NEC

IWB Setup Software/EyeRIS IX NEC edition

OPERATION MANUAL

Mac version

This manual describes installation and operation procedures of the driver / the calibration software

The Interactive Whiteboard Kit and projector supported by this software:
- NP04Wi
- NP-UM352W

Other optional product supported by this software that is used connected with the above mentioned products:
- NP01TM

Operating Environment
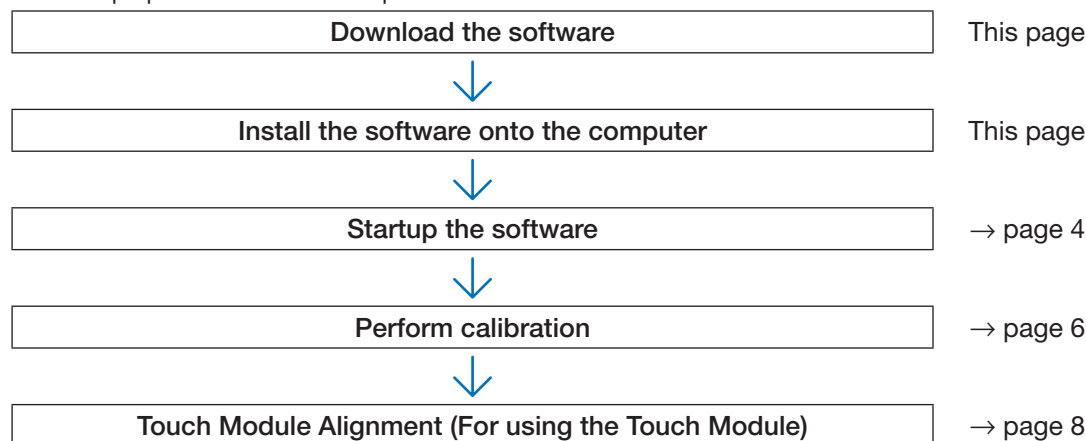
Supported OSs are as follows:
OS X 10.10-10.11, macOS 10.12-10.13

About trademarks

• Mac, OS X and macOS are trademarks of Apple Inc. registered in the U.S. and other countries.

Setup Procedure

Perform setup operations in below steps:

Download the software	This page
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Install the software onto the computer	This page
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Perform calibration	→ page 6
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Touch Module Alignment (For using the Touch Module)	→ page 8

Download the software

Access to our projector download page in our website:

URL: http://www.nec-display.com/dl/en/index.html

Open the IWB Setup Software/EyeRIS IX NEC edition download screen and install the EyeRIS IX onto the computer according to the instruction.

Install the Software onto the Computer

IMPORTANT

• When installing / uninstalling the software, you must log on the computer with Administrator's privileges.
• Before starting to install the software, quit all application software in running. If other application software is remained in running, installation may not be completed properly.
• If the displayed language on your OS is not one of correspondent languages for this software, all indications are displayed in English.
• In case the software in old version has been installed on the computer, make sure to uninstall the software in old version including SensorViewer and then start to install one in the latest version.

• Installation

1. Download [EyeRIS_IX_Mac_nec.zip] to your computer.
2. Extract the zip file.
3. Move or copy the extracted [EyeRIS_IX_Mac_nec.app] to the [Application] folder.

Note:

• If EyeRIS 3.0 has already been installed to the computer you are trying to install EyeRIS IX to, move both [EyeRIS] and [Sensorviewer] to the trash bin before you install EyeRIS IX.
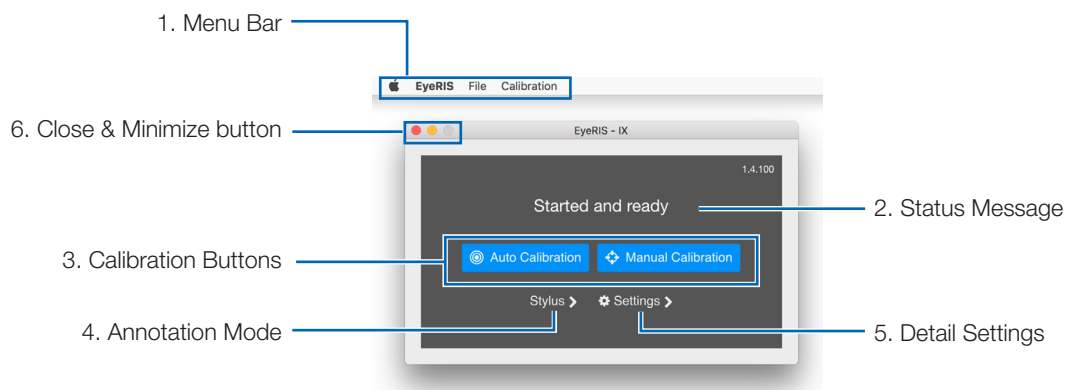
• Uninstallation

Move [EyeRIS] in the Application folder to the trash bin.

Startup the Software

1. Preparation:

- First of all, perform setup according to the user's manual supplied with each device you want to connect.
- After completing all connections to each device, boot up the computer.

2. Operation Window

1. Menu Bar

EyeRIS	Quit EyeRIS	Quit the EyeRIS application.
File	Hide	The operation screen will close, and the application will not exit.
	Firmware Update	When the Camera Firmware is old, shows the download link.
Calibration	Reset	Delete the calibration data saved in the camera unit. Use this when the calibration had problem. After the reset, please restart EyeRIS.

2. Status Message

Started and ready	Completed calibration and ready to annotation.
Not connected to EyeRIS	USB interface is not correct and it is not possible to execute calibration. Make sure that the USB cable is properly connected.
Calibration failed	Calibration was not completed correctly. Refer to the troubleshooting on page 10 and perform the calibration again.

3. Calibration buttons

Touch Calibration	Align the touch module, and execute touch calibration when the 'Finger' is selected.
Auto Calibration	Calibrate the projection image position when the 'Stylus' is selected as annotation mode.
Manual Calibration	For better accuracy, do it when the 'Stylus' is selected as annotation mode.

4. Annotation mode

Finger	Select this when using the touch module to perform touch operation.
Stylus	Select this when using the stylus pen operation. If the touch module is not installed, be sure to select this.

5. Detail Settings

Auto start	Click checkbox to enable the auto-start function after OS booted.
Sensor Viewer	Use this when checking the responsiveness of the infrared light from pen or touch. The Enter key allows you to switch the check mode (Infrared light / Visible light). Note: When EyeRIS is connected to NP-U321H, the viewer image has flickering on the visible light mode. This phenomenon is not wrong.

6. Close & Minimize button

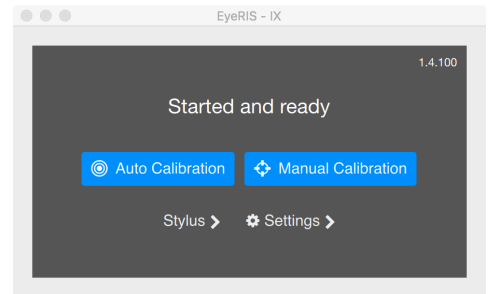| Minimize (Yellow)	The operation screen will be minimized and remain on the Dock.
Close (Red)	The operation screen will close. The application will not exit.

3. EyeRIS Startup

Starting [EyeRIS] in the Application folder will display the main menu of EyeRIS [1].

- In the condition the touch module is installed, click Touch Calibration. The calibration procedure is described on the pages 6 and 7.
- In the case the touch module is not installed, click the "Finger" button on the main menu and then change the setting to "Stylus" like [2]. And, click "<" and turn back to the main menu. EyeRIS main menu shows Auto /Manual Calibration buttons like [3]. The calibration procedure is described on the page 8.
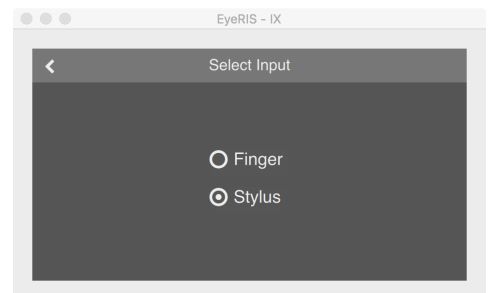
[1]

EyeRIS - IX

1.4.100

Started and ready

◎ Auto Calibration   ✧ Manual Calibration

Stylus ❯   ⚙ Settings ❯

[2]

EyeRIS - IX

Select Input

○ Finger
◉ Stylus

[3]

EyeRIS - IX

1.4.100

Started and ready

✋ Touch Calibration

Finger ❯   ⚙ Settings ❯

Note:
- At the beginning of the EyeRIS startup, the message "EyeRIS not calibrated" is shown.
- When the camera unit is connected, the enabled button shows blue.
- If camera unit condition is as follows, the message "Not connected" would be shown on the main menu and all calibration function is disabled with gray colored buttons.
  1) The computer and the camera unit are not connected by a USB cable.
     (See "Connection Diagram" on page 12)
  2) Projector has not powered on (including the STANDBY state)
  3) [REMOTE PEN] has been disabled if you use NP-UM352W.
- If all else fails, disconnect the USB cable once (circled one on the diagram in the troubleshooting), and then connect the cable again.
- If you need to have detail setting, see inside the menu bar or 'Settings' button, and changed the setting if you want.
- Depending on the settings of the computer you are using, a message informing you that the firmware is the older version may not be displayed on the top right corner of the screen. In this case, click the file on the menu bar and check whether the text color of "Update the Firmware" is black. The black text means that it is the older firmware. When you have installed the latest firmware, the text is gray.
- When updating the firmware of the camera unit, use EyeRIS IX you have installed on your Windows computer to do so. For more information, see the Camera Firmware Update Manual on the Support page.
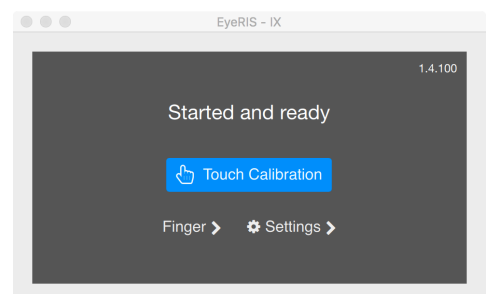
Calibration

Before starting to use the stylus pen or the Touch Module, make sure to perform calibration in order to make the computer to recognize exact position touched by the stylus pen or a finger.

Calibration data is saved in the camera unit. If there are no changes in your computer's resolution, redoing calibration is not required. When changing the resolution of your computer, perform calibration again.

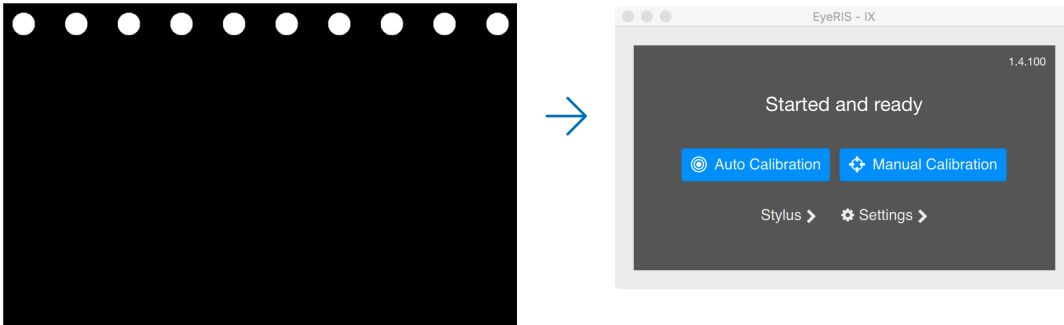| Auto Calibration	Automatically calibrate the stylus pen position. Recommend this when simple calibration is preferred.
Manual Calibration	Manually calibrate the stylus pen position. Recommend this for installing the projector permanently or when precise calibration is preferred. When the Auto Calibration did not work correctly, perform this.
Touch Alignment	Before starting to use the Touch Module, perform calibration and alignment by the dials A/B on the Touch Module for the touch operation. Please refer Alignment procedure on page 8 and 9.

Note:

- It may require to perform calibration again when resolution of the connected computer is changed or the input signal transmission is interrupted temporarily.
- Calibration may not be performed properly when the language bar has floated on the desktop.
  Minimize the language bar to dock in the task tray and then perform calibration.

Perform Calibration Automatically [Auto Calibration]

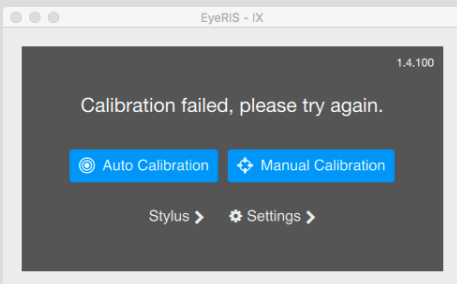Click the [Auto Calibration] button on the displayed calibration menu.

Projected image on the screen will be switched to the Automatic Calibration Screen.

After around 30 seconds, calibration will be completed and the screen will return to display the projected image.

Note:

- If the message [Calibration failed] is displayed as shown below, see "Troubleshooting" on page 12 and perform calibration again.

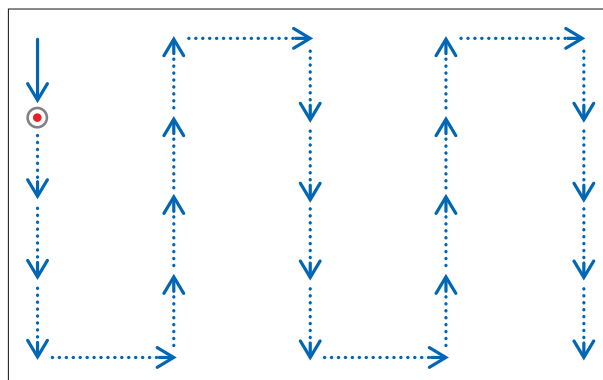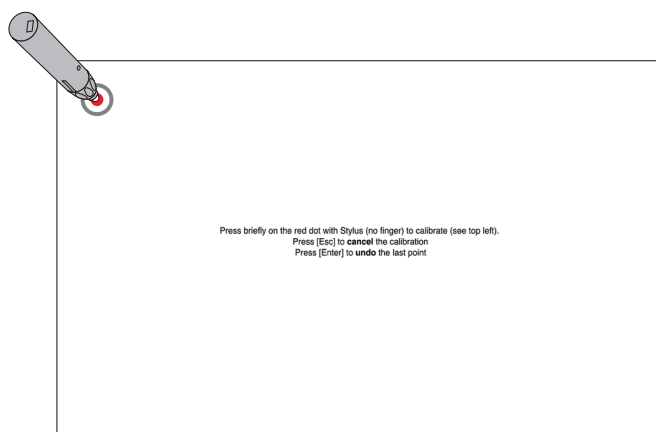# Perform Calibration Manually [Manual Calibration]

1. Click [Manual Calibration] button on the displayed calibration menu.

   Projected image on the screen is switched to the Manual Calibration Screen and red dot ⊙ is indicated at the top left on the screen.

   ```
   ⊙  ✎  Use the stylus to calibrate




                          Press briefly on the red dot with Stylus (no finger) to calibrate (see top left).
                                          Press [Esc] to cancel the calibration
                                          Press [Enter] to undo the last point



   ```

2. Press the center of the red dot with the stylus pen.

   The red dot is indicated at 25 points in order on the screen.

   When all points indicated by the red dot are pressed by the stylus pen, calibration is completed and the calibration completion message is displayed on.

3. The message "Started and Ready" is shown in the EyeRIS main window when the calibration is completed properly.
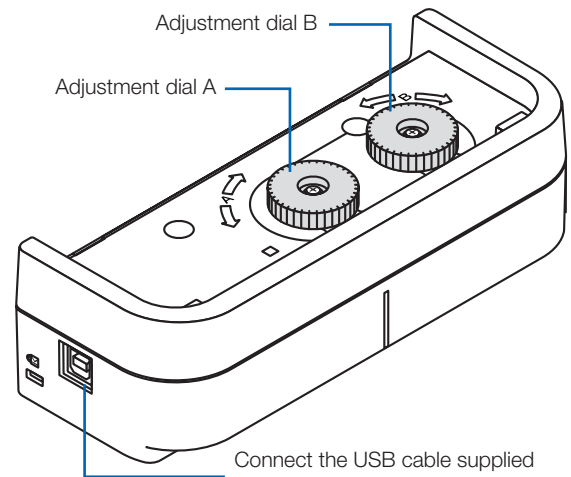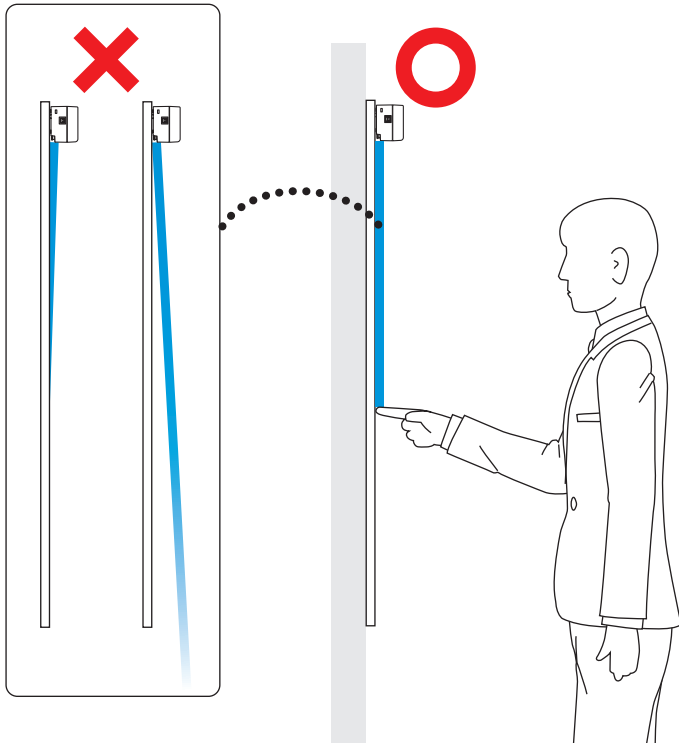

Note:

- For disconnecting the USB cable connecting the computer and the camera unit (the projector itself for UM352W), make sure to exit for finishing the software. If the software is remained in run and the USB cable is disconnected, it may cause of unstable computer motion.
- If a check mark is added to "Auto start" on the "Detail Settings" screen, the software starts to run automatically when the computer is started up.
- Drawing software is required to use the interactive white board function.
  Drawing software cannot be downloaded from our projector support page, prepare commercially available drawing software.
- Even if other images are displayed by switching the input source either on the projector or a separately sold switcher, the interactive whiteboard function remains to run. If the stylus pen is used on the screen under this condition (touch by fingers for the touch module), drawing may be appeared on the computer screen or other operations may be performed unexpectedly.

Touch Module Alignment (For using the Touch Module)

Mount the Touch Module at the top of the screen according to the installation manual supplied with the Touch Module.
Then adjust the Touch module to emit the infrared light parallel to the screen surface. Remove the dial cover on the Touch Module and adjust the two dials in the following procedures:

Note:

- Make sure to perform calibration before performing the Touch Module calibration.
- The drawing accuracy may be worse caused on affection of the ambient conditions such as temperature.
  It is recommended to perform calibration for the Touch Module periodically.
- The drawing line may become disconnected if the infrared light emitted from the Touch Module strikes a part of your hand before striking your fingertip.
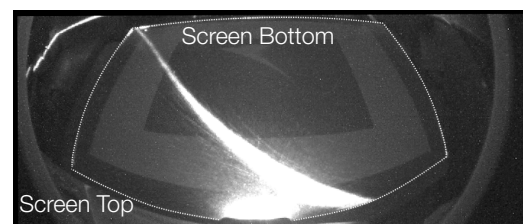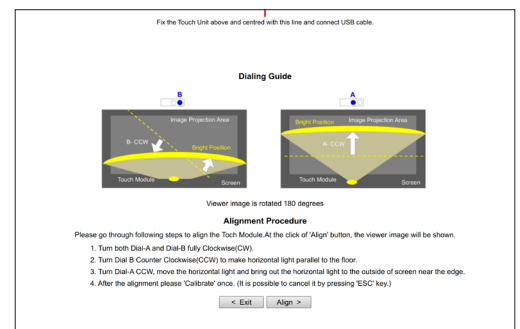
Adjustment dial B

Adjustment dial A

Connect the USB cable supplied with the TOUCH MODULE to the USB port (Type A) on the projector
NOTE: Do not connect the USB cable to the wireless LAN port.

1. Remove the dial cover of the Touch Module.

2. You need to turn the both adjustment Dial A and B of the Touch Module clockwise to the end stop beforehand.

3. Set EyeRIS to the [Finger] mode and then click [Touch Calibration], and the dial guide screen is displayed. Click "Align" button and read the instructions for alignment on the screen.
   To abort the touch alignment and the touch calibration, click the 'Exit' button.

4. Press [Enter] key to open the IR filter.
   Next, press also the [↑(UP)] key and change value until the exposure image is easily viewable.
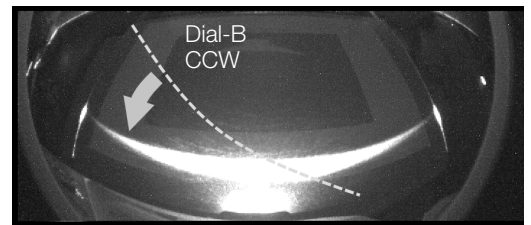
   Note:
   - The image is rotated 180 degrees.
   - Press the Esc key to return to the main menu.
   - Some of short lines are sometimes appeared on the bottom of the window, but they are not abnormal light from the Touch Module.

Screen Bottom

Screen Top

Before Alignment starts

5. Turn the Dial B counter clockwise, parallelize between the horizontal light and the floor.
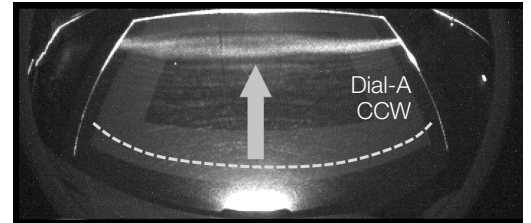

Level with Dial B

6. Turn the Dial A counter clockwise, move the horizontal light to around the bottom of the screen and the floor.

> **Note:**
> - The horizontal light darkening toward the end of the screen bottom.
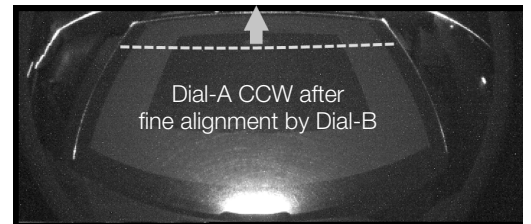> - If the horizontal light tilted, have the horizontal align by Dial B again.

Move to the bottom of the screen with Dial A

Turn the Dial A more, make transcend the horizontal light outside the bottom of the screen, and stop the alignment near the bottom edge.

After alignment, click 'Calibrate' button. Auto calibration in the touch condition will be started.

> **Note:**
> - To stop calibration, use [Back] or the Esc key to return to the dial guide.

Move to outside the screen with Dial A

7. Click the [Calibration] button to perform auto calibration for the touch operation. After the auto calibration for the touch operation is completed, the manual calibration window is shown. When you are prompted to enter the accurate location, perform the manual calibration. When the manual calibration is completed, you will be returned to the main window.

> **Note:**
> - Even the auto and manual calibrations were completed once each in the stylus mode, those calibrations for touch is needed for the finger mode.

Manual calibration screen for touch operation

Troubleshooting

You can check the installation condition of the camera unit when the [Sensor Viewer] in the EyeRIS's [Detail Settings] menu is displayed.

Check the camera recognition area

When drawing, do not place any objects such as cables or a part of the body between the stylus pen and the camera unit.

Check influence of external light

If the camera and/or the screen is exposed to strong light, it may cause of malfunction because the computer cannot recognize the stylus pen.

Check the place to install them avoiding to receive direct sunshine or strong light.

When the Touch Module is mounted beside a window, avoid receiving influence of light from outside by appropriate measures as closing a curtain and keeping a certain distance from the window, etc.
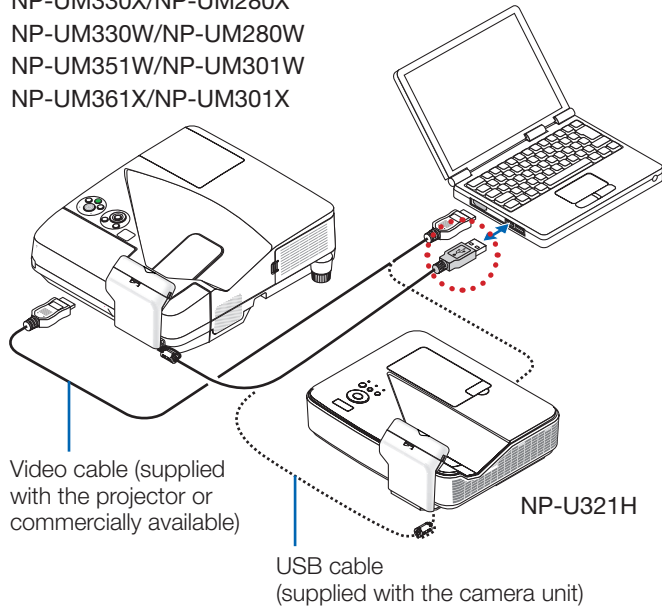
Others

The stylus pen does not work.	• Have the driver and the calibration software been installed on the computer?
	• Is the USB cable connected properly? (See "Connection Diagram" on page 12)
	• Has calibration performed properly?
	  Even calibration is performed at the beginning, please perform calibration again when the stylus pen becomes inactive during operation.
	• Does the stylus pen have proper charge?
	  If red LED is not turned on by pressing the pen tip, charge the stylus pen.
	• Stop to run the software and disconnect the USB cable connected with the computer once, then connect the USB cable again. (See the circled part in the connection diagram on page 12)
	• Check if the icon 🔵 is displayed in the Dock. If the icon does not appear, start EyeRIS in the Application folder.

The finger touch operation does not work.	• Is the type A USB port on the projector is connected with the type B USB port on the Touch Module by the USB cable? • Stop to run the software and disconnect the USB cable connected with the computer once, then connect the USB cable again. (See the circled part in the connection diagram on page 12) • Check if the icon 🔵 is displayed in the Dock. If the icon does not appear, start EyeRIS in the Application folder. • If a part of your body or clothes get too close to or contact with the projection screen, the touch operation may not work correctly. If this happens, keep a distance away between your body or clothes and the projection screen. • Drawing may not be possible from poor response caused by too fast operation depending on the computer. Slowly perform drawing.
Drawing lines are distorted in touch operation.	• When your screen has a frame, the position of touch points may not be corrected if the outline of displayed image is too close to the frame of the screen. If this happens, adjust the position for the projected image area to the screen according to the installation manual supplied with the Touch Module.

Lines traced with the stylus pen or the finger touch operation do not match lines indicated on the screen.
Or, Calibration Fail message is shown.
	• Was calibration performed properly?
	  Even calibration had performed at the beginning, please perform calibration again when positions of drawn lines are shifted during operation.
	• Perform [Calibration Reset] in the menu bar and then perform calibration again.
	• If Automatic Calibration does not work well, perform Manual Calibration.
	• Check if a physical disturbance stays between the camera unit and the screen.
	• Perform calibration again if positions of drawn lines are shifted in the following cases:
	  - If the screen resolution of the computer that calibration has been done is different from the screen resolution of the computer that is currently used.
	  - If the output resolution of the computer has been changed.
	  - If the screen orientation has been changed by shifting the position of your tablet computer and its equivalents (not the position in which calibration has been done).
	  - If calibration has been failed.

Calibration does not exit normally. / Manual Calibration works abnormally.	• If EyeRIS does not work correctly or shuts down during Calibration (Auto/Manual) for Stylus and Finger, restart EyeRIS or computer. If all else fails, reconnect USB cable. When NP-UM352W is used, disconnect the power cord once and reconnect it and start it. • If the the outside-light influences the camera viewing, the calibration does not work correctly. Increase the exposure and check there is nothing the outside-light on the SensorViewer.

The stylus pen does not work during manual calibration.	• Stop to run the software and disconnect the USB cable connected with the computer once, then connect the USB cable again. (See the circled part in the connection diagram on page 12)
If a message [Not connected to EyeRIS] or [EyeRIS has stopped running] is displayed.	• Disconnect the USB cable connected with the computer once, then connect the USB cable again. (See the circled part in the connection diagram on page 12) If it does not solve this problem, repeat to connect/disconnect the USB cable several times.
Screen flickering on the sensor viewer.	• When the camera unit is mounted on the NP-U321H projector, flickering may appear on the screen of the sensor viewer. To check the light responsiveness of the stylus pen or the Touch Module, use the Enter key to select the mode in which the projected image is not displayed in the sensor viewer.
After the graphics resolution on the computer was changed, EyeRIS has abnormal working.	• Before starting up EyeRIS, change the graphics resolution on the computer.
The software cannot be started from the DOCK menu.	• Click to start EyeRIS on the application folder.
DOCK and menu bar does not appear	• When the auto-hiding function for the DOCK and the menu bar on the desktop of computer is enabled, it is not easy to make reappear them by the stylus or touch. Please use the mouse or the track pad of the computer.
The software will not exit.	• Restart the computer.

<Connection Diagram>

See User's Manual for each device.

NP-UM330X/NP-UM280X
NP-UM330W/NP-UM280W
NP-UM351W/NP-UM301W
NP-UM361X/NP-UM301X

NP-U321H

Video cable (supplied
with the projector or
commercially available)

USB cable
(supplied with the camera unit)

In case of NP-UM352W

USB cable
(supplied with the projector)

Video cable (supplied with the projector or
commercially available)