SERVICE MANUAL

Model Name : EP732B

Prepared by SI :

_____

Prepared by TSE :

_____

Check by :

_____

Approved by :

_____

Date	Revise Version	Description
2004/2/20	V1.0	Initial Issue

Copyright February, 2004 . All Rights Reserved
Document #80V-G04-01A . P/N: 36.80V01.001

Preface

This manual is applied to EP732B 0.55" DMD SVGA Projector with digital imaging functionality based on Digital Micro-mirror Device (DMD) technology. It's the mode of single Panel, 200 watt lamp and 800(H) x 480(V) resolution. The manual gives you a brief description of basic technical information to help in service and maintaining 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. 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 further edition.

Copyright 2004, February
All Rights Reserved
Manual Version 1.0
Document # 80V-G04-01A

Table of Contents

Chapter 1

Introduction

1-1 Product Highlights

- One panel 0.55" DMD SVGA projection system with 1150 ANSI lumens (Typical), 1030 ANSI lumens (Minimum) (Philips/Phoenix 200W Lamp)
- High efficiency cooling system with low system acoustic noise level
- Light weight 5.0 lbs.
- True 800 * 600 resolution, 16.7M True colors
- With up, down, left, and right screen reverse
- Build-in full screen NTSC / PAL / SECAM video capability with S-video / Composite / Component and HDTV terminals
- SXGA / XGA / SVGA / VGA / MAC compatibility with one D-sub input terminal
- Auto image re-sizing to 800 * 600 full screen
- Manual focus 1:1.2 zoom lens
- Auto detection of computer signal input
- Auto Image synchronization (Auto-tracking / frequency / position adjustment)
- Powerful enlarge and freeze function
- Automatically saves adjustments for future use
- On-screen menu with 10 languages
- Built-in one 2W speaker
- IR remote control without USB mouse function and laser pointer
- Adaptive voltage control fan speed
- Auto source option for stable display from fixed source (when disabled)
- Monitor loop through
- ECO mode supports

1-2 Mechanical Specifications

Dimensions(LxWxH)	-	External 10.7*8.3*3.4 +/-0.04 inches (272*210*86 +/-1mm)
Weight	-	Approximate 5.0 lbs.
Cooling System	-	Advanced air flow
	-	Four fans with low system acoustic noise level
	-	Temperature control circuits with adaptive voltage control fan speed
	-	Max touch temperature follows UL60950 regulation
TiltAngle	-	7 degree with elevator mechanism
Keystone correction	-	+/- 16 degrees (32 degrees)
Color	-	Silver Top and Silver Bottom / Front
Lamp Door Protection	-	Lamp power supply shut off automatically when door open

1-3 Electrical Specifications

Power Supply

- Universal AC 100—240V, 50/60 Hz with PFC input
- 200W Lamp
- Variance FAN speed control (Depend on temperature variant)

Terminals

- Computer Input (D-Sub Female Terminal *1) to take s SCART RGB signal, via an adapter.
- Composite Video Input (RCA jack *1)
- S-Video Input (Mini DIN 4-pin *1) to take a SCART RGB signal, via an adaptor.
- 15 pin Monitor Output (D-Sub 15-pin Female terminal * 1)
- USB Remote mouse output (USB, type B connector * 1)
- Audio line input (3.5mm Mini Jack stereo)

Input Signal Spec

- Hsync Frequency 31.5-70 kHz
- Vsync Frequency 43-85 Hz
- Video Signal RGB (PC)
  Analog RGB 0.7 Vp-p, 75 ohm
  Analog RGB 1 Vp-p, 75 ohm, Sync. signal
  Separate TTL H, V Sync.
  Composite TTL Sync.
- Video
  Composite video 1 Vp-p, 75 ohm
  S-Video Luminance 0.714 Vp-p, 75 ohm
  Chrominance 0.286 Vp-p, 75 ohm

Video Compatibility

- Standards :

NTSC	M(3.58 MHz), 4.43 MHz
PAL	B, D, G, H, I, M, N
SECAM	B, D, G, K, K1, L
Component / HDTV	480i; 480P; 576P; 720P; 1080i

1-4 Optical Specifications

Projection Lens	-	F/2.4~2.7, f=19.7~23.6mm. 1.2 x Manual Zoom Lens.
	-	Throw Ratio=1.75~2.12
Projection Image Size	-	Adjustable from 32.5” to 337.5” (Diagonal)
Throw Distance	-	1.4m~12m
Brightness(200W)	-	1150 ANSI Lumens (Typical)
	-	1030 ANSI Lumens (Minimum)
Contrast	-	1600 : 1 Typical (Full on / Full off)
	-	1000 : 1 Minimum (Full on / Full off)
Uniformity	-	65% Minimum (Japan Standard)

1-5 Environmental Specifications

Temperature :

- Operating : 5° to 35°C
- Storage : -20° to 60°C

MaximumHumidity

- Operating : 5° to 35°C, 80%RH (max), non-condensing
- Storage : -20° to 60°C, 80%RH (max), non-condensing

Acoustic Noise Level :

- 200W : 37 dB(A) (Typical, Under 23 +/- 2°C)
- 160W : 34 dB(A) (Typical, Under 23 +/- 2°C)

Lamp Life :

- 2,000 hours marketing spec
- 1,500 hours to 50% survival typical full on mode

Altitude :

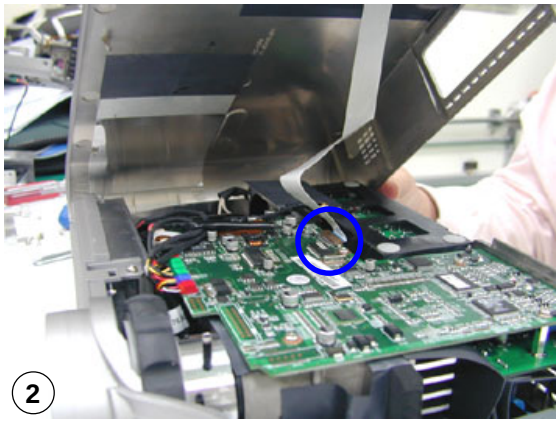
- Operating : 0 ~ 2,500 ft 5~35° C
  2,500 ~ 5,000 ft 5~30° C
  5,000 ~ 10,000 ft 5~25° C
- Storage : 40,000 ft

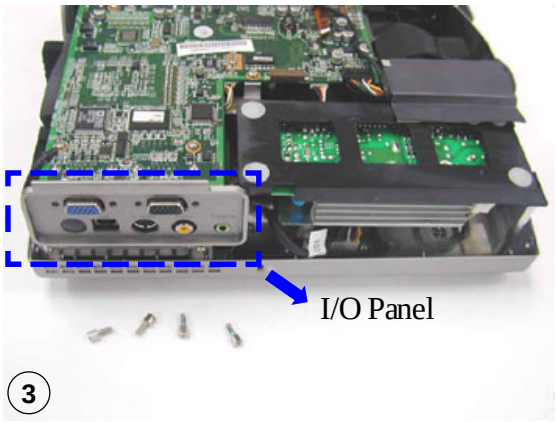
MTBF : Operating more than 10,000 hours (80% Confidence Level)

Disassembly Procedure

2-1 Removing Top Cover and I/O Panel

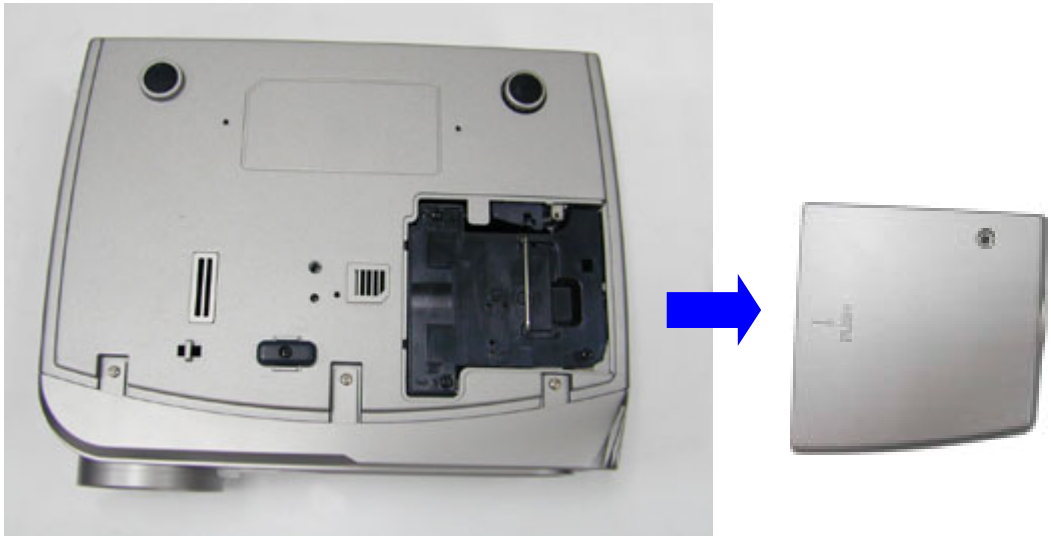
1. Unscrew 4 screws from left and right side of Top Cover.
2. Unplug one FPC cable and remove Top Cover.
3. Unscrew 4 hex screws to remove I/O Panel.



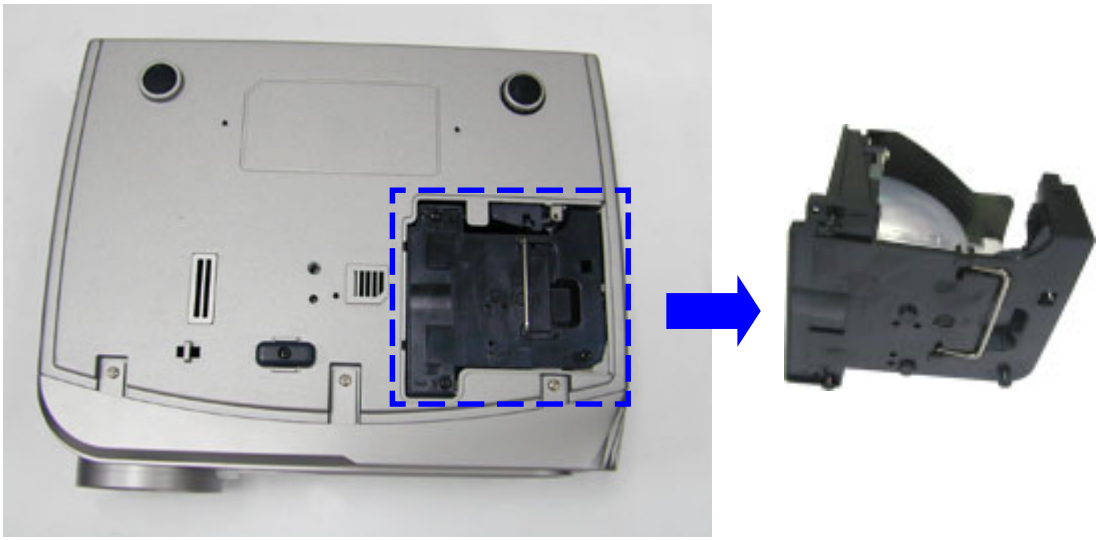


2-2 Removing Lamp Cover and Lamp Module

1. Unscrew one screw to remove Lamp Cover.

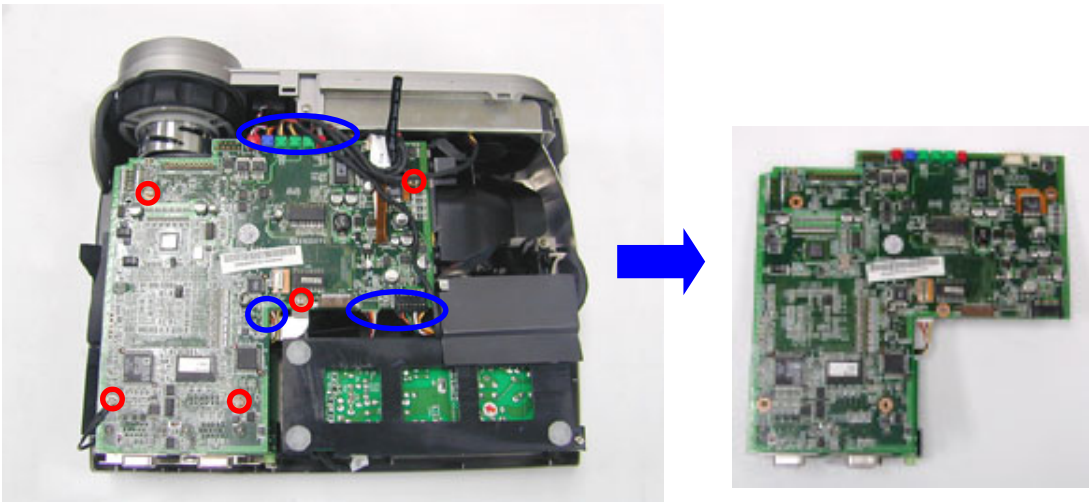


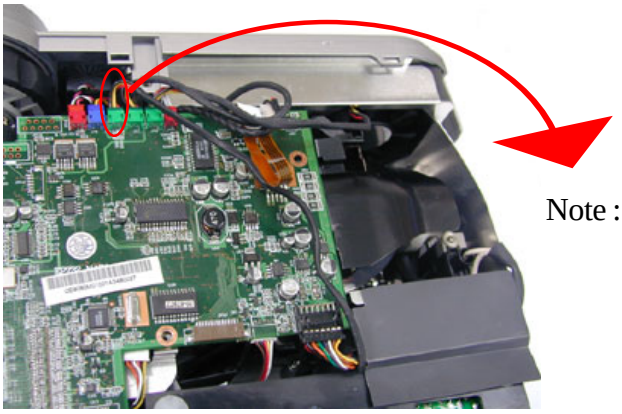
2. Loosen 3 screws to remove Lamp Module.



2-3 Removing Main Board

1. Unplug all wires(blue circle show) and unscrew 5 screws(red circle show) to remove Main Board.

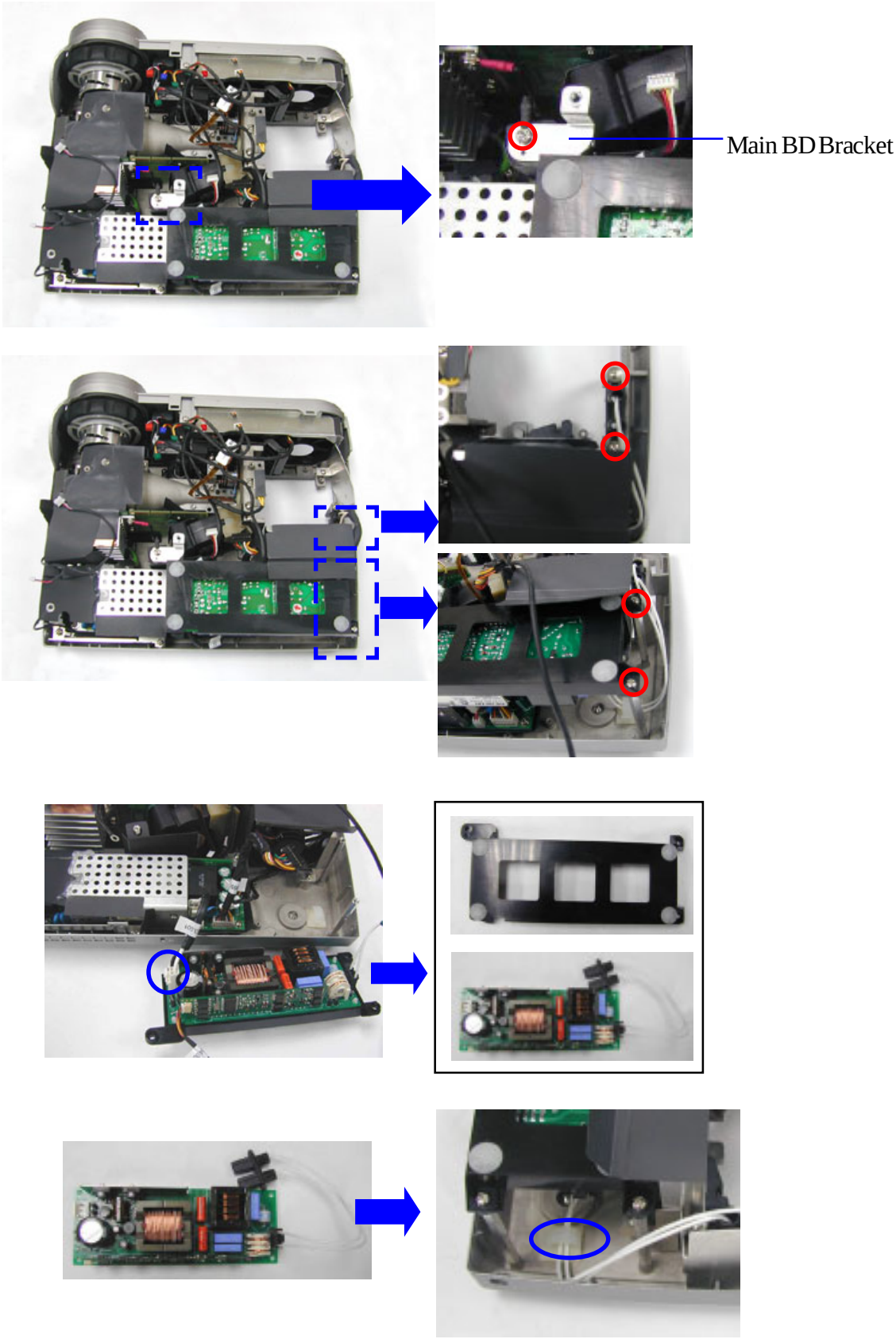




Note : The green connector is connect to the Blower Fan

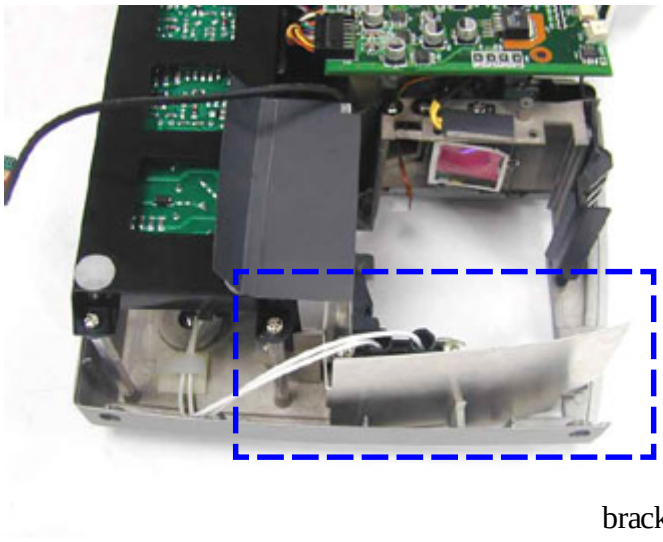
2-4 Removing Lamp Driver

1. Unscrew 5 screws (red circle show) and unplug one cable (blue circle show) to remove Lamp Driver.



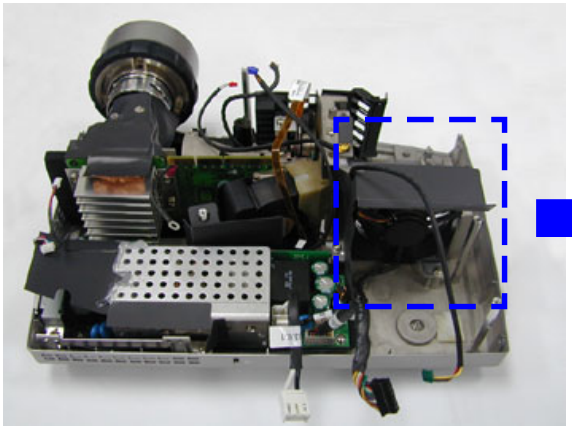
2-5 Removing Blower Fan and Front Fan

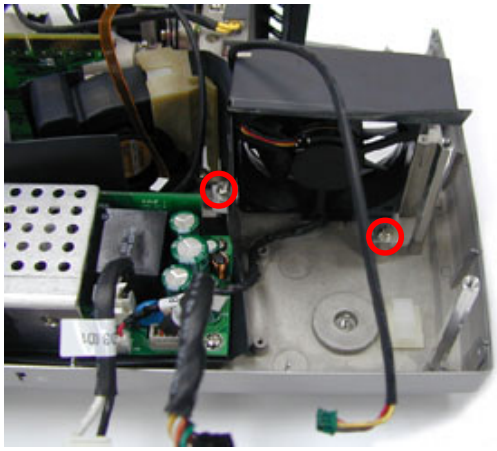
1. Unscrew 2 screws to remove bracket.



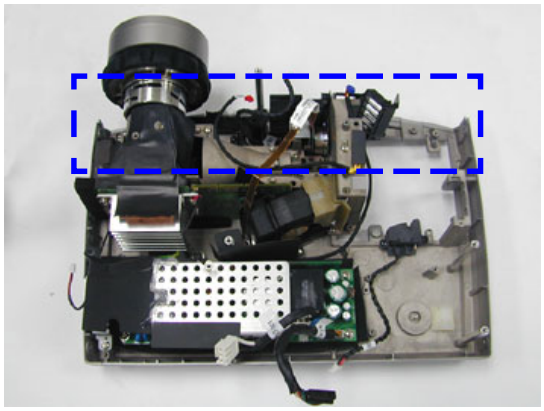
bracket

2. Unscrew 2 screws to remove Blower Fan.

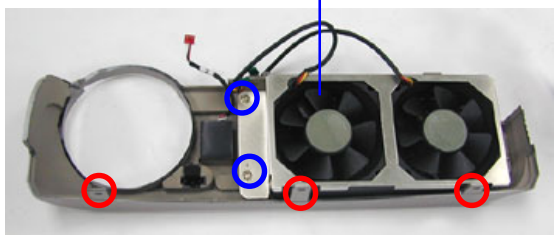




3. Unscrew 3 screws to remove Front Cover Module, then unscrew 2 screws to remove Front Fan.



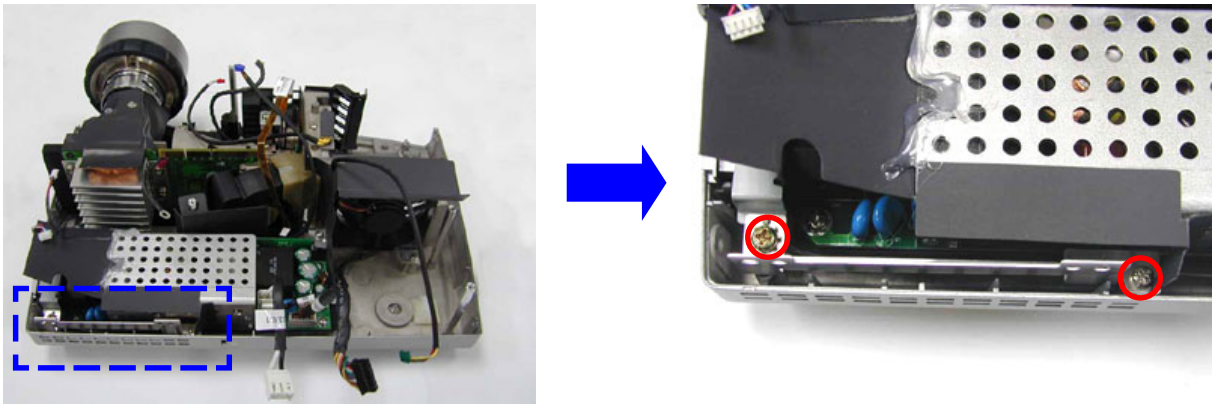
Front Fan



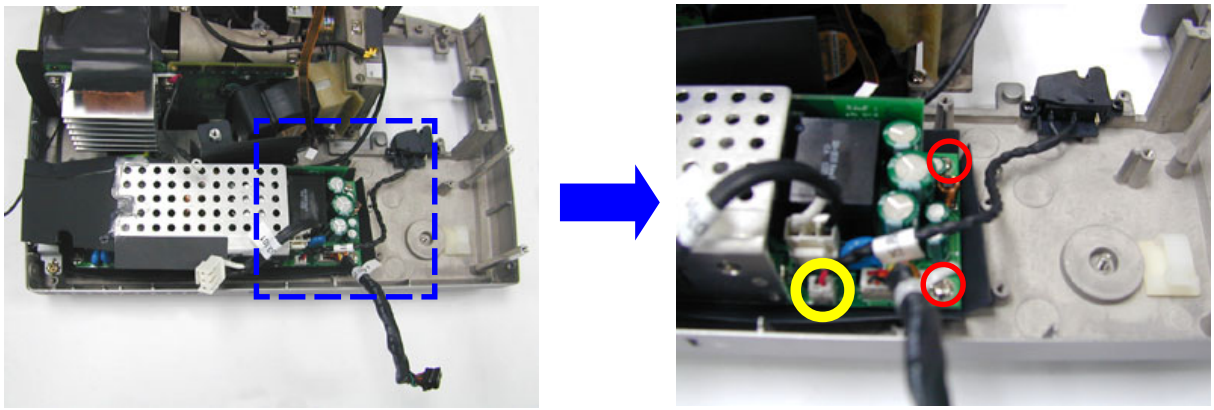
Front Cover Module

2-6 Removing LVPS Module

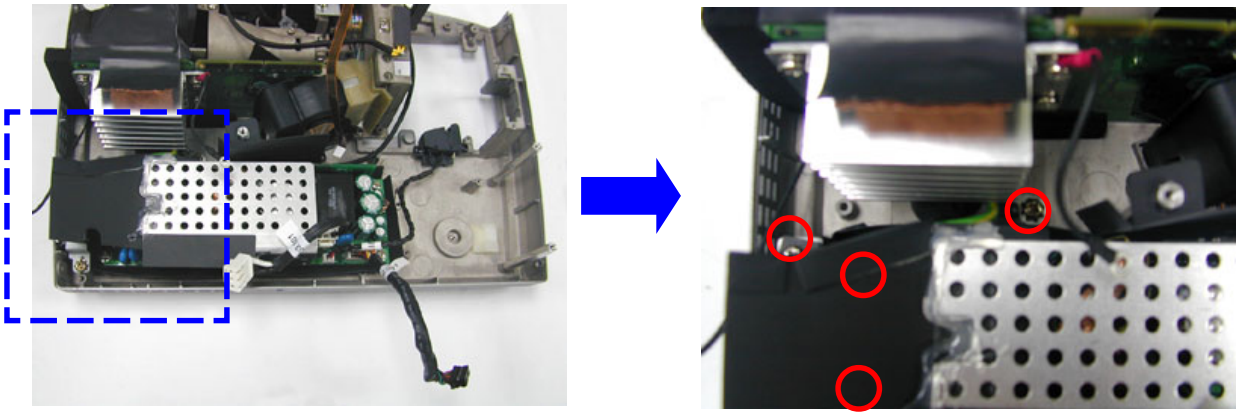
1. Unscrew 2 screws to remove bracket.



2. Unscrew 2 screws and unplug one cable.

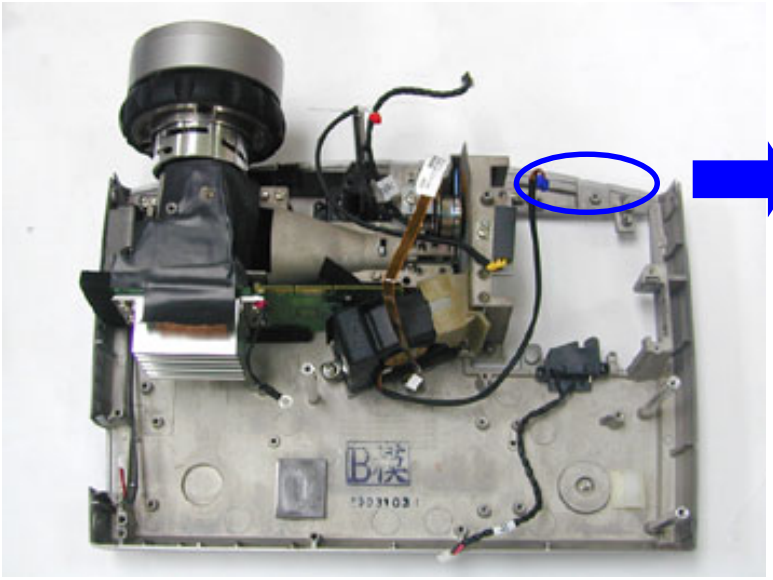


3. Unscrew 4 screws to remove LVPS Module.

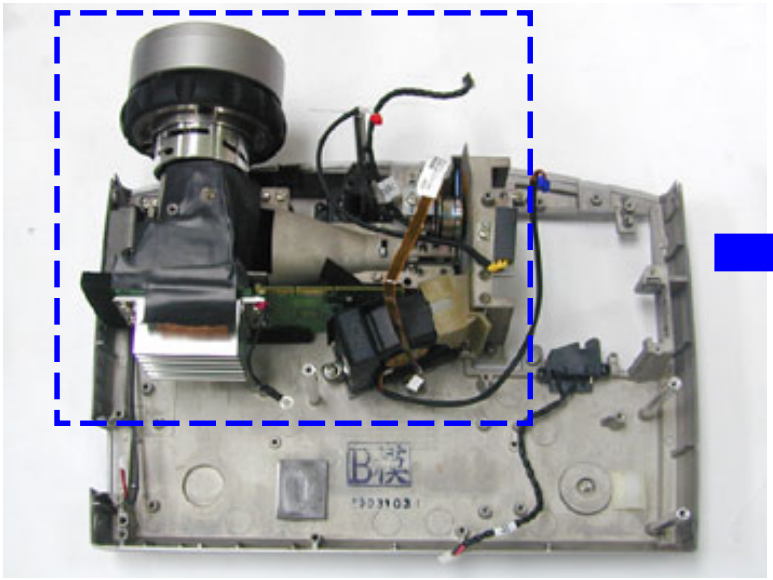


2-7 Removing Engine Module

1. Unscrew 3 acrews to remove the Light Cut and Fan Vent.

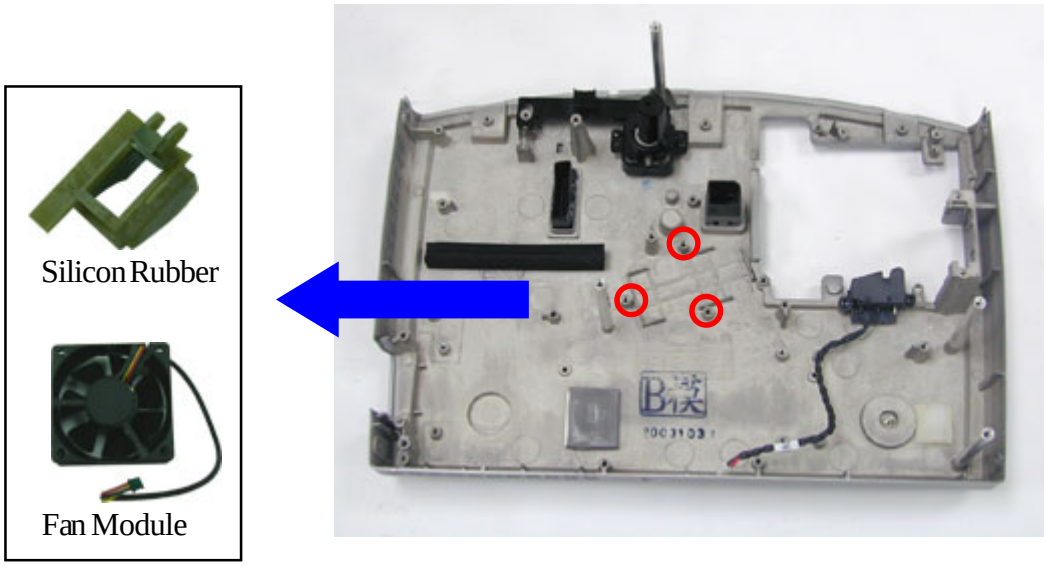


2. Unscrew 5 acrews to remove Engine Module.

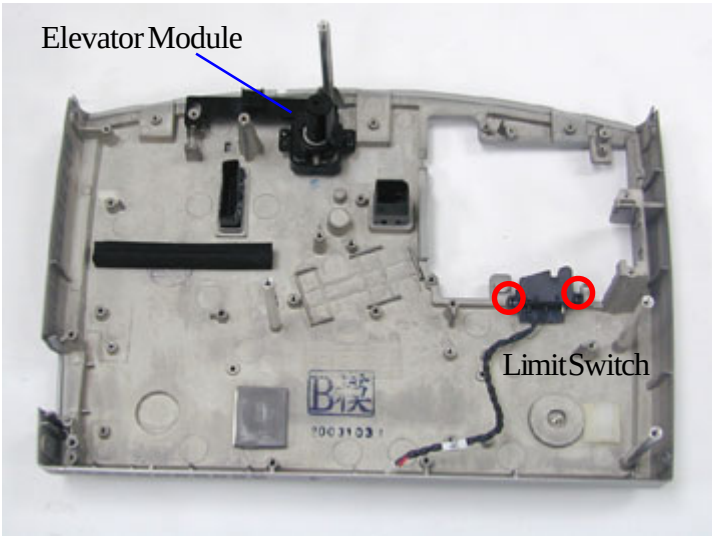


Engine Module

3. Unscrew 3 screw to remove Fan Module and Silicon Rubber from Bottom Cover.

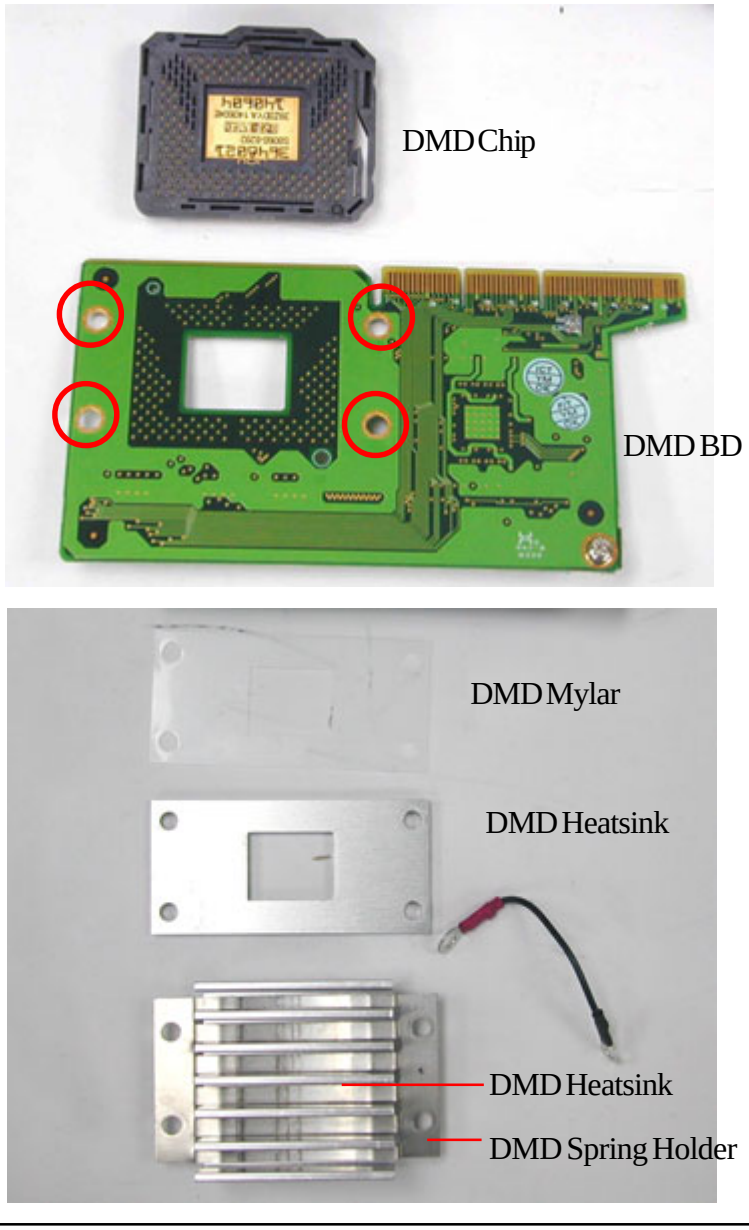


4. Unscrew 2 screw to remove Limit Switch from Bottom Cover.



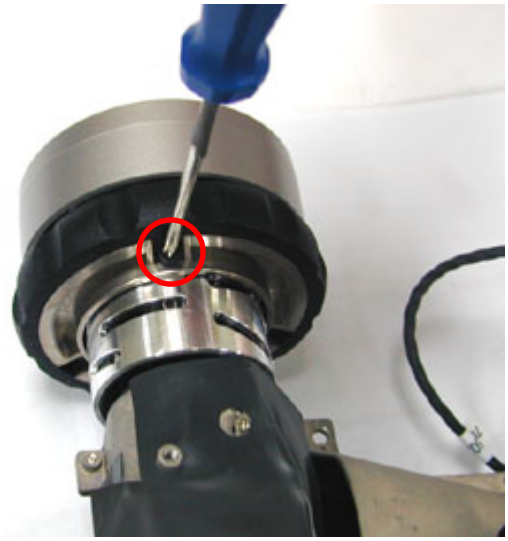
2-8 Disassembly Engine Module (Part I)

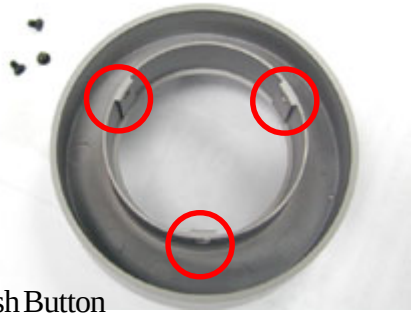
Unscrew 4 screws to remove all parts from Engine Module.



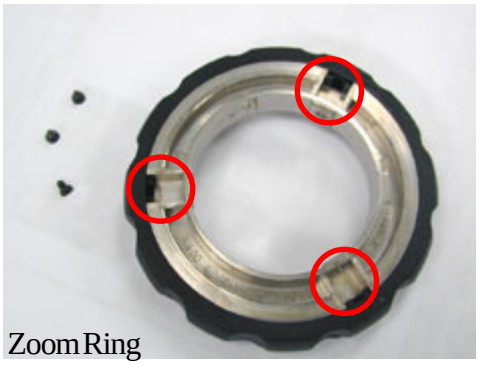
2-9 Disassembly Engine Module (Part II)

Unscrew 3 screws to remove Push Button, then unscrew 3 screws to remove Zoom Ring.

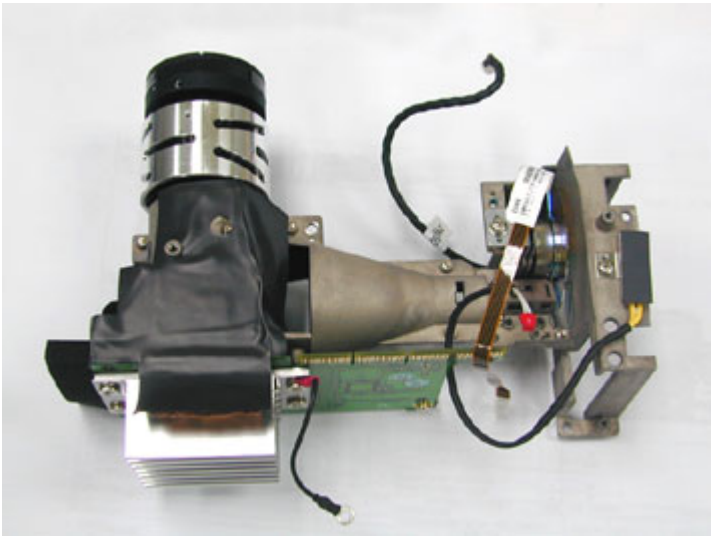




Push Button



Zoom Ring



Chapter 3

Troubleshooting

3-1 Equipment Needed

EP732B Projector
EP732B Remote Control
VGA to VGA Cable
PC (Personal Computer)
DVD Player for Video Signal and Audio Signal
HDTV Tuner or Player (480i, 480p, 720p, 1080i)

3-2 Main Procedure

3-2.1 Power Troubleshooting

A. Is LED Indicator OK?
- Check the Power cord and AC power outlet.
- Check the Keypad cable has broken or not.
- Check the Connect cable inside the Unit.
- Check the LVPS.
- Check the Main board.
- Check the Keypad board.

B. Is Fan Working After Press Power/Standby Button?
- Check the Keypad cable has broken or not.
- Check the Connectin wire of Fan.
- Check the Main board.
- Check the Fan.

C. Is Lamp Lit?
- Check the Lamp cover assembly OK or not.
- Check thay have the sound of Lamp ignitor output from Unit or not.
- Check the Cable of Limit switch.
- Check the Main board.
- Check the Lamp module.
- Check the Ballast.

3-2.2 Performance Troubleshooting (PC Signal)

A. Have Image?
- Ensure the Signal cable and Source work as well.
- Check that can OSD Menu show on the screen.
- Check the Main board.

B. Have Garbage Pattern?
- Ensure the Signal cable and Source work as well.
- Check the Main board.

C. Uniformity OK?
- Ensure the Projection screen without dirty.
- Ensure the Projection lens is clean.
- Ensure the Brightness is within spec.
  (Replace the Lamp if the Brightness is less than spec.)
- Check the Optical engine.

D. Is Color OK?
- Ensure the Signal cable works as well.
- Check the “Color wheel index” in the service mode of OSD Menu. (*Note)
- Check the Photo sensor.
- Check the Main board.

E. Dot Defect isn’t Compliant with the Spec.
- Ensure the Projection lens is clean.
- Use the Air gun for the Optical engine clean.
- Check the DMD chip.

F. Have Noise?
- Ensure the Signal cable and Source is work as well.
- Adjust the Tracking selection in OSD Menu.
- Press the Menu button to check that have the noise issue appear on OSD Menu.
  (Check the Main board if the noise also appear on the OSD Menu.)

G. Have Line Bar?

- Adjust the frequency selection in OSD Menu.
- Press the Menu button to check that have Line bar show on the OSD Menu.
  (Check the DMD chip and DMD board. If the Line bar also show on the OSD Menu)
- Ensure that there is no dust on the DMD Contact housing module.
- Re-assembly for DMD module.
- Check the Main board.

H. Have Noise?

- Ensure the Signal cable and Source is work as well.
- Adjust the Tracking selection in OSD Menu.
- Press the Menu button to check that have the noise issue appear on OSD Menu.
  (Check the Main board if the noise also appear on the OSD Menu.)

* Note : The procedure to enter service mode is..
Press “UP”, “DOWN” button at the same time, and then press “UP”, “UP” “LEFT” button when the unit display “No Signal” image.

3-2.3 Performance Troubleshooting (Video Signal)

A. Have Image?

- Ensure the signal cable and source work as well.
- Check that can OSD menu show on the screen.
  (Check the main board if OSD menu cannot show on the screen)
- Check the I/O connect board.
  (Use the new I/O connect board for the test)

B. Have Garbage Pattern?

- Ensure the signal cable and source work as well.
- Check that can OSD menu show on the screen.
  (Check the main board if OSD cannot show on the screen)
- Check the I/O connect board.
  (Use the new I/O connect board for the test)

C. Is Color OK?

- Do the “Factory Reset” of the engineering mode.
- Ensure the signal cable work as well.
- Check the color temperature setting of OSD menu.
  (Check the main board if the setting of color temperature is under default)
- Check the color setting of OSD menu.
  (Check the main board if the setting of color is under default)
- Check the “Degamma”, ”Saturation”, ”Tint” and “Sharpness” setting of OSD menu.
  (Check the main board if the setting of above setting are under default)

D. Is Image Flicker?

- Ensure the signal cable work as well.
  (Please check the length of cable; the signal will be reduce when the signal cable is longer than 5 m)
- Do the “Factory Reset” of the engineering mode.
  (Check the Main board if the image still flicker after the factory reset.)

E. Is There Line Bar Show On The Screen?

- Check that can OSD menu display on the line bar area.
  (Check the DMD board if the OSD menu cannot display on the line bar area.)
  (Check the Main Board if the OSD menu can display on the line bar area)

F. Image Noise.

- Ensure the signal cable is work as well.
  (Check the cable length of cable; the signal will be reduce when the signal cable is longer than 5 m)
- Do the “Factory Reset” of the engineering mode.
  (Check the Main board if the image still display with noise.)
- Check the I/O board.

3-2.4 Function Troubleshooting

A. OSD Does Not Show up.

- Check the Keypad cable and ensure there is no broken issue on the cable.
- Use Keypad to test again.
  (Replace the Keypad board if the Unit works fine with the new Keypad board.)
- Use the Remote control for the OSD function test.
  (Check the Keypad board and Keypad cable if the Remote control works as well)
- Check the Main board.

B. Function Cannot Be Adjust.

- Check the Keypad cable and ensure there is no broken issue on the cable.
- Use Keypad to test again.
  (Replace the Keypad board if the Unit works fine with the new Keypad board.)
- Use the Remote control for the OSD function Adjustment test.
  (Check the Keypad board and Keypad cable if the Remote control works as well)
- Check the Main board.

3-2.5 Audio Troubleshooting

A. No Sound Output.

- Ensure the Signal cable and Source are work fine.
- Use the new Speaker for the Sound output test.
  (Replace the Speaker if the new Speaker works fine with the Unit.)
- Check the Speaker wire that has broken issue or not.
- Check the Main board.

B. Sound Output With Noise.

- Ensure the Signal cable and Source are work fine.
- Ensure the volume has not select to the max selection.
  (Due to the output power of internal Speaker is 2W only.
  It might has the noise issue if the volume select to the max.)
- Use the new Speaker for the test.
  (Replace the Speaker if the new Speaker works fine with the Unit.)
- Check the Speaker wire that has broken issue or not.
- Check the Main board.

3-2.6 Remote Control Troubleshooting

A. Remote Control No Function.

- Use a known Remote control for the function test.
  (Replace the Remote control if the new Remote control works fine with the Unit.)
- Check the Main board if the Unit works fine with a known good Remote control.

Chapter 4

Function Test and Alignment Procedure

4-1 Equipment Needed

- IBM PC with XGA resolution (Color Video Signal & Pattern Generator)
- VCR with Multi-system (NTSC/PAL/SECAM)
- Chroma meter Minolta CL-100

4-2 Test Condition

- Circumstance Brightness : Dark room less than 60 lux
- Inspection Distance : 2.0m
- Screen Size : 60 inches diagonal (wide)
- Before function test and alignment, each EP732B should be run-in and warmed-up for at least 30 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=37.9 KHz, V=85 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)
- Test Display Mode & Pattern (Refer to 4-3.1 & 4-3.2)
- Function Test and Alignment Procedure

4-3 Test Display Modes and Patterns

4-3.1 Compatible Modes

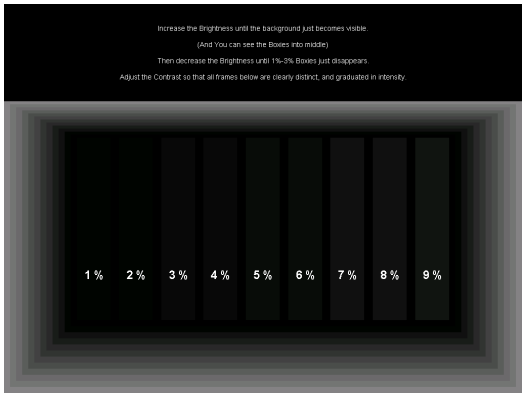
Analog :

Compatibility	Resolution	V-Sync(Hz)	H-Sync (KHz)
VGA	640 x 350	70	31.5
	640 x 350	85	37.9
	640 x 400	85	37.9
	640 x 480	60	31.5
	640 x 480	72	37.9
	640 x 480	75	37.5
	640 x 480	85	43.3
	720 x 400	70	31.5
	720 x 400	85	37.9
SVGA	800 x 600	56	35.2
	800 x 600	60	37.9
	800 x 600	72	48.1
	800 x 600	75	46.9
	800 x 600	85	53.7
XGA	1024 x 768	43.4	35.5
	1024 x 768	60	48.4
	1024 x 768	70	56.5
	1024 x 768	75	60.0
	1024 x 768	85	68.7
SXGA	1280 x 1024	60	63.98
SXGA+	1400 x 1050	60	63.98
MAC Ⅱ 13"	640 x 480	66.68	35
MAC 16"	832 x 624	74.55	49.725
MAC 19"	1024 x 768	75	60.24
MAC	1152 x 870	75.06	68.68
MAC G4	640 x 480	60	31.35
i MAC DV	1024 x 768	75	60

4-3.2 Function Test Display Pattern

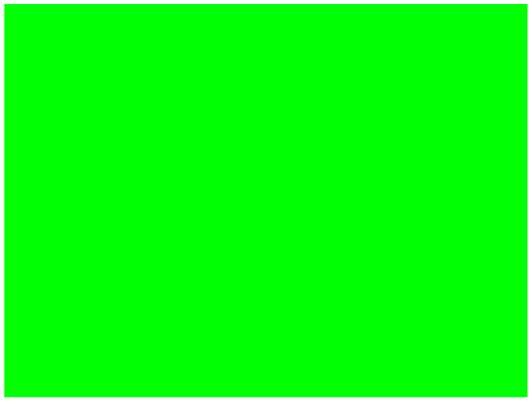
Item	Test Content	Pattern	Specification	Remark
1	Frequency & Tracking	Fine Line Moire	Eliminate visual wavy noise.	Figure 1
2	Contrast/Brightn-ess	Gray Scale	Gray levels should be distinguishable.	Figure 2
3	R, G, B and White Color Performance	R, G, B and White Color	Each R, G, B color should be normal.	Figure 3~6
4	Screen Uniformity & Flicker	Full White	Should be compliant with the spec.	Figure 6
5	Dead/Blemish Pixel	R, G, B, White, Dark, Blue 180, Gray 30	The numbers of dead/blemish pixels should be compliant with the spec.	Figure 3~9
6	Boundary	Boundary Frame	Horz. and Vert. position of video shuld be adjustable to be within the screen frame.	Figure 10

Fine Line Morie Pattern (Figure 1)



Contrast & Brightness (Figure 2)

R. Color Pattern (Figure 3)



G. Color Pattern (Figure 4)

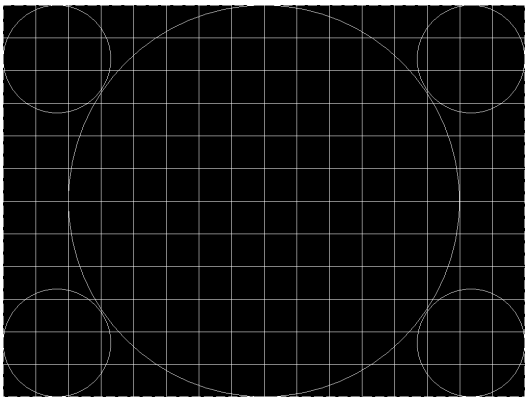
B. Color Pattern (Figure 5)

Full White Pattern (Figure 6)

Dark Pattern (Figure 7)

Gary 30 Pattern (Figure 8)

Blue 180 Pattern (Figure 9)



Boundary Frame (Figure 10)

4-4 Inspection Procedure

Reset

Please press “Menu” button on the projector panel to enter OSD Menu. Then press “ -” or “ +” to choose “Image II” function. Press “Enter” button to choose “Reset” function, and then press “Enter” to check if it works. This action will allow you to erase all end-users’ settings and restore the original factory setting.

Clock and Clock Phase

Test Signal: 800 x 600 @ 85/75/72/60 Hz
Test Pattern: Line Moire Pattern

- Check and see if image sharpness and focus is well performed.
- If not, readjust by following steps.
  - Enter “Image II” menu and select “Frequency” Function to adjust the total pixel number of pixel clock in one line period.
  - Then select “Tracking” Function and use “ - ” or “ + ” key to adjust the value to minimize video flicker.

R, G, B and White Colors Contrast

Test Signal: 800 x 600 @ 85/75/72/60 Hz
Test Pattern: 64 or 16 R, G, B and White colors Intensities Pattern

- Please check and see if each color is normal and distinguishable.
- If not, please return the unit to repair area.

Screen Uniformity and Flicker

Test Signal: 800 x 600 @ 85/75/72/60 Hz
Test Pattern: Full White Pattern

- Please check and see if it’s in normal condition.
- If not, please return the unit to repair area.

Dead Pixel/Blemish Pixel

Test Signal: 800 x 600 @ 85/75/72/60 Hz
Test Pattern: Gray 30, Blue 180, White, Dark, Red, Green, & Blue Pattern

- Please check and see if there are dead pixels on DMD chip.
- The total numbers and distance of dead pixels should be complaint with specification.

Check for Secondary Display Modes

Test signal : 1.) 640 x 350 @ 70.09 / 85.08Hz
2.) 640 x 480 @ 72.81 / 75.00 / 85.01Hz
3.) 720 x 400 @ 70.08 / 85.04Hz
4.) 800 x 600 @ 56.25 / 60.32 / 72.19 / 75.00 / 85.06Hz
5.) 832 x 624 @ 74.55Hz
6.) 1024 x 768 @ 43.48 / 60.00 / 70.00 / 75.03 / 85.00Hz

Normally when the primary mode 800 x 600 @ 85/75/72/60 Hz is well adjusted and complaint with the specification, the secondary display modes will be great possibility to be complaint with the specification. But we still have to check with general test pattern to make sure every secondary mode is complaint with specification.

Factory Reset

After final QC step, we have to erase all saved change again and restore the factory defaults. Please select and enter "Factory Reset" Function to see if it is workable. This action will allow you to erase all end-users' settings and restore the original factory setting.

Chapter 5

Firmware Upgrade Procedure

5-1 Equipment Needed

* **Software :**
  - DLP Composer
  - dev (firmware folder)

* **Hardware :**
  - Power Cord
  - RS232 Cable
  - USB Cable (P/N : 42.86006.001)
  - PC or Laptop
  - EP732B Projector

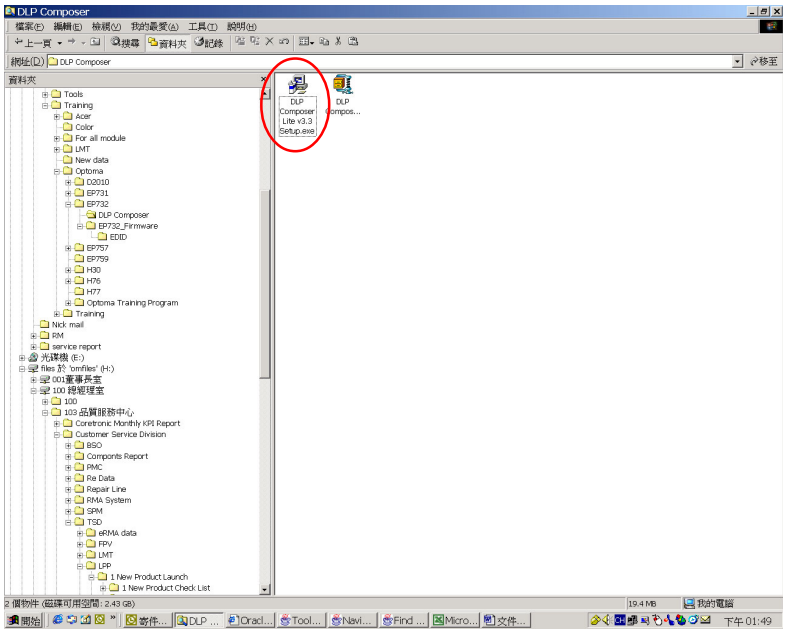
5-2 Setup Procedure

1. Connect USB of PC and USB port of EP732B projector.

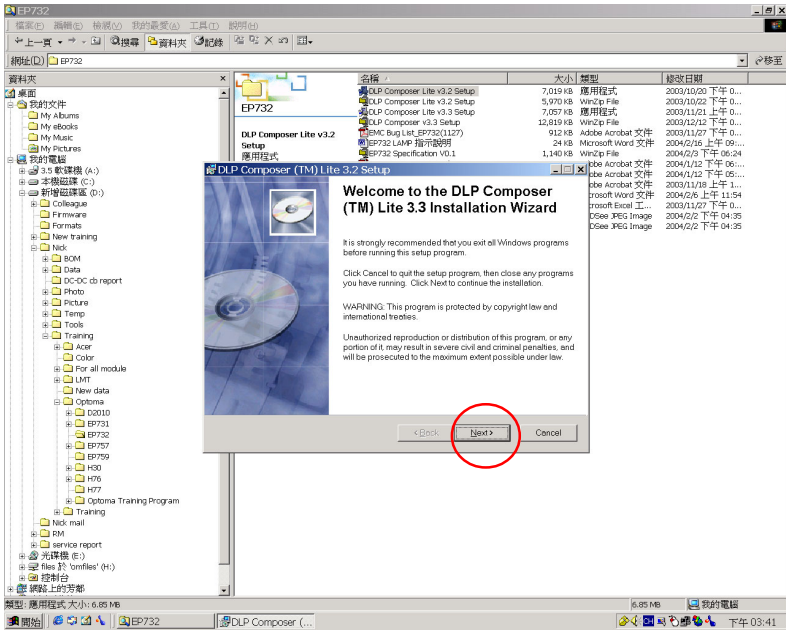
5-3 Installation Procedure

5-3.1 DLP Composer Installation Procedure

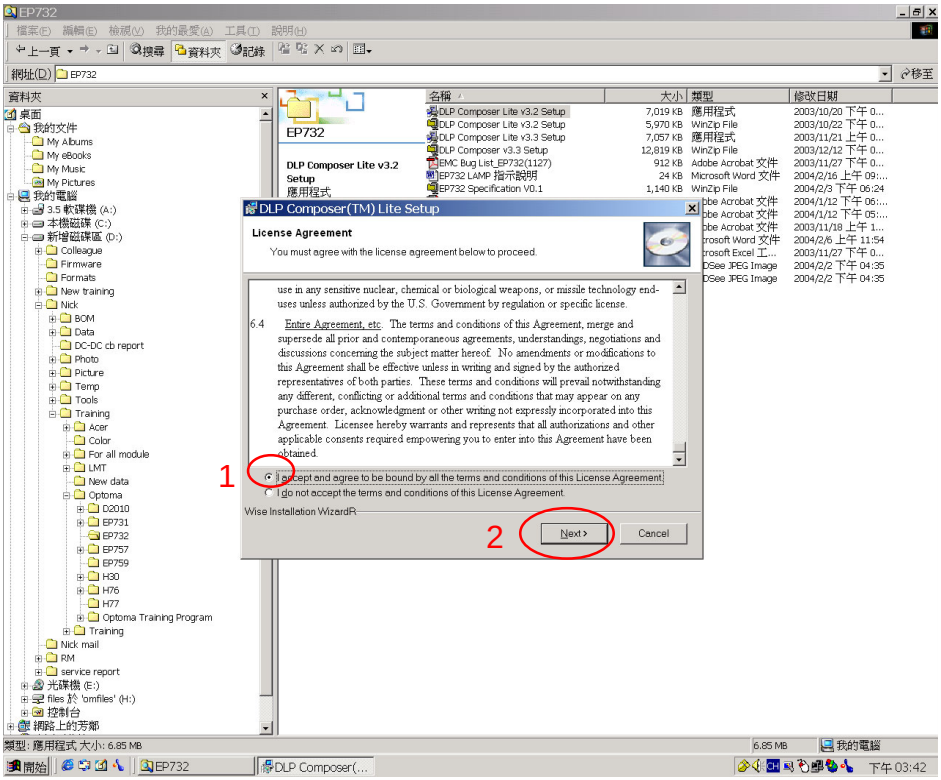
1. Execute the “DLP Composer Lite V3.3 Setup” program.



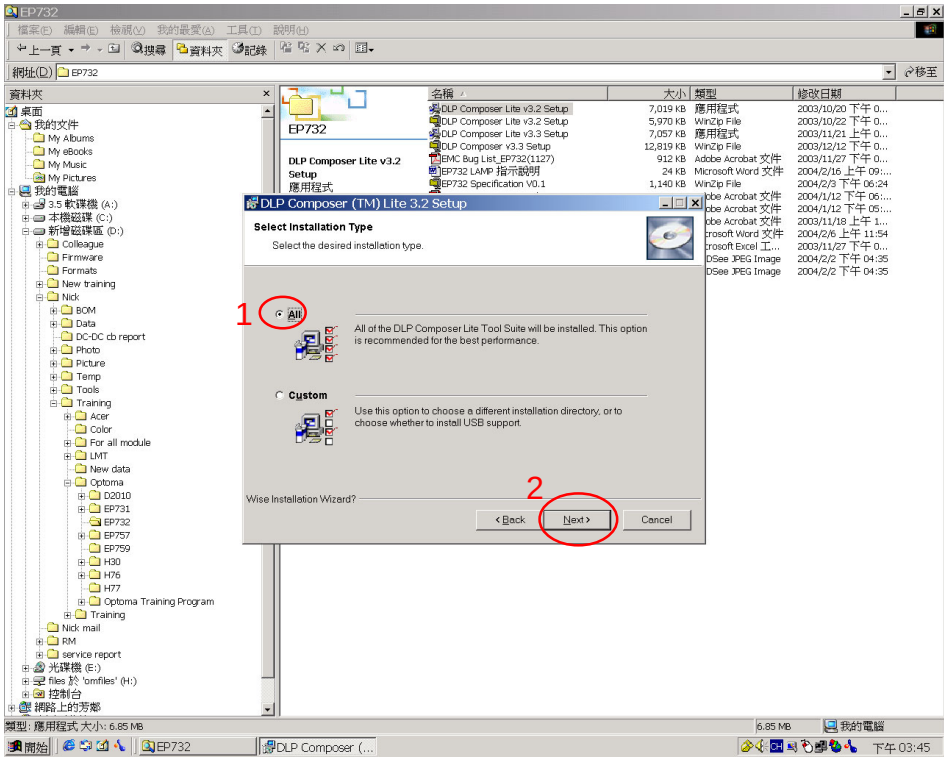
2. Click “Next” icon.



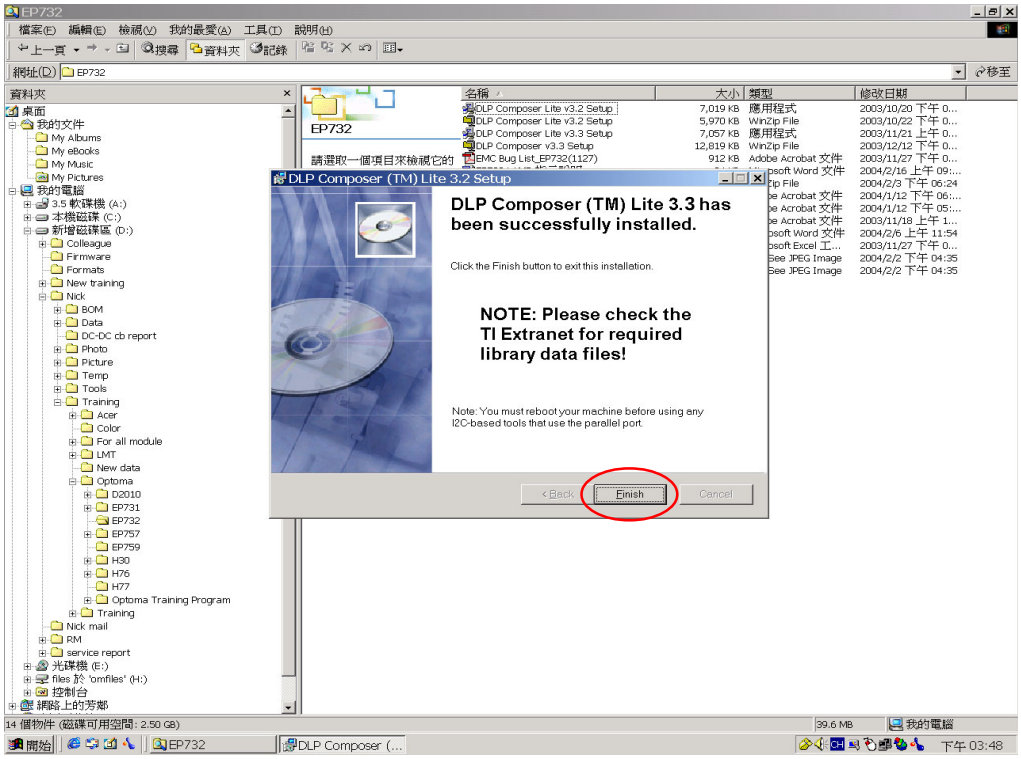
3. Select “I accept and agree to be bound by all the terms and conditions of this License Agreement”, then Click “Next” icon.



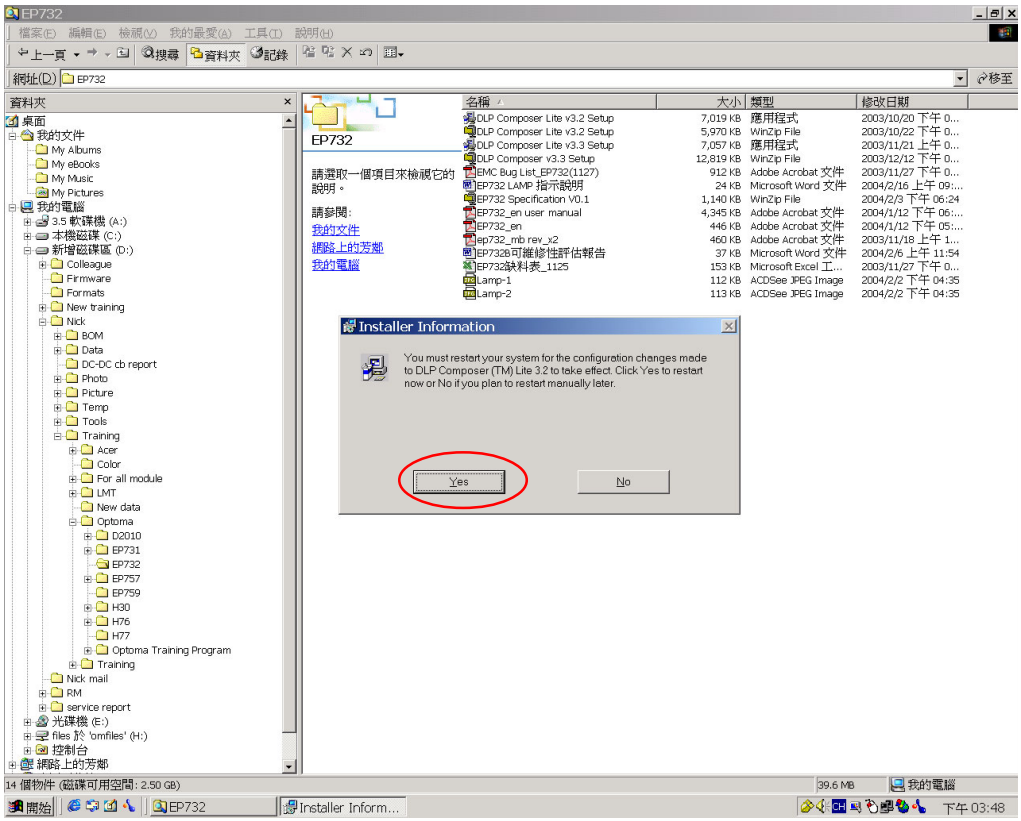
4. Select “All” and then click “Next” icon.



5. Click “Finish” to complete the installation.



6. Click “Yes” to restart the computer



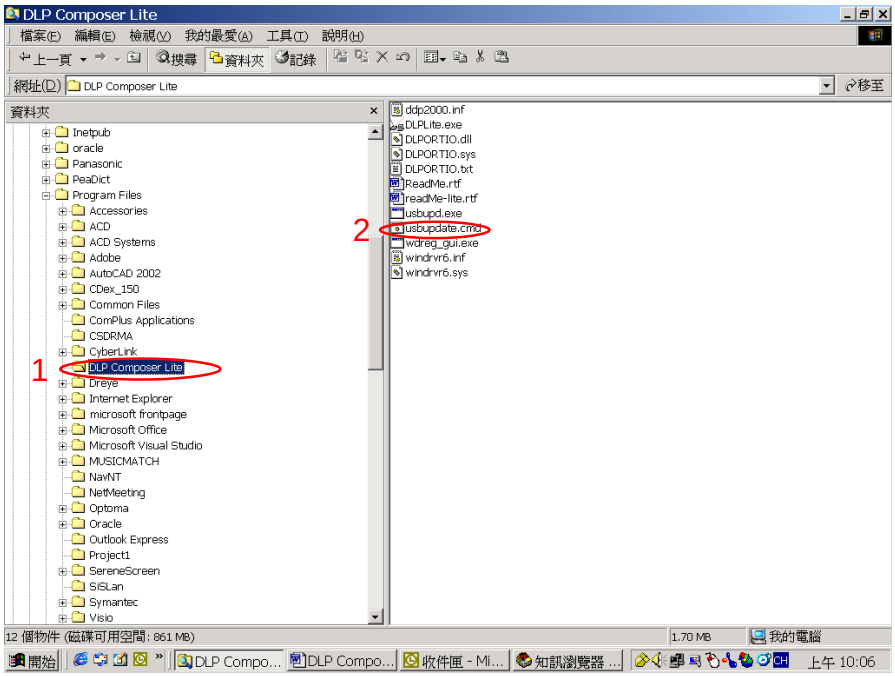
5-3.2 USB Driver Upgrade Procedure

1. After linking the PC and EP732B projector with a USB cable, press and hold the menu button, then push the power button to turn on the projector.

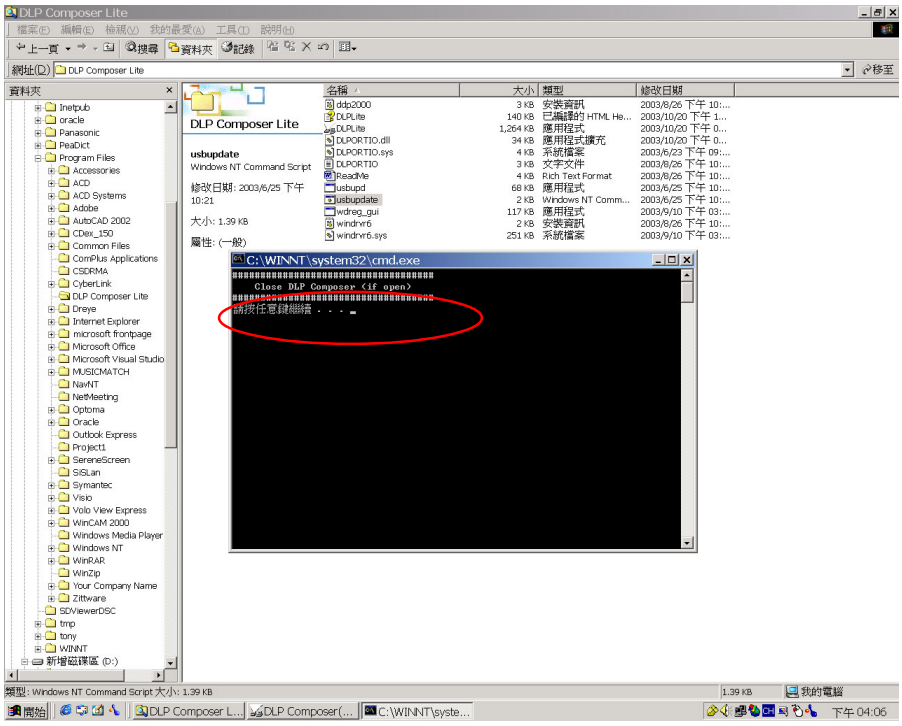
   Note : The "Temp" LED and "Lamp" LED should be full on.

2. Execute the C:\Program files\DLP Composer\usbupdata.cmd.

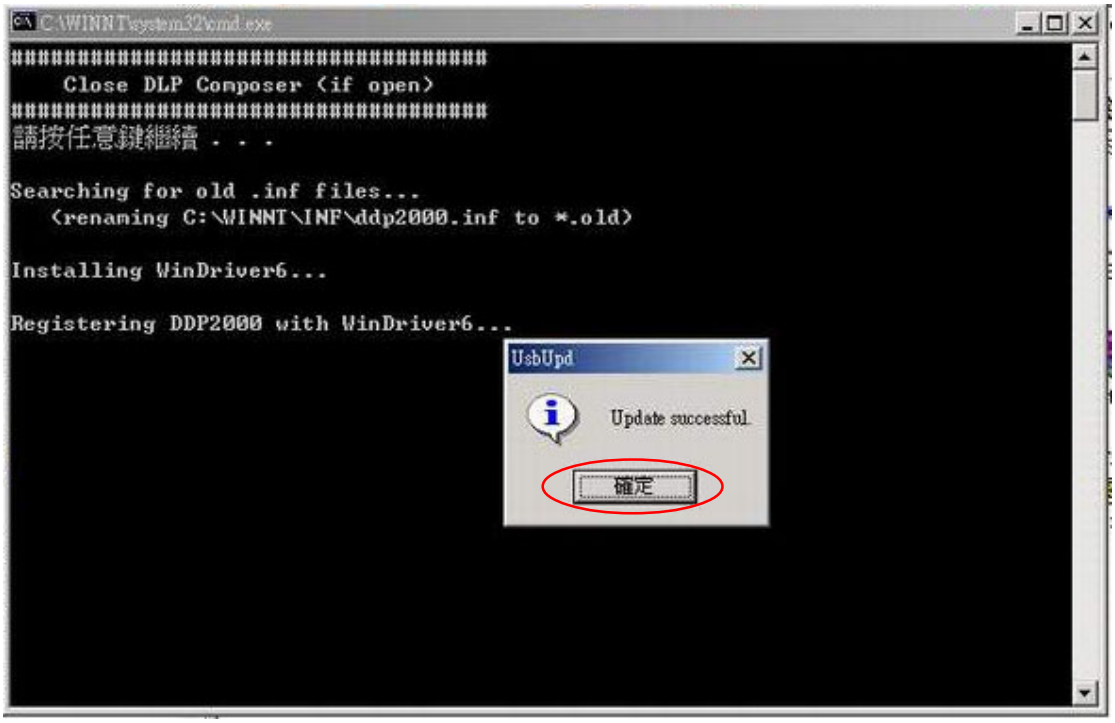
   Note : The "DLP Composer" program must be closed first.



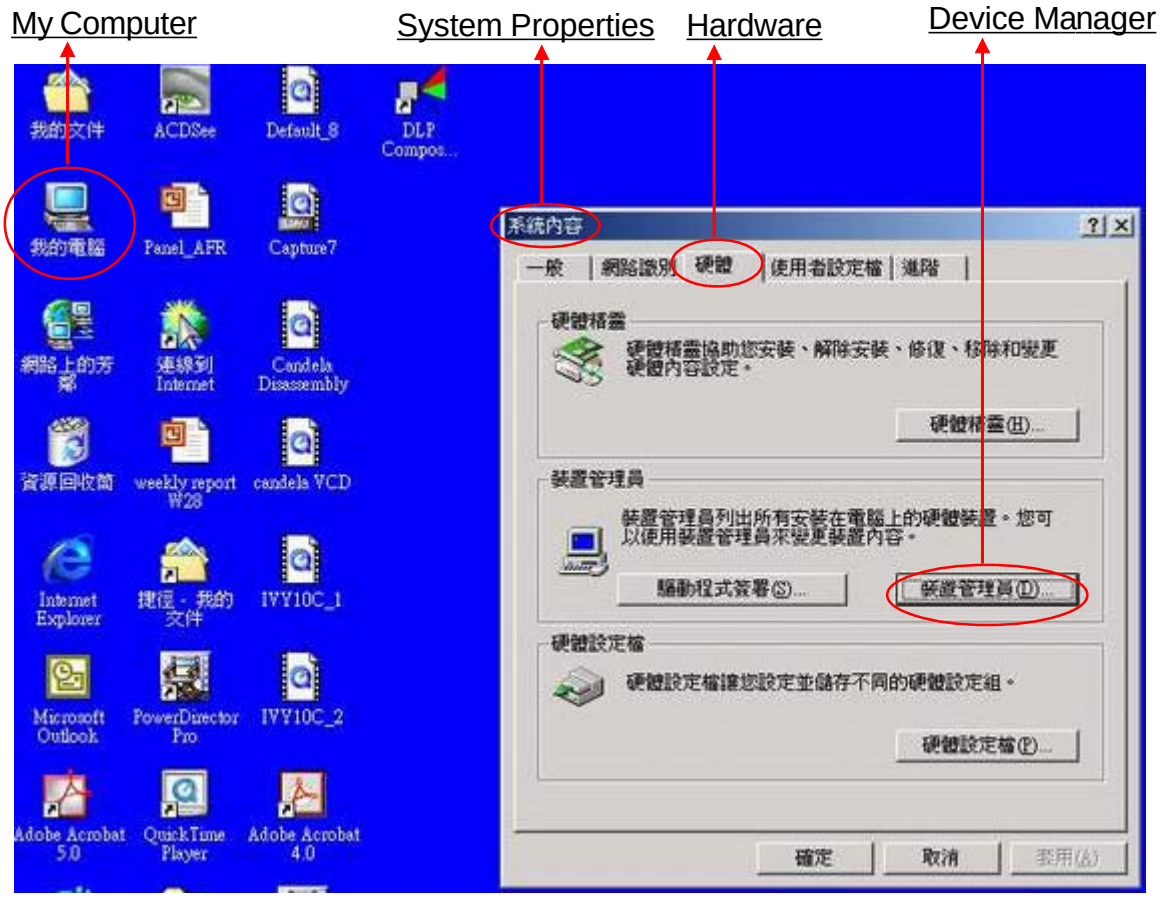
3. Type any key to continue. Then wait about a minute.



4. Click “OK”. The USB driver have successful.

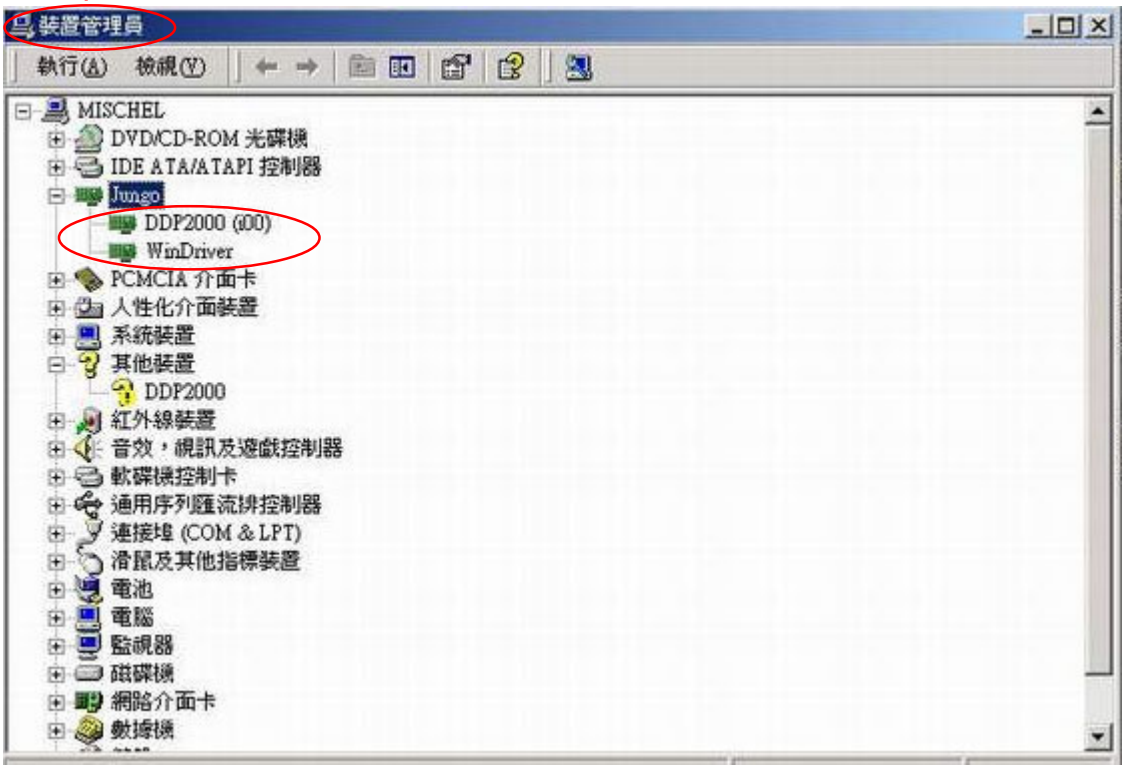


5. Right click “My Computer” on the desktop. Select “Properties” on the popup menu to launch the “System Properties” window. Choose “Hardware” and then click “Device Manager.”



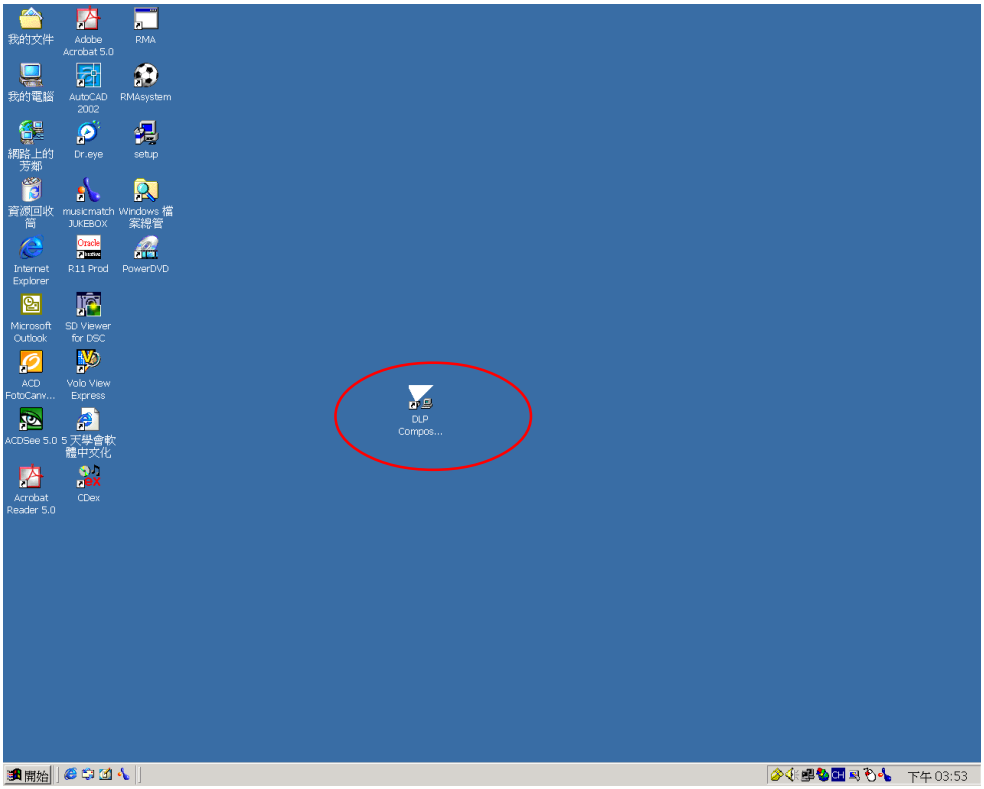
6. Click “Jungo” to assure “DDP2000” and “WinDriver” are properly installed. If not, repeat Step 1 ~ 6.

Device Manager

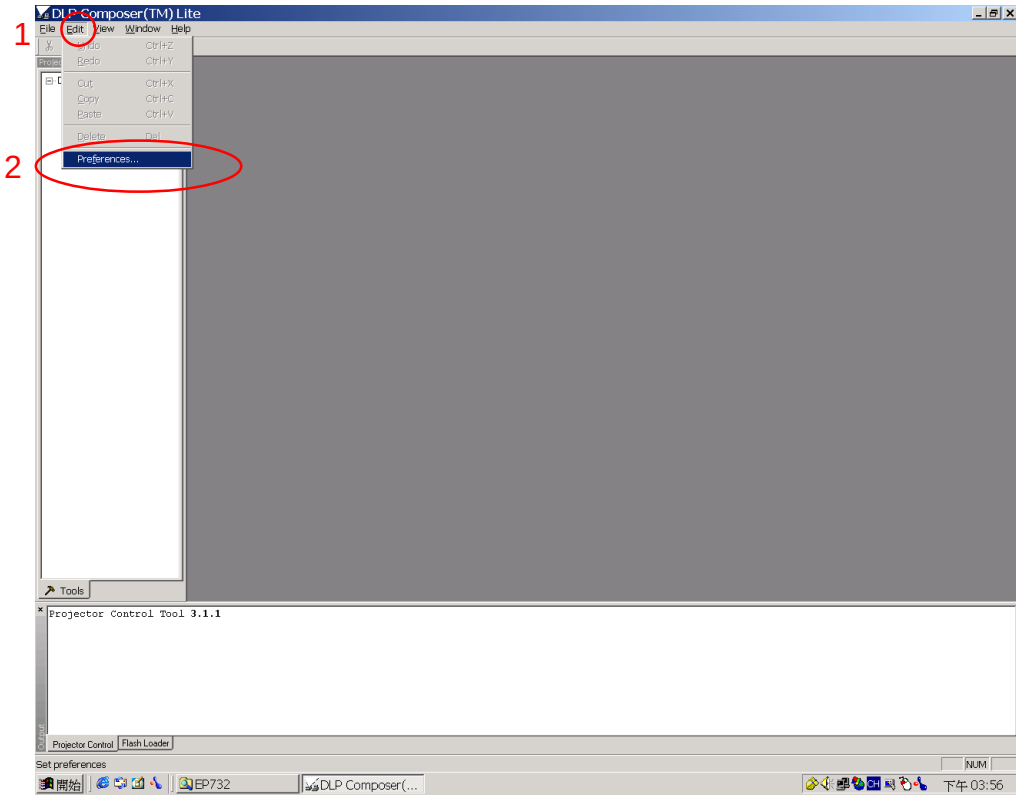


5-4 Firmware Upgrade Procedure

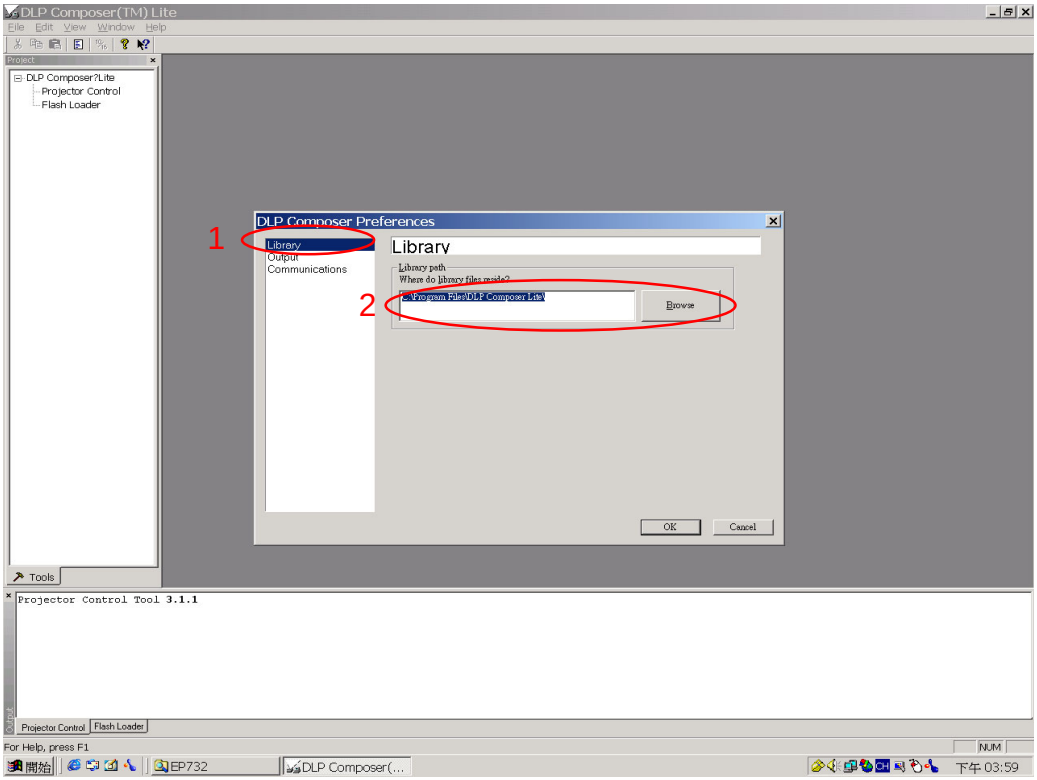
1. Execute the "DLP Composer™".



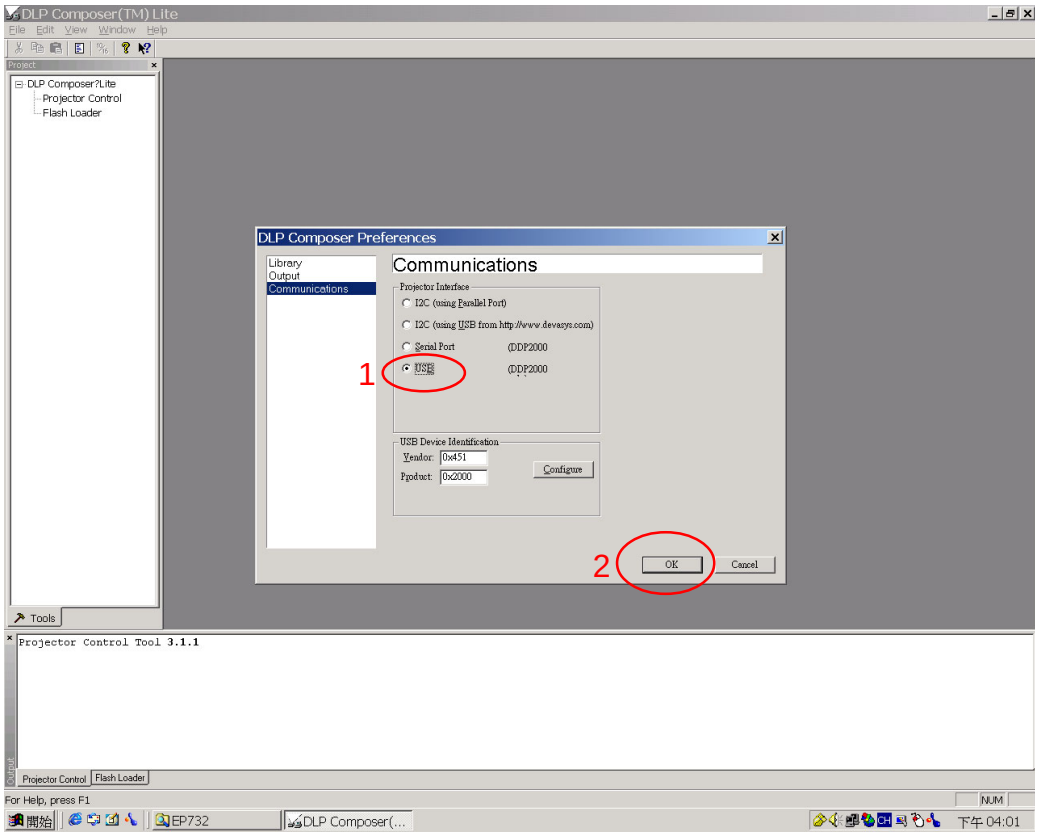
2. Click "Edit" and "Preferences".



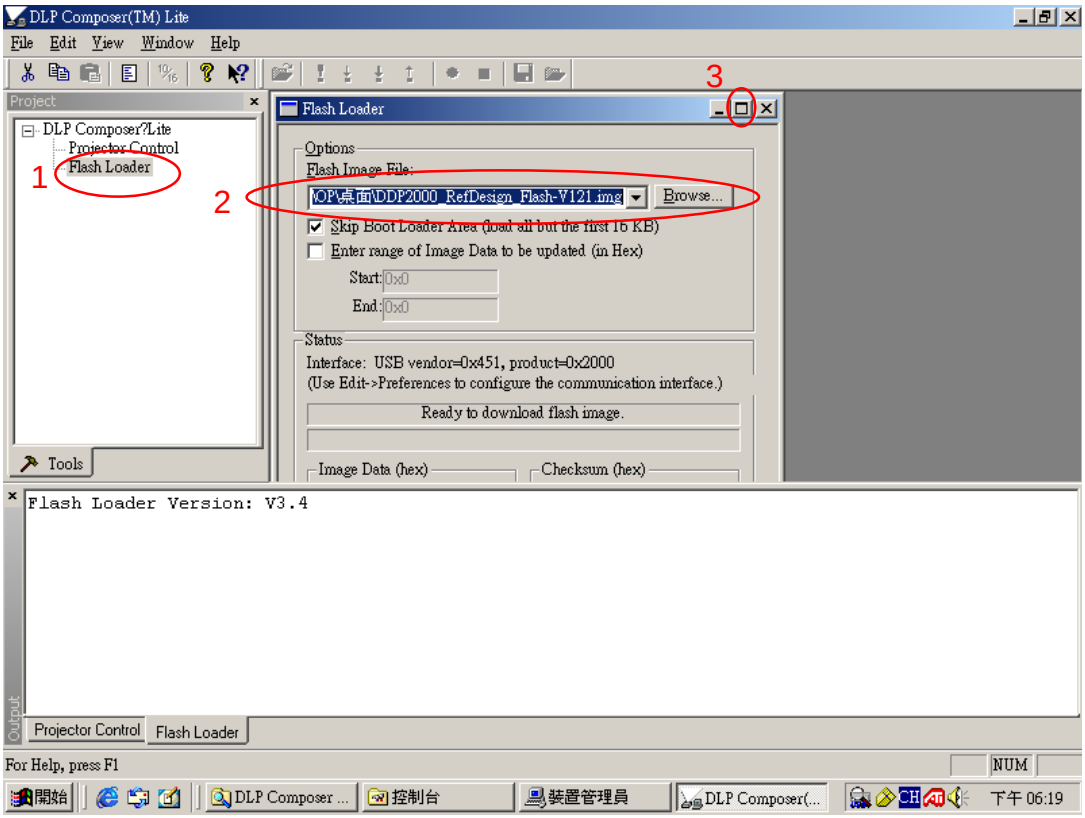
3. Click “Library”. The library path located to the default installation directory is : C:\Program Files\DLP Composer. If not then press “Browse” to select the right path.



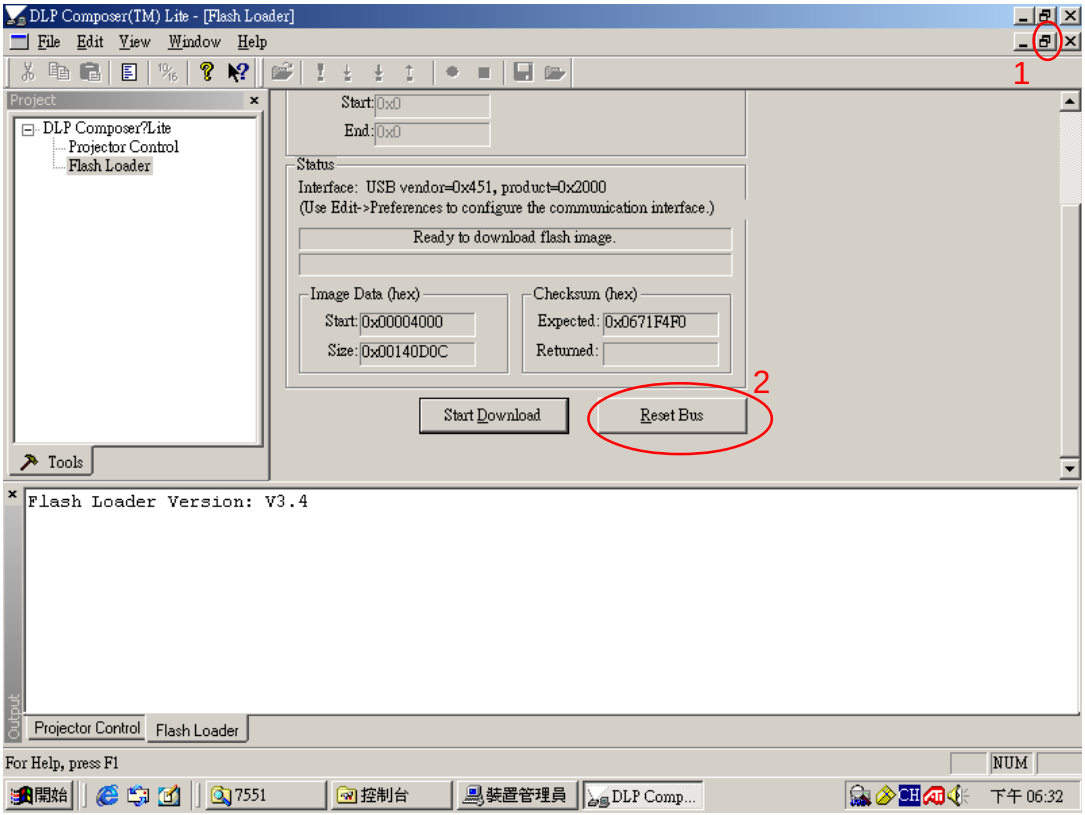
4. Select “Edit\Preferences\Communications”, choose “USB”, and then click “OK”.



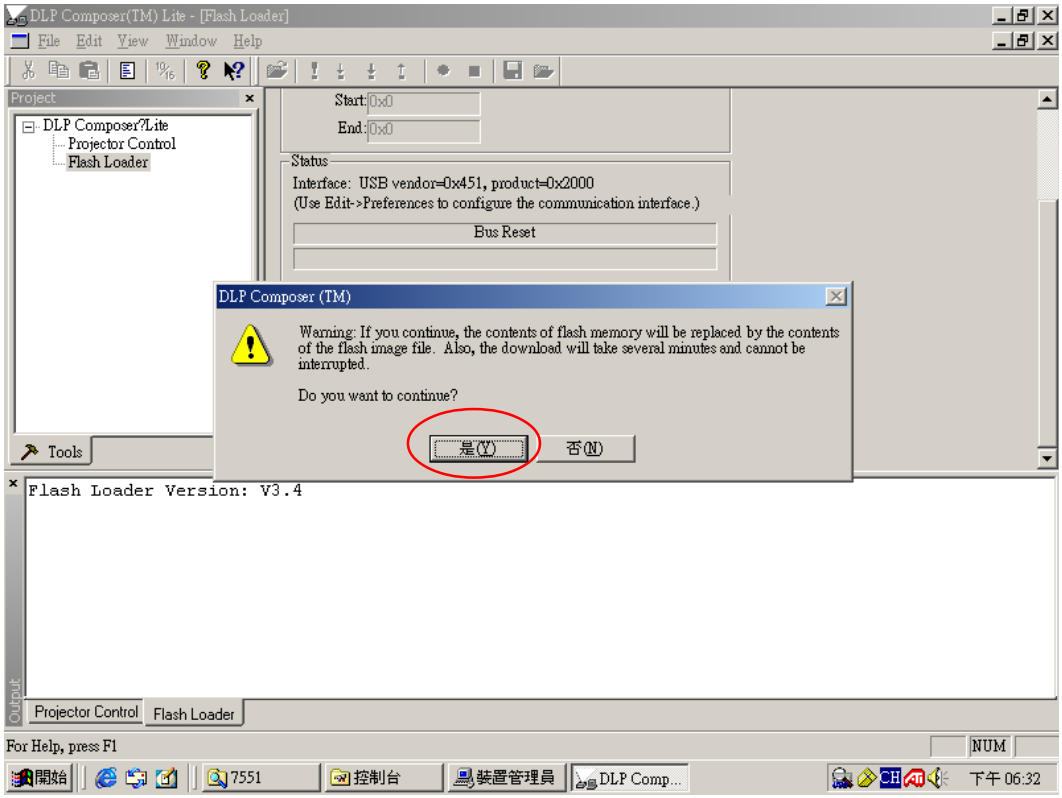
5. Choose “Flash Loader” and click “Browse” to search the “**DDP200_Flash_Vxx_EP732B.img**” file.
Then click this button to maximize the window size.



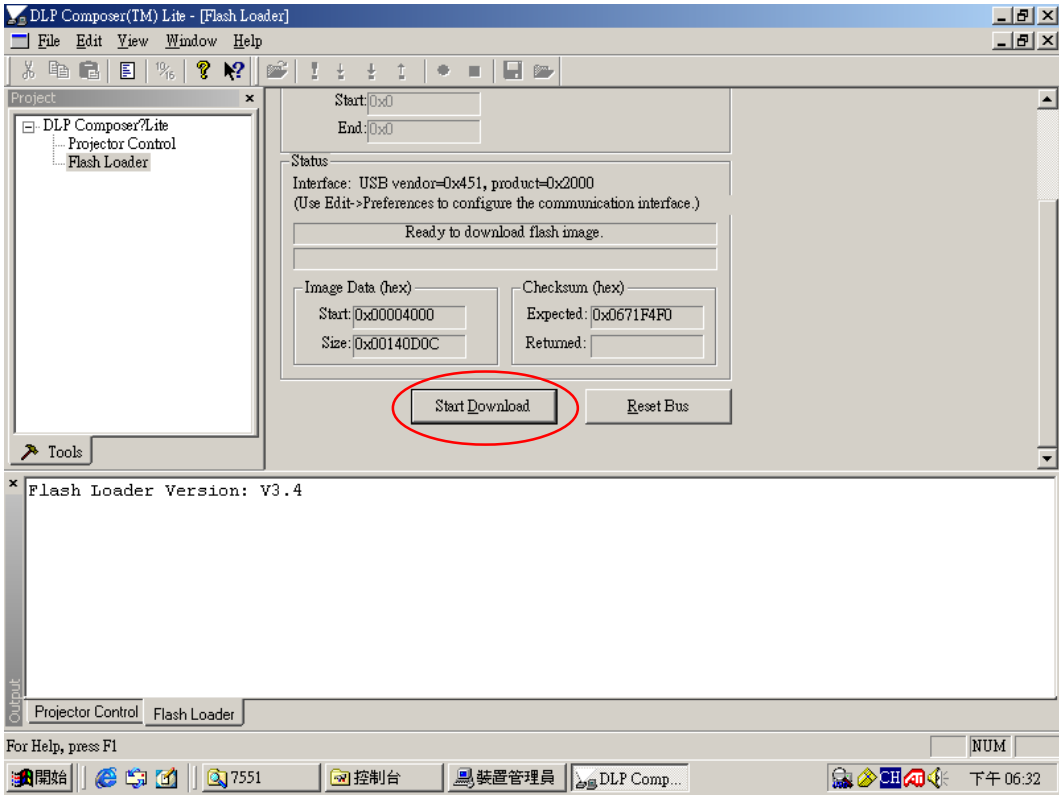
6. Click “Reset Bus” to erase the flash memory.



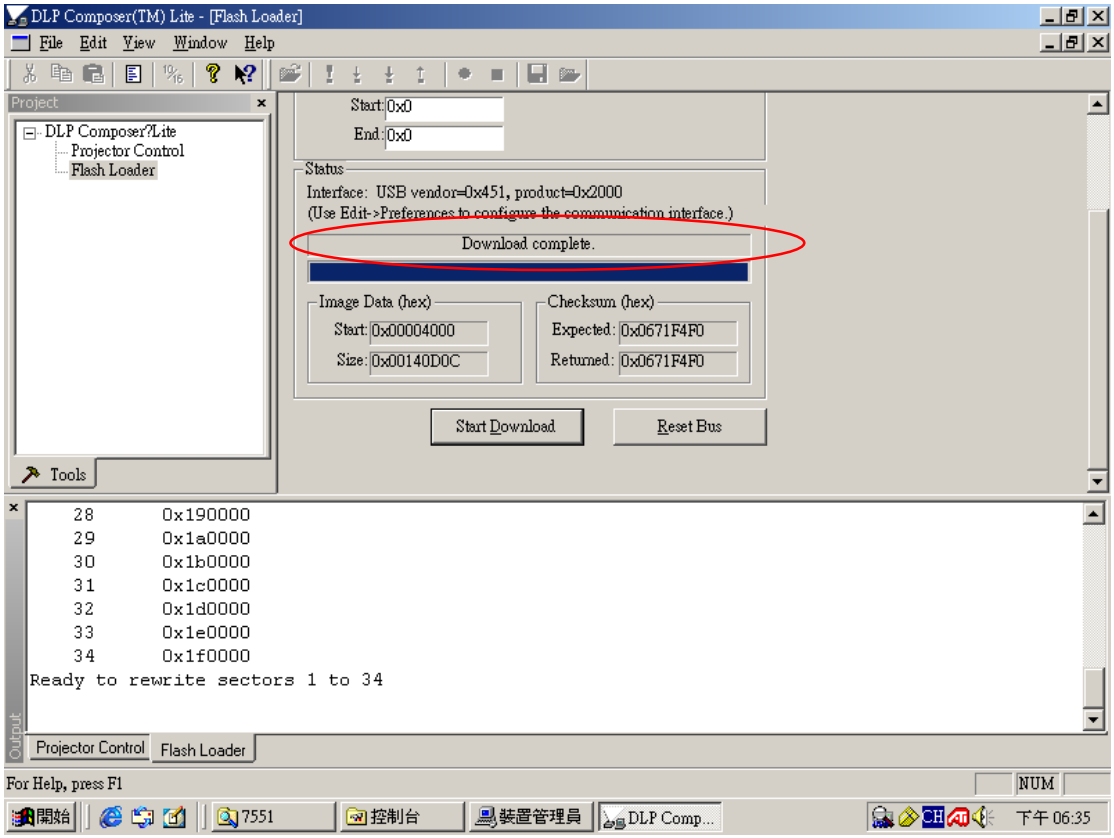
7. Click “Yes” to erase the flash memory.



8. If the firmware is ready, then click “Start Download” to process the firmware upgrade.



9. After the download is complete, please power on the projector.
   Enter **Service Mode** to check if the firmware version is correct. Note



Note :

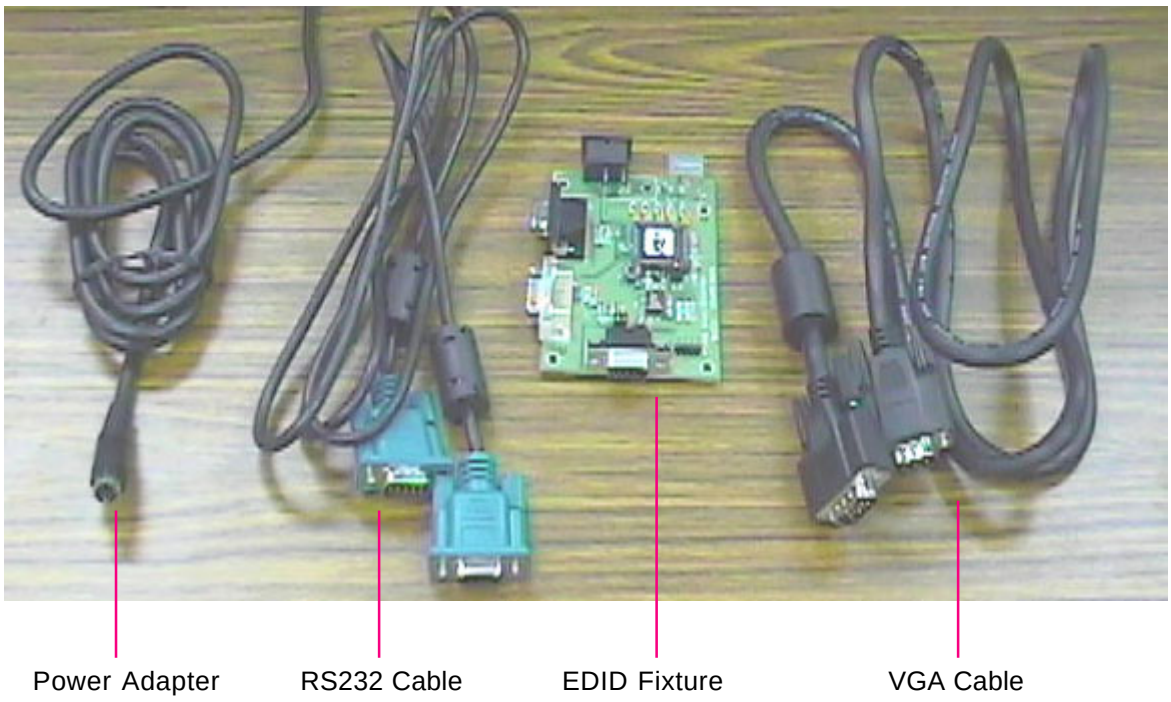
1. Press the “UP” and “Down” button at the same time.
2. Press “UP” button twice and then press “LEFT” button to enter **SERVICE MODE** (under searching signal pattern).

Chapter 6

DDC Key-in Procedure

6-1 Equipment Needed (Analog)

- PC
- EDID fixture
- Power Adapter & Power Cord
- RS-232 Cable
- VGA Cable
- EP732B



6-2 Setup Procedure

1. Connect Power Adapter with the fixture.
2. JP1 and JP5 on the fixture must be closed, and JP2 must be opened.

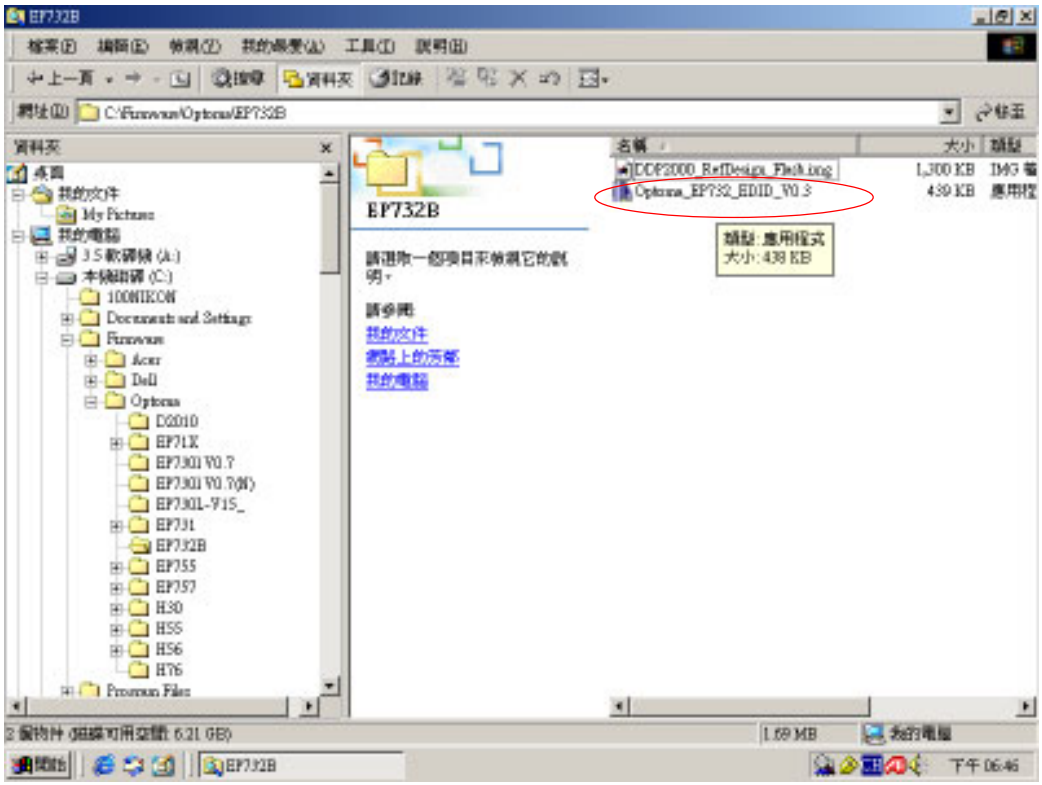
(Figure 1)

3. Connect P1 of the fixture and COM1 of PC with RS232 cable. (Figure 1 & 2)
4. Connect P3 of the fixture and VGA port of EP732B with VGA cable. (Figure 1 & 2)
5. Connect EP732B with Power Cord. (Figure 2)
6. Turn on the power switch of the fixture. (Figure 1)

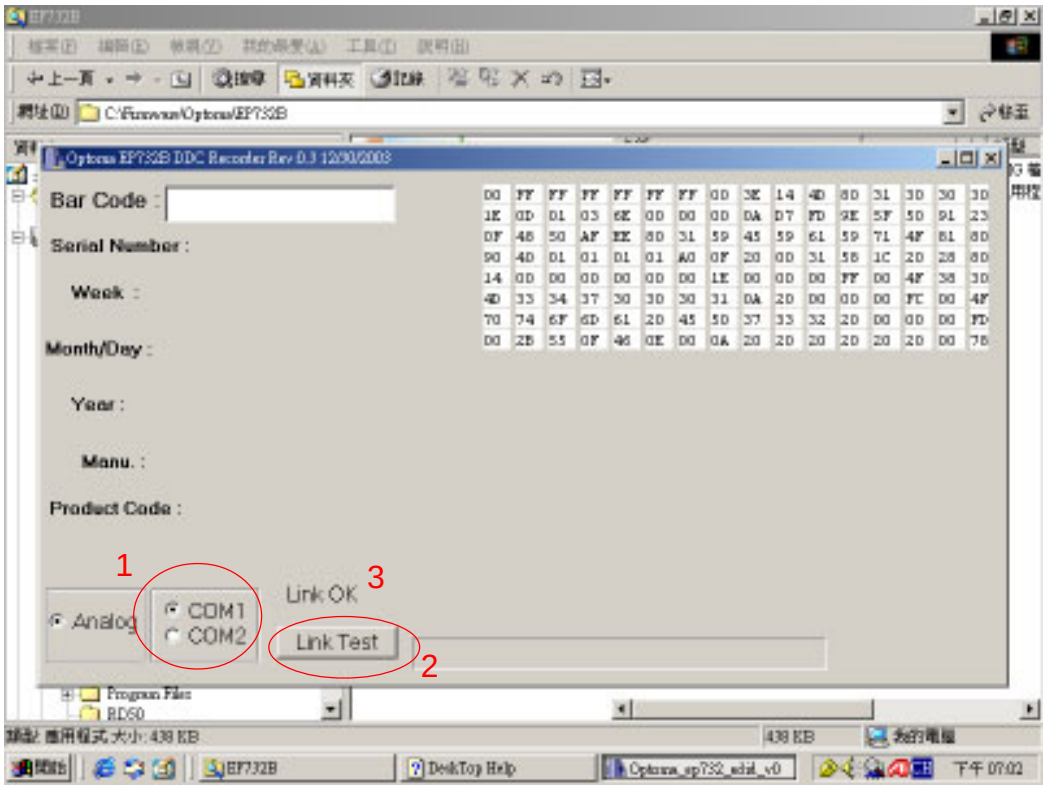
(Figure 2)

6-3 DDC Key-in Procedure

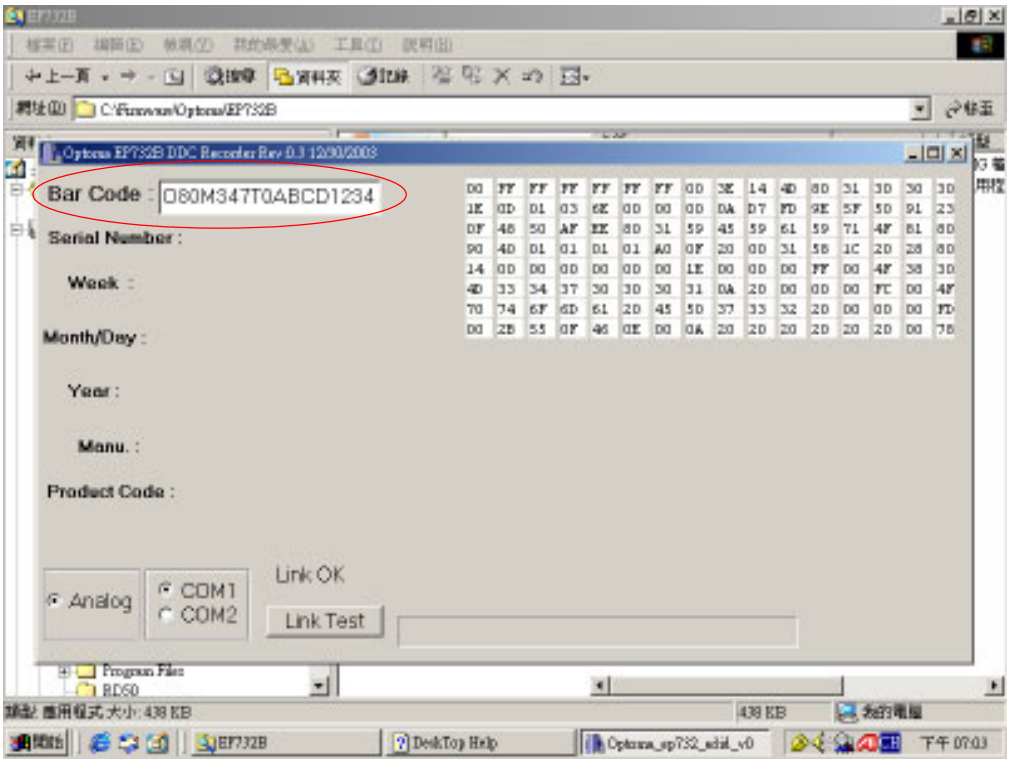
1. Execute “Optoma_EP732_EDID” program.



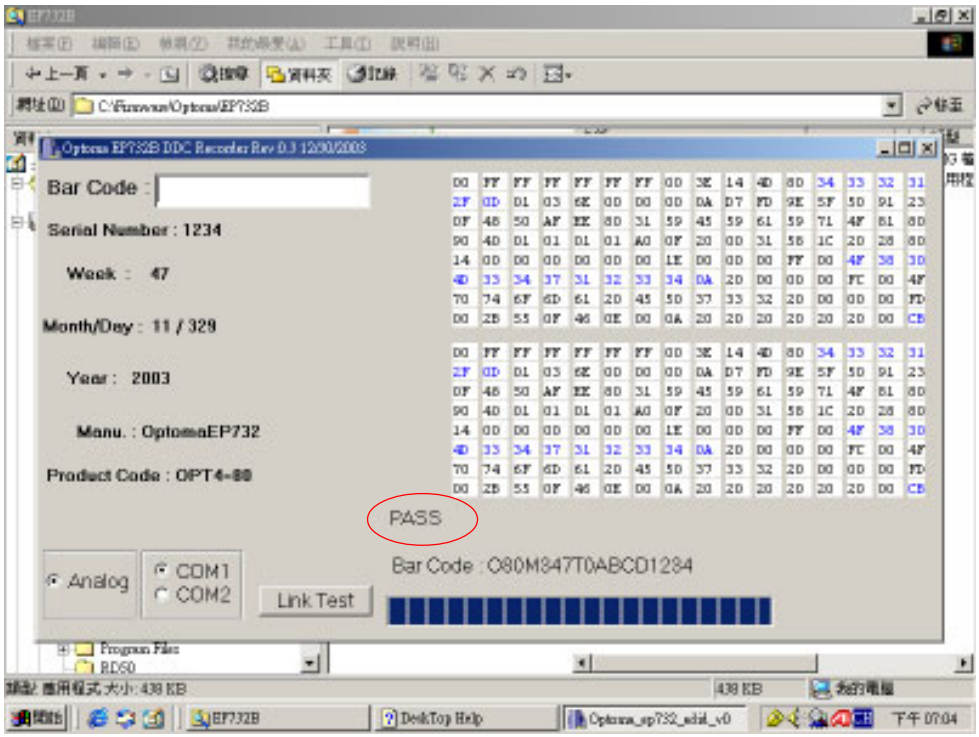
2. Select “COM1” and press “Link Test” key, then the screen will appear “Link OK”.



3. Key in the S/N into the blank space beside Bar Code, and then press “Enter” key on keyboard to begin programming.



4. After finishing the above procedures, “ PASS “ massage will appear on the screen.



5. Power on the EP732B and input digital signal. If there is no display, that means the EDID is not keyed in successfully. Then repeat Step 1 ~ 5.

Note: Do not run two EDID programs at the same time.

Appendix A

Serial Number System Definition

Serial Number Format for Projector

A	BBB	Y	WW	C	D	BEMO	EEEE
①	②	③	④	⑤	⑥	⑦	⑧

① : A = Optoma, B~Z = OEM

② : Product code (ex: 80V = EP732B)

③ : Y = Last number of the year (ex: 2004 - 4)

④ : Week of year

⑤ : Panel vendor code

⑥ : Electrical classification (1=110V, 2=220V, 0=universal)

⑦ : B = BIOS version, E = PCB board version,
M = Mechanical version, O = Optical version

⑧ : Serial code (from 0001~)

EX : A80V429T0AAAA1001

This label "A80V429T0AAAA1001" represents the whole serial number for EP732B, including Ver. 1st of BIOS and Ver. 1 of PCB Board. Both mechanical and optical version are 1st. In addition, panel vendor is T1. It's produced on 29-week of 2004 for universal area and its serial code is 1001.

Reader's Response

DearReaders:

Thank you for your backing our service manual up. In order to refine our content of the service manual and satisfy your requirement. We expect you can offer us some precious opinions for reference.

Assessment:

A. What do you think about the content after reading EP732B Service Manual?

Unit	*Excellent*	*Good*	*Fair*	*Bad*
1. Introduction				
2. Disassembly Procedure				
3. Troubleshooting				
4. Function Test & Alignment Procedure				
5. Firmware Upgrade Procedure				
6. DDC key-in Procedure				
7. Touch Panel Driver Installation and Calibration				
8. Appendix				

B. Are you satisfied with the EP732B 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 opinion or suggestion about this service manual?

Reader's basic data:

Name:		Title:	
Company:			
Add:			
Tel:		Fax:	
E-mail:			

After your finishing this form, please send it back to Coretronic Customer Service Dept. by fax: 886-3-578-8357, Thanks :)