EH1020	V

Assy 4520 Blower Module



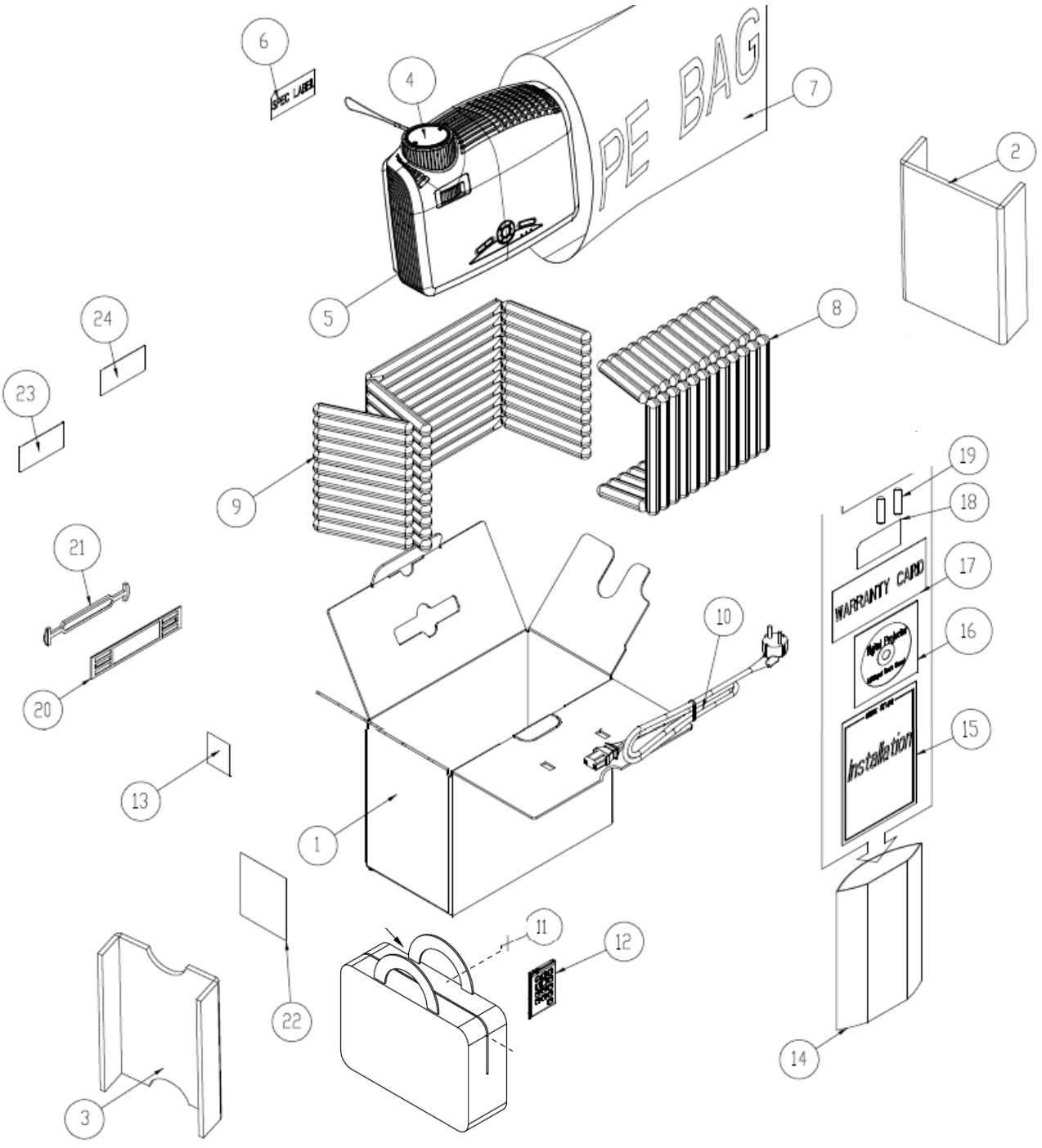
Item	P/N	Description	Parts Supply
1	49.8EF04G001	SUNON 45*20mm GB1245PKVX-8 F-TYPE BLOWER	V
2	52.89T01G001	BLOWER AIR TIGHT F12 H5350	
3	52.82G08G001	BLOWER 4520 RUBBER EP7190	

Assy 8525 Fan Shoelding Module



Item	P/N	Description	Parts Supply
1	49.8EF03G001	SUNON KDE1285PTV1 AXIAL FAN-LOW COST	V
2	61.8EG05G001	8525 FAN SHIELDING HD20	
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	43.8FC17G001	EH1020 THERMAL SWITCH WITH BRACKET (KLIXON YS11) 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	

Assy Packing Drawing



Item	P/N	Description	Parts Supply
1	55.8EG01G001	CARTON OUTSIDE BOX AB FLUTE HD20	V
2	55.8EG02G001	PARTITION PAPER RIGHT HD20	
3	55.8EG03G001	PARTITION PAPER LEFT HD20	
4	75.8EG02G011	LENS CAP ASSEMBLY HD20 BLACK	
5	DC.8FC01G001	D.C. EH1020	
6	35.86301G001	SPEC LABEL BLANK PD120	
7	51.8EG37G001	PE BAG HD20	
8	56.8EF01G001	AIR BAG BOTTOM	
9	56.8EF02G001	AIR BAG TOP EX615	
10	42.50115G001	CABLE POWER CORD 1.8M SP30+IS14 US	
11	53.8EF01G001	SOFT CARRY BAG EX615	V
12	45.8EF01G001	REMOTE CONTROL OF Z15II WITH LASER	V
13	57.00001G001	PACK SIO2 DRIER 20g	
14	51.00027G003	PE BAG ZIPPER 33cm*25cm SIZE GREEN FOR OPTOMA	
15	36.8FC02G001	QUICK START CARD MULTILINGUAL OPOTMA EH1020	
16	36.8FC01G001	USER'S GUIDE MULTILINGUAL (CD) OPTOMA EH1020	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	8FC	9	22	AAAAA	C	0001
(1)	(2)	(3)	(4)	(5)	(6)	(7)

(1) : **Q = Optoma**

(2) : **8FC = Project code**

(3) : **9 = Last number of the year (ex:2009 = 9)**

(4) : **22 = week of the year (ex:the twenty-second week of the year = 22)**

(5) : **AAAAA = not-defined**

(6) : **C = Manufacture factory (CPC)**

(7) : **0001 = Serial code**

EX: Q8FC922AAAAAC0001

This label represents the serial number for EH1020. It is produced at CPC on the twenty- second week of 2009. 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