EPSON®

Projector Manual Update Information

Multimedia Projector

EB-L1755U	EB-L1490U
EB-L1750U	EB-L1715S
EB-L1505UH	EB-L1710S
EB-L1500UH	EB-L1515S
EB-L1495U	EB-L1510S

Contents

Introduction to the Updated Firmware

Epson periodically provides firmware updates to enhance your projector features and to address issues of performance. Refer to these sections to learn more about the updated features within each firmware version.

▸ **Related Links**

Refer to these sections for a summary of the updated features of projector firmware version 2.00.

➤ **Related Links**

Updates to Supported Optional Accessories (Version 2.00)

Version 2.00 firmware supports the following optional accessories in addition to the existing optional accessories.

- Lens unit ELPLW08 is available with your projector.

➤ **Related Links**

Updates to Projector Menus (Version 2.00)

The following projector menus change in firmware version 2.00.

- The **Light Source Calibration** menu is added to the **Reset** menu.

➤ **Related Links**

Updates to Projector Status Information (Version 2.00)

The following projector status information changes in firmware version 2.00.

- The **Temp Error FE** and **Temp Warnng FE** items are added to the Projector Status display.

➤ **Related Links**

Updates to User Operations (Version 2.00)

The following projector operations change in firmware version 2.00.

- You can turn on the **On-Screen Display** setting using the [Menu] button on the projector control panel or the remote control.

➤ **Related Links**

Refer to these sections for a summary of the updated features of projector firmware version 2.10.

Updates to Supported Software (Version 2.10)

Version 2.10 firmware supports the following software in addition to the existing optional software available for your projector.

- Epson Projector Professional Tool Version 1.2

See *Epson Professional Projector Tool Operation Guide* for more details.

Updates to Projector Menus (Version 2.10)

The following projector menus change in firmware version 2.10.

- The projector can hold the last position of the cursor in the projector menu.
- The **Maintain Aspect Ratio** menu is added to the **Settings** menu.
- The **Log Save Destination** menu is added to the **Extended** menu.
- The **Reset All (Factory Default)** menu is added to the **Reset** menu.

Updates to User Operations (Version 2.10)

The following projector operations change in firmware version 2.10.

- You can adjust the focus while displaying the lens calibration message.

Refer to the section for a summary of the updated features of projector firmware version 2.22.

▸ Related Links

- "Updates to Supported Optional Accessory (Version 2.22)"

Updates to Supported Optional Accessory (Version 2.22)

Version 2.22 firmware supports the following optional accessory in addition to the existing optional accessories.

- Lens unit ELPLU03S is available with your projector.

▸ Related Links

- "ELPLU03S Support"

Refer to these sections for a summary of the updated features of projector firmware version 3.00.

⇥ **Related Links**
- "Updates to Supported Software (Version 3.00)" p.8
- "Updates to Projector Menus (Version 3.00)" p.8
- "Updates to Art-Net Channel Definitions (Version 3.00)" p.8
- "Updates to User Operations (Version 3.00)" p.8

Updates to Supported Software (Version 3.00)

Version 3.00 firmware supports the following software in addition to the existing optional software available for your projector.

- Epson Projector Professional Tool Version 1.31

See *Epson Professional Projector Tool Operation Guide* for more details.

Updates to Projector Menus (Version 3.00)

The following projector menus change in firmware version 3.00.

- When camera function errors occur, the error details are displayed.
- **Blend Curve** is added to the auto adjusted setting items when you select **Extended** > **Multi-Projection** > **Screen Matching** > **Start Auto Adjustment**.
- The following changes are applied to the point correction function.
  - You can select the grid numbers for vertical and horizontal point correction individually.
  - You can select up to 33×33 for grid point correction.
  - You can select which method is performed for point correction, linear interpolation or curve interpolation.
- The **All** setting value is added to the **Adjustment Level** menu from **Extended** > **Multi-Projection** > **Screen Matching** > **Color Matching**.
- You can enable or disable color calibration in the **Color Calibration** setting.

- The **History** menu is added to the **Lens Calibration** menu.
- You can select **10%** as the minimum setting for the light source brightness in **Settings** > **Brightness Settings** > **Brightness Level**.

⇥ **Related Links**
- "Camera Function Error Details" p.23
- "Auto Adjusted Setting Items During Screen Matching" p.23
- "Point Correction" p.23
- "Adjustment Level for Color Matching" p.24
- "Enable and Disable Color Calibration" p.24
- "Lens Calibration History" p.24
- "Brightness Level" p.25

Updates to Art-Net Channel Definitions (Version 3.00)

The following Art-Net channel definitions change in firmware version 3.00.

- Channel 14 **Freeze** is added.
- Channel 15 **Fade-in** is added.
- Channel 16 **Fade-out** is added.
- Channel 17 **Light Source Control** is added.

⇥ **Related Links**
- "Details of Updated Art-Net Channel Definitions (Version 3.00)" p.32

Updates to User Operations (Version 3.00)

The following projector operations change in firmware version 3.00.

- You can retain adjustment data even if you change the number of points during point correction.
- Operating conditions for the light source calibration change.

⇥ **Related Links**
- "Point Correction Number Change" p.40

- "Operating Conditions for Light Source Calibration"

Refer to these sections for a summary of the updated features of projector firmware version 4.00.

⇥ **Related Links**
- "Updates to Supported Optional Accessory (Version 4.00)"
- "Updates to Supported Software (Version 4.00)"
- "Updates to Projector Menus (Version 4.00)"

Updates to Supported Optional Accessory (Version 4.00)

Version 4.00 firmware supports the following optional accessory in addition to the existing optional accessories.

- External camera ELPEC01 is available with your projector.

⇥ **Related Links**
- "ELPEC01 Support"

Updates to Supported Software (Version 4.00)

Version 4.00 firmware supports the following software in addition to the existing optional software available for your projector.

- Epson Projector Management Version 5.4
- Epson Projector Professional Tool Version 1.4

See *Epson Projector Management Operation Guide* and *Epson Professional Projector Tool Operation Guide* for more details.

Updates to Projector Menus (Version 4.00)

The following projector menu changes in firmware version 4.00.

- The **Simple Stacking** is added to the **Multi-Projection**.

⇥ **Related Links**
- "Simple Stacking"

Refer to these sections for a summary of the updated features of projector firmware version 4.10.

» Related Links
- "Updates to Projector Menus (Version 4.10)"
- "Updates to User Operations (Version 4.10)"

Updates to Projector Menus (Version 4.10)

The following projector menus change in firmware version 4.10.

- The settings for the **Command Communication**, **Web API Settings** and **PJLink** are added to the **Others** menu.
- The settings for the **Reset All (User Default)** and **User Default Setting** are added to the **Reset All (Factory Default)** menu.

» Related Links
- "Command Communication, Web API Settings and PJLink"
- "Reset All (User Default) and User Default Setting"

Updates to User Operations (Version 4.10)

The following projector operations change in firmware version 4.10.

- You can use Web API to operate the projector.
- You can perform the point correction up to a larger number of pixels.
- You can enhance the network security with the following changes:
  - **Remote Password** settings
  - Epson Web Control
  - Epson Projector Management

» Related Links
- "Operating the Projector Using Web API"
- "Maximum Point Correction Value Change"
- "Remote Password Settings Change"
- "Epson Web Control Operation Change"
- "Epson Projector Management Operation Change"

Refer to these sections for a summary of the updated features of projector firmware version 5.00.

⏩ **Related Links**

- "Updates to User Operations (Version 5.00)"

Updates to User Operations (Version 5.00)

The following projector operations change in firmware version 5.00

- Stacking & Blending has been added to the projected image composition method using the Epson Projector Professional Tool software.
- When compositing projected images using the camera assist feature in the Epson Projector Professional Tool software, curved surfaces are now supported in addition to flat surfaces.

⏩ **Related Links**

- "Curved Surface Correction Using the Epson Projector Professional Tool Software"
- "Stacking & Blending Using the Epson Projector Professional Tool Software"

Details of Updated Firmware

Check these sections for the updated details of firmware.

Refer to these sections for more details about newly supported optional accessories.

▸ **Related Links**
- "ELPLW08 Support"

ELPLW08 Support

You can use lens unit ELPLW08 with your projector when you update the firmware to version 2.00. Refer to these sections for the technical details of lens unit ELPLW08.

▸ **Related Links**
- "ELPLW08 Lens Shift Range"
- "ELPLW08 Keystone Correction Range"
- "ELPLW08 Curved Surface Correction Range"
- "ELPLW08 Corner Wall Correction Range"
- "ELPLW08 Projection Distance"

ELPLW08 Lens Shift Range

The following figure shows the ranges within which you can shift the image using the lens shift feature.

> 📝 You cannot shift the lens to both the horizontal and vertical maximum values.

EB-L1755U/EB-L1750U/EB-L1505UH/EB-L1500UH
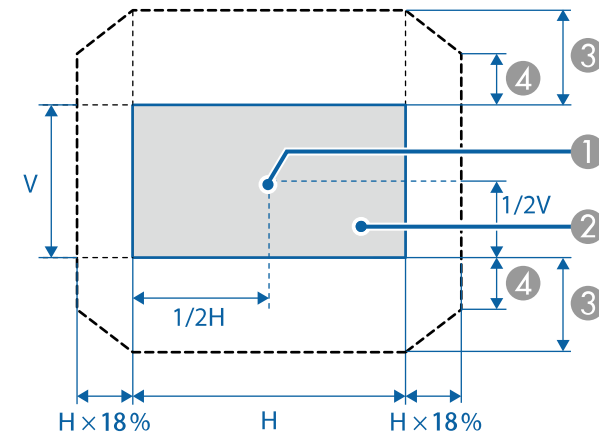
1. Center of the lens
2. Projected image when the lens position is moved to the home position
3. Maximum motion range: $V \times 60\%$
4. Horizontal direction at maximum value: $V \times 31\%$

EB-L1715S/EB-L1710S/EB-L1515S/EB-L1510S
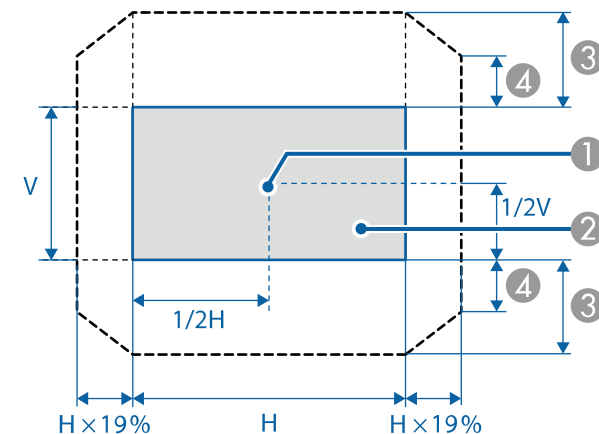
① Center of the lens

② Projected image when the lens position is moved to the home position

③ Maximum motion range: V × 55%

④ Horizontal direction at maximum value: V × 32%
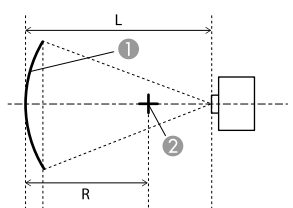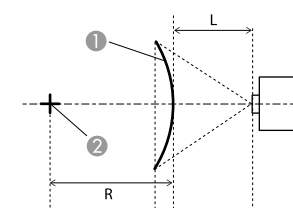
ELPLW08 Keystone Correction Range

You can correct keystone distortion when the projector is placed within the following angles.

- Vertical: -35 to +35 degrees
- Horizontal: -30 to +30 degrees

ELPLW08 Curved Surface Correction Range

The following table shows the minimum values for the ratio of projection distance and circle radius used for curved surface correction.

Concave surface	Convex surface

① Screen

② Center point of the circle created by the arc of the curved surface

L   Projection distance

R   Radius of the circle created by the arc of the curved surface

EB-L1755U/EB-L1750U/EB-L1505UH/EB-L1500UH

	Vertical lens shift: Home position (R/L)	Vertical lens shift: Top (R/L)
Horizontally curved surface (concave)	0.39	0.40
Horizontally curved surface (convex)	1.32	1.39
Vertically curved surface (concave)	0.31	0.42
Vertically curved surface (convex)	0.68	0.80

EB-L1715S/EB-L1710S/EB-L1515S/EB-L1510S

	Vertical lens shift: Home position (R/L)	Vertical lens shift: Top (R/L)
Horizontally curved surface (concave)	0.39	0.44
Horizontally curved surface (convex)	1.33	1.37
Vertically curved surface (concave)	0.31	0.40
Vertically curved surface (convex)	0.63	0.78

ELPLW08 Corner Wall Correction Range

The following table shows the maximum angle (α) within which the projector can move during corner wall correction.

Concave surface	Convex surface
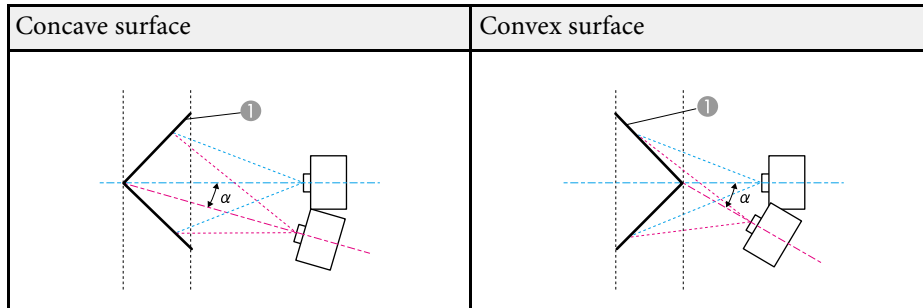
① Screen

α Angle of possible projector motion

EB-L1755U/EB-L1750U/EB-L1505UH/EB-L1500UH

	Vertical lens shift: Home position	Vertical lens shift: Top
Horizontal corner (concave)	31°	16°
Horizontal corner (convex)	5°	5°
Vertical corner (concave)	32°	9°
Vertical corner (convex)	14°	N/A

EB-L1715S/EB-L1710S/EB-L1515S/EB-L1510S

	Vertical lens shift: Home position	Vertical lens shift: Top
Horizontal corner (concave)	29°	12°
Horizontal corner (convex)	5°	1°
Vertical corner (concave)	32°	10°
Vertical corner (convex)	14°	N/A

ELPLW08 Projection Distance

You can calculate the projection distance using the following formulas.

> You can also use the projection distance calculator to automatically calculate various distances for you.
> https://epson.com/

EB-L1755U/EB-L1750U/EB-L1505UH/EB-L1500UH

- Screen aspect ratio: 16:10 or 16:9
  - Minimum distance (Wide) (cm) = Screen width (cm) × 0.86
  - Maximum distance (Tele) (cm) = Screen width (cm) × 1.21
- Screen aspect ratio: 4:3
  - Minimum distance (Wide) (cm) = Screen width (cm) × 1.03
  - Maximum distance (Tele) (cm) = Screen width (cm) × 1.46

EB-L1715S/EB-L1710S/EB-L1515S/EB-L1510S

- Minimum distance (Wide) (cm) = Screen width (cm) × 0.89
- Maximum distance (Tele) (cm) = Screen width (cm) × 1.25

Refer to the section for more details about newly supported optional accessory.

⟐ **Related Links**

- "ELPLU03S Support"

ELPLU03S Support

You can use lens unit ELPLU03S with your projector when you update the firmware to version 2.22.

Refer to the description of ELPLU03 in the User's Guide of your projector for ELPLU03S because all the description of ELPLU03 is also applicable to ELPLU03S.

> The maximum vertical lens shift range is approximately 32% and the maximum horizontal lens shift range is approximately 10% with the ELPLU03S lens. However, some signals may not be displayed correctly even within the range (EB-L1755U/EB-L1750U/EB-L1505UH/EB-L1500UH/EB-L1495U/EB-L1490U).

Refer to the section for more details about newly supported optional accessory.

❯❯ **Related Links**
- "ELPEC01 Support"

ELPEC01 Support

You can use external camera ELPEC01 with your projector when you update the firmware to version 4.00.

❯❯ **Related Links**
- "External Camera Usage"

External Camera Usage

You can use extended functions such as the Camera Assist function and Remote Camera Access with the optional external camera.

The extended functions reduce the time and effort needed to adjust the image.

When using the optional external camera, the following operations that are normally required for general camera solutions become unnecessary:

- Preparation such as securing installation location and adjusting the angle of view.
  As the optional external camera is installed on the projector or the lens, a tripod and installation space is unnecessary. There is also no need to adjust the focus, angle, and exposure.
- Activation
  Epson Projector Professional Tool software and Epson Web Control allow you to use the extended functions.

> You can download the Epson Projector Professional Tool software and manual from the following website.
> epson.sn

Refer to these sections for details about projector menu changes.

⏩ **Related Links**
- "Light Source Calibration Menu"

Light Source Calibration Menu

The **Light Source Calibration** menu is added to the **Reset** menu.

Previous Reset Menu (Version 1.00)

Top menu	Sub menu	Items or setting values
Reset	Reset All Memories	
	Reset All Config	

New Reset Menu (Version 2.00)

Top menu	Sub menu	Items or setting values
Reset	Reset All Memories	
	Light Source Calibration	Run Now
		Run Periodically
		Schedule Settings
		Last Run
	Reset All Config	

You can use the **Light Source Calibration** menu to run a utility to correct the differences in the **White Balance** and the **Brightness Level** for the light source. We recommend running this utility periodically.

- **Run Now**: Starts light source calibration.
  You cannot start it in the following conditions.
  - Within 30 minutes of turning off the projector.

- When the brightness has been automatically dimmed due to a high temperature environment.
- **Run Periodically**: When you select **On**, **Light Source Calibration** is performed for every 100 hours of use. If you select **Off** to maintain image matching with other Multi-Projection projectors, use the **Run Now** setting instead or use the scheduling feature below to perform **Light Source Calibration** periodically.
- **Schedule Settings**: Displays a schedule setting screen where you can set up **Light Source Calibration** to run calibration periodically.
- **Last Run**: Displays the last date and time when you performed **Light Source Calibration**.

Refer to these sections for details about projector menu changes.

➤ **Related Links**
- "Cursor Position Memory of Projector Menus"
- "Maintain Aspect Ratio Setting"
- "Log Save Destination Setting"
- "Reset All (Factory Default) Menu"

Cursor Position Memory of Projector Menus

The projector can memorize the menu cursor position after the menu screen disappears. This allows you to quickly access the latest-used projector menu settings without moving through the settings.

- When you press the [Menu] button to display the menu screen again, the menu screen appears with the latest-used cursor position highlighted.

> When you use the following submenu, the top menu screen is displayed.
> - Test Pattern
> - Focus, Distortion, Zoom, Lens Shift
> - Gamma
> - Panel Alignment
> - User's Logo
> - Projector Grouping, Tiling
> - Black Level
> - Date / Time Settings
> - Network Settings
> - Reset All (Factory Default)

- When you hold down the [Esc] button on the projector menu, you can back the top level menu screen.
- When you turn off the projector, menu operations return to the initial screen.

Maintain Aspect Ratio Setting

The **Maintain Aspect Ratio** setting is added to the **Settings** menu.

Previous Settings Menu (Version 1.00)

Top menu	Sub menu	Items or setting values	
Settings	Geometry Correction	Curved Surface	Correct Shape
			Horizontal Linearity
			Vertical Linearity

New Settings Menu (Version 2.10)

Top menu	Sub menu	Items or setting values	
Settings	Geometry Correction	Curved Surface	Correct Shape
			Horizontal Linearity
			Vertical Linearity
			Maintain Aspect Ratio

To project onto a curved surface while maintaining the aspect ratio, set **Maintain Aspect Ratio** to **On**.

Log Save Destination Setting

The **Log Save Destination** setting is added to the **Extended** menu.

Previous Extended Menu (Version 1.00)

Top menu	Sub menu	Items or setting values	
Extended	Operation	Advanced	BNC Sync Termination
			Remote Control Type
			Beep
			Indicators
			Instant Off
			Inv Direction Button
			AC Voltage Monitoring
			Lens Type

New Extended Menu (Version 2.10)

Top menu	Sub menu	Items or setting values	
Extended	Operation	Advanced	BNC Sync Termination
			Remote Control Type
			Beep
			Indicators
			Log Save Destination
			Instant Off
			Inv Direction Button

Top menu	Sub menu	Items or setting values	
			AC Voltage Monitoring
			Lens Type

Select the destination where you want to save the operation logs for the projector.

- Select **USB and Internal Memory** to save the logs to a USB storage device as well as the projector's internal memory.
- Select **Internal Memory** to save the logs to the projector's internal memory.

Reset All (Factory Default) Menu

The **Reset All (Factory Default)** menu is added to the **Reset** menu.

Previous Reset Menu (Version 1.00 and Version 2.00)

See Light Source Calibration Menu updated in version 2.00.

New Reset Menu (Version 2.10)

Top menu	Sub menu	Items or setting values
Reset	Reset All Memories	
	Light Source Calibration	Run Now
		Run Periodically
		Schedule Settings
		Last Run
	Reset All Config	
	Reset All (Factory Default)	

You can use the **Reset All (Factory Default)** menu to reset all projector's settings.

However, **Date & Time**, **Operation Hours**, **Light Source Info**, Password Protection items and their passwords are not reset.

You need to enter a password to perform a reset. The default password is set to "0000". Change this to your own desired password.

Reset All (Factory Default) Menu

The **Reset All (Factory Default)** menu is added to the **Reset** menu.

Previous Reset Menu (Version 1.00 and Version 2.00)

See Light Source Calibration Menu updated in version 2.00.

New Reset Menu (Version 2.10)

Top menu	Sub menu	Items or setting values
Reset	Reset All Memories	
	Light Source Calibration	Run Now
		Run Periodically
		Schedule Settings
		Last Run
	Reset All Config	
	Reset All (Factory Default)	

You can use the **Reset All (Factory Default)** menu to reset all projector's settings.

However, **Date & Time**, **Operation Hours**, **Light Source Info**, Password Protection items and their passwords are not reset.

You need to enter a password to perform a reset. The default password is set to "0000". Change this to your own desired password.

Refer to these sections for details about projector menu changes.

❯❯ **Related Links**

Camera Function Error Details

New Error Display (Version 3.00)

When camera function errors occur, the error details are displayed.

Error code	Status
0x01	Measurement value error
0x02	Measurement failure
0x03	Switch camera failure

For details on the operating conditions for the camera function, see the projector's *User's Guide*.

Auto Adjusted Setting Items During Screen Matching

Blend Curve is added to the auto adjusted setting items when you select **Extended** > **Multi-Projection** > **Screen Matching** > **Start Auto Adjustment**.

Previous Setting Items (Version 2.10)

Brightness Settings, **Black Level** (**Color Adjustment** only)

New Setting Items (Version 3.00)

Brightness Settings, **Black Level** (**Color Adjustment** only), **Blend Curve**

Point Correction

The following changes are applied to the point correction function.

- You can select the grid numbers for vertical and horizontal point correction individually.
- You can select up to 33×33 for grid point correction.
- You can select which method is performed for point correction, linear interpolation or curve interpolation.

Previous Settings Menu (Version 2.10)

Menu	Setting values
Point Correction	[3x3], [5x5], [9x9], [17x17]
Pattern Color	
Reset	

New Settings Menu (Version 3.00)

Menu	Setting values
Point Correction	
Points (Vert.)	[3], [5], [9], [17], [33]
Points (Horiz.)	
Pattern Color	
Interpolation	Line, Curve
Reset	

📝 If you have already made corrections using **Point Correction**, you may not be able to change Interpolation if the amount of correction is too large.

Adjustment Level for Color Matching

The **All** setting value is added to the **Adjustment Level** menu from **Extended** > **Multi-Projection** > **Screen Matching** > **Color Matching**.

Previous Settings Menu (Version 2.10)

Sub menu		Items or setting values
Color Matching	Adjustment Level	1, 2, 3, 4, 5, 6, 7, 8

New Settings Menu (Version 3.00)

Sub menu		Items or setting values
Color Matching	Adjustment Level	All, 1, 2, 3, 4, 5, 6, 7, 8

There are eight levels from **All**, white, through gray, and up to black. When you select **All**, you can adjust the color for each color in **Adjustment Level** 2 to 8 at the same time. (Once the red, blue, and green values are at their maximum or minimum position at any level, you cannot make any further adjustments.) Select **Adjustment Level** 1 to 8 to adjust each level individually.

Enable and Disable Color Calibration

You can enable or disable color calibration in the **Color Calibration** setting. You need to set the **Color Calibration** setting to **On** to execute the auto adjustment function for color calibration.

Previous Settings Menu (Version 2.10)

Top menu	Sub menu	Items or setting values	
Extended	Color Calibration	Start Auto Adjustment	
		Undo	
		Redo	
		Color Uniformity	
		Reset	

New Settings Menu (Version 3.00)

Top menu	Sub menu	Items or setting values	
Extended	Color Calibration	Color Calibration	On, Off
		Start Auto Adjustment	
		Undo	
		Redo	
		Color Uniformity	
		Reset	

Lens Calibration History

The **History** menu is added to the **Lens Calibration** menu. You can use the History menu to check the lens calibration history.

Previous Settings Menu (Version 2.10)

Top menu	Sub menu	Items or setting values	
Extended	Operation	Lens Calibration	Start

New Settings Menu (Version 3.00)

Top menu	Sub menu	Items or setting values	
Extended	Operation	Lens Calibration	Start, History

Brightness Level

You can select **10%** as the minimum setting for the light source brightness in
Settings > **Brightness Settings** > **Brightness Level**.

Previous Settings Menu (Version 2.10)

Top menu	Sub menu		Setting values
Settings	Brightness Settings	Brightness Level	100% to 30%

New Settings Menu (Version 3.00)

Top menu	Sub menu		Setting values
Settings	Brightness Settings	Brightness Level	100% to 10%

Refer to these sections for details about projector menu changes.

⤶ **Related Links**
- "Simple Stacking"

Simple Stacking

The **Simple Stacking** setting is added to the **Extended** menu > **Multi-Projection**.

Previous Extended Menu (Version 3.00)

Top menu	Sub menu	Items or setting values
Extended	Multi-Projection	Projector ID
		Projector Grouping
		Tiling
		Geometry Correction
		Edge Blending
		Black Level
		Scale
		Screen Matching
		Reset

New Extended Menu (Version 4.00)

Top menu	Sub menu	Items or setting values
Extended	Multi-Projection	Projector ID
		Projector Grouping
		Tiling
		Geometry Correction
		Edge Blending

Top menu	Sub menu	Items or setting values
		Black Level
		Scale
		Screen Matching
		Simple Stacking
		Reset

You can easily and quickly create a bright projected image by overlapping the images of multiple projectors using **Simple Stacking**.

- **Point Correction**: Divides the projected image into a grid and corrects the distortion in 0.5 pixel increments by moving the selected point of intersection in any direction.
- **Start Auto Adjustment**: You can automatically adjust the projected image using the camera assist functions. The projector for which you perform this feature becomes a master projector, and the adjustment is performed based on the projector's image position and shape.

> - Connect two projectors using a LAN cable.
> - Make sure you do the following before adjusting:
>   - Set the **DHCP** setting to **On** in the projector's **Network** menu for two projectors.
>   - Adjust the image position, shape, and focus on the master projector. If you adjust the image shape of the master projector, select **Point Correction** and select **Quick Corner** to correct the shape.
>   - The required time for simple stacking varies depending on the projector layout. It takes up to approximately 4 minutes.

⤶ **Related Links**
- "Conditions for Simple Stacking"

Conditions for Simple Stacking

You can use the simple stacking feature under the following conditions:

- An optional external camera or a built-in camera is installed on each projector.
- Wait for 2 minutes after turning on two projectors before starting the simple stacking process.
- You are projecting on a matte white diffusion screen that is flat and even.
- The projector is placed so it squarely faces the screen, not at an angle.
- Nothing is blocking the optional external camera and the projected image.
- The illuminance ratio on the screen surface when projecting an all-white screen and when projecting an all-black screen is 8:1 or more. (When the screen illuminance is 40 lux or less, we recommend using projection sizes within the following ranges for each projector.)
  - Up to 9.9 Klm: 50 to 200 inches
  - 10 Klm to 14.9 Klm: 60 to 300 inches
  - 15 Klm to 19.9 Klm: 70 to 350 inches
  - 20 Klm to 24.9 Klm: 80 to 400 inches
  - 25 Klm to 29.9 Klm: 90 to 450 inches
  - 30 Klm: 100 to 500 inches
- The original resolution of all the projector is same.
- **Projection** in the projector's **Extended** menu is set to **Front** or **Front/Ceiling** for all projectors.

Refer to these sections for details about projector menu changes.

⇥ **Related Links**

Command Communication, Web API Settings and PJLink

The settings for the **Command Communication**, **Web API Settings** and **PJLink** are added to the **Network** menu > **Others**.

Previous Network Menu (Version 4.00)

Top menu	Sub menu	Items or setting values
Network	Others	Secure HTTP
		Web Server Cert.
		Priority Gateway
		AMX Device Discovery
		Crestron RoomView
		Control4 SDDP
		Art-Net
		Message Broadcasting

New Network Menu (Version 4.10)

Top menu	Sub menu	Items or setting values
Network	Others	Command Communication
		Secure HTTP
		Web Server Cert.
		Web API Settings
		Priority Gateway
		PJLink
		AMX Device Discovery
		Crestron RoomView
		Control4 SDDP
		Art-Net
		Message Broadcasting

Command Communication

You can select the authentication method for command communication.

Protected

Select when performing a digest authentication using **Web Control Password**. You need to install the latest version of the Epson Projector Management software.

Compatible

Select when performing plain text authentication using the Monitor Password (up to 16 alphanumeric characters long).

> Select **Compatible** when monitoring projectors with a switcher and a system controller or using Epson Projector Management ver.5.30 or earlier.

Web API Settings

You can select the Web API settings when using Web API communications.

Web API

Set to **On** to enable to the Web API function.

Authentication

You can set the security for your projector to use during Web API communications.

- **Open**

  Security is not set.

- **Digest**

  Communication is performed using API authentication (Digest authentication).

> See the *Web API Specifications for Projectors* for details.

PJLink

Set to **On** to monitor the projector using PJLink.

Reset All (User Default) and User Default Setting

The **Reset All (User Default)** setting and the setting for the **User Default Setting** are added to the **Reset** menu > **Reset All (Factory Default)**.

Previous Reset Menu (Version 4.00)

Top menu	Sub menu	Items or setting values
Reset	Reset All (Factory Default)	Reset All (Factory Default)

New Reset Menu (Version 4.10)

Top menu	Sub menu	Items or setting values
Reset	Reset All (Factory Default)	Reset All (User Default)
		Reset All (Factory Default)
		User Default Setting

Reset All (User Default)

You can apply the values you set in the **User Default Setting** menu.

User Default Setting

You can define the default value used when performing the **Reset All (User Default)** functions.

You can set the values for the following settings:

- **Light Source Mode**
- **Brightness Level**
- **Constant Brightness**
- **A/V Output**
- **Standby Mode**
- **Standby Confirmation**
- **Messages**
- **Beep**
- **Sleep Mode**
- **Shutter Timer**
- **Shutter Release**
- **Color Mode**
- **Wireless Mode**
- **DHCP** (in the **Wired LAN** menu)
- **Command Communication**

Refer to these sections for details about changes to projector status information.

Temp Error FE and Temp Warning FE

Status items **Temp Error FE** and **Temp Warning FE** are added to the projector status information.

Previous Projector Status Information (System) (Version 1.00)

Category	Item	Status
Status Information	System	OK
		Warm-Up
		Standby
		Cool Down
		Temp Error
		Fan Error
		Sensor Error
		Power Error
		Internal Error
		Airflow Error
		Temp Warning
		Internal Warning
		Airflow Decline
		Power Warning
		Clean Filter
		Lens Error
		Laser Error

Category	Item	Status
		Laser Warning

New Projector Status Information (System) (Version 2.00)

Category	Item	Status
Status Information	System	OK
		Warm-Up
		Standby
		Cool Down
		Temp Error
		Fan Error
		Sensor Error
		Power Error
		Internal Error
		Airflow Error
		Temp Warning
		Internal Warning
		Airflow Decline
		Power Warning
		Clean Filter
		Lens Error
		Laser Error
		Laser Warning
		Temp Error FE
		Temp Warning FE

The new status items display the following status information.

• **Temp Error FE**: Temperature error due to overheating of the laser.

- **Temp Warning FE**: Temperature warning due to overheating of the laser.

See these tables for details about changes to the Art-Net channels.

Previous Art-Net Channel Definitions (Version 2.10)

Chanel	Function	Operation		Parameters	Default	Operation Content
1	Adjusting light (Dimming)	0% - 100%		0 - 255	0	Sets the image brightness.
2	A/V Mute control	A/V Mute	Off	0 - 63	128	Disables/enables A/V Mute.
		Non-operational		64 - 191		
		A/V Mute	On	192 - 255		
3	Switch source	Non-operational		0 - 7	0	Changes to the specified source.
		HDMI		8 - 15		
		Non-operational		16 - 23		
		HDBaseT		24 - 31		
		DVI-D		32 - 39		
		Non-operational		40 - 47		
		SDI		48 - 55		
		Computer		56 - 63		
		Non-operational		64 - 71		
		BNC		72 - 79		
		LAN		80 - 87		
		Non-operational		88 - 95		
		Non-operational		96 - 255		
4	Lens position	Non-operational		0 - 31	0	Moves the lens shift to the home position.
		Move to home position		32 - 63		
		Non-operational		64 - 255		

Chanel	Function	Operation		Parameters	Default	Operation Content
5	Horizontal lens shift	(+) lens adjustment	Movement - Large	0 - 31	128	Performs horizontal lens shift using the amount of movement specified.
			Movement - Medium	32 - 63		
			Movement - Small	64 - 95		
		Non-operational		96 - 159		
		(-) lens adjustment	Movement - Small	160 - 191		
			Movement - Medium	192 - 223		
			Movement - Large	224 - 255		
6	Vertical lens shift	(+) lens adjustment	Movement - Large	0 - 31	128	Performs vertical lens shift using the amount of movement specified.
			Movement - Medium	32 - 63		
			Movement - Small	64 - 95		
		Non-operational		96 - 159		
		(-) lens adjustment	Movement - Small	160 - 191		
			Movement - Medium	192 - 223		
			Movement - Large	224 - 255		

Chanel	Function	Operation		Parameters	Default	Operation Content
7	Electronic zoom	(+) lens adjustment	Movement - Large	0 - 31	128	Performs electronic zoom using the amount of movement specified.
			Movement - Medium	32 - 63		
			Movement - Small	64 - 95		
		Non-operational		96 - 159		
		(-) lens adjustment	Movement - Small	160 - 191		
			Movement - Medium	192 - 223		
			Movement - Large	224 - 255		
8	Electronic focus	(+) lens adjustment	Movement - Large	0 - 31	128	Performs electronic focus using the amount of movement specified.
			Movement - Medium	32 - 63		
			Movement - Small	64 - 95		
		Non-operational		96 - 159		
		(-) lens adjustment	Movement - Small	160 - 191		
			Movement - Medium	192 - 223		
			Movement - Large	224 - 255		

Chanel	Function	Operation		Parameters	Default	Operation Content
9	Electronic distortion	(+) lens adjustment	Movement - Large	0 - 31	128	Performs electronic distortion using the amount of movement specified.
			Movement - Medium	32 - 63		
			Movement - Small	64 - 95		
		Non-operational		96 - 159		
		(-) lens adjustment	Movement - Small	160 - 191		
			Movement - Medium	192 - 223		
			Movement - Large	224 - 255		
10	Load lens memory	Non-operational		0 - 15	0	Loads the specified lens memory.
		Load lens memory 1		16 - 31		
		Load lens memory 2		32 - 47		
		Load lens memory 3		48 - 63		
		Load lens memory 4		64 - 79		
		Load lens memory 5		80 - 95		
		Load lens memory 6		96 - 111		
		Load lens memory 7		112 - 127		
		Load lens memory 8		128 - 143		
		Load lens memory 9		144 - 159		
		Load lens memory 10		160 - 175		
		Non-operational		176 - 255		

Chanel	Function	Operation		Parameters	Default	Operation Content
11	Power control	Power off		0 - 63	128	Turns the projector power on or off.
		Non-operational		64 - 191		
		Power on		192 - 255		
12	Geometry correction	Off		0 - 15	255	Performs geometry correction.
		H/V-Keystone		16 - 31		
		Quick Corner		32 - 47		
		Point Correction		48 - 63		
		Curved Surface		64 - 79		
		Corner Wall		80 - 95		
		Load geometry correction memory 1		96 - 111		Loads a geometry correction memory.
		Load geometry correction memory 2		112 - 127		
		Load geometry correction memory 3		128 - 143		
		Non-operational		144 - 175		
13	Lock	Cannot control		0 - 127	0	Enables/disables Art-Net operations.
		Can control		128 - 255		

Chanel	Function	Operation		Parameters	Default	Operation Content
2	A/V Mute control	A/V Mute	Off	0 - 63	128	Disables/enables A/V Mute.
		Non-operational		64 - 191		
		A/V Mute	On	192 - 255		
3	Switch source	Non-operational		0 - 7	0	Changes to the specified source.
		HDMI		8 - 15		
		Non-operational		16 - 23		
		HDBaseT		24 - 31		
		DVI-D		32 - 39		
		Non-operational		40 - 47		
		SDI		48 - 55		
		Computer		56 - 63		
		Non-operational		64 - 71		
		BNC		72 - 79		
		LAN		80 - 87		
		Non-operational		88 - 95		
		Non-operational		96 - 255		
4	Lens position	Non-operational		0 - 31	0	Moves the lens shift to the home position.
		Move to home position		32 - 63		
		Non-operational		64 - 255		

New Art-Net Channel Definitions (Version 3.00)

Chanel	Function	Operation	Parameters	Default	Operation Content
1	Adjusting light (Dimming)	0% - 100%	0 - 255	0	Sets the image brightness.

Chanel	Function	Operation		Parameters	Default	Operation Content
5	Horizontal lens shift	(+) lens adjustment	Movement - Large	0 - 31	128	Performs horizontal lens shift using the amount of movement specified.
			Movement - Medium	32 - 63		
			Movement - Small	64 - 95		
		Non-operational		96 - 159		
		(-) lens adjustment	Movement - Small	160 - 191		
			Movement - Medium	192 - 223		
			Movement - Large	224 - 255		
6	Vertical lens shift	(+) lens adjustment	Movement - Large	0 - 31	128	Performs vertical lens shift using the amount of movement specified.
			Movement - Medium	32 - 63		
			Movement - Small	64 - 95		
		Non-operational		96 - 159		
		(-) lens adjustment	Movement - Small	160 - 191		
			Movement - Medium	192 - 223		
			Movement - Large	224 - 255		

Chanel	Function	Operation		Parameters	Default	Operation Content
7	Electronic zoom	(+) lens adjustment	Movement - Large	0 - 31	128	Performs electronic zoom using the amount of movement specified.
			Movement - Medium	32 - 63		
			Movement - Small	64 - 95		
		Non-operational		96 - 159		
		(-) lens adjustment	Movement - Small	160 - 191		
			Movement - Medium	192 - 223		
			Movement - Large	224 - 255		
8	Electronic focus	(+) lens adjustment	Movement - Large	0 - 31	128	Performs electronic focus using the amount of movement specified.
			Movement - Medium	32 - 63		
			Movement - Small	64 - 95		
		Non-operational		96 - 159		
		(-) lens adjustment	Movement - Small	160 - 191		
			Movement - Medium	192 - 223		
			Movement - Large	224 - 255		

Chanel	Function	Operation		Parameters	Default	Operation Content
9	Electronic distortion	(+) lens adjustment	Movement - Large	0 - 31	128	Performs electronic distortion using the amount of movement specified.
			Movement - Medium	32 - 63		
			Movement - Small	64 - 95		
		Non-operational		96 - 159		
		(-) lens adjustment	Movement - Small	160 - 191		
			Movement - Medium	192 - 223		
			Movement - Large	224 - 255		
10	Load lens memory	Non-operational		0 - 15	0	Loads the specified lens memory.
		Load lens memory 1		16 - 31		
		Load lens memory 2		32 - 47		
		Load lens memory 3		48 - 63		
		Load lens memory 4		64 - 79		
		Load lens memory 5		80 - 95		
		Load lens memory 6		96 - 111		
		Load lens memory 7		112 - 127		
		Load lens memory 8		128 - 143		
		Load lens memory 9		144 - 159		
		Load lens memory 10		160 - 175		
		Non-operational		176 - 255		

Chanel	Function	Operation	Parameters	Default	Operation Content
11	Power control	Power off	0 - 63	128	Turns the projector power on or off.
		Non-operational	64 - 191		
		Power on	192 - 255		
12	Geometry correction	Off	0 - 15	255	Performs geometry correction.
		H/V-Keystone	16 - 31		
		Quick Corner	32 - 47		
		Point Correction	48 - 63		
		Curved Surface	64 - 79		
		Corner Wall	80 - 95		
		Load geometry correction memory 1	96 - 111		Loads a geometry correction memory.
		Load geometry correction memory 2	112 - 127		
		Load geometry correction memory 3	128 - 143		
		Non-operational	144 - 175		
13	Lock	Cannot control	0 - 127	0	Enables/disables Art-Net operations.
		Can control	128 - 255		
14	Freeze	Non-operational	0 - 31	128	Images are paused or unpaused.
		Freeze off	32 - 95		
		Non-operational	96 - 159		
		Freeze on	160 - 223		
		Non-operational	224 - 255		

Chanel	Function	Operation	Parameters	Default	Operation Content
15	Fade-in	0.0s	0 - 15	255	Fade-in time setting when the shutter is released
		0.5s	16 - 31		
		1.0s	32 - 47		
		1.5s	48 - 63		
		2.0s	64 - 79		
		2.5s	80 - 95		
		3.0s	96 - 111		
		3.5s	112 - 127		
		4.0s	128 - 143		
		5.0s	144 - 159		
		7.0s	160 - 175		
		10.0s	176 - 191		
		Non-operational	192 - 255		
16	Fade-out	0.0s	0 - 15	255	Fade-out time setting when the shutter is executed
		0.5s	16 - 31		
		1.0s	32 - 47		
		1.5s	48 - 63		
		2.0s	64 - 79		
		2.5s	80 - 95		
		3.0s	96 - 111		
		3.5s	112 - 127		
		4.0s	128 - 143		
		5.0s	144 - 159		
		7.0s	160 - 175		
		10.0s	176 - 191		
		Non-operational	192 - 255		

Chanel	Function	Operation	Parameters	Default	Operation Content
17	Light Source Control	0% - 100%	0 - 255	100	Controls the light source.

When you execute the Light Source Control in the Channel 17, the A/V Mute in Channel 2 will be disabled.

Refer to these sections for details on changes to user operations.

Related Links

- "On-Screen Display Operation"

On-Screen Display Operation

You can turn the on-screen display on or off with the following operations.

Previous On-Screen Display Operation (Version 1.00)

You can turn the on-screen display on or off by pressing the [User] button that you assign the **On-Screen Display** feature on the remote control.

New On-Screen Display Operation (Version 2.00)

You can turn the on-screen display on or off by pressing the [User] button that you assign the **On-Screen Display** feature on the remote control.

You can also turn the on-screen display on or off by holding down the [Menu] button on the control panel or the remote control for three seconds.

Refer to these sections for details on changes to user operations.

» Related Links

- "Focus Adjustment While Displaying the Lens Calibration Message"

Focus Adjustment While Displaying the Lens Calibration Message

You can adjust the focus while displaying the lens calibration message.

Previous Focus Adjustment Operation (Version 1.00)

When you adjust the focus while displaying the lens calibration message, the message disappears.

Updated Focus Adjustment Operation (Version 2.10)

You can use the [▲] or [▼] buttons on the remote control or the control panel to adjust the focus without erasing the lens calibration message.

Refer to these sections for details on changes to user operations.

⟐ **Related Links**

Point Correction Number Change

You can retain adjustment data even if you change the number of points during point correction.

Previous Point Number Change During Point Correction (Version 2.10)

If you change the number of points during point correction, you need to adjust the points again.

Updated Point Number Change During Point Correction (Version 3.00)

Even if you change the number of points during point correction, the corrected status is retained.

Operating Conditions for Light Source Calibration

Some operating conditions are added for light source calibration.

Previous Light Source Calibration Operation (Version 2.00)

See Light Source Calibration Menu updated in version 2.00.

New Light Source Calibration Operation (Version 3.00)

You cannot perform light source calibration under the following conditions.

- When the light source brightness is too low due to settings such as **Image** > **Light Source Control** or the A/V Mute feature.
- Within 10 minutes after the projector turns on.
- When you select **30%** or lower in **Settings** > **Brightness Settings** > **Brightness Level**.

(Even if you set higher values, the calibration may not start depending on the surrounding temperature.)

Refer to these sections for details on changes to user operations.

» **Related Links**

Operating the Projector Using Web API

You can use Web API to operate the projector. You can also execute some of the ESC/VP21 commands by Web API. See the *Web API Specifications for Projectors* for details.

> - You can authenticate Web API communications using API authentication (Digest authentication).
> - The user name for API authentication is **EPSONWEB**; use the password that is set for **Web Control Password**.

Maximum Point Correction Value Change

The maximum point correction value is increased. You can perform the point correction up to a larger number of pixel, that allows you to project the image on the different shape of screens.

Previous Point Correction Value (Version 4.00)

You can make corrections in 0.5 pixel increments in all directions within the following ranges:

- EB-L1755U/EB-L1750U/EB-L1505UH/EB-L1500UH/EB-L1495U/EB-L1490U: Vertical and horizontal up to a maximum of 32 pixels
- EB-L1715S/EB-L1710S/EB-L1515S/EB-L1510S: Vertical and horizontal up to a maximum of 27 pixels

New Point Correction Value (Version 4.10)

You can make corrections in 0.5 pixel increments in all directions within the following ranges:

- EB-L1755U/EB-L1750U/EB-L1505UH/EB-L1500UH/EB-L1495U/EB-L1490U: Vertical and horizontal up to a maximum of 600 pixels
- EB-L1715S/EB-L1710S/EB-L1515S/EB-L1510S: Vertical and horizontal up to a maximum of 525 pixels

Remote Password Settings Change

The **Remote Password** settings on the projector's **Network** menu > **Network Configuration** > **Basic** change to enhance the network security.

Previous Remote Password Settings (Version 4.00)

You can enter up to 8 single-byte alphanumeric characters.

New Remote Password Settings (Version 4.10)

You can enter up to 32 single-byte alphanumeric characters.

Epson Web Control Operation Change

Epson Web Control settings change to enhance the network security.

- You can set the **Monitor Password** only with Epson Web Control only when **Command Communication** is **Compatible**.
- If you use the default password **admin** as a Web Control Password, a screen prompting you to change the password is displayed before you can view the **Advanced** screen on Epson Web Control. Follow the on-screen instructions to change the password.
  We strongly recommend changing the password regularly to prevent unauthorized access to your projector.

Epson Projector Management Operation Change

When authentication errors occur in Epson Projector Management after updating the firmware to version 4.10 or later, try one of the following:

- If you know the Web Control Password , select multiple target projectors on the main screen of the Epson Projector Management, open the **Edit** menu > **Property** and then enter the **Web Control Password**.

- If you do not know the Web Control Password, open **Network** menu > **Network Configuration** > **Basic** > **Web Control Password** in your projector's menu, change the **Web Control Password** and then enter the **Web Control Password** on the Epson Projector Management.

Refer to these sections for details on changes to user operations.

Stacking & Blending Using the Epson Projector Professional Tool Software

Stacking & Blending has been added to the projected image composition method using the Epson Projector Professional Tool software. You can use the **Geometry Assist - Stacking & Blending Function** wizard to easily and quickly create a single large, bright, projected image by joining and overlapping the images of multiple projectors.

See *Epson Professional Projector Tool Operation Guide* for more details.

1 Start the Epson Projector Professional Tool software.

2 Create a group of projectors that support Stacking & Blending on the **Layout/Monitoring** tab.

3 Select **Blending and Stacking Settings** on the **Create Group** screen.

4 Specify the projectors' positions in the **Blending and Stacking Settings**.

5 Start the **Geometry Assist - Stacking & Blending Function** wizard.

When the wizard has finished, perform the following operations as necessary:
- **Screen Matching** to correct the tint and brightness of each projected image.
- **Point Correction** to adjust the gaps in the positions of the projected image.

Curved Surface Correction Using the Epson Projector Professional Tool Software

When compositing projected images using the camera assist feature in the Epson Projector Professional Tool software, curved surfaces are now supported in addition to flat surfaces.

Previous Image Composition (Version 4.10)

When compositing projected images using the camera assist feature in the Epson Projector Professional Tool software, only flat surfaces are supported.

New Image Composition (Version 5.00)

When compositing projected images using the camera assist feature in the Epson Projector Professional Tool software, the following functions now support curved surfaces.

- Screen Matching (convex surfaces are not supported)
- Color Calibration
- Blending
- Stacking
- Stacking & Blending

See *Epson Professional Projector Tool Operation Guide* for more details.

> Check the following points when using the camera assist feature to correct images projected onto a curved surface.
> - All projectors in the group must support the Curved Surface Correction feature.
> - Before using this software to automatically adjust the projected image, determine the position of linearity for the entire screen, and attach stickers or other markers to the screen to mark the linearity adjustment.
> - Attach the stickers for linearity adjustment at equally spaced gaps on the projection surface.
> - When correcting the shape using the **Geometry Assist** wizard, align the number and position of the correction points with the stickers for linearity adjustment.

Appendix

Refer to these sections for important notices.

▸▸ **Related Links**
- "Notices"

Check these sections for important notices.

⇥ **Related Links**

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