Precautions: Please read this manual carefully before using your NC900C-A and keep the manual handy for future reference.

The NC900C-A (projector unit) is called the “projector”, and the NC-90MS01 (integrated media server) is called the “media block” or “IMB” in this manual.

- DLP, DLP Cinema and their respective logos are trademarks or registered trademarks of Texas Instruments.
- CineLink is a trademark of Texas Instruments.
- Other product names and manufacturer names described in this manual are the registered trademarks or trademarks of their respective companies.
- The display screens and illustrations shown in this manual may differ slightly from the actual ones.
- GPL/LGPL Software Licenses
  The product includes software licensed under GNU General Public License (GPL), GNU Lesser General Public License (LGPL), and others.
  For more information on each software, see "readme.pdf" inside the “about GPL&LGPL” folder on the supplied CD-ROM.

![WARNING]

TO PREVENT FIRE OR SHOCK HAZARDS, DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE.

![CAUTION]

TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT OPEN COVER. NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

This symbol warns the user that uninsulated voltage within the unit may have sufficient magnitude to cause electric shock. Therefore, it is dangerous to make any kind of contact with any part inside of this unit.

This symbol alerts the user that important literature concerning the operation and maintenance of this unit has been included. Therefore, it should be read carefully in order to avoid any problems.

DOC compliance Notice
This Class A digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

Machine Noise Information Regulation - 3. GPSGV,
The highest sound pressure level is less than 70 dB (A) in accordance with EN ISO 7779.

![WARNING]

This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

CAUTION

- In order to reduce any interference with radio and television reception use a signal cable with ferrite core attached. Use of signal cables without a ferrite core attached may cause interference with radio and television reception.
- This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the installation manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Important Safeguards
These safety instructions are to ensure the long life of your projector and to prevent fire and shock. Please read them carefully and heed all warnings.

Installation
1. Consult your dealer for information about transporting and installing the projector. Do not attempt to transport and install the projector yourself.
   The projector must be installed by qualified technicians in order to ensure proper operation and reduce the risk of bodily injury.
2. Place the projector on a flat, level surface in a dry area away from dust and moisture. Tilting the front of the projector up or down from level could reduce lamp life.
   Do not put the projector on its side when the lamp is on. Doing so may cause damage to the projector.
3. Do not place the projector in direct sunlight, near heaters or heat radiating appliances.
4. Exposure to direct sunlight, smoke or steam could harm internal components.
5. Handle your projector carefully. Dropping or jarring your projector could damage internal components.
6. To carry the projector, a minimum of four persons are required.
7. Do not hold the lens part with your hand.
   Otherwise the projector may tumble or drop, causing personal injury.
8. Do not place heavy objects on top of the projector.
9. Turn off the projector, and disconnect the power cable before moving the projector.
10. The cooling fan settings need to be configured when using the projector in a location at an altitude of approximately 5500 feet/1600 meters or higher. Consult your dealer in advance.
11. If you wish to have the projector installed on the ceiling:
   - Do not attempt to install the projector yourself.
   - The projector must be installed by qualified technicians in order to ensure proper operation and reduce the risk of bodily injury.
   - In addition, the ceiling must be strong enough to support the projector and the installation must be in accordance with any local building codes.

Important Information
Important Information

• Please consult your dealer for more information.

**WARNING**

1. Do not cover the lens with the supplied lens cap or equivalent while the projector is on. Doing so can lead to distorting or melting of the cap and burning your hands due to the heat emitted from the light output.
2. Do not place any objects, which are easily affected by heat, in front of the projector lens. Doing so could lead to the object melting from the heat that is emitted from the light output.

Do not tilt the projector forward or back at a greater angle than 15°. Doing so may result in malfunction. When mounting the projector on the ceiling, select an appropriate option for [Fan Tilt Setting].

**Power Supply**

1. The projector is so designed that it operates with the power supply voltage described below.
   • AC100–130V 10.3 to 7.9 A 50/60Hz Single-phase
   • AC200–240V 5.1 to 4.3 A 50/60Hz Single-phase
   Ensure that your power supply fits this requirement before attempting to use your projector.
2. The power cable is not included with the projector. Ask your dealer for the power cable to select and purchase. Use a power cable that meets the standards and power supply voltage of the country where you are using the projector.
   Refer to “2-2. Connecting the Power Cable” (page 17) for details on connecting the power cable.
3. Handle the power cable carefully. A damaged or frayed power cable can cause electric shock or fire.
   • Do not bend or tug the power cable excessively.
   • Do not place the power cable under the projector, or any heavy object.
   • Do not cover the power cable with other soft materials such as rugs.
   • Do not heat the power cable.
4. Placing the power cable and the signal cable closely to each other can cause beat noise. If this happens, keep the two separated so that beat noise is not generated. Beat noise is corruption of the picture often seen as a rolling band moving through the image.
5. Do not touch the projector during a thunder storm. Doing so can cause electrical shock or fire.
6. When installed on the ceiling, install the breaker in a location that is easy to reach by hand.

**Fire and Shock Precautions**

1. Ensure that there is sufficient ventilation and that vents are unobstructed to prevent potentially dangerous concentrations of ozone and the build-up of heat inside your projector. Allow at least 12 inches (30cm) of space between your projector and a wall. In particular, clear a space of 27.6 inches (70 cm) or more in front of the air outlet on the rear surface and 19.8 inches (50 cm) or more in front of the air outlet on the lamp side.
2. Prevent foreign objects such as paper clips and bits of paper from falling into your projector. Do not attempt to retrieve any objects that might fall into your projector. Do not insert any metal objects such as a wire or screwdriver into your projector. If something should fall into your projector, disconnect it immediately and have the object removed by a qualified service person.
3. Turn off the projector, unplug the power cable and have the projector serviced by a qualified service personnel under the following conditions:
   • When the power cable or plug is damaged or frayed.
   • If liquid has been spilled into the projector, or if it has been exposed to rain or water.
   • If the projector does not operate normally when you follow the instructions described in this user’s manual.
   • If the projector has been dropped or the cabinet has been damaged.
   • If the projector exhibits a distinct change in performance, indicating a need for service.
4. Keep any items such as magnifying glass out of the light path of the projector. The light being projected from the lens is extensive, therefore any kind of abnormal objects that can redirect light coming out of the lens, can cause unpredictable outcome such as fire or injury to the eyes.
5. When using a LAN cable:
   For safety, do not connect to the connector for peripheral device wiring that might have excessive Voltage.
6. Do not look into the lens while the projector is on. Serious damage to your eyes could result.
7. Do not try to touch the air outlets on the projector during normal projector operation as it is hot.
Important Information

Cleaning
1. Turn off the projector and unplug the power cable before cleaning the cabinet or replacing the lamp.
2. Clean the cabinet periodically with a cloth. If heavily soiled, use a mild detergent. Never use strong detergents or solvents such as alcohol or thinner.
3. Use a blower or lens paper to clean the lens, and be careful not to scratch or mar the lens.
4. Do not touch the projector or the power plug with wet hand. Doing so can cause electrical shock or fire.

**CAUTION**

1. Do not unplug the power cable from the wall outlet or projector when the projector is powered on. Doing so can damage the projector.
   - While projecting images
   - While cooling after the projector has been turned off.
   (The POWER button LED blinks in green while the fan is rotating, and “cooling...” is displayed on the LCD screen. The cooling fan continues to work for 90 seconds.)
2. Do not turn off the AC power for 90 seconds after the lamp is turned on and while the POWER indicator is blinking green. Doing so could cause premature lamp failure.
3. Use of a wall outlet with a 20 A or more circuit breaker is recommended.

**CAUTION**

1. Do NOT TOUCH THE LAMP immediately after it has been used. It will be extremely hot. Turn the projector off and then disconnect the power cable. Allow at least one hour for the lamp to cool before handling.
2. When removing the lamp from a ceiling-mounted projector, make sure that no one is under the projector. Glass fragments could fall if the lamp has been burned out.

**WARNING TO CALIFORNIA RESIDENTS:**
Handling the cables supplied with this product will expose you to lead, a chemical known to the State of California to cause birth defects or other reproductive harm. WASH HANDS AFTER HANDLING

**Note for US Residents**
The lamp in this product contains mercury. Please dispose according to Local, State or Federal Laws.

Lamp Replacement
1. Use the specified lamp for safety and performance.
2. To replace the lamp, follow all instructions provided on page 52.

3. Due to the lamp being sealed in a pressurized environment, there is a small risk of explosion, if not operated correctly. There is minimal risk involved, if the unit is in proper working order, but if damaged or operated beyond the recommended hours, the risk of explosion increases. Please note that there is a warning system built in, that displays following message when you reach a preset operating time “Lamp1 OverTime” or “Lamp2 OverTime”. When you see this message please replace the lamp 1 or lamp 2. If the lamp does explode, smoke will be discharged from the vents located on the back of the unit. Do not stand in front of the vents during the operation. This smoke is comprised of glass in particulate form and Mercury gas, and will not cause harm if kept out of your eyes. If your eyes have been exposed to this gas, please flush your eyes out with water immediately and seek immediate medical attention. Do not rub your eyes! This could cause serious injury.

**A Lamp Characteristic**
The projector has a high-pressure mercury lamp as a light source. A lamp has a characteristic that its brightness gradually decreases with age. Also repeatedly turning the lamp on and off will increase the possibility of its lower brightness.

**Disposing of your used product**
EU-wide legislation as implemented in each Member State requires that used electrical and electronic products carrying the mark (left) must be disposed of separately from normal household waste.
This includes projectors and their electrical accessories or lamps. When you dispose of such products, please follow the guidance of your local authority and/or ask the shop where you purchased the product.
After collecting the used products, they are reused and recycled in a proper way. This effort will help us reduce the wastes as well as the negative impact such as mercury contained in a lamp to the human health and the environment at the minimum level.
The mark on the electrical and electronic products only applies to the current European Union Member States.
For questions relating to unclear points or repairs
Contact your dealer or the following support branch for questions relating to unclear points, malfunctions and repairs of the product.

In Europe
Company Name: NEC Display Solutions Europe GmbH
Address: Landshuter Allee 12-14, D-80637 Muenchen, Germany
Telephone: +49 89 99699 0
Fax Line: +49 89 99699 500
Email Address: info@nec-displays.com
WEB Address: http://www.nec-display-solutions.com

In North America
Company Name: NEC Display Solutions of America, Inc.
Address: 500 Park Boulevard, Suite 1100 Itasca, Illinois 60143, U.S.A.
Telephone: +1 800 836 0655
Fax Line: +1 800 356 2415
Email Address: pjtechsupport@necdisplay.com
WEB Address: http://www.necdisplay.com/

In China
Company Name: NEC Solutions (China) Co., Ltd.
Address: Rm 1903, Shining Building, 35 Xueyuan Rd, Haidian District Beijing 100191, P.R.C.
Telephone: +8610 59342706

In Hong Kong, Taiwan, Singapore, Malaysia and Indonesia
Company Name: Strong Westrex, Inc.
Address: Room 4108 China Resources Building, No. 26 Harbour Road, Wanchai, Hong Kong.
Telephone: +852 2827 8289
Fax Line: +852 2827 5993
Email Address: hkstrong@netvigator.com

In South Korea
Company Name: Hyosung ITX Co., Ltd.
Address: 1F, Ire Building, 2, Yangpyeong-dong 4-ga, Yeongdeungpo-gu, Seoul, Korea 150-967
Telephone: +82-2-2102-8591
Fax Line: +82-2-2102-8600
Email Address: moneybear@hyosung.com
WEB Address: http://www.hyosungitx.com

In Australia and New Zealand
Company Name: NEC Australia Pty Ltd
Address: 26 Rodborough Road Frenchs Forest NSW 2086
Telephone: 131 632 (from anywhere in Australia)
Email Address: displays@nec.com.au
WEB Address: http://www.nec.com.au
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1. What’s in the Box? and the Names of the Projector Parts

1-1. Features

- **DLP Cinema® projector**
  Complies with the strict projection standards defined by the Digital Cinema Initiatives (DCI) industry group in the United States using leading imaging technology of NEC. It also supports 3D projection and high frame rates (HFR).

- **Reduced installation space and increased freedom through a more compact and lightweight body**
  By employing a newly developed 0.69” DLP Cinema chip, DLP Cinema® projector has become even more compact and lightweight than the previous model with dimensions of 621mm (wide) × 798mm (deep) × 314mm (high) and weight of approximately 44kg.

  The projector does not need to be connected to an external exhaust duct. It also supports installation on both the floor and ceiling. Therefore the projector delivers reduced installation space and improved freedom. A wide variety of optional lenses (sold separately) are also available for the projector in order to support a wide variety of installation methods (a lens is not mounted when the projector is shipped from the factory).

- **Reduced maintenance time through the lamp replacement at the unit level**
  The lamps can be replaced at the unit level. This method makes the lamp replacement easier and greatly reduces the time for maintenance work. The projector consumes less power than the previous model through the adoption of a high-pressure mercury lamp.

  By employing a two lamp system, even if one lamp is extinguished, projection can continue using the other lamp although the brightness is degraded (the projector does not comply with DCI standards when using only a single lamp).

- **Equipped with easy to use functions**
  (1) Lamp power memory function that can be operated with one touch

    The projector is provided with a lamp power memory function for storing the brightness of the images on the screen for each input signal.

    Even if you are projecting multiple images that have different settings for brightness, you can project them with the conditions pre-registered for each signal, simply by selecting the corresponding signal.

  (2) Frequently used titles can be registered in preset buttons

    The projector has been equipped with 16 preset buttons that make it easy to select registered title (input signal). To this projector, 100 titles at most can be registered (input signal registration). Among the registered titles, any 16 titles can be assigned to the preset buttons.
1. What’s in the Box? and the Names of the Projector Parts

(3) You can operate and configure the projector via a network from a PC
You can operate and configure the projector via a network from a PC by using the separately supplied software Digital Cinema Communicator (DCC) for S2.

- **Advanced Dust Protection**
A dust control shield is arranged between each DMD chip of R, G and B, and the spectroscopic/condenser prism. It prevents dust and dirt in the air, and oily particles in smoke associated with event halls from coming into contact with the face of the DMD and causing operating problems.
1-2. What's in the Box?

Check the content of the accessories.

- Projector
- Power cable stopper
- Dust cap for lens
- Service door key x 2
- Dummy bracket
- CD-ROM (User's Manual)
- Important Information
- Warranty (for Japan)
- Limited warranty (for North America)

**TIP**
In the event that you did not receive all of the accessories outlined above, or some are damaged, contact your dealer/distributor. Differs slightly from the drawings in this manual, but there is no problem in actual use.
1. STATUS indicator
These indicate the status of the projector. When the projector is operating normally, these light/blink in green or orange. When an error occurs, they light/blink in red. When an error occurs, check the contents of the display on the LCD screen. (See page 68)

2. LAN port
The connector for external devices such as a cinema server or a PC installed with the DCC. (See page 13)

3. Connection terminals
Various image signal cable are to be connected here. (See page 13)
You can expand signal input terminals by installing the optional signal input board (NC-80LB01-B/NC-80DS01-B). Contact your dealer/distributor for more information on separately sold optional products.

4. Control panel
On the control panel, power to your projector is turned on or off, titles are selected, and various adjustments are made of projected screen. (See page 14)

5. Air inlet / Air filter
The air inlet for cooling inside the projector. Do not cover.
An air filter is attached over the air inlet to prevent dust. Refer to “5-3. Replacing the Lamp and the Air Filter” (page 52) on how to replace the air filter.

6. Lens (optional)
Images are projected from the lens. Request your dealer/distributor to install or replace the lens.

7. Interlock connector (inside front of projector)
This is the connector for the projector safety device. This is used to control the projector from an external source. Consult with your dealer/distributor about using this.

8. Notch filter cover
Remove the cover when replacing the notch filter. Contact your dealer/distributor for details on replacement notch filters.
NOTE: Do not cover the air inlets and outlet while the projector is in operation. Insufficient ventilation leads to a rise of the internal temperature and may cause a fire or malfunction.

1-3-2. Rear of the projector

1. Lamp cover
   This opens to allow the lamp to be replaced. Refer to “5-3. Replacing the Lamp and the Air Filter” (page 52) on how to replace the lamp.

2. VOLTAGE SELECT switch
   Can be switched to match the voltage of the power supply. (See page 17)

3. Main power switch
   While AC power is being supplied, set the main power switch to ON position (1), then your projector will enter a standby state.

4. Power cable stopper
   Prevents the power plug from falling out from the projector.

5. AC input
   Connects to the AC power cable. The AC power cable is not an accessory. Consult with your dealer/distributor about the AC power cable.

6. Air inlet / Air filter
   The air inlet for cooling inside the projector. Do not cover.
   An air filter is attached over the air inlet to prevent dust. Refer to “5-3. Replacing the Lamp and the Air Filter” (page 52) on how to replace the air filter.

7. Air Outlet
   The air outlet to exhaust heat inside the projector. Do not cover.
1. What’s in the Box? and the Names of the Projector Parts

8. Buzzer (inside rear of projector)
   The buzzer rings when the power is turned on or an error has occurred.

   **NOTE:** Do not cover the air inlets and outlet while the projector is in operation. Insufficient ventilation leads to a rise of the internal temperature and may cause a fire or malfunction.

   **CAUTION:**
   DO NOT TOUCH THE LAMP immediately after it has been used. It will be extremely hot. Turn the projector off and then disconnect the power cable. Allow at least one hour for the lamp to cool before handling.

1-3-3. Bottom of the projector

   1. Handle (4 locations)
      Handles for moving the projector.
   2. Level adjusters (in four positions)
      In the ordinary installation, you can adjust the projector inclination at 4 positions.
1. Ethernet port (LAN) (RJ-45)
The port for interfacing with an image signal server or controlling the projector from a PC via a network. Connect the projec-
tor and the PC with a commercially available Ethernet cable (10/100/1000Base-T).

2. External control terminal (GP I/O) (D-Sub 37P)
The terminal for externally controlling the projector or connecting a 3D image system to the projector. (See page 81)

3. 3D terminal (3D) (D-Sub 15P)
The terminal for connecting a 3D image system to the projector. (See page 86)

4. PC control terminal (RS-232) (D-Sub 9P)
The terminal for operating the projector from a PC via an RS-232C or for service personnel to set data for the projector.
Connect the projector and the PC with a commercially available RS-232C straight cable.

5. USB port (USB) (type A)
The port for the projector maintenance.

6. Service terminal (REMOTE) (Stereo mini)
This terminal is used for service purpose only.

7. Device management indicator
The indicator for displaying the projector status. Used by service personnel during maintenance.

8. Slot B
Not used in this projector.

9. Slot A
The slot is used for an image media block (IMB) or optional products (page 87). Contact your dealer/distributor for an instal-
lion of optional products.
Refer to the IMB instruction manual for details on IMB.
1. LCD screen
   The LCD screen displays menus and setting values for the projector operations.

2. ▲▼◄► (UP/DOWN/LEFT/RIGHT) buttons
   Press these buttons to select a menu item while a menu is displayed.

3. MENU button
   Press this button to display the menu for various settings and adjustments. (See page 42)

4. ENTER button
   Press this button to select the menu item.

5. EXIT button
   Press this button to return to the previous menu item.

6. KEY LOCK button
   Press this button to lock (KEY LOCK) the buttons on the control panel. Buttons on the control panel do not function while KEY LOCK is on.
   Pressing the KEY LOCK button for one second or longer while KEY LOCK is off locks the buttons.
   Pressing the KEY LOCK button for one second or longer while KEY LOCK is on unlocks the buttons. (See page 33)

   **NOTE** KEY LOCK becomes automatically on if no control panel operation takes place in the standby state for 30 seconds by default. (See page 33)

7. POWER button
   Press this button for more than three seconds to turn on or off (standby) the projector. (See page 67)
   In order to start up the projector, turn on the main power switch for the projector to set the projector in the standby state. (See page 24)

8. DOUSER button
   Press this button to open and close the douser. (See page 67)

9. LAMP ON/OFF button
   Press this button for five seconds or longer to turn on or off the lamp while the projector is on. (See page 34)

10. LAMP button
    Press this button to display the lamp adjustment menu. (See page 31)
11. IMB button (planned to be supported in a future update)
This button is operable when the media block is installed in the projector.
Press this button to display the operation menu of the media block.

12. Play/pause button (planned to be supported in a future update)
This button is operable when the media block is installed in the projector.
Press this button to play or pause the image contents.

13. Stop button (planned to be supported in a future update)
This button is operable when the media block is installed in the projector.
Press this button to stop playing the image contents.

14. Preset buttons
Press the preset button to select a title (input signal) assigned to each button. Up to 100 titles (input signals) can be registered to this projector, and any 16 titles from them can be assigned to the preset button. Please request your dealer to register and change the titles of the buttons as required.
The preset button indicators show their assigned title or selection status. (See page 66)

TIP
To select a title allocated to one of the preset buttons, use the following procedure.
- To select a title allocated to one of “Preset Button1” to “Preset Button8”
  Press the button which corresponds to the number of the preset button (button <1> to <8>).
  - Press the <1> button to select the “Preset Button1”.
  - Press the <8> button to select the “Preset Button8”.
- To select a title allocated to one of “Preset Button9” to “Preset Button16”
  Press the preset button (button <1> to <8>) while holding down the UP button.
  - Press the <1> button while holding down the UP button to select the “Preset Button9”.
  - Press the <8> button while holding down the UP button to select the “Preset Button16”.
2. Installation and Connection

2-1. Steps for setting up and connecting

Use the following steps for setting up your projector:

- **Step 1**
  Setup the screen and projector. (Contact your dealer to carry out the setup.)

- **Step 2**
  Connect the power cable to the projector. (See page 17)

- **Step 3**
  Connect cables to the image input terminals. (See page 22)
  Connect cables to the various control terminals. (See page 22)
2-2. Connecting the Power Cable

The power cable is not included with the projector. Use a power cable that meets the standards and power supply voltage of the country where you are using the projector. Ask your dealer for the power cable to select and purchase.

**WARNING:**

Carefully read the contents described in this section before connection and connect the cables according to the proper procedure. Inappropriate handling may cause fatal, serious or other bodily injuries due to fire or electric shock.

**CAUTION:**

- Before connecting the power cables, check that the main power switch of the projector is turned off. Implement the connection with AC power shut off.
- Be sure to ground the equipment to ensure safety. Use a power cable that meets the standards and power supply voltage of the country where you are using the projector (page 78), and always connect the equipment to the ground. If the ground is not connected, it may cause electrical shocks.
- When connecting the power cable plugs to the AC IN and the electrical outlet, securely insert the plugs all the way in. If the connection between the power cable plug and the electrical outlet is loose, the plug area may generate heat, causing burns and accidents.
- Switch the power cable and power supply voltage of the projector to match the projector to the voltage of the electrical outlet you are connecting to. If selected incorrectly, it may cause damage or fires.

**NOTE:**

- Install the electric outlet nearby the projector main unit so that the power supply can be cut by unplugging the AC power cable.
- When plugging in or unplugging the AC power cable, make sure that the main power switch is pushed to the [O] position. Failure to do so may cause damage to the projector.
- Do not use a three-phase power supply. Doing so may cause malfunction.
2. Installation and Connection

1. Connect the AC power supply cable.
   Connect the AC power supply cable to the projector.
2. Installation and Connection

2. Set VOLTAGE SELECT switch according to the voltage being used.

<table>
<thead>
<tr>
<th>Voltage of power to use</th>
<th>Power cable to use</th>
<th>Position of the VOLTAGE SELECT switch</th>
</tr>
</thead>
<tbody>
<tr>
<td>AC100V outlet</td>
<td>AC100V power cable</td>
<td>“100 130V~”</td>
</tr>
<tr>
<td>AC200V (single phase) outlet</td>
<td>AC200V power cable</td>
<td>“200 240V~”</td>
</tr>
</tbody>
</table>

3. Connect the power plug to the electrical outlet.

This completes the connection of the AC power supply cable.
2. Installation and Connection

**Attaching the power cable stopper**

You can prevent the power plug from falling out from the main unit by using the included power cable stopper.

<table>
<thead>
<tr>
<th><strong>CAUTION:</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Do not bundle the power cable. Doing this could cause heat or a fire.</td>
</tr>
</tbody>
</table>

**NOTE**

- Do not clamp the power cable with other cables. Doing so can generate noise, which can affect adversely the signal cable.
- Be careful not to insert the band inversely. Once the band is attached, it cannot be removed from the slot.

1. Insert the end of band of the power cable stopper into the slot next to the AC IN on the terminal panel.

![Insertion diagram]

2. Use the power cable stopper to clamp the power cable. Push the clamper to lock it.

![Clamping diagram]

3. Slide the clamper to the hilt of the power cable.

![Sliding diagram]

This completes the attachment of the power cable stopper.
2. Installation and Connection

Removing the power cable from the power cable stopper

1 Push the clamper of the power cable stopper to unclasp it.

2 Push the power cable clamper to open it wide enough to pull out the power cable.
2. Installation and Connection

2-3. Connecting the image input terminals

The IMB (NC-90MS01) is mounted as standard in this projector. Alternately, you can use an HDSDI input port or DVD-D input port by replacing this with a signal input board (NC-80LB01-B/NC-80DS01-B) which is sold separately.

The video input ports that can be used with each board are as follows. Refer to the instruction manual of the IMB or signal input board for details on connecting the video input ports with external equipment.

<table>
<thead>
<tr>
<th>Board</th>
<th>Input Port</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>NC-90MS01</td>
<td>HDMI input port</td>
<td>x 1</td>
</tr>
<tr>
<td></td>
<td>3G SDI input port</td>
<td>x 2</td>
</tr>
<tr>
<td>NC-80LB01-B</td>
<td>HDSDI input terminal</td>
<td>x 4</td>
</tr>
<tr>
<td>NC-80DS01-B</td>
<td>DVI-D input terminal</td>
<td>x 2</td>
</tr>
</tbody>
</table>

2-4. Connecting the various control terminal

For control, your projector comes with such ports as the PC control terminal and the Ethernet port (RJ-45).

- PC control terminal (RS-232) -------------- Use this terminal when controlling the projector in serial connection from a PC.
- LAN port (LAN) --------------------------- Use this port when controlling the projector in LAN connection from a PC.
3.
Projection of Images
(Basic Operation)

3-1. Steps of projecting images

- Step 1
  Turn on the power to the projector. (See page 24)
- Step 2
  Select the title of input signal. (See page 27)
- Step 3
  Adjust the position and size of the projected screen. (See page 28)
- Step 4
  Turn off the power to the projector. (See page 35)
3. Projection of Images (Basic Operation)

3-2. Turning your projector on

Preparation:  
- Connect the power cable to the projector. (See page 17)  
- Supply AC power to the projector.

**NOTE**  
- Turn off the main power switch to the projector when supplying or cutting AC power to the projector. Supplying or shutting down the AC power while the main power switch is on will damage the projector.  
- Turning on and off the projector involves a two-step operation; the "main power switch" and the "POWER button".  
- Turning power on. (See this page)  
  1. Turn on the “main power switch” of the projector. Your projector is set in a standby state.  
  2. If KEY LOCK is on, press the KEY LOCK button for one second or longer. KEY LOCK is off and buttons on the control panel become operable.  
  3. Press the POWER button three seconds or longer. Your projector is turn on.  
- Turning power off. (See page 35)  
  1. Press the POWER button three seconds or longer. Your projector is set in a standby state.  
  2. Turn off the “main power switch” of the projector. Your projector is turned off.

1. Remove the lens cap.

2. Check that the VOLTAGE SELECT switch is set to match the voltage of the power supply you are using.

**CAUTION:**

You should select a power cable which is appropriate for the voltage of the electrical outlet you are connecting the projector to, and set the VOLTAGE SELECT switch properly. If the selection or setting is wrong, it may cause fires, or damage to the projector.

<table>
<thead>
<tr>
<th>Voltage of power to use</th>
<th>Position of the VOLTAGE SELECT switch</th>
</tr>
</thead>
<tbody>
<tr>
<td>AC100V outlet</td>
<td>“100 130V~”</td>
</tr>
<tr>
<td></td>
<td>200 240V~</td>
</tr>
<tr>
<td></td>
<td>100 130V~</td>
</tr>
<tr>
<td>AC200V (single phase) outlet</td>
<td>“200 240V~”</td>
</tr>
<tr>
<td></td>
<td>200 240V~</td>
</tr>
<tr>
<td></td>
<td>100 130V~</td>
</tr>
</tbody>
</table>
3. Projection of Images (Basic Operation)

3 Turn on the main power switch on the side of the projector.

A buzzer will ring on the projector. The POWER button indicator will blink green and the STATUS indicator will light orange (standby state). KEY LOCK becomes automatically on if no control panel operation takes place in the standby state for 30 seconds by default. Buttons on the control panel do not function while KEY LOCK is on. (See page 33)

![Main power switch and VOLTAGE SELECT switch](image)

4 If KEY LOCK is on, press the KEY LOCK button for one second or longer.

KEY LOCK becomes off. The KEY LOCK button indicator turns off and buttons on the control panel become operable. (See page 33)

![Control panel](image)

5 Press the POWER button on the control panel of your projector three seconds or longer.

Your projector is turn on.

![Power ON... and Lamp Off](image)

When the startup of the projector completes, the status of the POWER button, DOUSER button, LAMP ON/OFF button, and preset button (button <1> to <8>) changes as follows.

<table>
<thead>
<tr>
<th>Button</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>POWER button</td>
<td>Lit green</td>
</tr>
<tr>
<td>DOUSER button</td>
<td>Initial settings: Off (douser is off)</td>
</tr>
<tr>
<td>LAMP ON/OFF button</td>
<td>Initial settings: Blinking green (lamp is off)</td>
</tr>
<tr>
<td>Button &lt;1&gt; to &lt;8&gt;</td>
<td>The preset button which was last selected is lit green</td>
</tr>
</tbody>
</table>
3. Projection of Images (Basic Operation)

6 Press the LAMP ON/OFF button on the control panel for five seconds or longer.

The lamp is turned on and the screen glows light about 15 seconds later. The LAMP ON/OFF button indicator blinks in cycles of 2 (and changes to steady green light 90 seconds later).

The douser is closed until the screen glows light (the DOUSER button indicator lights green). When the douser is open, the DOUSER button indicator turns off.

NOTE

- While your projector is on, be sure to have the lens cap removed from the lens. Otherwise, the lens cap may get deformed due to a heat buildup.
- In the following instances, the power to your projector cannot be turned on even if you press the POWER button.
  - When the inside temperature is abnormally high. The protective function prevents power from turning on. Wait some time (until the projector inside cools down) and then turn on the power.
  - When the STATUS indicator is blinking in red without the lamp lighting up after power-on. Your projector may be in trouble. Check the error display on the LCD screen and contact your dealer/distributor for instructions.
- Note that the image may sometimes flicker until the lamp has stabilized (5 to 10 minutes) after power-on. This is due to the characteristics of the lamp and is not trouble of your projector.
3-3. Selecting the title of input signal

This projector allows you to select pre-registered title (input signal) using the preset buttons on the control panel (up to 16 titles). Request your dealer/distributor for details on registering and changing titles. This section explains the steps for selecting registered titles.

1. Turn on the power to the image devices connected to the projector.

2. Press the MENU button.

3. Press the LEFT/RIGHT button to display “Title Select” on the LCD screen.
   At each press of the LEFT/RIGHT buttons, the display will cycle as “Title Select” → “Configuration” → “(Title Setup)” → “Information.”

4. Press the DOWN button.
   The title of the input signal is displayed.
   • When you have made a wrong selection, press the UP button. A return will be made to the previous menu.

5. Press the LEFT/RIGHT buttons to display “Title of Signal to be Projected” on the LCD screen.

6. Press the ENTER button.
   The title of the signal to be projected is selected.
   • The (*) mark on the LCD indicates that this is the currently selected item.
3. Projection of Images (Basic Operation)

3-4. Adjusting the position and the size of projected screen

3-4-1. Displaying the test pattern

1. Press the MENU button, or select a test pattern from preset buttons (button <1> to <8>). If you register the test patterns to the preset buttons (<1> to <8> buttons), select the test pattern according to “3-3. Selecting the title of input signal (See page 27)”.

2. Press the LEFT/RIGHT button to display “Title Select” on the LCD screen.

3. Press the DOWN button. The title of the input signal is displayed.

4. Press the LEFT/RIGHT button to display “TEST Pattern” on the LCD screen.

5. Press the DOWN button. The LCD screen enters the mode where you can select a test pattern.

6. Press the LEFT/RIGHT button. This switches the test pattern name displayed on the LCD screen.
3. Projection of Images (Basic Operation)

7 Display on the LCD the name of the test pattern to be projected, then press the ENTER button.

The test pattern is displayed.

To cancel the test pattern display, select the title of the signal to project or select the “OFF” test pattern.

3-4-2. Adjusting the position of the projected screen (Lens shift)

1 Press the MENU button.

2 Press the LEFT/RIGHT button to display “Configuration” on the LCD screen.

3 Press the DOWN button.

4 Press the LEFT/RIGHT button to display “Lens Control” on the LCD screen.

5 Press the DOWN button.

The screen (“Lens Position”) to adjust the position of the projected screen is displayed.

6 Press the UP/DOWN/LEFT/RIGHT button.

The position of the projected screen moves in the selected direction.

7 Press the EXIT button when adjustment is complete.

The display will return to a menu one level above (where “Lens Control” is displayed).
3. Projection of Images (Basic Operation)

3-4-3. Adjustment of the size (zoom) and focus of the projected screen

1. Press the MENU button.
2. Press the LEFT/RIGHT button to display “Configuration” on the LCD screen.
3. Press the DOWN button.
4. Press the LEFT/RIGHT button to display “Lens Control” on the LCD screen.
5. Press the DOWN button.
   The screen (“Lens Position”) to adjust the position of the projected screen is displayed.

6. Press the ENTER button.
   The screen to adjust the size and focus of the projected screen is displayed.
   Press the ENTER button to switch the display between “Lens Position” and “Focus Zoom” adjustments.

7. Adjust the size and focus of the projected screen.
   Press the UP/DOWN button to adjust the focus.
   Press the LEFT/RIGHT button to adjust the size.

8. Press the EXIT button when adjustment is complete.
   The display will return to a menu one level above (where “Lens Control” is displayed).
3-4-4. Adjusting the brightness of the projected screen (Lamp output)

1. Press the LAMP button.
   The screen to adjust the lamp output is displayed.

   ![Lamp Setup Adjust](image)

   **TIP** Press the ENTER button to switch the display between “Lamp Setup (Adjust)” and “Lamp Setup (Lamp Mode)”. Note that while the LAMP ON/OFF button indicator is blinking green (page 67), you cannot use the lamp mode settings screen because the lamp cannot be turned off and the lamp mode cannot be set.

2. Press the DOWN button.

3. Press the LEFT/RIGHT button to adjust the lamp output.

   The specified adjustment value is applied.
3. Projection of Images (Basic Operation)

3-4-5. Adjusting the brightness of the projected screen (Lamp mode)

**NOTE:** While the LAMP ON/OFF button indicator is blinking green (page 67), you cannot use the lamp mode settings screen because the lamp mode cannot be set. Wait until the LAMP ON/OFF button indicator changes from blinking to steady on.

1. Press the LAMP button.
   
The screen to adjust the lamp output is displayed.

![Lamp button and adjustment screen](image)

2. Press the LAMP button while the lamp output adjustment screen is displayed.
   
The screen to select the lamp mode is displayed.

   **TIP:** Press the ENTER button to switch the display between “Lamp Setup (Adjust)” and “Lamp Setup (Lamp Mode)”.

3. Press the LEFT/RIGHT button to select the lamp to use.

   ![Lamp setup screen](image)

<table>
<thead>
<tr>
<th>Lamp Setup</th>
<th>Lamp Mode</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dual</td>
<td>(X)</td>
</tr>
</tbody>
</table>

   | Lamp 1      | Uses lamp 1 (lamp 2 is not used). |
   | Lamp 2      | Uses only lamp 2 (lamp 1 is not used). |

4. Press the ENTER button.
   
   - If the lamp is on, the changed settings are applied immediately.
   - If the lamp is off, the settings are applied the next time the lamp is turned on.

   **NOTE:** When the lamp mode is changed, the LAMP ON/OFF button indicator blinks green (See page 67). You cannot change the lamp mode while the LAMP ON/OFF button indicator is blinking. Wait until the LAMP ON/OFF button indicator changes from blinking to steady on.
3-5. Preventing misoperations

Buttons on the control panel can be locked (KEY LOCK) to prevent misoperations. Buttons on the control panel do not function while KEY LOCK is on. KEY LOCK must be off to operate these buttons.

**NOTE**
- KEY LOCK is automatically turned on in the following cases.
  - When the projector has entered the standby state by turning on the main power switch of the projector while the AC power is supplied.
  - When the projector has entered the standby state after turning off the power using the POWER button.
- The timing where KEY LOCK is turned on while the projector is in standby state depends on the “Auto Key Lock” setting in the adjustment menu.
  - When Auto Key Lock is enabled, KEY LOCK becomes automatically on if no control panel operation takes place in the standby state for 30 seconds. KEY LOCK becomes automatically on again even after KEY LOCK is turned off if no control panel operation takes place for 30 seconds.
  - When Auto Key Lock is disabled, KEY LOCK becomes automatically on when the projector enters the standby state; however, it stays off after KEY LOCK is turned off.

### 3-5-1. KEY LOCK setting

- Press the KEY LOCK button on the control panel for one second or longer.

KEY LOCK becomes on. The KEY LOCK button indicator lights orange. When you press a button on the control panel of the projector while KEY LOCK is on, “Panel is Locked. (KEY LOCK)” is displayed, and the button will not function. (See page 38)

### 3-5-2. Turning KEY LOCK off

- Press the KEY LOCK button for one second or longer while KEY LOCK is on.

KEY LOCK becomes off. The KEY LOCK button indicator turns off.
3. Projection of Images (Basic Operation)

3-6. Turning on/off the lamp with the projector turned on

**NOTE**
The indicators on the control panel blink when the following operations are carried out. (See page 66)
- When you turn the lamp on or change the lamp mode
  The indicators of the POWER button and the LAMP ON/OFF button blink green. The projector cannot be turned off while the POWER button indicator is blinking (in cycles of 2). The lamp cannot be turned off while the LAMP ON/OFF button indicator is blinking.
- When you turn the lamp off
  The LAMP ON/OFF button indicator blinks green. The lamp cannot be turned on while the LAMP ON/OFF button indicator is blinking.

If you operate the POWER button or LAMP ON/OFF button while the indicators are blinking, the LCD screen displays the warning screen below. The POWER button or LAMP ON/OFF button becomes operable when the amount of time remaining reaches 0.

3-6-1. Turning off the lamp

- Press the LAMP ON/OFF button on the control panel for five seconds or longer.

3-6-2. Turning on the lamp

- Press the LAMP ON/OFF button on the control panel for five seconds or longer.

**TIP**
The LCD screen displays “Lamp Lit Change” if any of the following events occurs when the lamp mode is set to “Dual”.
- One of the lamps has failed to turn on when you turn the lamps on
- One of the lamps has extinguished while the lamps are on
To once again light a lamp which has failed to turn on or extinguished, press both the LAMP ON/OFF button and the MENU button three seconds or longer. However, the lamp cannot be turned on again while the LAMP ON/OFF button indicator is blinking.
3-7. Turning your projector off

NOTE
The indicators on the control panel blink when the following operations are carried out. (See page 66)
- When you turn the lamp on or change the lamp mode
  The indicators of the POWER button and the LAMP ON/OFF button blink green. The projector cannot be turned off while the POWER button indicator is blinking (in cycles of 2). The lamp cannot be turned off while the LAMP ON/OFF button indicator is blinking.

If you operate the POWER button or LAMP ON/OFF button while the indicators are blinking, the LCD screen displays the warning screen below. The POWER button or LAMP ON/OFF button becomes operable when the amount of time remaining reaches 0.

Press the POWER button on the projector control panel for three seconds or longer.

1. The lamp is turned off, the POWER button indicator blinks green, and the STATUS indicator blinks orange (cooling state).
   The fan will continue to rotate while cooling, and the amount of time remaining for cooling is displayed on the LCD screen. The cooling-off time is 90 seconds.
   When the cooling is finished, the POWER button indicator turns off and the status indicator lights orange (standby state). KEY LOCK becomes automatically on if no control panel operation takes place in the standby state for 30 seconds by default. Buttons on the control panel do not function while KEY LOCK is on. (See page 33)

Wait till the projector enters standby state before turning off the main power switch of the projector.
2. The POWER button indicator is turned off and the main power is turned off.
3. Projection of Images (Basic Operation)

3 Turn off the AC power to the projector.

**NOTE:** In the following instances, do not turn off the main power switch or disconnect the AC power. Doing so can damage the projector.
- While projecting images
- While the fan is running after the power is turned off (The cooling-off time is 90 seconds)
4. Using Menus

4-1. Basic operation with adjustment menus

To adjust the projector, display the menu on the LCD screen of the projector control panel.

4-1-1. Screen display

The menu display screen is composed of a menu display field (the upper two lines) and a setting item display field (the bottom two lines).

The meanings of symbols in the menu display screen are outlined below.

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="UP button" /> <img src="image" alt="UP button" /></td>
<td>Indicates there is a menu of a higher level. Press the UP button to return to a menu one level above.</td>
</tr>
<tr>
<td><img src="image" alt="LEFT/RIGHT button" /> <img src="image" alt="LEFT/RIGHT button" /></td>
<td>Indicates there is a selected item or menu at the same level. Press the LEFT/RIGHT button to display other selected items or menus.</td>
</tr>
<tr>
<td><img src="image" alt="DOWN button" /> <img src="image" alt="DOWN button" /></td>
<td>Indicates there is a menu of a lower level. Press the DOWN button to display the menu one level below.</td>
</tr>
<tr>
<td><img src="image" alt="UP button" /> <img src="image" alt="DOWN button" /></td>
<td>Indicates that there are setting items of a higher or lower level. Press the UP button to return to a menu one level above. Press the DOWN button to display the setting item one level below.</td>
</tr>
</tbody>
</table>
4. Using Menus

When not displaying menus, the following screen is normally displayed.

**When in standby**
When the projector is in a standby state (the main power switch in on), the following is displayed.

![Standby Lamp Off Screen](image)

**When power is turned on**
When the power is turned on, the following is displayed.

- Displays the lamp mode and lamp output (%).
- Displays the lamp usage time.
- Displays the selected title.
- Displays the selected video input port.

**TIP**
When the lamp mode is set to “Dual” (both lamp 1 and lamp 2 turned on; see page 44), the display switches between the lamp 1 and lamp 2 usage times every 10 seconds.

![Lamp Usage Time Switch](image)

**When the power is turned off**
When you press the POWER button on the control panel of the projector for 3 or more seconds, the projector starts cooling. When cooling finishes, the projector enters the standby mode. The amount of time remaining for cooling is displayed as shown below during cooling.

![Cooling Screen](image)

**When a button is pressed while the key lock function is on**
If a button on the control panel is pressed while the key lock function is on, the following is displayed and the button will not function.

![Panel is Locked Screen](image)
4-1-2. Operating menus

**Preparation:** Turn your projector on. (See page 24)

1. Press the MENU button on the control panel of your projector.
   The menu is displayed in the LCD screen.

2. Press the LEFT/RIGHT buttons to display “Information.”
   At each press of the LEFT/RIGHT buttons, the display will cycle as “Title Select” ←→ “Configuration” ←→ “(Title Setup)” ←→ “Information.”

3. Press the DOWN button.
   The submenu “Lamp” of “Information” is displayed.
   The menu item can be selected by pressing the ENTER button instead of the DOWN button.
   To return to the previous state, press the UP button, or the EXIT button.

4. Press the LEFT/RIGHT button to select the submenu “Version.”
   At each press of the LEFT/RIGHT button, the display will cycle as “Lamp” ←→ “Preset Button” ←→ “Usage” ←→ “Error Code” ←→ “Version” ←→ “IP Address” ←→ “Setup Date” ←→ “Option Status.”

5. Press the DOWN button.
   The submenu “System” another rank lower than “Version” is displayed.
4. Using Menus

6 Press the DOWN button.
The submenu “BIOS” another rank lower than “System” is displayed.

7 Press the LEFT/RIGHT button to select the submenu “Data.”
At each press of the LEFT/RIGHT button, the display will cycle as “BIOS” ←→ “Firmware” ←→ “Data” ←→ “Lens” ←→ “Serial No.” ←→ “Model,” and each version information is displayed.

8 Press the UP button several times.
At each press of the UP button, the display will return to a menu one level above.
4. Using Menus

4-1-3. How to enter alphanumeric characters

Alphanumeric characters are entered for items, such as the log file of the specified period is written to USB memory. (See page 73)

Characters can be entered by pressing numeric buttons on the control panel on this projector.

Characters can be entered by pressing each button as shown in the following table.

- To delete a character during entry, press the DOWN button.

[Example of Entry]
To enter “XGA” for example, use the following procedure:

1. Press the “8” button three times.
   
2. Press the RIGHT button.
3. Press the “3” button.
   
4. Press the RIGHT button.
5. Press the “1” button.


<table>
<thead>
<tr>
<th>Button</th>
<th>Entered character</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 A → B → C → 1 → a → b → c → ! →</td>
<td></td>
</tr>
<tr>
<td>2 D → E → F → 2 → d → e → f → “ →</td>
<td></td>
</tr>
<tr>
<td>3 G → H → I → 3 → g → h → i → # →</td>
<td></td>
</tr>
<tr>
<td>4 J → K → L → 4 → j → k → l → $ →</td>
<td></td>
</tr>
<tr>
<td>5 M → N → O → 5 → m → n → o → % →</td>
<td></td>
</tr>
<tr>
<td>6 P → Q → R → 6 → p → q → r → &amp; →</td>
<td></td>
</tr>
<tr>
<td>7 S → T → U → 7 → s → t → u → ’ →</td>
<td></td>
</tr>
<tr>
<td>8 V → W → X → 8 → v → w → x → ( →</td>
<td></td>
</tr>
<tr>
<td>LAMP Y → Z → / → 9 → y → z → ? → ) →</td>
<td></td>
</tr>
<tr>
<td>IMB * → , → . → 0 → ; → : → + → - →</td>
<td></td>
</tr>
</tbody>
</table>

Move right and left Delete entered characters

Enter characters
4. Using Menus

4-2. Table of adjustment menus

Menus in parentheses are menus for our service personnel. Normally, these menus cannot be used.

<table>
<thead>
<tr>
<th>Main menu</th>
<th>Submenu</th>
<th>Description</th>
<th>Reference page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Title Select</td>
<td>‘Title Memory Name’</td>
<td>Selects the title of the signal to be projected.</td>
<td>43</td>
</tr>
<tr>
<td>TEST Pattern</td>
<td></td>
<td>Selects the test pattern to be projected.</td>
<td>43</td>
</tr>
<tr>
<td>Configuration</td>
<td>Lamp Setup</td>
<td>Adjust</td>
<td>44</td>
</tr>
<tr>
<td></td>
<td>Lamp Mode</td>
<td>Selects the lamp to use.</td>
<td>44</td>
</tr>
<tr>
<td></td>
<td>Lens Control</td>
<td>Lens Position</td>
<td>45</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Focus Zoom</td>
<td>45</td>
</tr>
<tr>
<td></td>
<td>Reset</td>
<td>(Factory Default)</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lamp Usage</td>
<td>46</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Filter Usage</td>
<td>46</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(Fan Usage)</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>(Setup)</td>
<td>Douser Setup</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Panel Key Lock</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Auto Key Lock</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3D Connector</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Unlit Mode</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>(Installation)</td>
<td>Option Slot</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Orientation</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lens Center</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Baudrate</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Date/Time</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>New Router Setup</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fan Speed Mode</td>
<td>-</td>
</tr>
<tr>
<td>(Title Setup)</td>
<td>Preset Button</td>
<td>Preset Button 1–16</td>
<td>47</td>
</tr>
<tr>
<td>Information</td>
<td>Lamp</td>
<td>Output</td>
<td>47</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Voltage</td>
<td>47</td>
</tr>
<tr>
<td></td>
<td>Preset Button</td>
<td>Preset Button 1–16</td>
<td>47</td>
</tr>
<tr>
<td></td>
<td>Usage</td>
<td>Displays information related to projector usage.</td>
<td>48</td>
</tr>
<tr>
<td></td>
<td>Error Code</td>
<td>Displays the currently occurring error.</td>
<td>48</td>
</tr>
<tr>
<td></td>
<td>Version</td>
<td>System</td>
<td>48</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SIIB</td>
<td>49</td>
</tr>
<tr>
<td></td>
<td></td>
<td>IMB</td>
<td>49</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Slave</td>
<td>49</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ballast</td>
<td>49</td>
</tr>
<tr>
<td></td>
<td>IP Address</td>
<td>System</td>
<td>49</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Displays the IP address of the projector.</td>
<td>49</td>
</tr>
<tr>
<td></td>
<td>Setup Date</td>
<td>Displays the date when the projector was set up (starting date of the warranty period).</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>Option Status</td>
<td>Displays the link status of the device mounted in slot A and projector.</td>
<td>50</td>
</tr>
</tbody>
</table>
4-3. Title Select

4-3-1. Title select (Title Memory)
Selects the title of the signal to be projected.
You can register up to 100 titles. You can also assign registered titles to the preset buttons (<1> to <8> buttons) on the projec-
tor's control panel and call them up directly using those buttons.
Request your dealer/distributor for details on registering and changing titles.

4-3-2. Test Pattern
Selects the test pattern to be projected.

OFF, Alignment, Cross Hatch, Convergence, Red, Green, Blue, White, Black,
White 50% [IRE], H-Ramp, Logo
4. Using Menus

4-4. Configuration

Please request your dealer/distributor to perform the settings.

4-4-1. Lamp Setup

Adjust

Adjusts the lamp output (brightness).

Lamp Mode

Selects the lamp to use. When “Dual” is selected, lamp 1 and lamp 2 turn on/off at the same time. When “Lamp 1” or “Lamp 2” is selected, the other lamp is not used.

<table>
<thead>
<tr>
<th>Mode</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dual</td>
<td>Uses lamp 1 and lamp 2 at the same time.</td>
</tr>
<tr>
<td>Lamp 1</td>
<td>Uses only lamp 1 (lamp 2 is not used).</td>
</tr>
<tr>
<td>Lamp 2</td>
<td>Uses only lamp 2 (lamp 1 is not used).</td>
</tr>
</tbody>
</table>

**TIP**
- If you change the lamp mode while the lamp is on, the changed settings are applied immediately.
- If you change the lamp mode while the lamp is off, the changed settings are applied the next time the lamp is turned on.

**NOTE**
When the lamp mode is changed, the LAMP ON/OFF button indicator blinks green (See page 67). You cannot change the lamp mode while the LAMP ON/OFF button indicator is blinking. Wait until the LAMP ON/OFF button indicator changes from blinking to steady on.
4-4-2. Lens Control

Adjust the position, size, and focus of the projected screen.
Press the ENTER button to switch the display between “Lens Position” and “Focus Zoom” adjustments. Press the EXIT button to return to a menu one level above.

**Lens Position**

Adjusts the position of the projected screen.
The projected screen moves in the selected direction as you press the UP/DOWN/LEFT/RIGHT button.

**Focus Zoom**

Adjusts the size (Zoom) and focus (Focus) of the projected screen.
Press the UP/DOWN button to adjust the focus.
Press the LEFT/RIGHT button to adjust the size of the projected screen.
4. Using Menus

4-4-3. Reset

This is used to reset the lamp and air filter usage times.

**Lamp Usage**

Resets the lamp usage time. When both lamp 1 and lamp 2 are replaced at the same time, reset the usage times of both lamp 1 and lamp 2.

[1] Press the LEFT/RIGHT button to select the lamp to reset the usage time of, and then press the ENTER button.

[2] Press the ENTER button in the “Lamp1 Usage” or “Lamp2 Usage” screen, the confirmation screen will appear.

[3] Select “Yes” in the confirmation screen, and then press the ENTER button to reset the lamp usage time.

---

**Filter Usage**

Resets the air filter usage time. Press the ENTER button, then select “Yes” in the displayed confirmation screen, and then press the ENTER button to reset the air filter usage time.

---
4-5. Title Setup

Sets the title to be assigned to the preset buttons (<1> to <8> buttons) (up to 16 titles). Request your dealer/distributor to perform the settings.

4-6. Information

Displays the hours of lamp use, the version information and error codes.

4-6-1. Lamp
Displays information relating to the lamp.

**Output**
Displays the lamp mode and lamp output power value (W).

![Lamp Output](image)

- Selects the item to display.
- Displays the lamp mode.
- Displays the current power value (W).

**Voltage**
Displays the voltage value (V) of the currently used lamp.

![Lamp Voltage](image)

- Selects the item to display.
- Displays the voltage value (V) of lamp 1.
- Displays the voltage value (V) of lamp 2.

4-6-2. Preset Button
Sets the title to be assigned to the preset buttons (<1> to <8> buttons) on the projector’s control panel.

![Preset Button](image)

- Selects the preset button number whose contents you want to display.
- Displays the assigned title numbers.
- Displays the registered names of the assigned titles.

**TIP**
To select a title allocated to one of “Preset Button9” to “Preset Button16”, press the preset button while holding down the UP button. For example, to select the title allocated to “Preset Button9”, press the <1> button while holding down the UP button.
4. Using Menus

4-6-3. Usage
Displays information related to the projector usage, such as the usage time of the projector, lamps, air filters, and fan, and information about the lamp replacement cycle.

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Projector</td>
<td>Displays the usage time of the projector.</td>
</tr>
<tr>
<td>Lamp</td>
<td>Displays the usage time of the lamp.</td>
</tr>
<tr>
<td>Lamp Remaining</td>
<td>Displays the amount of usage time remaining (approximate) from the current usage time with the unused state as 100% and 0% when the lamp needs replacement.</td>
</tr>
<tr>
<td>Lamp Strike</td>
<td>Displays the number of times the lamp has been turned on.</td>
</tr>
<tr>
<td>Filter</td>
<td>Displays the usage time of the air filter.</td>
</tr>
<tr>
<td>Fan</td>
<td>Displays the usage time of the fan.</td>
</tr>
<tr>
<td>Douser Count</td>
<td>Displays the number of times the douser has been used.</td>
</tr>
</tbody>
</table>

4-6-4. Error Code
Displays the error code when an error occurs.

When multiple errors occur, you can display them by pressing the LEFT/RIGHT buttons.

4-6-5. Version
Displays version information about the projector, optional boards, and IMB.

System
Displays the version information of the projector.

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOS</td>
<td>Displays the BIOS version of the projector.</td>
</tr>
<tr>
<td>Firmware</td>
<td>Displays the firmware version of the projector.</td>
</tr>
<tr>
<td>Data</td>
<td>Displays the data version of the projector.</td>
</tr>
<tr>
<td>Lens</td>
<td>Displays the firmware version of the lens mount on the projector.</td>
</tr>
<tr>
<td>Serial No.</td>
<td>Displays the serial number of the projector.</td>
</tr>
<tr>
<td>Model</td>
<td>Displays the model name of the projector.</td>
</tr>
</tbody>
</table>
Displays the model name and version information about the signal input board (SIB). When the projector is in standby mode, the version information displays “---”.

Displays the vendor name.

Displays the version information.

Displays the version information.

Displays the slave firmware version of the projector.

Displays the ballast firmware version of the projector. The version information is displayed in the format “ballast 1/ballast 2”.

Displays the IP address set in the projector.

Displays the IP address set for the projector (System).
4. Using Menus

4-6-7. Setup Date
Displays the date when the projector was set up (starting date of the warranty period).

4-6-8. Option Status
Displays the link status of the device mounted in slot A (media block, signal input board) on the projector. The device name is displayed in ( ) when the projector is in standby or when connection to the device cannot be confirmed.

| A                      | Displays the link status of the device in slot A.  
|                        | <Vendor Name> IMB: Media block (NC-90MS01)  
|                        | • NC-80LB: Signal input board (NC-80LB01-B)  
|                        | • NC-80DS: Signal input board (NC-80DS01-B)  
|                        | • No Board: No device mounted  

B Not Available: Slot B is not available in this projector.
5. Maintenance of Your Projector

5-1. Cleaning the Cabinet

Before carrying out maintenance of your projector, be sure to always check that the projector is turned off and the power plug is unplugged from the electrical outlet.

• Wipe with a dry, soft cloth without nap.
  When the cabinet is excessively dirty, wipe with cloth well wrung after being dampened with a neutral detergent diluted with water and then finish up with a dry cloth.
  When you use a chemical dust cloth, follow the instructions in the manual attached to it.
• Do not use a solvent, such as thinner or benzene. The coating may deteriorate or peel off.
• When removing dust on the ventilation opening, suck it off using an adapter with a brush on a vacuum cleaner. Never allow the cleaner without an adapter to come into direct contact or use a nozzles adapter in cleaning.
• Clean the ventilation opening at regular intervals. Dust, if allowed to accumulate there, may cause heating inside, which leads to functional trouble. The interval, which can vary with the location of your projector, is about 100 hours.
• Do not damage the cabinet by scratching it or allowing hard objects to hit it. This can scratch the projector.
• Consult your dealer/distributor about cleaning the inside of the projector.

5-2. Cleaning the Lens

Clean the lens the same way as with camera lens (using a commercially available camera blower or cleaning paper for glasses). Take care not to damage the lens when cleaning.
5. Maintenance of Your Projector

5-3. Replacing the Lamp and the Air Filter

5-3-1. Warnings About Replacing the Lamp

When the usage time of the lamp being used as the light source exceeds the lamp replacement time (approximate), the message “Lamp1 OverTime” or “Lamp2 OverTime” is displayed on the projector LCD screen. When this happens, the lamp has reached its replacement time and you should replace it with a new lamp.

- The lamp replacement time (approximate) is 3,000 hours.
- You can check the current amount of lamp usage remaining (approximate) using the following items in the adjustment menus. (See page 48)
  - Amount of lamp usage remaining (approximate): “Information” → ”Usage” → ”Lamp Remaining”

**CAUTION**

DO NOT TOUCH THE LAMP immediately after it has been used. It will be extremely hot. Turn the projector off and then disconnect the power cable. Allow at least one hour for the lamp to cool before handling.

- Use the specified lamp for safety and performance.
- Do not mount the lamp that you first used mounted in lamp 1 in lamp 2, and do not mount the lamp that you first used mounted in lamp 2 in lamp 1. If you do, the lamp replacement time (approximate) will not be calculated properly.
- Please purchase the replacement lamp at your dealer/distributor. Specify NP-9LP01 as the model number for the replacement lamp when ordering.
- Replace the air filters at the same time as when you replace the lamp. Specify NP-9AF01 as the model number for the replacement filter when ordering.
- A replacement lamp and air filter kit is also provided. Specify NP-9LP01 as the model number for the replacement lamp and filter kit when ordering.
- Do not remove any screws other than as specified.
- The lamp has glass attached for protecting the lamp. Handle with care to avoid accidently breaking it. Furthermore, do not touch the surface of the glass. This may lead to perform degradation in terms of brightness.
- If you continue using the lamp after the message has been displayed, the lamp may blow. When the lamp blows, it shatters creating a large sound, and fragments of the lamp become scattered around within the lamp house. If this happens, please contact your dealer/distributor for a replacement.
- If you replace the lamp while the unit is installed suspended from the ceiling, take care to ensure that no one can enter below the unit. If the lamp shatters, there is a risk of lamp fragments flying everywhere.

**NOTE:** The lamp replacement time is not the guarantee time. The actual replacement time varies depending on the usage environment.
5-3-2. Warnings About Replacing the Air Filter

Air filters are attached over the air inlet of the projector to prevent dust. Replace air filters periodically to maintain the projector's performance.

**WARNING:**
- When replacing air filters, turn off the projector and unplug the power cable.
- Dust in air filters will hinder ventilation of the projector, lead to a rise of the internal temperature and can cause a fire or malfunction.

**CAUTION**
Before replacing the filters, turn off the projector, disconnected the power cable and then allow the cabinet to cool. Failure to do so can result in electric shock or burn injuries.

- Please purchase the replacement air filter at your dealer/distributor. Specify the NP-9AF01 (optional) when you order.
- A replacement lamp and air filter kit is also provided. Specify NP-9LP01 as the model number for the replacement lamp and filter kit when ordering.
- Always replace both of the air filters at the same time. If you do not replace both of the air filters, the air filter usage time will not be calculated correctly.

<table>
<thead>
<tr>
<th>Model number</th>
<th>Replacement cycle</th>
</tr>
</thead>
<tbody>
<tr>
<td>NP-9AF01</td>
<td>Replace each time you replace the lamp.</td>
</tr>
<tr>
<td>NP-9LF01 (kit)</td>
<td></td>
</tr>
</tbody>
</table>
5. Maintenance of Your Projector

5-3-3. Procedure for Replacing the Lamp and Air Filter

- **Step 1**
  Replace the lamp (See page 54)

- **Step 2**
  Replace the rear air filter (See page 59)
  Replace the side air filter (See page 62)

- **Step 3**
  Reset the lamp usage time and air filter usage time (See page 64)

5-3-4. Replacing the Lamp

This section describes the procedure for replacing both of the lamps.

**Preparation:** Have a Phillips head screwdriver ready.

1. Remove the lamp cover.
   1. Loosen the screw securing the lamp cover until the Phillips screwdriver goes into a free-wheeling condition.
      The screw is not removable.
   2. Grasp the standoff pillar of the screw securing the lamp cover and pull it up towards you to remove the lamp cover.
2. Remove the lamp housing.

1. Loosen the two screws securing the lamp housing until the Phillips screwdriver goes into a freewheeling condition. The two screws are not removable.

2. Grasp the handle and remove the lamp housing. At this time, pull the lamp housing straight out.

⚠️ CAUTION
Make sure that lamp housing is cool enough to handle before removing it.
5. Maintenance of Your Projector

3. Install a new lamp housing.

1. Insert a new lamp housing until the lamp housing is plugged into the socket. Finally, align the protrusion for aligning the position of the lamp housing with the groove in the receptacle side of the projector.
2. Secure it in place with the two screws.
Be sure to tighten the screws.

**NOTE** Be sure to install both Lamp 1 and Lamp 2. The projector will not turn on unless both the lamps are installed.

4. Reattach the lamp cover.

1. Align the protrusions (2 locations) in the lamp cover with the receptacle holes in the projector and mount the lamp cover.
5. Maintenance of Your Projector

2. Tighten the screw to secure the lamp cover.

Be sure to tighten the screw.

This completes replacing the lamp. Next, replace the air filters.

- Replace the rear air filter (See page 59)
- Replace the side air filter (See page 62)

**NOTE** Always replace both of the air filters at the same time. If you do not replace both of the air filters, the air filter usage time will not be calculated correctly.
5. Maintenance of Your Projector

5-3-5. Replacing the Rear Air Filter

**Preparation:** Replace the lamp first. (See page 54)

1. Open the filter cover.

   1. Loosen each of the two knobs by turning them counterclockwise.
      
      The knobs are not removable. If the knob is too tight to turn, use a Phillips screwdriver.

2. Tilt the filter cover towards you to open it.
5. Maintenance of Your Projector

2 Remove the air filter.
   Pull the right side of the air filter towards you to remove it.

3 Mount the air filter to the projector.
   Look for an arrow (↑AIR FLOW) indicating the installation direction on the side of the air filter. Point the arrow towards the projector.
   1. Align the air filter to the flange on the left side of the air inlet.
   2. Push the right side of the air filter against the air inlet on the projector.
Mount the filter cover to the projector.

1. Grasp the knob on the filter cover and mount it to the projector.

2. Tighten the two knobs clockwise to secure the filter cover.

This completes replacing the rear air filter. Next, replace the side air filter.
5. Maintenance of Your Projector

5-3-6. Replacing the Side Air Filter

**Preparation:** Replace the lamp first. (See page 54)

1. **Remove the filter cover.**
   
The filter cover is fastened by plastic clips (4 locations). Grasp the top and bottom edges of the cover and pull it towards you to remove it.

   ![Diagram showing the filter cover and clip receptacle holes]

   **Note:** When removing the filter cover, remove it by applying force evenly. If you only apply force to one side, it may cause the clips to become damaged.
2 Remove the air filter.
Pull the upper part of the air filter towards you and lift it up to remove it.

3 Mount the air filter to the projector.
Look for an arrow (↑AIR FLOW) indicating the installation direction on the side of the air filter. Point the arrow towards the projector.
1. Align the air filter to the flange under the air inlet.
2. Push the top side of the air filter against the air inlet on the projector.
Mount the filter cover to the projector.

1. Align the positions of the plastic clips (4 locations) with the clip receptacle holes on the projector.

2. Push it in straight to fasten the filter cover.

This completes replacing the side air filter. If you have not yet finished replacing the rear air filter, replace the rear air filter next (See page 59). Once you have finished replacing both of the air filters, reset the lamp usage time and the air filter usage time.

5-3-7 Resetting the Lamp Usage Time and Air Filter Usage Time

1. Turn on the power to the projector.

2. Reset the usage time in “Configuration” → “Reset” in the adjustment menu.
   • “Lamp Usage”: Resets the lamp usage (See page 46)
   • “Filter Usage”: Resets the filter usage (See page 46)

This completes resetting the lamp usage time and air filter usage time.
6. Troubleshooting

Before asking for repair, please check your connection, settings and operation once again. If the trouble cannot be corrected, please contact your dealer/distributor for instructions or repair.

6-1-1. Problems and where to check

<table>
<thead>
<tr>
<th>Problem</th>
<th>Check these items</th>
</tr>
</thead>
<tbody>
<tr>
<td>The projector cannot be turned on.</td>
<td>Check to see if AC power is supplied to the projector.</td>
</tr>
<tr>
<td></td>
<td>Make certain that the main power switch is ON.</td>
</tr>
<tr>
<td></td>
<td>Check to see whether the panel key lock function is activated. If so, the main unit's control</td>
</tr>
<tr>
<td></td>
<td>buttons are locked and do not work.</td>
</tr>
<tr>
<td></td>
<td>Is the temperature inside the projector too high? When the inside temperature is</td>
</tr>
<tr>
<td></td>
<td>too high, the protective function does not allow your projector to be turned on.</td>
</tr>
<tr>
<td></td>
<td>Wait some time and then turn it on.</td>
</tr>
<tr>
<td></td>
<td>Are you using the projector at high elevations with an altitude of approximately</td>
</tr>
<tr>
<td></td>
<td>5500 feet/1600 meters or higher? The cooling fan settings need to be configured</td>
</tr>
<tr>
<td></td>
<td>when using the projector at high elevations. Please contact your dealer/distributor</td>
</tr>
<tr>
<td></td>
<td>for instructions.</td>
</tr>
<tr>
<td>The image cannot be projected.</td>
<td>Check to see if the connected input has been selected.</td>
</tr>
<tr>
<td></td>
<td>Check to see if a cable is properly connected to the input terminal.</td>
</tr>
<tr>
<td></td>
<td>Check to see whether the douser is closed.</td>
</tr>
<tr>
<td></td>
<td>Check to see if the settings are all adjusted properly.</td>
</tr>
<tr>
<td>The image is distorted.</td>
<td>Check to see if the protractor is properly set up.</td>
</tr>
<tr>
<td>The image is blurred.</td>
<td>Make certain that the lens is properly focused.</td>
</tr>
<tr>
<td></td>
<td>Check to see if the screen and a projector are installed at correct angles.</td>
</tr>
<tr>
<td></td>
<td>The projection distance may be larger than the focusing range.</td>
</tr>
<tr>
<td></td>
<td>See if the lens and other parts have condensation on them. If the projector is</td>
</tr>
<tr>
<td></td>
<td>turned on in a warm place after storage in a cold place, the lens and other optical</td>
</tr>
<tr>
<td></td>
<td>components inside may develop condensation. In such a case, please wait several</td>
</tr>
<tr>
<td></td>
<td>minutes until the condensation disappears.</td>
</tr>
</tbody>
</table>
6-2. Indicator display list

See the descriptions below when the buttons on the control panel or the STATUS indicator on the rear of the projector is lit or blinking. The projector also has a warning function that uses a buzzer.

### 6-2-1. Preset buttons

<table>
<thead>
<tr>
<th>Indicator condition</th>
<th>Projector condition</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Off</td>
<td>No title is assigned to the button.</td>
<td>-</td>
</tr>
<tr>
<td>Steady light</td>
<td>A title is assigned to the button.</td>
<td>-</td>
</tr>
<tr>
<td>Green</td>
<td>The title is being selected.</td>
<td>-</td>
</tr>
<tr>
<td>White</td>
<td>The title is not selected.</td>
<td>-</td>
</tr>
</tbody>
</table>

### 6-2-2. KEY LOCK button

<table>
<thead>
<tr>
<th>Indicator condition</th>
<th>Projector condition</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Off</td>
<td>The key lock is off.</td>
<td>-</td>
</tr>
<tr>
<td>Steady light</td>
<td>Orange</td>
<td>The key lock is on.</td>
</tr>
</tbody>
</table>
### 6-2-3. POWER button

<table>
<thead>
<tr>
<th>Indicator condition</th>
<th>Projector condition</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Off</td>
<td>The projector power supply is off, or the projector is in standby.</td>
<td>-</td>
</tr>
<tr>
<td>Blinking light</td>
<td>Preparing to turn power on/cooling fan rotating (State from turning the power off to entering standby mode).</td>
<td>Wait for a moment.</td>
</tr>
<tr>
<td>Steady light</td>
<td>The projector is turned on.</td>
<td>-</td>
</tr>
</tbody>
</table>

(Note 1) Repeats 0.5 seconds on → 0.5 seconds off.
(Note 2) Repeats 0.5 seconds on → 1.5 seconds off.

### 6-2-4. DOUSER button

<table>
<thead>
<tr>
<th>Indicator condition</th>
<th>Projector condition</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Steady light</td>
<td>The douser is closed.</td>
<td>-</td>
</tr>
<tr>
<td>Off</td>
<td>The douser is opened.</td>
<td>-</td>
</tr>
</tbody>
</table>

### 6-2-5. LAMP ON/OFF button

<table>
<thead>
<tr>
<th>Indicator condition</th>
<th>Projector condition</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Off</td>
<td>The lamp is off.</td>
<td>-</td>
</tr>
<tr>
<td>Steady light</td>
<td>The lamp is on (Dual/Lamp 1/Lamp 2).</td>
<td>-</td>
</tr>
<tr>
<td>Blinking light</td>
<td>State where the lamp cannot be turned on/off or the lamp mode cannot be changed (Immediately after turning the lamp on/off or immediately after changing the lamp mode).</td>
<td>Wait for a moment. (for a maximum of about 90 seconds)</td>
</tr>
</tbody>
</table>

(Note 1) Repeat 0.5 seconds on → 1.5 seconds off.
### 6-2-6. STATUS indicator

<table>
<thead>
<tr>
<th>Indicator condition</th>
<th>Projector condition</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Off</td>
<td>Main power is off.</td>
<td>-</td>
</tr>
<tr>
<td>Blinking light</td>
<td>Green</td>
<td>The projector is getting ready to turn on. The douser is closed. The lamp is off.</td>
</tr>
<tr>
<td></td>
<td>Orange</td>
<td>The projector is cooling down.</td>
</tr>
<tr>
<td></td>
<td>Red (With buzzer)</td>
<td>Safety problem, error.</td>
</tr>
<tr>
<td></td>
<td>Red (Without buzzer)</td>
<td>Error with possible image project under certain conditions.</td>
</tr>
<tr>
<td>Steady light</td>
<td>Green</td>
<td>The projector is turned on.</td>
</tr>
<tr>
<td></td>
<td>Orange</td>
<td>The projector is in standby.</td>
</tr>
<tr>
<td></td>
<td>Red</td>
<td>Error at a level with not affect on projection.</td>
</tr>
</tbody>
</table>
6-3. Operation using an HTTP browser

6-3-1. Overview
The use of HTTP server functions will allow control of the projector from a web browser. Please be sure to use “Microsoft Internet Explorer 4.x” or a higher version for the web browser.
This device uses “JavaScript” and “Cookies” and the browser should be set to accept these functions. The setting method will vary depending on the version of the browser. Please refer to the help files and the other information provided in your software.

**NOTE**
The display’s or button’s response can be slowed down or operation may not be accepted depending on the settings of your network.
Should this happen, consult your network administrator.
The projector may not respond if its buttons are repeatedly pressed in rapid intervals. Should this happen, wait a moment and repeat.
Access is gained to the HTTP server functions by and specifying http://<the projector’s IP address>/index.html in the entry column of the URL.

6-3-2. Preparation before use
Make network connections and set up the projector and confirm that it is complete before engaging in browser operations.
Operations with a browser that uses a proxy server may not be possible depending on the type of proxy server and the setting method. Although the type of proxy server will be a factor, it is possible that items that have actually been set will not be displayed depending on the effectiveness of the cache, and the contents set from a browser not be reflected in operation. It is recommended that a proxy server not be used unless it is unavoidable.

6-3-3. Handling of the address for operation via a browser
Regarding the actual address that is entered for the address or entered to the URL column when operation of the projector is via a browser, the host name can be used as it is with the host name corresponding to the IP address of the projector has been registered in the domain name server by a network administrator, or the host name corresponding to the IP address of the projector has been set in the “HOSTS” file of the computer being used.

(Example 1) When the host name of the projector has been set to “pj.nec.co.jp”
http://pj.nec.co.jp/index.html is specified for the address or the entry column of the URL to access HTTP server functions.

(Example 2) When the IP address of the projector is “192.168.10.10”
http://192.168.10.10/index.html is specified for the address or the entry column of the URL to access HTTP server functions.
### 6-3-4. Structure of the HTTP server

| Power | Controls the power to your projector.  
|       | • On: Turns the power on.  
|       | • Off: Turns the power off. |
| Lamp | Turn the lamp on/off.  
|       | • On: Turns the lamp on.  
|       | • Off: Turns the lamp off. |
| Title List | Displays titles set in the projector (such as input port, screen type, and title). Check, and the title will be changed. |
| Basic Control | Displays the basic control items. |
| Lens | Controls the lens operation. |
| Shift | ▲: Shifts the projected screen upward.  
|       | ▼: Shifts the projected screen downward.  
|       | ◀: Shifts the projected screen leftward.  
|       | ◁: Shifts the projected screen rightward.  
|       | ●: Stops the shifting.  
|       | Shifting can also be stopped by clicking the same button one more time. |
| Zoom | ▲: Zooms up the lens.  
|       | ▼: Zooms down the lens.  
|       | ●: Stops the zooming.  
|       | Zooming can also be stopped by clicking the same button one more time. |
| Focus | ▲: Focuses up the lens.  
|       | ▼: Focuses down the lens.  
|       | ●: Stops the focusing.  
|       | Focusing can also be stopped by clicking the same button one more time. |
| Mute | Picture | Click and the douser closes and the projected picture disappears. Click once again and the picture will be projected again. |
| Projector Status | Displays the condition of the projector.  
|       | • Lamp Usage: Displays the hours of lamp use.  
|       | • Lamp Power: Displays lamp output (%).  
|       | • Lamp Status: Displays the status of the lamp (On: Lights / Off: Off).  
|       | • Error Status: Displays the status of errors occurring within the projector.  
|       | • Refresh: Updates the display of the following conditions. |
| DCC Download | You can download and use Digital Cinema Communicator for S2 (DCC) on your computer. Refer to page 71 for how to download DCC. |
6-3-5. Downloading DCC from the projector for use

The execution file of DCC is integrated in the projector. This section describes the procedure for downloading the execution file of DCC from the projector to your computer for use.

The following requirements must be met for this function.

- Java Runtime Environment (JRE) is installed on your computer.
- The following Web browser is being used.
  - When using Windows: Internet Explorer 7.X or later, Mozilla Firefox 2.X or later
  - When using Linux: Mozilla Firefox 3.6 or later

1. Start the Web browser on your computer.

2. Enter “http://(IP address of projector)” for the address of the Web browser, and press the Enter key.

   In the initial status, the IP address of the projector is set to “192.168.10.10”.
   In this case, enter “http://192.168.10.10”.
   The HTTP server screen of the projector is displayed.

3. Click the [DCC(JWS)] button of DCC Download.

   The splash screen of Java is displayed, and the security warning screen for the digital signature is displayed.

   **NOTE** When using Firefox as your Web browser, a dialog confirming how to open the file is displayed.
   - For Windows, select [Java(TM) Web Start Launcher].
   - For Linux, select [JavaWS].
On the security warning screen, confirm the following points and then click the run button.

- [DCC Starter JWS] is displayed for the name.
- [NEC Display Solutions, Ltd.] is displayed for the issuer.
- [(IP address of connected projector)] is displayed for the download source.

The DCC Starter starts and the downloading of DCC starts. Downloading definitely is performed when you click this the first time. From the second time, downloading is not performed when the version of DCC integrated in the projec-
tor matches the version of DCC already downloaded to your computer.

**TIP**
If you select the check box, the security warning screen is not displayed from the next time.

When downloading completes, DCC starts.

**TIP**
The downloaded DCC execution file is saved in the following folder. (If the folder does not exist, a folder is created automatically.)
For Windows:  "C:\DCC\(IP address of connected projector)"
For Linux:  "~/wine/drive_c/DCC/(IP address of connected projector)"
6-4. Writing of the log file (Save Information)

Log files saved on the main unit can be written to USB memory connected to the USB port of the main unit. To perform the writing of the log file, use the following procedure.

1. Connect the USB memory to the USB port of the main unit.
   Wait until the USB memory is recognized, and it enters the condition in which it can be used (5 or more seconds). For details, refer to the instruction guide of the USB memory.

2. Simultaneously press the UP button and ENTER button.
   The “Save Info.” screen is displayed.

3. Press the LEFT/RIGHT button, and select the log file writing period.
   The items that can be selected are as follows.

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Today</td>
<td>Writes today’s log files.</td>
</tr>
<tr>
<td>7days</td>
<td>Writes 7 days’ log files from today.</td>
</tr>
<tr>
<td>30days</td>
<td>Writes 30 days’ log files from today.</td>
</tr>
<tr>
<td>Manual</td>
<td>Writes the specified period’s log files.</td>
</tr>
</tbody>
</table>

4. Press the ENTER button.
   When “Today”, “7days”, or “30days” is selected, the log file writing period is displayed.

   ** Save Info. **
   12/10/01 (Mon)
   Execute

   ← The log file writing period is displayed.
6. Appendix

When “Manual” is selected, specify the log file writing period. For how to enter numerals, refer to “4-1-3. How to enter alphanumeric characters” (See page 41). If you press the ENTER button, the display advances to the following screen.

1. Enter the date/time to start writing.
2. Press the ENTER button.
3. Enter the date/time to stop writing.
4. Press the ENTER button.
5. The log file writing period is displayed.

Confirm the log file writing period, press the LEFT/RIGHT button to select “Execute,” and press the ENTER button.

The log files of the specified period are written to the USB device. When writing completes, the following screen is displayed.

** Save Info. **
Date Filter
From Date
[12/10/01 (Mon)]

** Save Info. **
Date Filter
To Date
[12/10/05 (Fri)]

** Save Info. **
12/10/01 (Mon)
12/10/05 (Fri)

The log file writing period is displayed.

6. Confirm the log file writing period, press the LEFT/RIGHT button to select “Execute,” and press the ENTER button.

The log files of the specified period are written to the USB device. When writing completes, the following screen is displayed.

** Save Info. **
Complete(USB1)
(OK)

** Save Info. **
Complete(USB2)
(OK)

** Save Info. **
Complete(USB3)
(OK)

TIP If you select “Cancel” and press the ENTER button, the writing of log files is stopped, and the display returns to the normal screen.

Press the ENTER button.
The display returns to the normal screen.

7. Remove the USB from the USB port of the main unit.
### 6-4-1. Names of log files

Written log files are saved with the following file names.

<table>
<thead>
<tr>
<th>N?</th>
<th>This shows the model of projector. The numeral of the “?” portion differs depending on the model.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N1: NC3200S Series</td>
</tr>
<tr>
<td></td>
<td>N3: NC1200C Series</td>
</tr>
<tr>
<td></td>
<td>N4: NC2000C Series</td>
</tr>
<tr>
<td></td>
<td>N6: NC3240S Series</td>
</tr>
<tr>
<td></td>
<td>N7: NC900C Series</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>YYMMDD</th>
<th>Shows the date/time when written.</th>
</tr>
</thead>
<tbody>
<tr>
<td>YY</td>
<td>Year (lower 2 digits)</td>
</tr>
<tr>
<td>MM</td>
<td>Month (2 digits)</td>
</tr>
<tr>
<td>DD</td>
<td>Date (2 digits)</td>
</tr>
</tbody>
</table>

For example, if NC900C-A log file is written on October 1, 2012, it is saved with the "N7121001.txt" file name.
6-5. Outline Drawing

Units: mm
## 6-6. Specifications

<table>
<thead>
<tr>
<th>Model name</th>
<th>NC900C-A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Projection method</td>
<td>3 chip DLP Cinema® method</td>
</tr>
<tr>
<td>0.69-inch DC2K chip</td>
<td></td>
</tr>
<tr>
<td>Panel resolution</td>
<td>2048 x 1080</td>
</tr>
<tr>
<td>Lamp type</td>
<td>350W AC lamp</td>
</tr>
<tr>
<td>Screen sizes</td>
<td>7 m to 8.1 m @14ft-L / Screen Gain 1.3, Max. 9.5 m @14ft-L / Screen Gain 1.8 (Depends on setup conditions)</td>
</tr>
<tr>
<td>Contrast ratio</td>
<td>1600:1 with DCI specified color representation</td>
</tr>
<tr>
<td>Lens adjustment function</td>
<td>Motorized lens shift (vertical/horizontal), motorized zoom, motorized focus, douser</td>
</tr>
<tr>
<td>Signal input ports</td>
<td>When shipped from factory: Empty (for mounting optional components) (Note 1)</td>
</tr>
<tr>
<td>External Control</td>
<td>RS-232C (D-sub 9pin) x 1</td>
</tr>
<tr>
<td>GPIO port (D-sub 37 pin) x 1</td>
<td></td>
</tr>
<tr>
<td>Service terminal (stereo mini jack) x 1</td>
<td></td>
</tr>
<tr>
<td>3D CTL (D-sub 15 pin) x 1</td>
<td></td>
</tr>
<tr>
<td>USB (Type A) x 1</td>
<td></td>
</tr>
<tr>
<td>Interlock port x 1</td>
<td></td>
</tr>
<tr>
<td>Ethernet port (G-bit RJ-45) x 1</td>
<td></td>
</tr>
<tr>
<td>Power supply voltage</td>
<td>AC 100 to 130 V, 50/60 Hz single phase</td>
</tr>
<tr>
<td>AC 200 to 240 V, 50/60 Hz single phase</td>
<td></td>
</tr>
<tr>
<td>Input current</td>
<td>10.3 to 7.9 A (100 to 130 V)</td>
</tr>
<tr>
<td>5.1 to 4.3 A (200 to 240 V)</td>
<td></td>
</tr>
<tr>
<td>Power consumption</td>
<td>1023 W (100 to 130 V) (Note 2)</td>
</tr>
<tr>
<td>985 W (200 to 240 V) (Note 2)</td>
<td></td>
</tr>
<tr>
<td>Cooling method</td>
<td>Cooling air system (includes dust filter)</td>
</tr>
<tr>
<td>Noise level</td>
<td>Less than 52 dB</td>
</tr>
<tr>
<td>Installation</td>
<td>Orientation: Desktop/front, Desktop/rear, Ceiling/front, Ceiling/rear</td>
</tr>
<tr>
<td>Net weight</td>
<td>44 kg (Excluding lens)</td>
</tr>
<tr>
<td>Dimensions</td>
<td>621 mm (W) x 798 mm (D) x 314 mm (H) (Does not include protruding portions, includes foot.)</td>
</tr>
<tr>
<td>Environment</td>
<td>Operating temperature: 10 to 35°C</td>
</tr>
<tr>
<td>Operating humidity: 10 to 85% (non-condensing)</td>
<td></td>
</tr>
<tr>
<td>Storage temperature: -10 to 50°C</td>
<td></td>
</tr>
<tr>
<td>Storage humidity: 10 to 85% (non-condensing)</td>
<td></td>
</tr>
<tr>
<td>Operating altitude: 0 to 3000m/9800 feet (1600m/5500 feet to 3000m/9800 feet: Set &quot;Fan Speed Mode&quot; to &quot;High Altitude&quot;)</td>
<td></td>
</tr>
<tr>
<td>Regulations</td>
<td>&lt;Safety&gt;</td>
</tr>
<tr>
<td>USA</td>
<td>UL60950-1 2nd Edition</td>
</tr>
<tr>
<td>Canada</td>
<td>CSA60950-1 2nd Edition</td>
</tr>
<tr>
<td>Europe</td>
<td>EN60950-1 2nd Edition</td>
</tr>
<tr>
<td>Russia</td>
<td>IEC60950-1 2nd Edition, GOST-R, Hygenic</td>
</tr>
<tr>
<td>Oceania</td>
<td>IEC60950-1 2nd Edition</td>
</tr>
<tr>
<td>Asia</td>
<td>IEC60950-1 2nd Edition</td>
</tr>
<tr>
<td>Korea</td>
<td>K60950-1</td>
</tr>
<tr>
<td>Saudi Arabia</td>
<td>SASO</td>
</tr>
<tr>
<td>Japan</td>
<td>JE60950-1</td>
</tr>
</tbody>
</table>

(Note 1) The video input slots are empty when the device is shipped. The optional Signal Input Board is available as separate optional products.

(Note 2) The value is typical.

* Note that these specifications and design can change without prior notice.
6. Appendix

6-7. Power Cable

**NOTE** Ask your dealer for the power cable to select and purchase.

**Power Cable Electrical Specification**

The projector is equipped with an IEC60320 C19 connector to connect an AC power supply cable. Ensure that the AC power cables that connect the connectors built into the projector to the AC power mains have the current capacities as shown below.

<table>
<thead>
<tr>
<th>Power supply voltage</th>
<th>Projector input current</th>
<th>Power cable current capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>AC 100–130V</td>
<td>10.3 to 7.9A</td>
<td>125V 15A or higher</td>
</tr>
<tr>
<td></td>
<td></td>
<td>250V 15A or higher</td>
</tr>
<tr>
<td>AC 200–240V</td>
<td>5.1 to 4.3A</td>
<td>250V 15A or higher</td>
</tr>
</tbody>
</table>

**Type of Power Cable**

Use plugs, cables, and connectors that are suitable for the regulations of the country of installation, as shown in the following table.

**NOTE** For users in North America

Use a power cable no longer than 4.5m/14.76 ft according to National Electrical Code.

**Germany**

<table>
<thead>
<tr>
<th>Plug</th>
<th>Cable</th>
<th>Connector</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEE 7</td>
<td>H05VV-F 3G1.5</td>
<td>IEC 320 C19</td>
</tr>
</tbody>
</table>

**USA**

<table>
<thead>
<tr>
<th>Plug</th>
<th>Cable</th>
<th>Connector</th>
</tr>
</thead>
<tbody>
<tr>
<td>NEMA 5-15P</td>
<td>SJT 3 x AWG 14</td>
<td>IEC 320 C19</td>
</tr>
</tbody>
</table>
## 6. Appendix

**Japan**

<table>
<thead>
<tr>
<th>Plug</th>
<th>Cable</th>
<th>Connector</th>
</tr>
</thead>
<tbody>
<tr>
<td>JIS C 8303</td>
<td>VCTF 3 x 2.0mm</td>
<td>IEC 320 C19</td>
</tr>
</tbody>
</table>

**China**

<table>
<thead>
<tr>
<th>Plug</th>
<th>Cable</th>
<th>Connector</th>
</tr>
</thead>
<tbody>
<tr>
<td>GB2099</td>
<td>RVV 300/500</td>
<td>GB17465.1</td>
</tr>
</tbody>
</table>

**Connector**

Dimensions of the connector of the power cable are shown below.
6-Appendix

6-8. Pin Assignment and Functions of Terminal

6-8-1. PC CONTROL connector (RS-232) (D-Sub 9 pin)

This is an RS-232C interface for controlling the projector from a PC. The projector operates as a DCE (Data Communication Equipment), so use a straight cable when connecting to a PC.

<table>
<thead>
<tr>
<th>Pin No.</th>
<th>RS-232C Signal Name</th>
<th>Functions as RS-232C</th>
<th>Projector Connector Operation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>CD</td>
<td>Carrier detection</td>
<td>Not used (N.C.)</td>
</tr>
<tr>
<td>2</td>
<td>RXD</td>
<td>Reception data</td>
<td>Data transmission to an external device</td>
</tr>
<tr>
<td>3</td>
<td>TXD</td>
<td>Transmission data</td>
<td>Data reception from an external device</td>
</tr>
<tr>
<td>4</td>
<td>DTR</td>
<td>Data Terminal ready (Note)</td>
<td>Connection to 6 pins</td>
</tr>
<tr>
<td>5</td>
<td>GND</td>
<td>Signal GND</td>
<td>Signal GND</td>
</tr>
<tr>
<td>6</td>
<td>DSR</td>
<td>Data set ready (Note)</td>
<td>Connection to 4 pins</td>
</tr>
<tr>
<td>7</td>
<td>RTS</td>
<td>Transmission request</td>
<td>SYSTEM: Hi-Z (Not used)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>CINEMA: Hi-Z (Used)</td>
</tr>
<tr>
<td>8</td>
<td>CTS</td>
<td>Transmission available</td>
<td>SYSTEM: Fixed at -6.5 V (Not used)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>CINEMA: ±10.5 V (Used: Depends on communication status)</td>
</tr>
<tr>
<td>9</td>
<td>RI</td>
<td>Ring indicator</td>
<td>Not used (N.C.)</td>
</tr>
</tbody>
</table>

(Note) Do not use DTR and DSR signals when communicating.
6-8-2. External control connector (GP I/O) (D-Sub 37 pin)

It is possible to control the projector with an external device and to control the external device from the projector using an external control connector (GPIO: General Purpose I/O Ports). Each pin is electrically separated from the projector internal circuits by a photo-coupler. 8 port input and 8 port output are available.

Please contact your dealer/distributor regarding how to use and to operate them.

<table>
<thead>
<tr>
<th>Pin No.</th>
<th>Signal Name</th>
<th>I/O</th>
<th>Pin No.</th>
<th>Signal Name</th>
<th>I/O</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>GPIN1+ (3D L/R Input Reference +)</td>
<td>IN</td>
<td>20</td>
<td>GPIN1- (3D L/R Input Reference -)</td>
<td>IN</td>
</tr>
<tr>
<td>2</td>
<td>GPIN2+ (3D L/R Display Reference +)</td>
<td>IN</td>
<td>21</td>
<td>GPIN2- (3D L/R Display Reference -)</td>
<td>IN</td>
</tr>
<tr>
<td>3</td>
<td>GPIN3+ (system reserved)</td>
<td>IN</td>
<td>22</td>
<td>GPIN3- (system reserved)</td>
<td>IN</td>
</tr>
<tr>
<td>4</td>
<td>GPIN4+ (system reserved)</td>
<td>IN</td>
<td>23</td>
<td>GPIN4- (system reserved)</td>
<td>IN</td>
</tr>
<tr>
<td>5</td>
<td>EXT_GPIN1+ (Control and Title Selection +)</td>
<td>IN</td>
<td>24</td>
<td>EXT_GPIN1- (Control and Title Selection -)</td>
<td>IN</td>
</tr>
<tr>
<td>6</td>
<td>EXT_GPIN2+ (Control and Title Selection +)</td>
<td>IN</td>
<td>25</td>
<td>EXT_GPIN2- (Control and Title Selection -)</td>
<td>IN</td>
</tr>
<tr>
<td>7</td>
<td>EXT_GPIN3+ (Control and Title Selection +)</td>
<td>IN</td>
<td>26</td>
<td>EXT_GPIN3- (Control and Title Selection -)</td>
<td>IN</td>
</tr>
<tr>
<td>8</td>
<td>EXT_GPIN4+ (Control and Title Selection +)</td>
<td>IN</td>
<td>27</td>
<td>EXT_GPIN4- (Control and Title Selection -)</td>
<td>IN</td>
</tr>
<tr>
<td>9</td>
<td>GPOUT1+ (External 3D L/R Output Reference +)</td>
<td>OUT</td>
<td>28</td>
<td>GPOUT1- (External 3D L/R Output Reference -)</td>
<td>OUT</td>
</tr>
<tr>
<td>10</td>
<td>GPOUT2+ (system reserved)</td>
<td>OUT</td>
<td>29</td>
<td>GPOUT2- (system reserved)</td>
<td>OUT</td>
</tr>
<tr>
<td>11</td>
<td>GPOUT3+ (system reserved)</td>
<td>OUT</td>
<td>30</td>
<td>GPOUT3- (system reserved)</td>
<td>OUT</td>
</tr>
<tr>
<td>12</td>
<td>GPOUT4+ (Internal 3D L/R Output Reference +)</td>
<td>OUT</td>
<td>31</td>
<td>GPOUT4- (Internal 3D L/R Output Reference -)</td>
<td>OUT</td>
</tr>
<tr>
<td>13</td>
<td>EXT_GPOUT1+ (Projector Ready/Busy +)</td>
<td>OUT</td>
<td>32</td>
<td>EXT_GPOUT1- (Projector Ready/Busy -)</td>
<td>OUT</td>
</tr>
<tr>
<td>14</td>
<td>EXT_GPOUT2+ (Projector Error Status +)</td>
<td>OUT</td>
<td>33</td>
<td>EXT_GPOUT2- (Projector Error Status -)</td>
<td>OUT</td>
</tr>
<tr>
<td>15</td>
<td>EXT_GPOUT3+ (IMB Play/End Status +)</td>
<td>OUT</td>
<td>34</td>
<td>EXT_GPOUT3- (IMB Play/End Status -)</td>
<td>OUT</td>
</tr>
<tr>
<td>16</td>
<td>EXT_GPOUT4+ (Projector Heartbeat +)</td>
<td>OUT</td>
<td>35</td>
<td>EXT_GPOUT4- (Projector Heartbeat -)</td>
<td>OUT</td>
</tr>
<tr>
<td>17</td>
<td>NC (not connected)</td>
<td>-</td>
<td>36</td>
<td>NC (not connected)</td>
<td>-</td>
</tr>
<tr>
<td>18</td>
<td>GND PWR</td>
<td>37</td>
<td>GND PWR</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>19</td>
<td>GND PWR</td>
<td>37</td>
<td>GND PWR</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

**EXT_GPIN1 - EXT_GPIN4:** You can control the projector externally by combinations of input signals (high/low). (Projector power supply/turning the lamp on or off/image mute/title selection)

**EXT_GPOUT1 - EXT_GPOUT4:** Functions in the above table are default settings. You can change the assigned functions.
6. Appendix

Input Connector

- Using GPIO Control
  Momentary "ON" pulse enables you to control projector. To enable "ON" pulse, hold it for at least 500 ms. Hold "OFF" for at least 500 ms before "ON". (See page 83)

Here is function list to control projector by using GPIO port.

<table>
<thead>
<tr>
<th>Pin No.</th>
<th>Photo-coupler ON/OFF</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-20</td>
<td>ON/OFF</td>
<td>3D L/R timing signal input ON/OFF</td>
</tr>
<tr>
<td>2-21</td>
<td>ON/OFF</td>
<td>3D L/R display timing signal input ON/OFF</td>
</tr>
<tr>
<td>3-22</td>
<td>-</td>
<td>System reserved (used internally)</td>
</tr>
<tr>
<td>4-23</td>
<td>-</td>
<td>System reserved (used internally)</td>
</tr>
</tbody>
</table>

5-24 6-25 7-26 8-27

<table>
<thead>
<tr>
<th>8-27</th>
<th>7-26</th>
<th>6-25</th>
<th>5-24</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFF</td>
<td>OFF</td>
<td>ON</td>
<td>OFF</td>
<td>Power ON</td>
</tr>
<tr>
<td>OFF</td>
<td>OFF</td>
<td>ON</td>
<td>OFF</td>
<td>Power OFF</td>
</tr>
<tr>
<td>OFF</td>
<td>OFF</td>
<td>ON</td>
<td>ON</td>
<td>Lamp ON</td>
</tr>
<tr>
<td>OFF</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>Lamp OFF</td>
</tr>
<tr>
<td>OFF</td>
<td>ON</td>
<td>OFF</td>
<td>ON</td>
<td>Image douser ON</td>
</tr>
<tr>
<td>OFF</td>
<td>ON</td>
<td>ON</td>
<td>OFF</td>
<td>Image douser OFF</td>
</tr>
<tr>
<td>OFF</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
<td>System reserved (used internally)</td>
</tr>
<tr>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>Selects the title registered to the preset button 1</td>
</tr>
<tr>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>ON</td>
<td>Selects the title registered to the preset button 2</td>
</tr>
<tr>
<td>ON</td>
<td>OFF</td>
<td>ON</td>
<td>ON</td>
<td>Selects the title registered to the preset button 3</td>
</tr>
<tr>
<td>ON</td>
<td>OFF</td>
<td>ON</td>
<td>OFF</td>
<td>Selects the title registered to the preset button 4</td>
</tr>
<tr>
<td>ON</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>Selects the title registered to the preset button 5</td>
</tr>
<tr>
<td>ON</td>
<td>ON</td>
<td>OFF</td>
<td>ON</td>
<td>Selects the title registered to the preset button 6</td>
</tr>
<tr>
<td>ON</td>
<td>ON</td>
<td>ON</td>
<td>OFF</td>
<td>Selects the title registered to the preset button 7</td>
</tr>
<tr>
<td>ON</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
<td>Selects the title registered to the preset button 8</td>
</tr>
</tbody>
</table>

Example for dousing image: Input ON to 5-24 and 7-26 while 6-25 and 8-27 are OFF.
Example for selecting the preset button 2: Input ON to 5-24 and 8-27 while 6-25 and 7-26 are OFF.

Note:
- The operation command coming from GPI/O port will be canceled when the projector is processing other tasks, such as lamp cooling and switching title.
- Set all other pins than those in use to "OFF".
- The operation command is executed upon continuous input of the "ON" pulse for approximately 200 ms.
• Timing chart of GPIO control

Example of Select Preset Button

Example for turning the image douser (Douser) on

Example of Lamp On
Example for turning the power off

Execute
Power OFF
6. Appendix

Output Connector

GP I/O Connector | Inside Projector

Ext_GPOUT_P
Ext_PROJ_GOOD_P

Pin No.: 9 10 11 12 13 14 15 16

Absolute Maximum Rating: 50 mA

Ext_GPOUT_N
Ext_PROJ_GOOD_N

Pin No.: 28 29 30 31 32 33 34 35

• Using GPIO Control
You can use GPIO control for the projector’s health check and error check. Also, you can use the output as the trigger to control external devices.
The following functions are assigned to the pin number 13-32, 14-33, 15-34, and 16-35 (EXT_GPOUT1 - EXT_GPOUT4) as the default. You can change the assigned functions.

<table>
<thead>
<tr>
<th>Pin No.</th>
<th>Photo-coupler ON/OFF</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>9-28</td>
<td>ON/OFF</td>
<td>External 3D L/R timing signal output ON/OFF</td>
</tr>
<tr>
<td>10-29</td>
<td>–</td>
<td>System reserved (used internally)</td>
</tr>
<tr>
<td>11-30</td>
<td>–</td>
<td>System reserved (used internally)</td>
</tr>
<tr>
<td>12-31</td>
<td>ON/OFF</td>
<td>Internal 3D L/R timing signal output ON/OFF</td>
</tr>
</tbody>
</table>
| 13-32   | ON/OFF              | GPIO control status check
ON: GPIO control (input) is unavailable.
OFF: GPIO control (input) is available. |
| 14-33   | ON/OFF              | Error check
ON: Error
OFF: No error |
| 15-34   | ON/OFF              | IMB status check
ON: The content is being played.
OFF: The content is stopped/paused. |
| 16-35   | ON/OFF              | Health check (heart beat)
ON and OFF are alternately output when operations are normal. |
6. Appendix

6-8-3. 3D connector (D-sub 15 pin)
This is used to connect a 3D image system to the projector.

Pin view of a female connector

<table>
<thead>
<tr>
<th>Pin No.</th>
<th>Signal Name</th>
<th>I/O</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>+12V</td>
<td>PWR</td>
<td>Supplies power (+12V) to the 3D image system</td>
</tr>
<tr>
<td>2</td>
<td>GNDC</td>
<td>GND</td>
<td>Ground</td>
</tr>
<tr>
<td>3</td>
<td>GNDC</td>
<td>GND</td>
<td>Ground</td>
</tr>
<tr>
<td>4</td>
<td>RS232_RX</td>
<td>IN</td>
<td>Data transmission from the 3D image system (1200 Baud, 8 bits, No Parity)</td>
</tr>
<tr>
<td>5</td>
<td>RS232_TX</td>
<td>OUT</td>
<td>Data transmission to the 3D image system (1200 Baud, 8 bits, No Parity)</td>
</tr>
<tr>
<td>6</td>
<td>CONN_3D_MODE+</td>
<td>OUT</td>
<td>3D mode status (+) (Connects to the collector of the output transistor of the photo coupler inside the projector)</td>
</tr>
<tr>
<td>7</td>
<td>CONN_SYNC+</td>
<td>OUT</td>
<td>3D L/R switching timing signal (+) (Connects to the collector of the output transistor of the photo coupler inside the projector)</td>
</tr>
<tr>
<td>8</td>
<td>3D_INPUT_REFERENCE+</td>
<td>IN</td>
<td>3D L/R timing signal (+) (Connects to the anode of the input diode of the photo coupler inside the projector)</td>
</tr>
<tr>
<td>9</td>
<td>+12V</td>
<td>PWR</td>
<td>Supplies power (+12V) to the 3D image system</td>
</tr>
<tr>
<td>10</td>
<td>3D_INPUT_REFERENCE−</td>
<td>IN</td>
<td>3D L/R timing signal (−) (Connects to the cathode of the input diode of the photo coupler inside the projector)</td>
</tr>
<tr>
<td>11</td>
<td>3D_DISPLAY_REFERENCE+</td>
<td>IN</td>
<td>3D L/R display timing signal (+) (Connects to the anode of the input diode of the photo coupler inside the projector)</td>
</tr>
<tr>
<td>12</td>
<td>3D_DISPLAY_REFERENCE−</td>
<td>IN</td>
<td>3D L/R display timing signal (−) (Connects to the cathode of the input diode of the photo coupler inside the projector)</td>
</tr>
<tr>
<td>13</td>
<td>CONN_3D_MODE−</td>
<td>OUT</td>
<td>3D mode status (−) (Connects to the emitter of the output transistor of the photo coupler inside the projector)</td>
</tr>
<tr>
<td>14</td>
<td>CONN_SYNC−</td>
<td>OUT</td>
<td>3D L/R switching timing signal (−) (Connects to the emitter of the output transistor of the photo coupler inside the projector)</td>
</tr>
<tr>
<td>15</td>
<td>N/C</td>
<td>−</td>
<td>Unused</td>
</tr>
</tbody>
</table>
### 6-9. Related products list

<table>
<thead>
<tr>
<th>Product name</th>
<th>Model name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lens</td>
<td>Zoom lens 1.36 to 1.63 NP-9LS14Z</td>
</tr>
<tr>
<td></td>
<td>Zoom lens 1.63 to 2.03 NP-9LS16Z</td>
</tr>
<tr>
<td></td>
<td>Zoom lens 2.03 to 2.72 NP-9LS20Z</td>
</tr>
<tr>
<td></td>
<td>Zoom lens 2.72 to 4.07 NP-9LS27Z</td>
</tr>
<tr>
<td></td>
<td>Zoom lens 4.07 to 6.34 NP-9LS40Z</td>
</tr>
<tr>
<td>Lamp</td>
<td>Replacement Lamp NP-9LP01</td>
</tr>
<tr>
<td>Air Filter</td>
<td>Replacement Filter NP-9AF01</td>
</tr>
<tr>
<td>Lamp and Air Filter Kit</td>
<td>Replacement Lamp and Filter NP-9LF01</td>
</tr>
<tr>
<td>Integrated Media Server</td>
<td>Integrated Media Server NC-90MS01</td>
</tr>
<tr>
<td>Signal Input Board (supports CineLink™ 2) (Note 1)</td>
<td>Signal Input Board NC-80LB01-B</td>
</tr>
<tr>
<td>Signal Input Board (does not support CineLink™ 2) (Note 1)</td>
<td>Signal Input Board NC-80DS01-B</td>
</tr>
</tbody>
</table>

(Note 1) What is HDCP/HDCP technology?

HDCP is an acronym for High-bandwidth Digital Content Protection. High bandwidth Digital Content Protection (HDCP) is a system for preventing illegal copying of video data sent over a Digital Visual Interface (DVI).

If you are unable to view material via the DVI input, this does not necessarily mean the projector is not functioning properly. With the implementation of HDCP, there may be cases in which certain content is protected with HDCP and might not be displayed due to the decision/intention of the HDCP community (Digital Content Protection, LLC).