

**Pro-L1490U/ L1495U / L1500UH / L1505UH / L1715SNL / L1750UNL /  
L1755UNL**

**Firmware v3.01 Release notes**

**(Note: All previous firmware version updates are included in v3.01)**

1. Scope

This is to inform about the release of main firmware V3.01 for above-mentioned models.

2. Updating information (Previous version: V2.23 -> New version: V3.01)

2-1. Specification change

1. Added selectable items (correction point/display grid color) for point correction

current: (points) 3x3/5x5/9x9/17x17, (grid color) W/R/G/B

new: (points) 3x3/5x5/9x9/17x17/33x33, (grid color) W/R/G/B/C/M/Y

2. Improved point correction function to specify adjustable point number with each direction separately. (from 3, 5, 9, 17, 33)

3. Added function which can specify a range which can be set to affect (surrounding points will be adjusted automatically depending on user adjustment) an adjusted point by the user when the point correction is done from Epson Projector Professional Tool (hereinafter called "EPPT").

4. Improved geometric correction (Quick corner/Curved surface/Corner/Point correction) so that correction points can be set on the outside of the projection area.

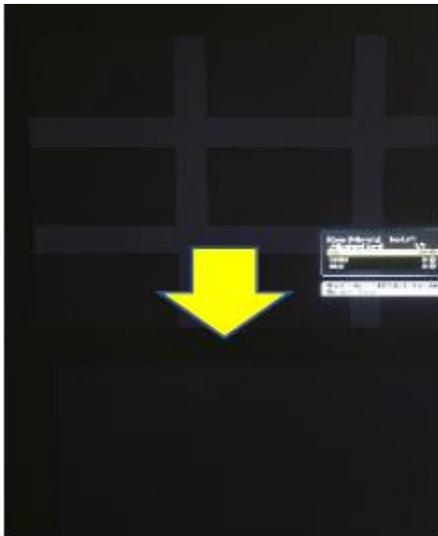
5. Changed specification of geometric correction so that a correction value will be held even after a grid number at correction is changed. (e.g. When correction is done in order of 17x17 -> 9x9 -> 17x17, each adjusted value which were done by grid 17x17 and 9x9 will be held even after going back to 17x17 at last step.)

6. Added interpolation type "Curve" for point correction so that customer can select appropriate interpolation method depending on usage.

7. Improved specification so that projector can display patterns/frame on a projected image at geometric correction from EPPT. (Quick Corner/Curved Surface/Corner Wall newly support this function)

8. Added "Flexible adjustment" which 21x11 points will be used for uniformity adjustment at each adjustment level (1~8) via EPPT. This function is available from EPPT only.

9. Adjustment pattern which is used for uniformity adjustment is changed to a raster image by removing black the frame for improving visibility.



10. Changed specification of following functions.

1) Uniformity

Changed adjustment range and adjustment value

Range: (current) -20~20 , (new) -50~50

Value: (current) brightness 2.5%/1step , (new) 1%/1step

2) Color matching

- Uniformed the specification of correction range between "Color matching" and "Uniformity"

- Added the Adjustment Level "All" which can adjust each color component value and Brightness for all levels at once

11. Changed adjustable range of G-M correction menu.

current: 11 steps (0~10)

new: 21 steps (-5~15)

12. Uniformed a gradation expression of gray scale pattern (Horizontal, Vertical) for test pattern to Color Matching(22 steps).

13. Add ON / OFF menu on color calibration function to make it easier to switch between correction state and initialization state. \*Default is ON

14. No Signal message is displayed when signal input from specific device\*.

\*Barco : ImagePRO- II

15. Remove the TLS1.0/1.1 support. Only TLS1.2 is available for secure HTTPS.

16. There is possibility that RO error occurs due to malfunction of main CPU (SML) at startup.

17. Supported for stacking assist. This function is available from EPPT only.

18. Supported for automatic connection geometry correction. (tiling assist)

This function is available from EPPT only.

19. (Multi-projection function) Blend curve \* is automatically adjusted when screen matching is finished normally.

\*Blend curve is adjusted automatically for each blending area (up / down / left / right)

- (Multi-projection function) Blend curve setting is updated along with "Undo" and "Redo" function in Screen matching menu.

20. (Multi-projection function) Blend curve in edge blending function is changed that can be set independently for each blending area (up / down / left / right). Also, the blend curve setting menu has illustrations.

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To optimize blending by setting blend curve for each blending area if the brightness of each projector is uneven during multi-projection with 3 or more projectors.



21. Fade-in / fade-out time of AV mute setting can be set by ArtNet  
Fade-in setting range: 0.5 [s] increments between 0.0 [s] and 10.0 [s]  
Fade out setting range: Same as above

22. Changed the process so that "Light source module warning (YE warning)" is not displayed when the setting value of brightness setting (custom mode) is less than 30%".  
<Generating conditions of light source module warning (2 conditions)>

- 1) When the color balance of the light source is imbalanced  
(Example: The color of the white image is extremely yellow / blue, etc.)
- 2) When the brightness level of the light source is low

23. The lower limit of light source brightness setting (custom mode) is changed as follows.

- Before change: 30% ~ 100%
- After change: 10% ~ 100%

24. Assign light source brightness setting function to Art-Net CH17

- Before change: No function
- After change: 0%\* ~ 100%

\* If set to less than 10%, AV mute will be ON\*\*

\*\* AV mute will be ON at 0[s] regardless of fade-in/out settings

25. Fade-in / fade-out function is changed as follows

- Before change: only image processing
- After change: image processing + light source brightness control

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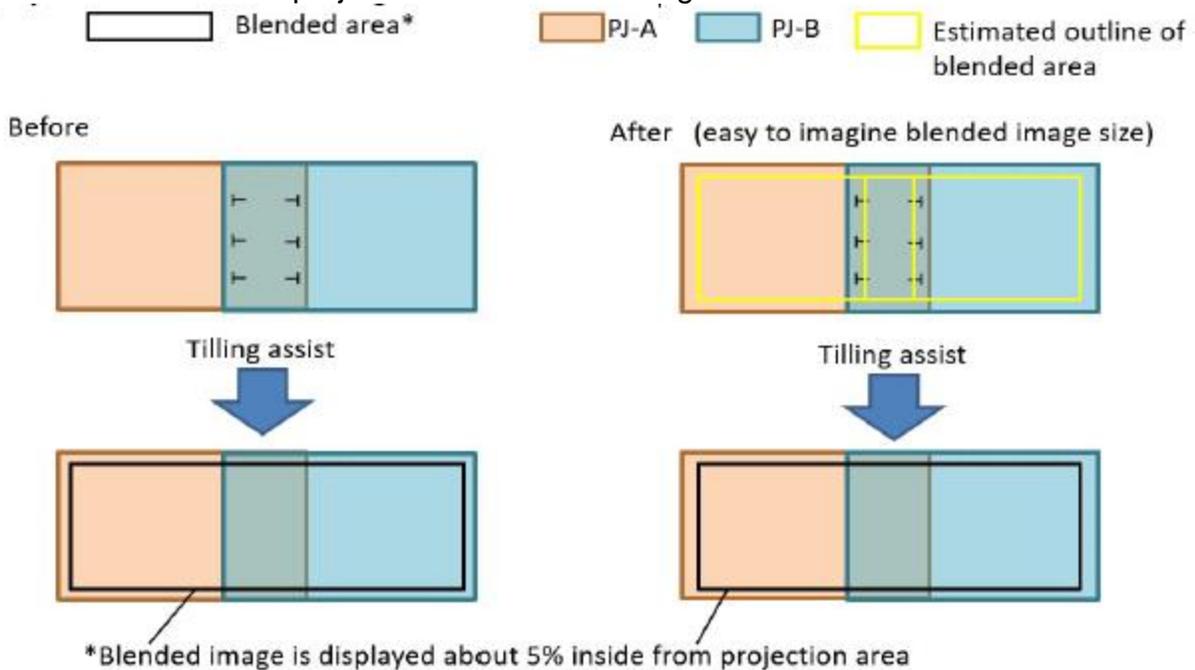
Improvements to fade-in/out function. Improvements have been made by adding light source brightness control.

- Brightness is noticeable when black image is displayed in dark room at the timing of fade-in/out.
- Fade-in/out processing is not smooth

26. Epson Professional Tool V1.30 is supported

\*For detail of Epson Professional Tool V1.30, see TI17-12e

27. (Tiling assist function) Changed to display the outline prediction line of the blend screen 5% inside the projection screen when tiling assist is executed.



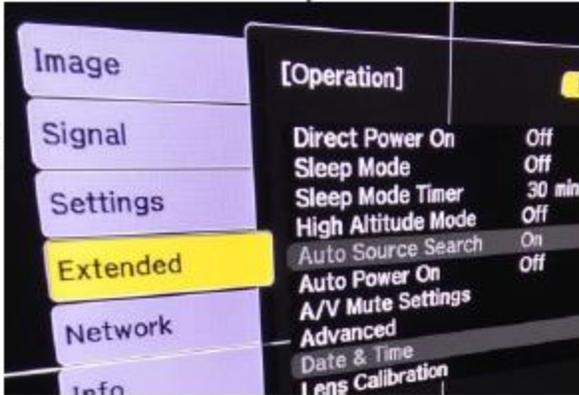
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Before: It's difficult to understand blending image area and difficult to match the image size and screen size. Therefore, re-adjustment may be required after finishing tiling assist.

After: By displaying estimated outline of blending area, blended image size can be almost matched to the screen.

28. While displaying test pattern, Auto Source Search menu is grayed out.

\*Menu: Extended -> Operation -> Auto Source Search



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In current specification, if the Auto Source Search setting is changed while displaying the test pattern, the changes will not be reflected until test-pattern is canceled.

29. Changed the message of each initialization button in Web Control as follows.

- Before change: Settings
- After change: Execute

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In the case of "Settings", user may misunderstand that "adjusted settings will be reflected".

30. Improved error message of screen matching and color calibration.

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By displaying the cause and how to resolve it in the error message, allows users to handle the error as much as possible.

31. (Multi-projection function) Changed the color and size of the black level adjustment window when:

"Color adjustment" is selected under the black level adjustment menu\*

\*Color matching and color uniformity menu window are also changed to same configuration.

Current:



New:



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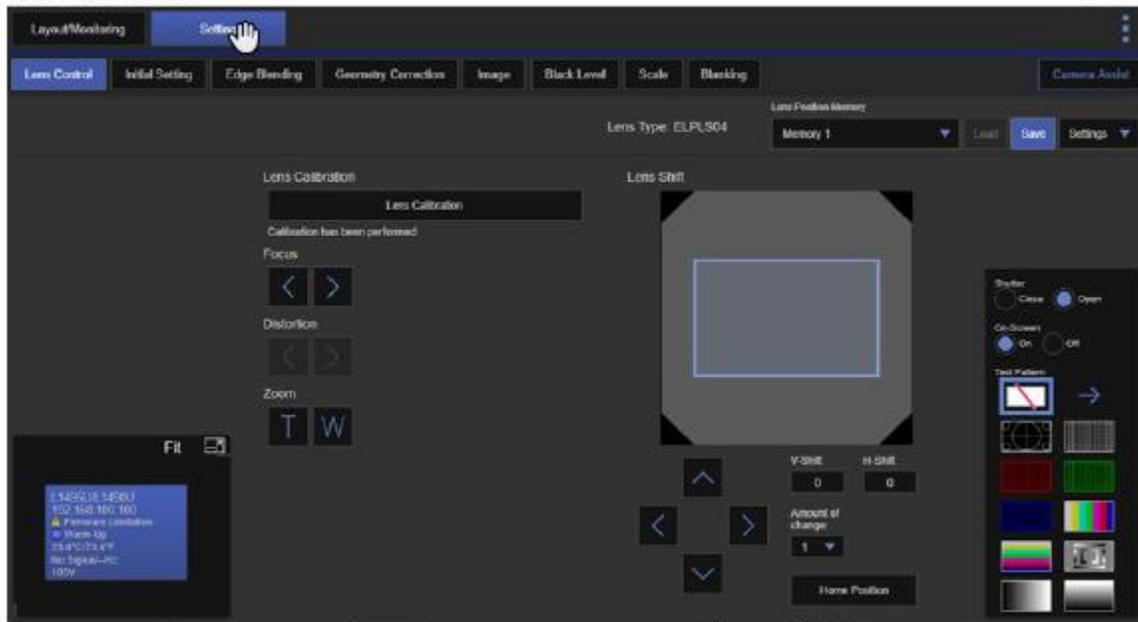
Black level adjustment window is too bright which affects the adjustment of the black level around the window.

32. Display the status whether lens calibration has been executed in OSD menu and Professional Tools (V1.30 or later).

1) OSD menu

Extended > Operation > Lens calibration > History

2) EPPT (V1.30 or later)



Quality improvement

1. When connect a specific device (BarcoLink compatible device) to SDI source and input a supported signal, No Signal message is displayed.

### Specification change

(1) Following items are excluded from the items initialized by executing “Reset All (Factory Default)”

- a. Brightness value of “Constant Brightness” mode
- b. Accumulated operation time of Constant Brightness mode

(2) Added Special mode for power issue

(3) Response value with respect to “POWR?” Command of PJLink when projector is in “Error standby” was

changed as below.

Before : POWR = ERR4 (It means abnormal standby state) → **After : POWR = 0 standby state**

<Reason of the change>

Some users have encountered that sending “Power Restart” command did not restart projector over PJLink due to projector was in “Abnormal Standby State”

**2-2. Bug fixed**

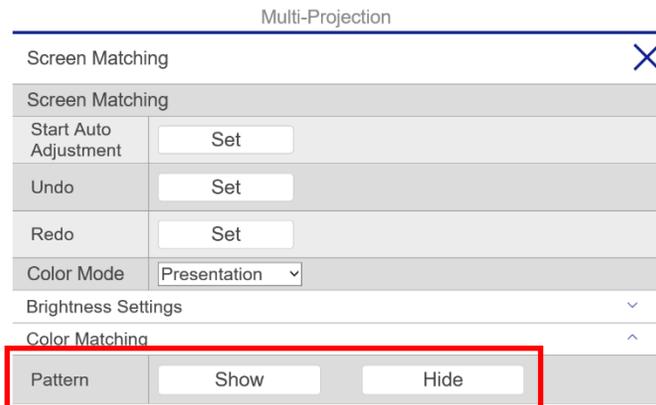
- (1) Changing resolution to 4K from 1080p with specific video player such as Panasonic DMR-UBZ1 increases processing load and sometimes triggers “RO error”
- (2) Projector is not able to connect to “Crestron RoomView” while it is set to “ON” when lens calibration automatically runs during power on sequence.

<Specification change>

- (1) Support Pro-L1490U/L1495U (Nepal10UG 9000 lumen models Product code:HA16)

<Bug fixed>

- (1) There is no selection button for “pattern 1” and “pattern 2” in the color matching setting menu in the WEB control display.  
Web control > Advanced > Multi-Projection > Screen Matching > Color Matching > Pattern



Multi-Projection

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Screen Matching

Start Auto Adjustment	<input type="button" value="Set"/>
Undo	<input type="button" value="Set"/>
Redo	<input type="button" value="Set"/>
Color Mode	Presentation ▾

Brightness Settings

Color Matching

Pattern	<input checked="" type="radio"/> Pattern 1	<input type="radio"/> Pattern 2
	<input type="button" value="Show"/>	<input type="button" value="Hide"/>

- (2) When connecting from Epson Professional Tool to the projector, Epson Professional Tool function can be used without authentication even though Web control password is set.
- (3) Internal error (I2C error) occurs if input signal continues to be unstable due to operations such as repeated cable insertion and removal.
- (4) There is a possibility that an RO error occurs due to malfunction of the main CPU (SML) at startup.

<Bug fixed>

(1) Affected model

Pro-L1500UH/L1505UH/L1715S/L1750U/1755U

(2) Symptom

Fan noise increases +4dB compared to product spec in normal mode

(Before : +37dB(normal mode) -> After : +41dB(normal mode))

It does not affect functionality, no issue in terms of operation

(3) Cause

Incorrect temperature control parameters were applied to the affected model

<Specification change>

Support "Professional Tool Version 1.20"

1. Newly added "**Reset All (Factory Default)**" menu under "**Reset tab**"

Settings of projector are initialized to factory default except followings.

- (1) Service information (TOT, LOT, Laser On/Off, Error/Warning info etc)
- (2) Date & Time
- (3) Settings protected by password (Ex : User logo, Network settings, Schedule etc)

<How to perform "All Reset (Factory Default)">

2. From OSD menu  
Reset tab -> Reset All (Factory Default) -> Reset All (Factory Default) -> Enter the password
  - Default password : "0000"
  - Password can be entered only with the remote controller.  
  
(Press number button (0~9) while holding "[Num] button" situated at the bottom right of the controller
  - Message "**Turn off the projector for the new setting to take effect. Power off?**" is displayed when password accepted, so choose "Yes". (Projector is powered off automatically) Then power on the projector again.
3. Newly added "**Maintain Aspect Ratio**" under "Curved Surface" menu (Settings tab -> Geometry Correction -> Curved Surface)
4. Countermeasure against WPA2 security vulnerability (KRACKs)
5. OSD memory function
  - (1) Last OSD menu just before it is closed is displayed when pressing Menu button
  - (2) Menu cursor jumps to the top of "Menu tab" by holding ESC button for a second
  - (3) Menu cursor position in each menu hierarchies is memorized. Therefore, the menu cursor navigates user to the previous hierarchy by pressing the Enter button.
6. "Lens calibration dialog" is not displayed from the next power-up in case that "No" is chosen in the dialog displayed after lens replacement.
7. Boundary line and points for black level adjustment in "Multi-Projection mode" disappear after pressing the Enter button
8. "Lens focus position" is controllable by means of "UP/DOWN button" on the operation panel or "UP/DOWN button" on the remote controller when lens calibration dialog is displayed after power on.
9. Specification of Lens Calibration changed as below.
  - (1) Lens calibration dialog stays on unless user choose on or off.
  - (2) When the lens position is detected as "out of range for lens shift" after power on, the lens calibration is automatically performed.
10. Improved "RO error" which occurs at power shut down

11. Newly added “**EDID**” menu (Signal tab -> Advanced -> EDID)

By choosing the proper EDID, the projection image is correctly displayed in the environment where several signal sources with various resolutions are used

<Note>

- (1) Disconnect the video cable of the current source from the projector then change EDID setting
- (2) Restarting power is required after changing EDID.

12. Enhanced error/warning log related to “Laser” (YE error/Warning) in AS menu. Detail information of the following 4 items is displayed

- (1) Laser Array, Laser Driver error/warning
- (2) Motor Driver error
- (3) Laser Driver, Motor Driver communication error
- (4) Light source module warning (R/B balance warning)

<Note>

Error/Warning log information is initialized by updating V2.10 (i.e Error/Warning counter set to “0”). This is because memory map for the log data needs to be renewed. Therefore, please acquire the log data or configuration data before updating to V2.10 as needed.

13. Higher limit of brightness level and that factor are displayed in “Brightness Settings” menu under the following conditions.

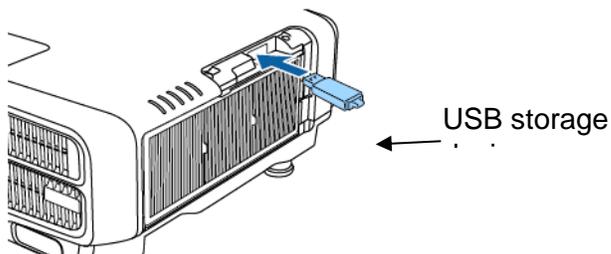
(Settings -> Brightness Settings)

- (1) Install a lens in a projector that does not support maximum brightness of the projector
- (2) Brightness locking function is set to “on”

14. Error/Warning log can be stored to a USB storage device

(1) Setup

- a. Attach the USB storage device to the projector as shown below.



b. OSD menu : “Extended” -> “Advanced” -> “Log Save Destination” -> choose “USB and Internal Memory”

(2) Following logs are stored in the USB storage device (Total 4 files)

- Error info : Error/Warning information (same as error/warning information shown in AS menu)

- Laser info : Laser information (Laser related error/warning)

- Temp info : Temperature information (Readout value of Thermistors when error/warning detected)

- Signal info : Source select information

(3) USB storage device

- USB 2.0 or later

- Format : FAT

(4) Others

a. The logs are automatically saved when “Events<sup>\*1</sup>” are detected and accumulated in the USB storage device continuously until the size of the logs reaches the max capacity.

\*1. “Events” means when error/warning/signal source change etc are detected

b. Log storage begins right after choosing “USB and Internal memory” in the OSD menu.

Logs that have been stored in the internal memory before choosing “USB and Internal memory” are not stored in the USB storage device.

c. USB storage device can be simply removed without any menu operation

d. Logs can be checked with PC

e. USB storage device can be simply attached again after removal.

\*Logs are added to the existing files in the USB storage device

<Bug fixed>

15. OSD menu in specific languages

16. Convergence time of brightness (from 95% -> 100%) when recovering from all black image.

17. Enclose "MAIL FROM" and "RCPT TO" in "<" & ">" in accordance with RFC standard.
18. Projection image seamlessly transit to all black when A/V mute is activated.
19. Few bugs in RTL (Right To Left) language
- 20 When edge blending is on via "Web Control", color level adjustment in Black level menu is not correctly reflected to the projection image.

<Specification change>

1. Added a function that automatically selects and applies appropriate Laser calibration parameter by identifying Laser serial number

<Quality improvement>

1. Countermeasure against "bright spot\*1 appears for a moment right after EPSON logo disappears or during video signal identification" has been taken

->The bright spot appears on the "black image" which is displayed under the conditions mentioned above.

<Function improvement>

1. Support new projection lens "**ELPLW08**" (Lens shift parameter, Menu structure, Command specification etc.)

<Specification change>

1. Geometry Correction(H/V-Keystone) supports "**ELPLW08**"
2. Changed specification of the "Light Source Calibration" as below
  - 1) Newly added "**Light Source Calibration**" menu.
    - a. Performing the "Light Source Calibration" is possible from menu
    - b. Error message pops up to notify that the Light Source Calibration is not executable when continuous operation time of Light Source Module is **less than 20 minutes**
    - c. Light Source Calibration that is automatically performed every 100 hours is selectable either "Perform" or "Not perform" by setting a menu "**Run Periodically**"

d. Newly added short-cut menu of “Schedule Settings” to “Light Source Calibration” menu.

e. Newly added “**Sync Schedule**” menu to “Schedule Settings” menu.

- **All events** registered in the schedule of reference projector is synchronized with other projectors positioned by tiling.

(Schedule of other projectors are overwritten by the schedule of referenced projector)

- “**Sync Schedule**” button becomes available under the following conditions.

A. Event “Light Source Calibration” exists in the schedule of referenced projector

B. Event “Screen Matching” exists in the schedule of referenced projector

- Other than the conditions “A” and “B”, the button is not available.

. Software detects “Laser warning/Abnormal condition” caused by excess temperature of the Laser unit as “Temperature warning/Temperature Abnormal Condition”. Following 2 points have changed.

#### 1) Status Information

<Before>

- Laser Warning

<After>

- **Temp Warning FE** (Warning)

- **Temp Error FE** (Error)

#### 2) AS menu

<Before>

- shown as “YE” in the Error log/Warning log

- counted number of error in “YE”

<After>

- shown as “**TH FE**” in the Error log/Warning log

- counted number of error in “**TH**”

4. Changing “**On-Screen display : OFF** (Message information not displayed)” condition to “**ON**” by holding Menu button on the projector or Remote Controller more than 3 seconds (Extended -> Display -> Messages)

5. Control algorithm for LD control

1) Performing the “Light Source Calibration” limited by continuous operation time of LD

Light Source Calibration cannot be performed when continuous operation time of LD is less than 20 minutes.

(Error message pops up and notify users that the calibration cannot be performed)

2) Remaining time of Light Source Calibration is shown on the projection image.

6. Support ErP Lot6/26 Tier3 (Support low power consumption at network standby mode)

7. Web control function supports Chrome browser (Version 69.0.3497 or later)

8. Configuration data (Error log, Settings parameter etc) acquirable via network cable (LAN port) even when PJ is in abnormal stand-by mode.

※Network setting of the projector (IP address etc) have been set in advance, and PC with Network Updater installed is connectable to the network of the projector.

<Bug fix>

1. Improvement of control timing for LD lighting

->Countermeasure against “LDDR communication error (YE error)” which occasionally occurs when the projector is powered on.

With current firmware V1.40, communication with MDR unit and LDDR unit begins before both units get fully operational, thus it fails with high probability at the beginning of the communication.

#### **SML Previous ver. V1.02**

Rotation speed $\pm$ 250rpm / Detection time less than 3 seconds

#### **SML new ver. V1.03**

Rotation speed $\pm$ 700rpm / Detection time less than 5 seconds

<Specification change>

1. Compatible with “Epson Projector Management V5.10”

<Modified Problem>

1. PJ is not detected by the Epson Projector Professional Tool

2. There is a case that the color tone is reversed by switching the Uniformity setting.

3. There is a case that the uniformity adjustment result is not reflected to the Color matching function