

DLP Cinema® Projector

NEC

Installation Manual

DLP Cinema® Projector

NC3541L

NC2041L

NEC Display Solutions, Ltd.

Model No. NP-NC3541L, NP-NC2041L

Introduction

DLP Cinema Projector Installation and Adjustment NEC Display Solutions, Ltd. Manual (This document) describes the procedures to install, adjust and maintain the projector and peripheral devices. For safe and correct installation, adjustment and use of this projector, carefully read this document before location assessment and installation.

Refer to the operation manuals of the applicable products for basic operation and remarks of the projector. This document expects the readers who have basic knowledge about projector installation. After reading, please keep this document under care of the company which installed or adjusted the projector.

The product name used in this manual

In this manual, the device name is written as listed below. If the function has difference by devices, the product name is written in the text.

- NC3541L / NC2041L
- NP-90MS01 / NP-90MS02
- Digital Cinema Communicator v2

Projector
Media block or IMS
DCC

Important Information

Precautions

Please read this manual carefully before using your **NC3541L/NC2041L** and keep the manual handy for future reference. The NC3541L/NC2041L (projector unit) is called the “projector”, and the NP-90MS01/NP-90MS02 (integrated Media server) is called the “media block” or “IMB” in this manual.

- DLP (Digital Light Processing), DLP Cinema, DLP Cinema logo and CineLink are trademarks of Texas Instruments.
- CineLink is a trademark of Texas Instruments.
- Other product names and logos mentioned in the user’s manual may be the trademarks or registered trademarks of their respective holders.
- 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 REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

CAUTION

TO PREVENT ELECTRIC SHOCK, DO NOT OPEN TOP COVER. NO USER SERVICEABLE PARTS INSIDE.



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.

Laser Safety Caution

This product is classified as Class 1 of IEC60825-1 Third edition 2014. This product is classified as RG3 of IEC62471-5 First edition 2015. This product is classified as RG3 of IEC62471:2006.(for USA). Obey the laws and regulations of your country in relation to the installation and management of the device.

CAUTION

Use of controls or adjustments of procedures other than those specified herein may lead to hazardous laser radiation exposure.

- Hazardous optical radiation is emitted from this product, RG3 IEC 62471: 2006. (for USA)
- No direct exposure to the beam shall be permitted, RG3 IEC 62471-5: 2015.
- Do not look into the lens while the projector is on. Serious damage to your eyes could result.



- 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.
- When turning on the projector, ensure that nobody is facing towards the lens in the path of the light emitted from the laser.
- This product can only be operated in theaters by specified personnel. Customers should not operate this product.

DOC Compliance Notice (for Canada only)

This Class A digital apparatus meets all requirements of the Canadian ICES-003 Standards.

Machine Noise Information Regulation - 3. GPSGV,

The highest sound pressure level is less than 70 dB (A) in accordance with EN ISO 7779.

Important Information

WARNING

This equipment is compliant with Class A of CISPR 32. In a residential environment this equipment may cause radio interference.

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.

WARNING

THE END USER IS NOT ALLOWED TO OPEN OR MODIFY THE PRODUCT.
NO USER SERVICEABLE PARTS.
MAINTENANCE AND SERVICE OF THE PRODUCT IS ONLY TO BE HANDLED BY NEC AUTHORIZED TECHNICIANS.

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. Do not point the projection beam toward other people or reflective objects.
2. 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.
3. Place the projector on a flat, level surface in a dry area away from dust and moisture. Do not put the projector on its side when the Laser is on. Doing so may cause damage to the projector.
4. Do not place the projector in direct sunlight, near heaters or heat radiating appliances.

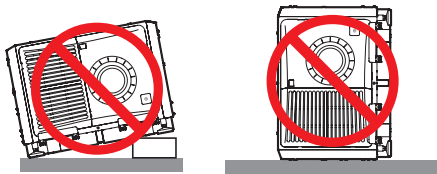
5. Exposure to direct sunlight, smoke or steam could harm internal components.
6. Handle your projector carefully. Dropping or jarring your projector could damage internal components.
7. To carry the projector, a minimum of six persons are required.
8. Do not hold the lens part with your hand. Otherwise the projector may tumble or drop, causing personal injury.
9. Do not place heavy objects on top of the projector.
10. Turn off the projector, and disconnect the power cable before moving the projector.
For C2 connection, turn off the projector, shut down the AC power to the projector and the light using a circuit breaker. Disconnect the cables between devices and the light before moving the projector.
11. Do not install and store the projector in the below circumstances. Failure to do so may cause of malfunction.
 - In powerful magnetic fields
 - In corrosive gas environment
 - Outdoors
12. 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.
 - Install the breaker in a location that is easy to reach by hand.
 - In addition, to prevent ceiling collapse, the ceiling should be able to support total weight of 177kg (projector weight of 169kg, lens weight of 8kg) for an extended period of time, and the installation must be in accordance with any local building codes.
 - Please consult your dealer for more information.Refer to "2-2-1. Installing the Projector on the Ceiling" (page 40) for details on the attachment positions when installing on the ceiling.

WARNING

1. Do not use the projector with the supplied lens cap or equivalent while the projector is operating. This may cause the lens cap to heat up and deform or melt.
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.



It is possible to vertically set up this device at 360 degrees. However, please do not set up the main part of the device slanted to the left or right because it may result in malfunctions.



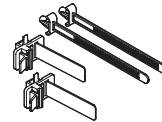
Power Supply

1. Consult your dealer for installing the power cable to the projector. DO NOT install the power cable by yourself. Doing so may cause a fire or electric shock. The projector is so designed that it operates with the power supply voltage described below. For C1 connection (When the AC power to the projector power supply and the light power supply is provided by a single cable)
 - AC 200V-240V single phase 50/60Hz
 For C2 connection (When the AC power to the projector power supply and the light power supply is provided by separate cables)
 - AC 200V-240V single phase 50/60Hz (projector power supply)
 - AC 200V-240V single phase 50/60Hz (light power supply)
 Ensure that your power supply fits this requirement before attempting to use your projector.
2. 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. Refer to “2-3. Selecting the Power Cable for C2 Connection (English)” for details.
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.

CAUTION

The power cable stopper (shown in below) is supplied with this projector.

To prevent the power cable from coming loose, make sure that all the prongs of the power cable are fully inserted into the AC IN terminal of the projector before using the power cable stopper to fix the power cable. A loose contact of the power cable may cause a fire or electric shock. For using the power cable stopper, refer to the user's manual.



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 24 inches (60 cm) of space between your projector and a wall. In particular, clear a space of 26.7 inches (70 cm) or more in front of the air outlet on the rear surface and 12 inches (30 cm) or more on the upper part of the projector body. (See page 24)
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, shut down the AC power to the projector immediately and have the object removed by a qualified service person. For C2 connection, turn off the projector, shut down the AC power to the projector and the light using a circuit breaker, and contact your dealer/distributor.
3. Turn off the projector, shut down AC power by using a circuit breaker and contact qualified service personnel under the following conditions. For C2 connection, turn off the projector, shut down the AC power to the projector and the light using a circuit breaker, and contact your dealer/distributor for a repair.
 - 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. When using a LAN cable: For safety, do not connect to the connector for peripheral device wiring that might have excessive Voltage.

Cleaning

1. Shut down AC power by using a circuit breaker before cleaning.
For C2 connection, turn off the projector, shut down the AC power to the projector and the light using a circuit breaker.
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 handle the projector and the power cable with wet hands. Doing so can cause electrical shock or fire.

CAUTION

1. Do not shut down AC power to the projector under the following conditions.
Doing so can damage the projector.
 - While projecting images
 - While cooling after the power is turned off.
(The STATUS indicator LED blinks in orange while the fan is rotating, and "cooling..." is displayed on the LCD screen.)
 - When using the NP-90MS01/NP-90MS02: 100 seconds
 - During IMB Operation (if the projector is not in standby state)
2. Do not turn off the AC power for 90 seconds after the Laser is turned on and while the POWER indicator is blinking green. Doing so could cause premature Laser failure.
3. Keep hands away from the lens mounting portion while the lens shift is in operation. Failure to do so could result in fingers being pinched between the cabinet and lens cover.
4. When main body is damaged, cooling fluids may come out of internal part. DO NOT touch and drink the cooling fluid.
When the cooling fluids are swallowed or contacted with your eyes, please consult with doctors immediately.

Caution on Carrying the Projector/Handling the Optional Lens

When installing/removing a lens, shut down the AC power to the projector.

When shipping the projector with the lens, remove the lens before shipping the projector. Always attach the dust cap to the lens whenever it is not mounted on the projector. The lens and the lens shift mechanism may encounter damage caused by improper handling during transportation.

Handling the Battery

- Take care when handling the battery, as it could cause fire, injury, or damage to surrounding objects.
 - Do not short out, dismantle, or place batteries in a fire.
- Dispose of used batteries according to your local regulations.
- There is a battery mounted on the electronic circuit board within the main unit. When disposing of the main unit, do not dismantle the device or remove the internal circuit board, and contact the shop where you purchased the product or your local government agency.

Peripheral Devices and Connecting Cables

Use shielded cables for the cables connecting the IMB with peripheral devices (GPI, GPO, AES cables). If you use a non-shielded cable, there is a risk that radio interference may occur.

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

Light Module

1. A light module containing multiple laser diodes is included in the product as the light source.
2. These laser diodes are sealed in the light module. No maintenance or service is required for the performance of the light module.
3. End user is not allowed to replace the light module.
4. Contact qualified distributor for light module replacement and further information.

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. 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 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 EU: The crossed-out wheeled bin implies that used batteries should not be put to the general household waste! There is a separate collection system for used batteries, to allow proper treatment and recycling in accordance with legislation.

According to the EU directive 2006/66/EC, the battery can't be disposed improperly. The battery shall be separated to collect by local service.

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 Munich, 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: +8610-4008-900-678
 Email Address: nec-support@nec.cn

In Hong Kong and Taiwan

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: Felix.chen@btn-inc.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>

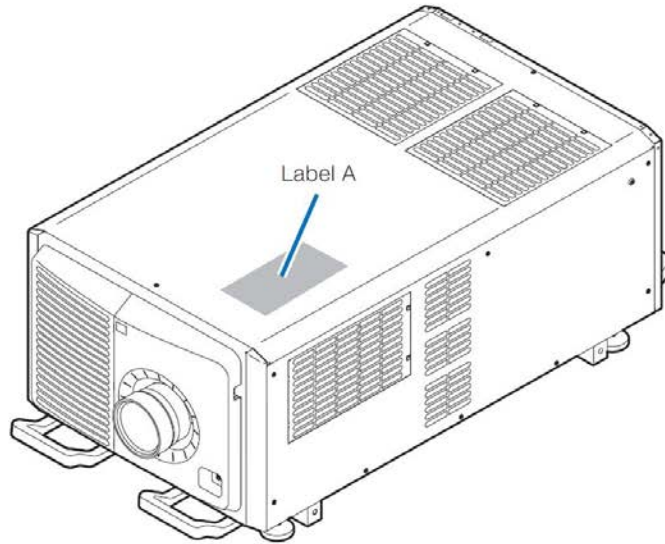
In Australia and New Zealand

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>

In Thailand, Singapore, Malaysia, Indonesia and Philippines

Company Name: Goldenduck International Co., Ltd.
 Address: 65 Soi Phutthamothon Sai 1, 21 Bangramad, Talingchan, Bangkok, Thailand 10170
 Telephone: +66-2887-8807
 Fax Line: +66-2887-8808
 Email Address: contact@goldenduckgroup.com

Label Information



Label A : Risk Group / Lamp Safety Label

RISK GROUP 3
WARNING
DO NOT LOOK INTO THE BEAM.
NO DIRECT EYE EXPOSURE TO THE BEAM IS PERMITTED.
HAZARD DISTANCE: REFER TO THE MANUAL.

GRUPE DE RISQUE 3
AVERTISSEMENT
NE PAS REGARDER DIRECTEMENT DANS LE FAISCEAU.
L'EXPOSITION DIRECTE DES YEUX AU FAISCEAU EST INTERDITE.
DISTANCE A RISQUE: SE REPORTER AU MANUEL.

RISIKOGRUPPE 3
WARNUNG
SCHAUEN SIE NICHT IN DEN STRAHL.
DIREKTER AUGENKONTAKT MIT DEM STRAHL IST NICHT ERLAUBT.
SICHERHEITSABSTAND: SIEHE HANDBUCH.

ГРУППА РИСКА 3
ПРЕДУПРЕЖДЕНИЕ
НЕ СМОТРИТЕ НА ЛУЧ.
ЗАПРЕЩАЕТСЯ ЛЮБОЕ ПРЯМОЕ ВОЗДЕЙСТВИЕ ЛУЧА НА ГЛАЗА.
ОПАСНОЕ РАССТОЯНИЕ: СМ. РУКОВОДСТВО ПО ЭКСПЛУАТАЦИИ.

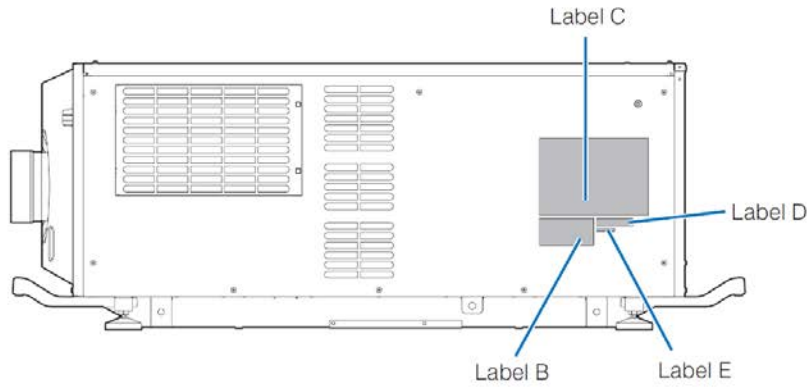
リスクグループ 3
警告
ビームを見ないこと。
目へのビームの直接被曝を禁止する。
障害距離：取扱説明書を参照。

위험 그룹 3
경고
빔을 눈으로 보지 마십시오.
빔을 직접 눈에 노출하는 것은 허용되지 않습니다.
위험 거리: 설명서를 참조하십시오.

风险组别 3
警告
请勿注视光束。
不允许将眼睛暴露于光束中。
有害距离：请参阅手册。
IEC/EN 62471-5:2015

FOR NORTH AMERICA
RISK GROUP 3
WARNING
HAZARDOUS OPTICAL RADIATION EMITTED FROM THIS PRODUCT.
DO NOT LOOK AT OPERATING LIGHT SOURCE.
EYE INJURY MAY RESULT.
HAZARD DISTANCE: REFER TO THE MANUAL.
NO DIRECT EXPOSURE TO BEAM SHALL BE PERMITTED.
NOT FOR HOUSEHOLD USE.

GRUPE DE RISQUE 3
AVERTISSEMENT
RADIATIONS OPTIQUES DANGEREUSES EMISES PAR CE PRODUIT.
NE REGARDEZ PAS DIRECTEMENT LA SOURCE LUMINEUSE.
CELA POURRAIT ENTRAÎNER DES BLESSURES AUX YEUX.
DISTANCE A RISQUE: SE REPORTER AU MANUEL.
L'EXPOSITION DIRECTE AU RAYON DOIT ÊTRE AUTORISÉE.
NE CONVIENT PAS A UN USAGE DOMESTIQUE.
IEC/TR 62471-2:2009
IEC/EN 62471:2006



•Label B : Laser Explanatory Label



•Label C : NP-NC3541L

NEC MODEL No. NP-NC3541L C1: 200-240V~ 50/60Hz 30.0A
C2: 200-240V~ 50/60Hz 4.9A for PJ POWER
200-240V~ 50/60Hz 25.1A for LIGHT POWER

XXXX XXXX
3264639500

CE

NEC Display Solutions, Ltd.
4-2B, Mita 1-chome, Minato-ku, Tokyo, Japan
MADE IN CHINA

Contact address for EMEA
NEC Display Solutions Europe GmbH
Landshuter Allee 12-14
80637 Munich, Germany

Tegangan dan Frekuensi:
C1: 200-240V~ 50/60Hz
C2: 200-240V~ 50/60Hz(PROYEKTOR CATU DAYA)
200-240V~ 50/60Hz(CAHAYA CATU DAYA)
Produksi China

THIS CABINET IS CONSTRUCTED OF METAL(AL)

警告 ⚡	高压注意 サービスマン以外の方は外装パネルを外さないでください。内部には高電圧部分が多くあり、万一さわると危険です。	使用上の注意 イ、通風孔をふさがらないでください。内部温度の上昇を招き故障の原因になります。ロ、温度の高い場所や湿気の多い場所での使用はさけてください。
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CAUTION: TO PREVENT ELECTRIC SHOCK, DO NOT OPEN TOP COVER. NO USER-SERVICEABLE PARTS INSIDE.
ATTENTION: AFIN DE PREVENIR UN CHOC ELECTRIQUE NE PAS ENLEVER LE COUVERCLE S'ADRESSER A UN REPARATEUR COMPETENT.
ВНИМАНИЕ: ВО ИЗБЕЖАНИЕ УДАРА ЭЛЕКТРИЧЕСКИМ ТОКОМ НЕ ОТКРЫВАЙТЕ ВЕРХНЮЮ КРЫШКУ. ВНУТРИ НЕТ ДЕТАЛЕЙ, ОБСЛУЖИВАЕМЫХ ПОЛЬЗОВАТЕЛЕМ.
주의: 전기충격 방지를 위해 캐비닛을 열지 마십시오. 내부에는 사용자를 위한 서비스가능 부품이 들어있지 않습니다.
HINWEIS: Zur Vermeidung eines elektrischen Schlages, öffnen Sie das Gehäuse nicht selbst. In diesem Gerät sind keine Teile enthalten, die vom Nutzer gewartet werden können.
WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.
AVERTISSEMENT: POUR EVITER UN FEU OU UN RISQUE D'ELECTROCUTION NE PAS EXPOSER CET ENSEMBLE A LA PLUIE OU A L'HUMIDITE.

この装置は、クラス A 機器です。この装置を住宅環境で使用すると電波妨害を引き起こすことがあります。この場合には使用者が適切な対策を講ずるよう要求されることがあります。 VCCI-A

THIS DEVICE COMPLIES WITH PART 15 OF THE FCC RULES, OPERATION IS SUBJECT TO THE FOLLOWING TWO CONDITIONS:
(1) THIS DEVICE MAY NOT CAUSE HARMFUL INTERFERENCE, AND
(2) THIS DEVICE MUST ACCEPT ANY INTERFERENCE RECEIVED, INCLUDING INTERFERENCE THAT MAY CAUSE UNDESIRED OPERATION. CAN ICES-3(A)/NMB-3(A)

This product complies with performance standards for laser products under 21 CFR Part 1040 except with respect to those characteristics authorized by Variance Number 2015-V-3435 effective on April 7 2016.

•Label C : NP-NC2041L

NEC MODEL No. NP-NC2041L C1: 200-240V~ 50/60Hz 17.5A
C2: 200-240V~ 50/60Hz 4.9A for PJ POWER
200-240V~ 50/60Hz 12.6A for LIGHT POWER

XXXX XXXX 3264639500 

CE 

NEC Display Solutions, Ltd. 4-28, Mita 1-chome, Minato-ku, Tokyo, Japan
MADE IN CHINA

Contact address for EMEA
NEC Display Solutions Europe GmbH
Landshuter Allee 12-14
80637 Munich, Germany

Tegangan dan Frekuensi:
C1: 200-240V~ 50/60Hz
C2: 200-240V~ 50/60Hz (PROYEKTOR CATU DAYA)
200-240V~ 50/60Hz (CAHAYA CATU DAYA)
Produksi China

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ВНИМАНИЕ: ВО ИЗБЕЖАНИЕ УДАРА ЭЛЕКТРИЧЕСКИМ ТОКОМ НЕ ОТКРЫВАЙТЕ ВЕРХНЮЮ КРЫШКУ. ВНУТРИ НЕТ ДЕТАЛЕЙ, ОБСЛУЖИВАЕМЫХ ПОЛЬЗОВАТЕЛЕМ.
주의: 전기충격 방지를 위해 캐비닛을 열지 마십시오. 내부에는 사용자를 위한 서비스가능 부품이 들어있지 않습니다.
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CAN ICES-3(A)/NMB-3(A)

This product complies with performance standards for laser products under 21 CFR Part 1040 except with respect to those characteristics authorized by Variance Number 2015-V-3435 effective on April 7 2016.

•Label D


MODEL NO. NP-XXXXXXX XXXXXXXX

•Label E

M/F Date : YYYY. MM. DD

Radiation Range of Emitted Light by the Projector (HD: Hazard Distance)

- The below table describes the radiation range of emitted light by the projector that is classified as Risk Group 3 (RG3) of IEC62471-5 First edition 2015.
- The below table describes the radiation range of emitted light by the projector that is classified as Risk Group 3 (RG3) of IEC62471:2006.(for USA).
- Please keep within bounds for installing the projector.

Install a barrier for preventing human eyes from entering the RG3 area. For the barrier installation position, keep horizontal safety zone over 1.5m from the RG3 area. In case to install the projector over head, keep over 3m distance at least between the floor surface and the RG3 area.

Operators shall control access to the beam within the hazard distance or install the product at the height that will prevent exposures of spectators' eyes within the hazard distance.

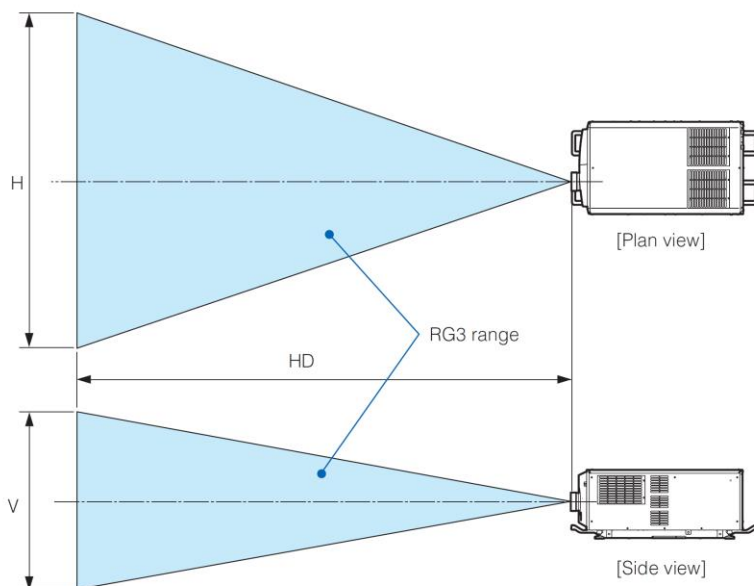
NC3541L

(IEC62471-5 First edition 2015)

Lens		RG3 HD (m)	Screen size (m)	
			H	V
NC-50LS12Z	Wide	6.0	5.31	2.80
	Tele	8.0	4.82	2.54
NC-50LS14Z	Wide	7.0	5.38	2.84
	Tele	9.5	5.14	2.71
NC-50LS16Z	Wide	7.0	4.83	2.55
	Tele	9.0	4.09	2.16
NC-50LS18Z	Wide	7.0	4.38	2.31
	Tele	11.0	4.07	2.15
NC-50LS21Z	Wide	8.0	4.10	2.16
	Tele	13.0	3.94	2.08
L2K-30ZM	Wide	11.0	4.07	2.15
	Tele	16.0	4.10	2.16

(IEC62471:2006 (for USA))

Lens		RG3 HD (m)	Screen size (m)		EHv
			H	V	
NC-50LS12Z	Wide	6.0	5.31	2.80	12
	Tele	8.0	4.82	2.54	16
NC-50LS14Z	Wide	7.0	5.38	2.84	14
	Tele	9.5	5.14	2.71	19
NC-50LS16Z	Wide	7.0	4.83	2.55	14
	Tele	9.0	4.09	2.16	18
NC-50LS18Z	Wide	7.0	4.38	2.31	14
	Tele	11.0	4.07	2.15	19
NC-50LS21Z	Wide	8.0	4.10	2.16	16
	Tele	13.0	3.94	2.08	22
L2K-30ZM	Wide	11.0	4.07	2.15	20
	Tele	16.0	4.10	2.16	22



* If lens shift is utilized, please consider the shift of projected image according to the volume of lens shift.

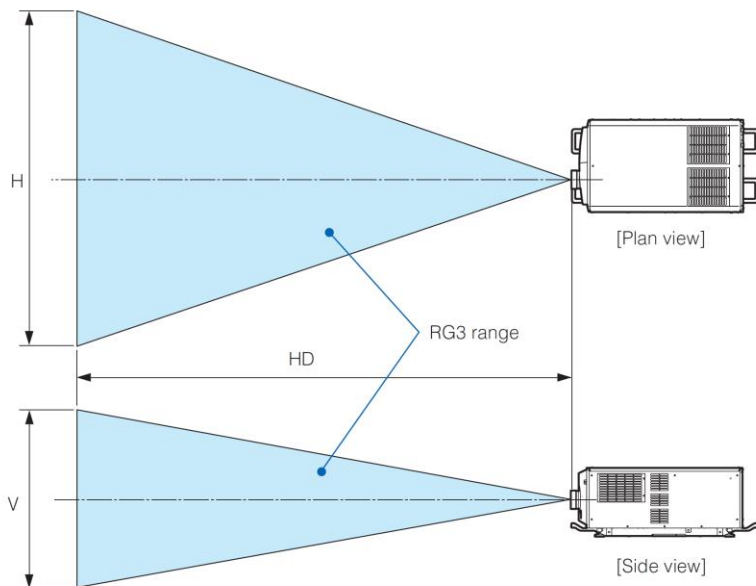
NC2041L

(IEC62471-5 First edition 2015)

Lens		RG3 HD (m)	Screen size (m)	
			H	V
NC-50LS12Z	Wide	4.8	4.25	2.24
	Tele	6.4	3.83	2.02
NC-50LS14Z	Wide	5.6	4.31	2.27
	Tele	7.5	4.08	2.15
NC-50LS16Z	Wide	5.6	3.86	2.04
	Tele	7.1	3.25	1.71
NC-50LS18Z	Wide	5.6	3.50	1.85
	Tele	8.7	3.23	1.71
NC-50LS21Z	Wide	6.4	3.28	1.73
	Tele	10.3	3.13	1.65
L2K-30ZM	Wide	8.8	3.26	1.72
	Tele	12.7	3.26	1.72

(IEC62471:2006 (for USA))

Lens		RG3 HD (m)	Screen size (m)		EHv
			H	V	
NC-50LS12Z	Wide	4.8	4.25	2.24	12
	Tele	6.4	3.83	2.02	16
NC-50LS14Z	Wide	5.6	4.31	2.27	14
	Tele	7.5	4.08	2.15	19
NC-50LS16Z	Wide	5.6	3.86	2.04	14
	Tele	7.1	3.25	1.71	18
NC-50LS18Z	Wide	5.6	3.50	1.85	14
	Tele	8.7	3.23	1.71	19
NC-50LS21Z	Wide	6.4	3.28	1.73	16
	Tele	10.3	3.13	1.65	22
L2K-30ZM	Wide	8.8	3.26	1.72	20
	Tele	12.7	3.26	1.72	22



* If lens shift is utilized, please consider the shift of projected image according to the volume of lens shift.

 **CAUTION**

Please heed all precaution for safety.

To install the projector

- For planning the layout of the projector, make sure to take safety measures instructed on the installation manual.
- In order to refuse danger, install either a wall outlet within easy reach for pulling out the power plug in emergency or a device as a breaker to shut down the power supply to the projector.
- Take safety measures preventing human eyes from entering the RG3 area.
- Considering the installation place, select an appropriate lens and secure safety zone that is determined for each lens. For operation on the powered projector as light adjustment, make sure appropriate safety measures have been taken.
- Check the validity of taken security measures if appropriate safety zone based on the installed lens is secured. Periodically check the validity and keep these results.
- Educate the administrator of the projector (operators) about safety before starting to operate the projector.

To use the projector

- Instruct the administrator of the projector (operators) to perform inspections before powering on the projector. (Including the safety check against emitted light by the projector)
- Instruct the administrator of the projector (operators) to be in circumstances able to control the projector whenever the projector is powered on for an emergency.
- Instruct the administrator of the projector (operators) to keep the installation manual, user's manual and inspection records to a place where they can take these documents out easily.
- Instruct them to clarify if the projector is conformed to standards of each country and region.

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1. Before Setting Up Your Projector

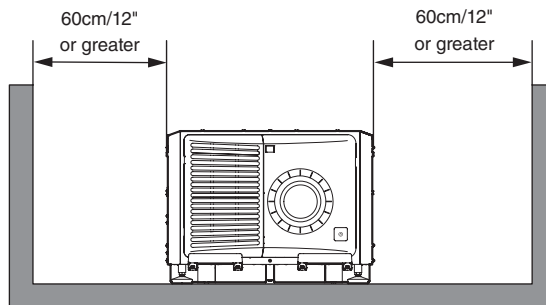
1-1. Clearance for Installing the Projector (English)

Allow ample clearance between the projector and its surroundings as shown below.

Avoid installing the projector in a place where air movement from the HVAC is directed at the projector.

Heated air from the HVAC can be taken in by the projector's intake vent. If this happens, the temperature inside the projector will rise too high causing the over-temperature protector to automatically turn off the projector's power.

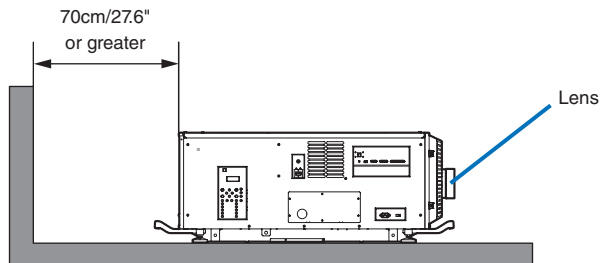
Example 1 – If there are walls on both sides of the projector.



NOTE The drawing shows the proper clearance required for the front, back and top of the projector.

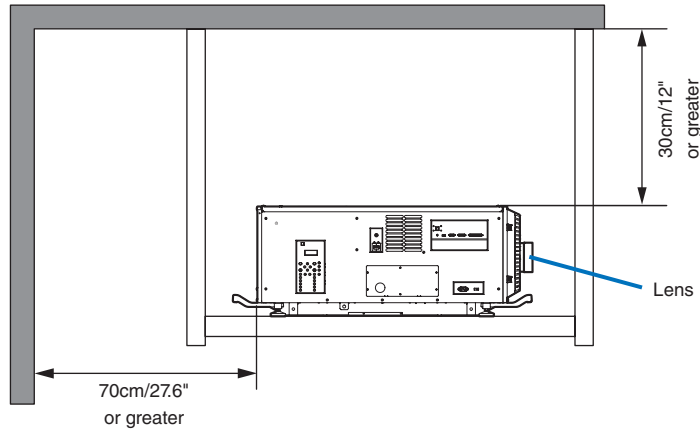
Example 2 – If there is a wall behind the projector.

(1) For floor installation:



NOTE The drawing shows the proper clearance required for the front, sides and top of the projector.

(2) For ceiling mounting:

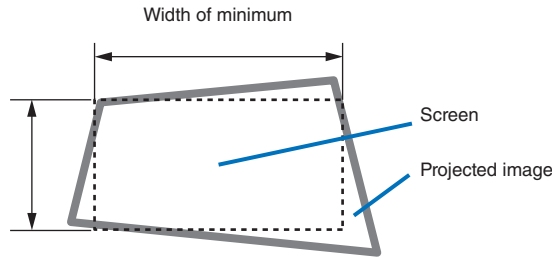


NOTE

- The drawing shows the proper clearance required for the front, sides, back and bottom of the projector.
- If suspending the projector 30 cm/12 inches away from the ceiling, allow ample clearance for all four sides and the under the projector.

1-3. Selecting the lens unit

This section provides guideline information on how to select the screen size, the projector mounting position, and the type of lens unit that is appropriate for your presentation purposes. Multiple lens units are sold separately as options for this projector. Select an appropriate lens unit according to the environment in which your projector is installed. Note that all descriptions given in this manual assume the angle of projection is zero degrees. In the case of projection from an upper position or from the left or right, it is necessary to calculate the width for the minimum projected image at a size larger than the screen size.

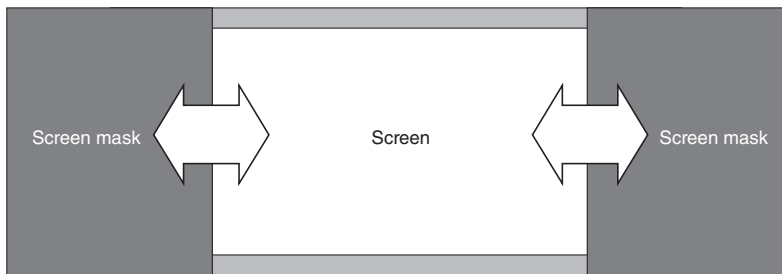


1-3-1. Screen Type

The following two types of screen masks can be used for the DLP Cinema Projector. Check the screen mask for your projector for its type before selecting lens units, because types of lens units to be used on the projector and its settings depend upon the type of screen mask you use.

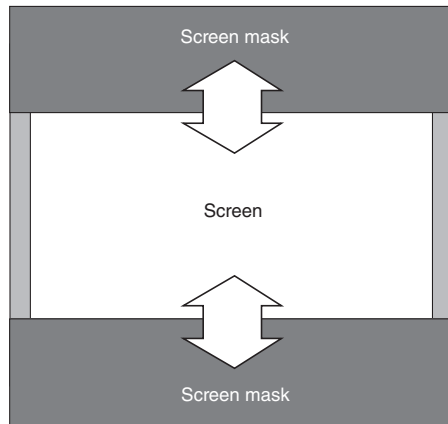
Horizontal moving screen mask

Screen masks move horizontally to adjust the screen.



Vertical moving screen mask

Screen masks move vertically to adjust the screen.



1-3-2. Calculating the lens zoom magnification to use

The lens zoom magnification required when installing the projector is calculated using the following method.

- (1) Calculate the lens zoom magnification for SCOPE projection
- (2) Calculate the lens zoom magnification for VISTA (FLAT) and HDTV projection
- (3) Select the lens that satisfies the zoom magnification calculated in (1) and (2).

SCOPE projection:

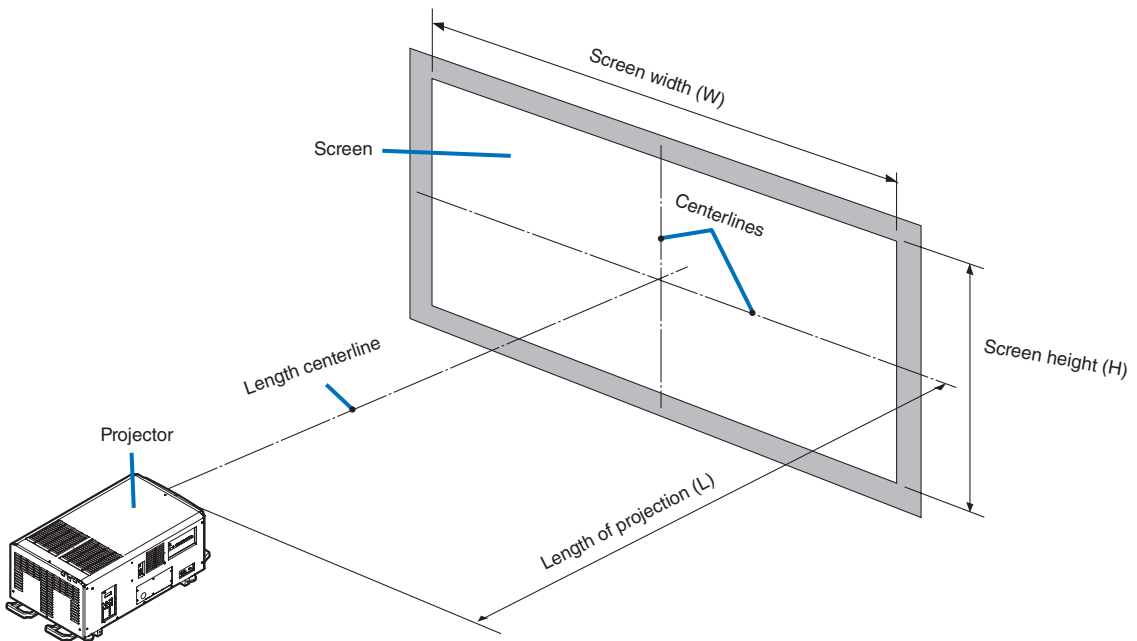
$$\text{Lens magnification} = \frac{\text{Length of projection (L)}}{\text{Screen width (W)}}$$

VISTA (FLAT)/HDTV projection:

$$\text{Lens magnification} = \frac{\text{Length of projection (L)}}{\text{Screen width (W)} \times (4096 \div (\text{Number of pixels per horizontal line} \times 2))}$$

Note: Number of pixels per horizontal line: 1998 for VISTA (FLAT); 1920 for HDTV

Select a lens that meets the magnification requirement for SCOPE, VISTA (FLAT), and HDTV screen types.



Option lenses

The lens units that can be attached to this projector are shown in the following table.

MODEL	Magnifying
NC-50LS12Z	1.13–1.66
NC-50LS14Z	1.30–1.85
NC-50LS16Z	1.45–2.17
NC-50LS18Z	1.63–2.71
NC-50LS21Z	1.95–3.26
L2K-30ZM	2.71–3.89

Examples of selecting the lens unit

If the “projection distance (L) = 30 m, the screen width (W) = 15 m”:

$$\text{SCOPE projection} = \frac{30\text{m}}{15\text{m}} = 2.0\text{x}$$

$$\text{VISTA (FLAT) projection} = \frac{30\text{m}}{15\text{m} \times (4096 \div (1998 \times 2))} = 1.95\text{x}$$

$$\text{HDTV projection} = \frac{30\text{m}}{15\text{m} \times (4096 \div (1920 \times 2))} = 1.88\text{x}$$

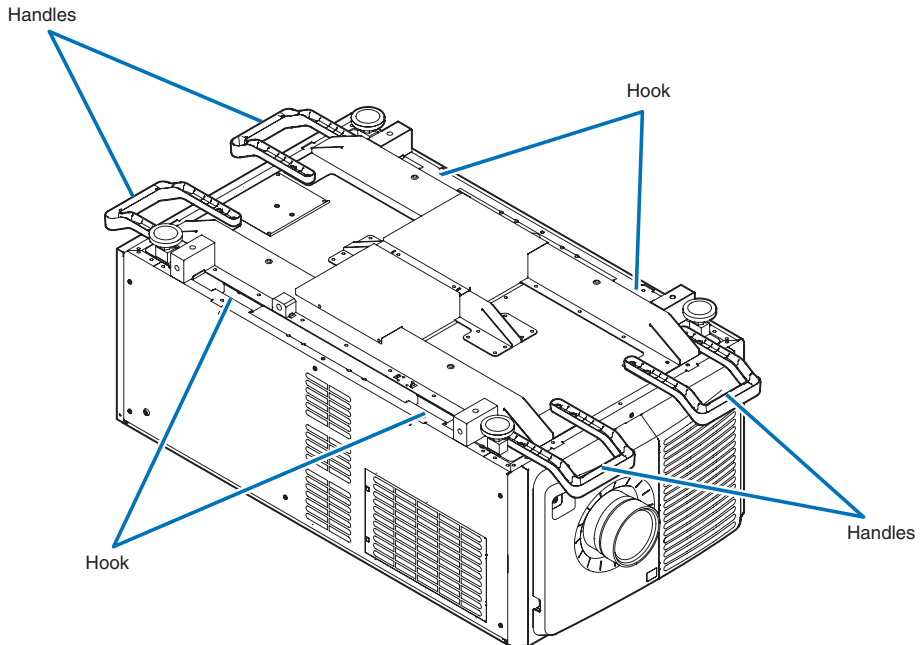
Therefore, the following lens units, which satisfy the magnifications in all of the above projections, are selected.

- NC-50LS16Z
- NC-50LS18Z

1-4. Carrying the projector

⚠ WARNING

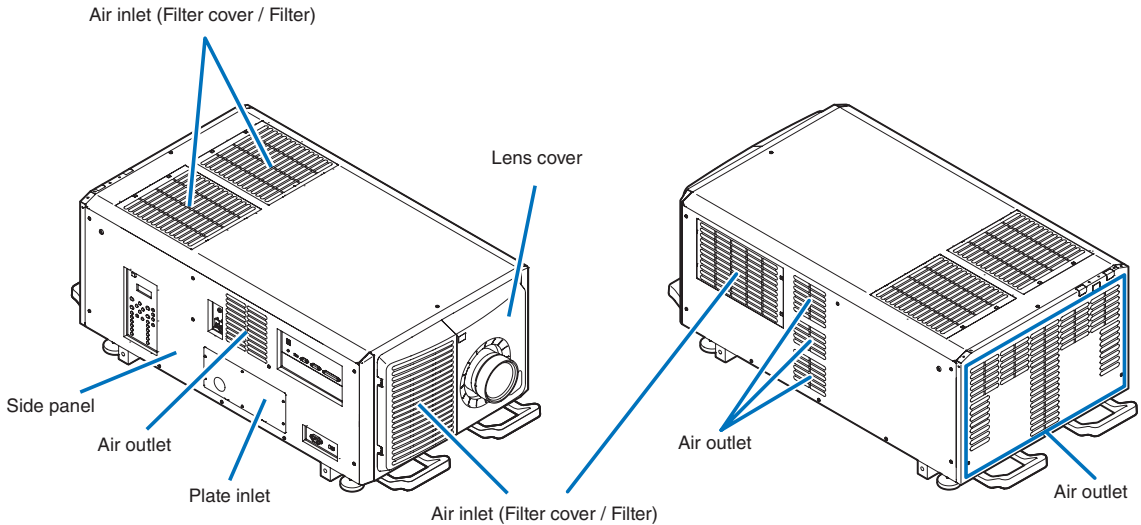
- When moving the projector, it should be carried by holding the handles or hook on the base of the unit by 6 or more people.
- When moving the projector, first turn off the power and always disconnect the power plug from the electrical outlet, and check that all of the connecting cables between equipment and the lenses have been removed.
- For C1 connection, Turn off the projector, shut down AC power by using a circuit breaker.
- For C2 connection, turn off the projector, shut down the AC power to the projector and the light using a circuit breaker.



1-5. Removing the Projector Covers

This section provides guideline information on how to remove and mount covers on the projector.

Name of the cover



NOTE

- “Side panel” and “Lens cover” are equipped with key locks. Special keys (service key) are required to remove or mount them. Refer to “Position of the key locks on the covers” (page 34) for details.
- If you remove the lens cover or side panel, a tamper event is detected by the tamper detection circuit. When you start the projector after attaching the cover, the following error message is displayed on the LCD screen of the projector main unit.
 - “IMB: Service Door Tamper”
- Encrypted contents cannot be displayed while an error message is being displayed. Refer to “3-2. Recovering from Tamper Errors” (page 87) for details on how to clear the error message.
- Do not turn on the power when the lens inlet cover and the side panel are removed.
- When removing the lens cover, return the lens shift to the center position before turning off the power.

Position of the key locks on the covers

When removing or attaching a cover of the projector main unit, the lock needs to be unlocked using the included service key. The positions of the locks on each of the covers are as follows.

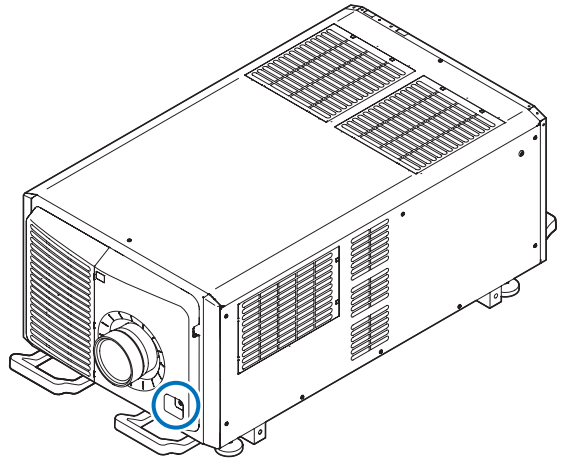
WARNING

TO REDUCE THE RISK OF ELECTRIC SHOCK AND LASER RADIATION, DO NOT OPEN COVER. NO User-SERVICEABLE PARTS INSIDE. REFER SERVICING AND INSTALLATION TO QUALIFIED SERVICE PERSONNEL AND INSTALLATION PERSONNEL.

NOTE When a cover is removed, the power to the unit is automatically turned off by the safety protection system.

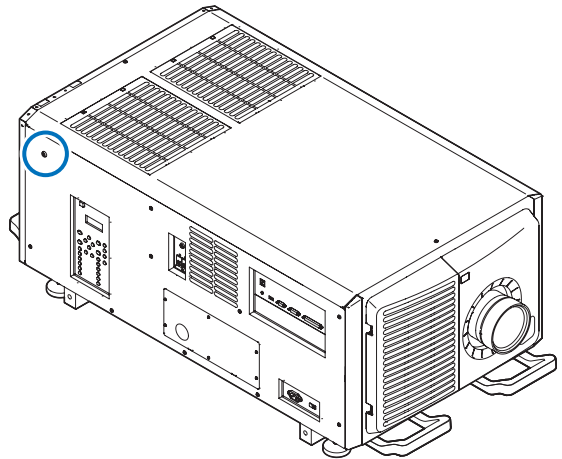
Lens Cover

The lock is unlocked when attaching or removing lenses (page 78).



Side Panel

The lock is unlocked when attaching or removing the option board (page 82).

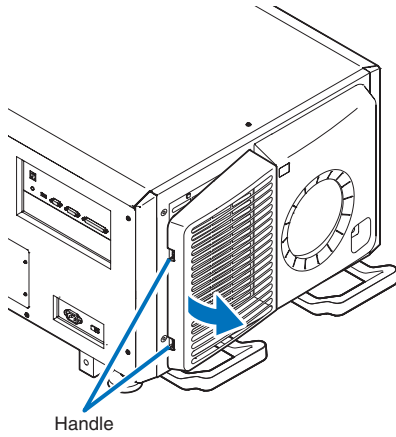


1-5-1. Removing and Mounting the Lens Cover

Preparation: Service key (attached goods)

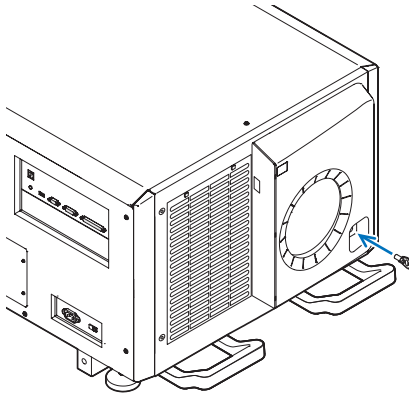
1 Remove the front filter cover.

Pull the filter cover in the direction of the arrow to remove it.



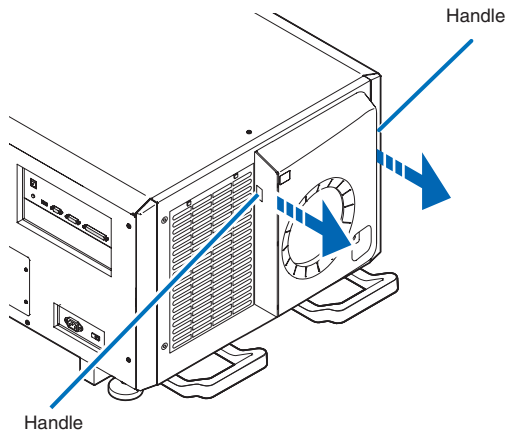
2 Unlock the lens cover.

Unlock the cover using the service key.

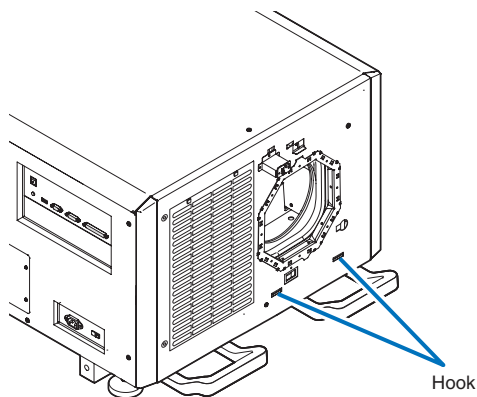


3 Remove the lens cover.

The lens cover is secured to the projector body by two claws each at the cover top and bottom. Hold the cover sides and pull toward you.



- This completes removing the lens cover. To mount the cover, perform the removal procedure in reverse. Make sure to lock the key.



* Lens cover removed condition

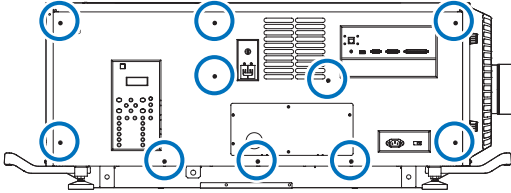
NOTE If the cover is not properly mounted, an error may occur. Securely push all claws into the position.

1-5-2. Removing and Mounting the Side Panel

Preparation: Phillips head screwdriver (No.2) and Service key (attached goods)

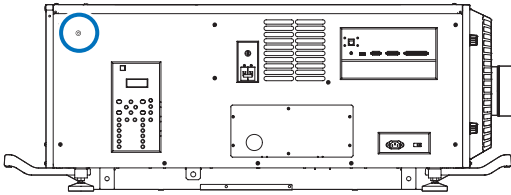
1 Loosen the ten fixing screws on the side panel.

Loosen four screws on the side panel until they are free to spin. The screws do not detach from the panel.



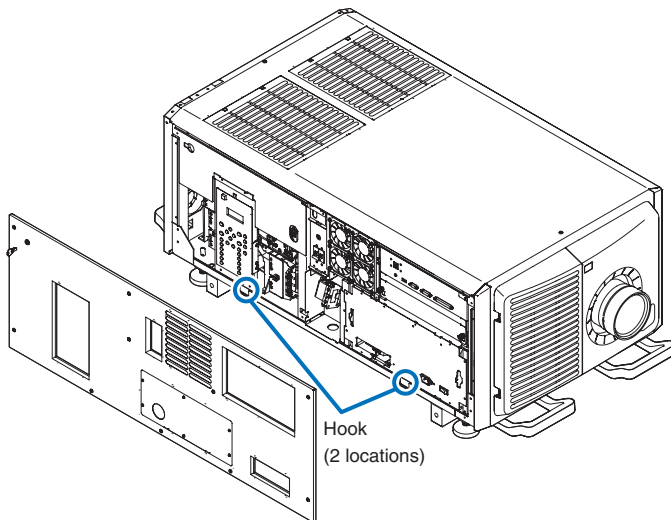
2 Unlock the side panel.

Unlock the cover using the service key.



3 Remove the side panel.

The side panel is fixed in place by hooks at the bottom (in 2 locations). Tilt the side panel toward you and pull up to remove it. Do not use force when tilting the side panel.



This completes removing the side panel. To mount the side panel, perform the removal procedure in reverse. Make sure that you do not forget to tighten the screws or to lock the key lock.

1-5-3. Removing and Mounting the Filter Cover

Refer to the projector User's Manual for details on how to remove and attach the filter cover.

2. Setting Up Your Projector

2-1. Setup Procedure

Set up the projector according to the procedure below. This chapter describes the installation of procedure until turning on of the power.

- **Step 1**
Projector Installation (See page 39)
- **Step 2**
Selecting the Power Cable (See page 42)
Connecting the Power Cable (See page 48)
- **Step 3**
Mounting the Lens Unit (See page 78)
- **Step 4**
Mounting the following optional parts as required.
 - Installing the Media Block (NP-90MS01/NP-90MS02) (See page 82)

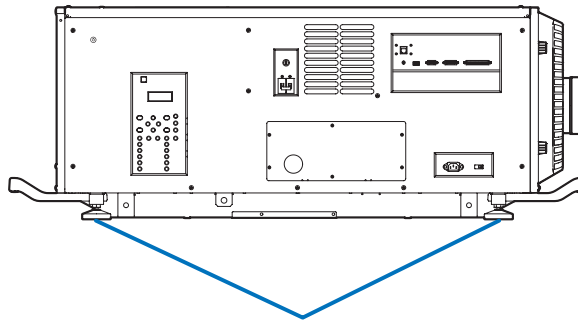
2-2. Projector Installation

Move the projector to the projection position and install it corresponding to the screen and projection conditions.

To correct the inclination to the right or left of the projector, use the level adjusters at 4 positions. You can extend the level adjuster to 10 mm at the maximum (Rotate it counterclockwise for extension).

CAUTION

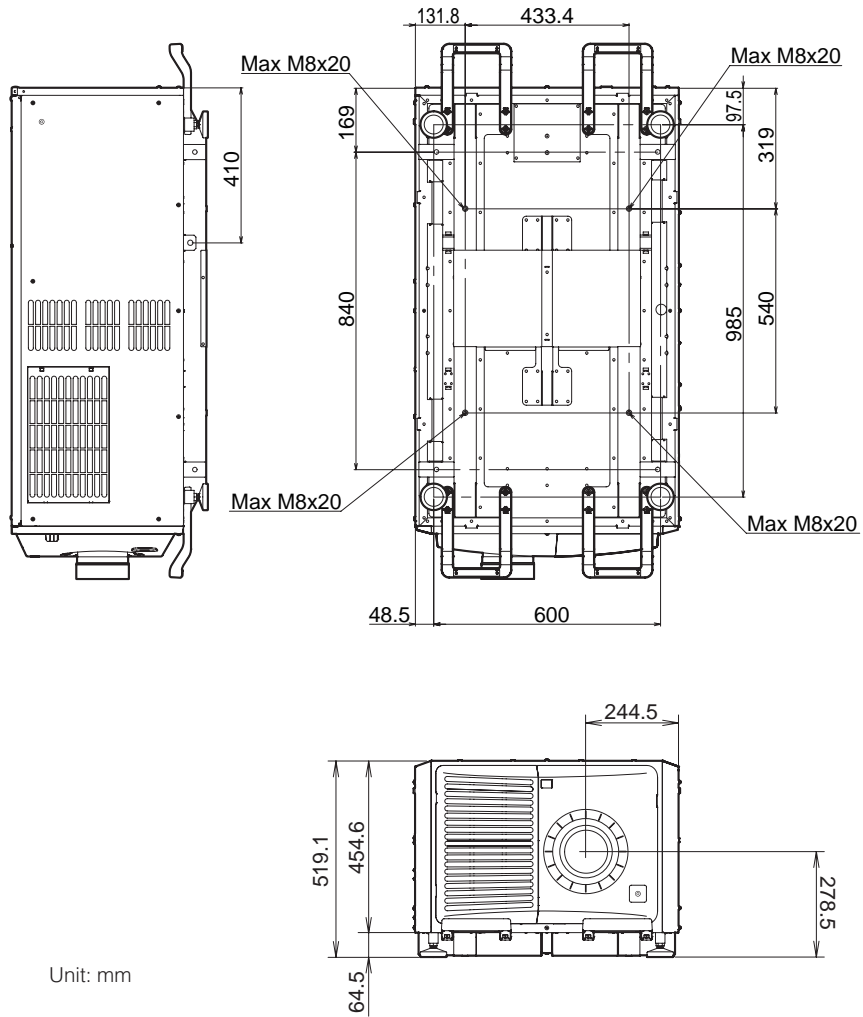
- Do not extend the adjuster by more than 10 mm. Rotating it forcefully may cause the adjuster to come off or be damaged.
- To adjust the level adjusters of the projector, extend the two level adjusters at the front and the back at the same time so that the weight is imposed to them equally. If you adjust only one adjuster, the weight is not imposed equally, which may result in level adjuster failure.



Level adjusters (in four positions)

2-2-1. Installing the Projector on the Ceiling

To install the projector on the ceiling, install it by referring to the following specifications.



2-2-2. Tilt-Free Installation

It is possible to vertically set up this device at 360 degrees.

However, it is impossible to set up the main part of the device slanted to the left or right.

Precautions regarding Tilt-Free Installation

- Refrain from installing the main unit with a tilt in either direction directly on the floor or a base. The unit may collapse and lead to failure, damage, injury, or exposure of the harmful laser projection.
In addition, the air intake may become blocked which will raise the internal temperature and cause damage or lead to a fire.
- Be sure to prepare metal fittings (such as ceiling hanging brackets) to support the main unit. Ask whoever is installing the projector to prepare these metal fittings. (Charged Service)
- When installing the unit with a tilt, be sure to use and install metal fittings sturdy enough to maintain the angle of installation over a long period of time.

2-2-3. Terms for Preparation of Frames and Ceiling Hanging Brackets

Ask whoever is installing the projector to prepare a specifically designed frame and ceiling hanging brackets (Charged Service).

Take note of the following upon its design.

- There are intake openings and exhaust openings on the side of the main unit, exhaust openings on the rear, intake openings on the front, intake openings on the top side. Make sure that the design does not obstruct these openings. Also make sure to secure enough space to allow easy removal of the filter cover for cleaning the filter.
- Remove the adjusters on the main unit if they will interfere with the frame. The adjusters can be removed by turning them.
- Attach the frame and ceiling hanging brackets to the screw holes (in four positions) provided on the bottom surface of the main unit for ceiling hanging installation.
Refer to the specification sheet for dimensions between the centers of the screw holes. Note that the screw holes on the main unit have the dimensions of an M8 thread and a maximum depth of 20 mm (the lengths of the bolts are to be calculated according to the design).
- Horizontal adjustment mechanism (for example, bolts and nuts in four positions)
- Design the frame so that it will not easily collapse.
- Construction to prevent the unit from falling shall be implemented to sufficiently support the total weight of 177 kg (169 kg for the projector + 8 kg for the lens) over a long period of time.

NOTE Make sure there are at least six people taking part when lifting this unit.
Attempting to lift this unit alone may lead to injury or cause pain in the lower back.

2-3. Selecting the Power Cable for C2 Connection (English)

The power cable for C2 Connection is not included with the projector. Refer to “2-3-1. AC Power Work Specifications” (page 43) and provide the necessary power cable.

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 43), 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.
- In order to prevent the power plug from being disconnected from the projector, fix the power cable by using the power cable stopper supplied with this unit. For how to use the power cable stopper, refer to “Attaching the power cable stopper” (page 60).

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.

2-3-1. AC Power Work Specifications

AC power supply equipment

Do not use any voltage other than those shown below for the AC power supply connected to the projector.

200–240V AC, single phase, power, 50/60Hz

AC power supply cable for the projector

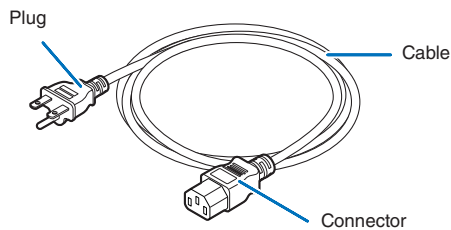
The projector is equipped with an IEC60320-C14 inlet to connect an AC power supply cable. Use an IEC60320-C13 compliant AC power cable connector and ensure that the connector meets the following current capacity specifications.

Power supply voltage	Projector input current	Power cable current capacity
AC 200–240V	4.9A	10A or higher

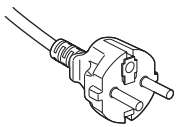

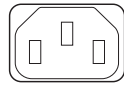
Furthermore, use plugs, cables, and connectors that are suitable for the regulations of the country of installation, as shown in the following table.

NOTE

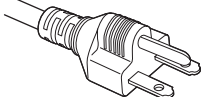

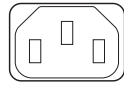
- For users in North America
Use a power cable no longer than 4.5m/14.76 ft according to National Electrical Code.
- For UK only: In UK, a BS approved power cord with moulded plug has a Black (10 Amps) fuse installed for use with this equipment. If a power cord is not supplied with this equipment please contact your supplier.



Germany

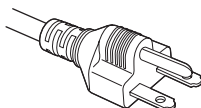

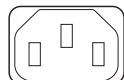
Plug	Cable	Connector
CEE 7 	H05VV-F 3x1mm ² 	IEC60320 C13 

USA

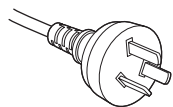

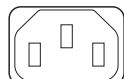
Plug	Cable	Connector
NEMA 6-15P 	SJT 3 x AWG 16 	IEC60320 C13 

Setting Up Your Projector

Japan

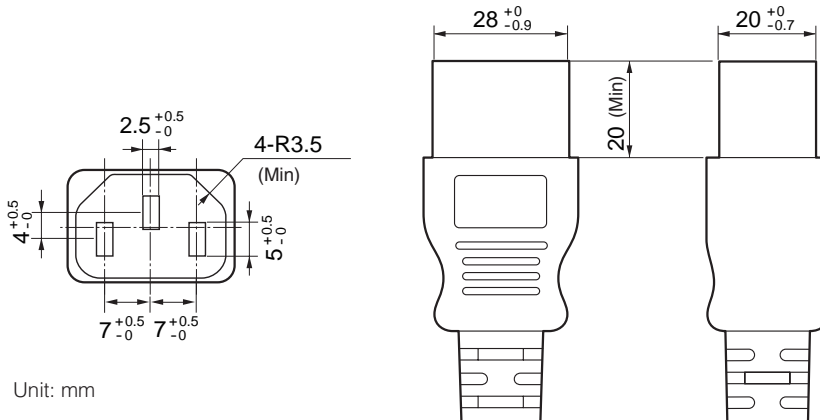
Plug	Cable	Connector
JIS C 8303 	HVCTF 3 x 1.25mm ² 	IEC60320 C13 

China

Plug	Cable	Connector
GB2099 	RVV 300/500 	GB17465.1 

Connector

Dimensions of the connector of the power cable are shown below.



2-4. Auswahl des Netzkabels für Anschluss C2 (Deutsch)

Es wird kein Netzkabel für Anschluss C2 mit dem Projektor geliefert. Nehmen Sie auf „2-4-1. Netzstrom-Spezifikationen“ (Seite 46) Bezug, und beschaffen Sie das notwendige Netzkabel.

WARNUNG

Lesen Sie diesen Abschnitt vor dem Herstellen der Verbindungen sorgfältig durch, und schließen Sie die Kabel anhand der ordnungsgemäßen Verfahren an. Falsche Handhabung kann zu schweren oder sogar tödlichen Verletzungen durch Brand oder einen elektrischen Schlag führen.

ACHTUNG

- Bevor Sie das Netzkabel anschließen, prüfen Sie, ob die Hauptstromschalter des Projektors ausgeschaltet ist. Stellen Sie die Verbindungen bei ausgeschaltetem Netzstrom her.
- Erden Sie das Gerät, um die Sicherheit zu gewährleisten. Verwenden Sie ein Netzkabel, das die Normen und Netzspannung des Landes, in dem der Projektor verwendet wird, erfüllt (Seite 46), und schließen Sie das Gerät stets an Erde an. Wenn keine Erde angeschlossen wird, kann es zu elektrischen Schlägen kommen.
- Führen Sie die Netzkabelstecker beim Anschließen bis zum Anschlag in den Netzeingang und die Netzsteckdose ein. Sitzt der Netzstecker nicht fest in der Netzsteckdose, kann Wärme im Steckerbereich erzeugt werden, die zu Verbrennungen und Unfällen führen kann.
- Um eine Trennung des Netzsteckers vom Projektor zu verhindern, fixieren Sie das Netzkabel, indem Sie den mit diesem Gerät gelieferten Netzkabelstopper verwenden. Die Verwendung des Netzkabelstoppers siehe 75.

HINWEIS

- Installieren Sie die Steckdose nahe beim Projektor, so dass Sie die Stromzufuhr unterbrechen können, indem Sie das Netzkabel abtrennen.
- Vergewissern Sie sich, dass der Hauptstromschalter auf der Position [O] steht, bevor Sie das Netzkabel anschließen oder abziehen. Anderenfalls kann es zu einer Beschädigung des Projektors kommen.
- Verwenden Sie keine Dreiphasen-Stromversorgung. Anderenfalls kann es zu einer Funktionsstörung kommen.

2-4-1. Netzstrom-Spezifikationen

Netz kabel

Der Projektor ist mit einem C19-Steckverbinder gemäß IEC60320 zum Anschließen des Netzkabels ausgestattet. Sorgen Sie dafür, dass die Netzkabel, die von den Steckverbindern am Projektor zum Netzanschluss führen, über die unten angegebenen Stromkapazitäten verfügen.

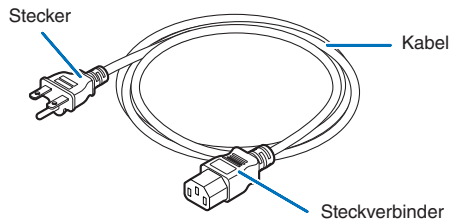
200–240 V AC, eiphasig, 50/60Hz

Netz kabel für den Projektor

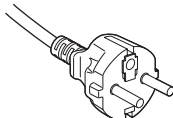

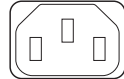
Der Projektor ist mit einem C14-Eingang gemäß IEC60320 zum Anschließen des Netzkabels ausgestattet. Verwenden Sie einen IEC60320 C13-kompatiblen Netzkabelanschluss und sorgen Sie dafür, dass der Anschluss über die unten angegebene Stromkapazität verfügt.

Netzspannung	Projektor-Eingangsstrom	Netzkabel-Stromkapazität
200–240 V Wechselstrom	4,9 A	10 A oder höher

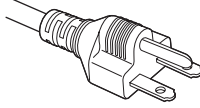


Verwenden Sie zudem Stecker, Kabel und Steckverbinder, die den Vorgaben des jeweiligen Landes entsprechen (siehe dazu folgende Tabelle).



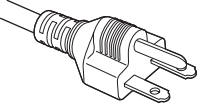

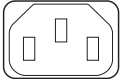
Deutschland

Stecker	Kabel	Steckverbinder
CEE 7 	H05VV-F 3x1mm ² 	IEC60320 C13 

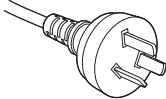

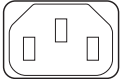
USA

Stecker	Kabel	Steckverbinder
NEMA 6-15P 	SJT 3 x AWG 16 	IEC60320 C13 

Japan

Stecker	Kabel	Steckverbinder
JIS C 8303	HVCTF 3 x 1.25mm ²	IEC60320 C13
		

China

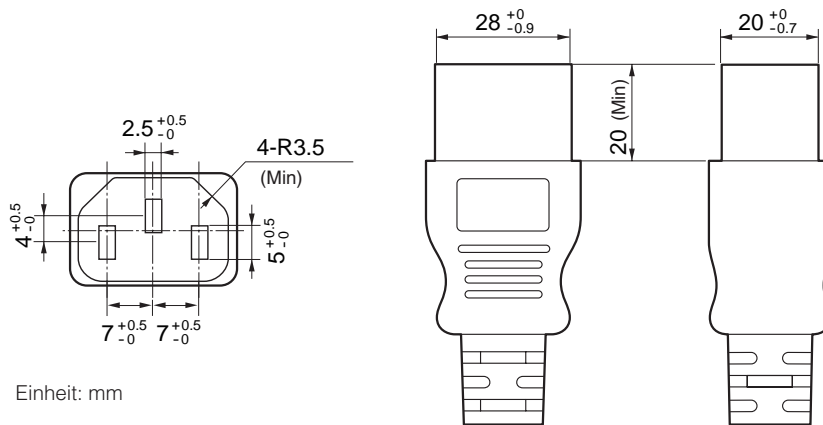
Stecker	Kabel	Steckverbinder
GB2099	RVV 300/500	GB17465.1
		

Für Benutzer in UK

Verwenden Sie ein Netzteil mit BS-Zulassung und 10A-Sicherung.

Steckverbinder

Die Abmessungen des Netzkabels sind unten angegeben.



2-5. Connecting the power cable (English)

Connect the power cable of the projector. The AC power cable is not attached as an accessory. Be sure to have professional technicians do any power supply construction.

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

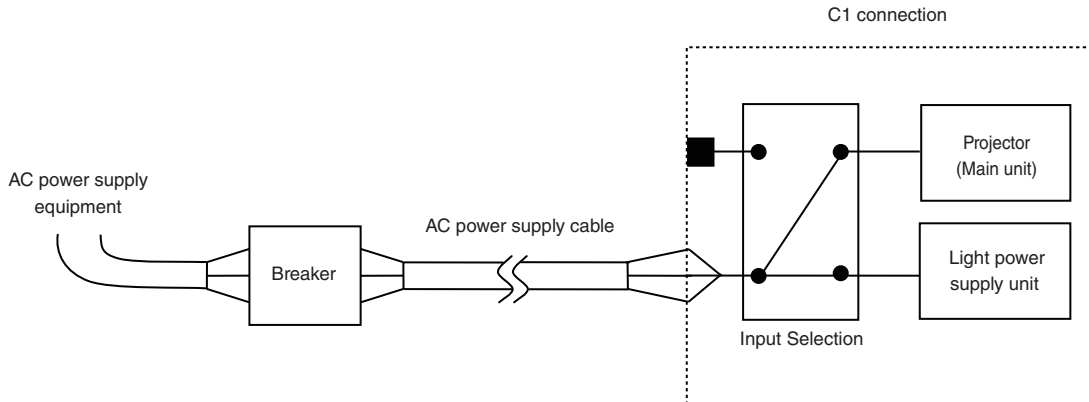
- Make sure that the AC power supply is disconnected before carrying out the work of connecting the power supply cable.
- Be sure to follow the contents described in this section.
- Entrust a specialist to carry out the power supply work from the power supply equipment of the building to the place of projector installation.
- Be sure to ground the equipment to ensure safety. To avoid electric shock, request a professional to carry out the grounding and related works. Make sure to ground the equipment before supply of the AC power.

2-5-1. Power supply construction specifications

There are two different ways to connect the power cords, the C1 connection and the C2 connection.

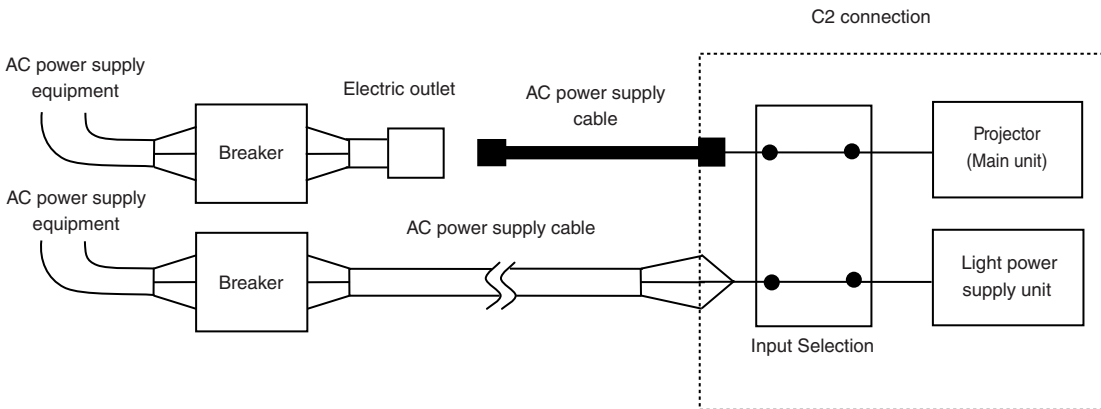
• C1 connection

AC power is provided to the projector power supply and the light power supply by a single cable.



• C2 connection

AC power is provided to the projector power supply and the light power supply by separate cables.



AC power supply equipment

Do not connect AC power supply voltages to the projector other than those indicated below.

- | |
|---|
| <p>When using with a C1 connection</p> <ul style="list-style-type: none"> • 200 - 240 V AC, single phase, 50/60 Hz <p>When using with a C2 connection</p> <ul style="list-style-type: none"> • 200 - 240 V AC, single phase, 50/60 Hz (projector power supply) • 200 - 240 V AC, single phase, 50/60 Hz (light power supply) |
|---|

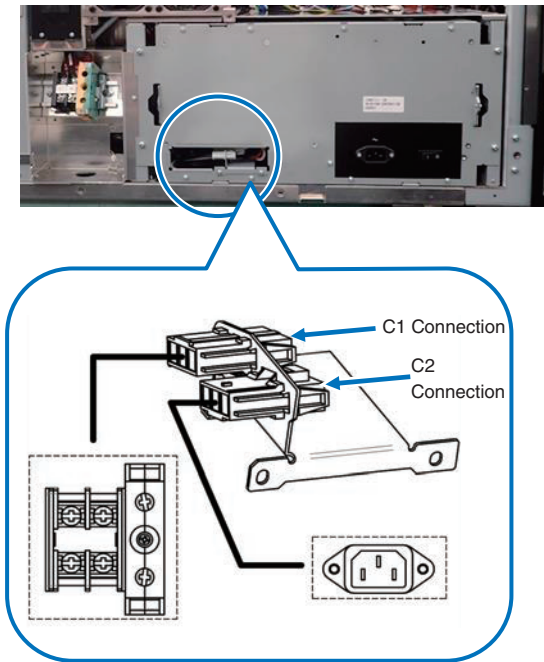
Breakers

When connecting the AC power supply from the power supply equipment of the building to the projector, be sure to connect it through a breaker. The capacity of the breaker must be as indicated below.

- | |
|---|
| <p>When using with a C1 connection</p> <ul style="list-style-type: none"> • Power supply for projector + power supply for light
200 - 240 V AC: 40A <p>When using with a C2 connection</p> <ul style="list-style-type: none"> • Power supply for projector
100 - 240 V AC: 10A • Power supply for lamp
200 - 240 V AC: 40A |
|---|

Input Selection

The power supply connection method is configured by the wiring to the input selection. The configurations are as follows.

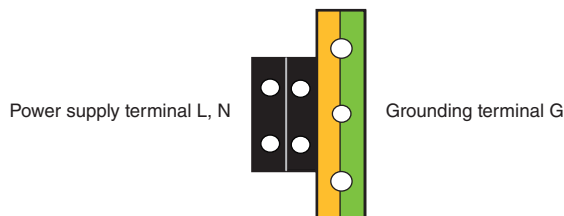


AC power supply cable

- For the AC power cable, use a cable of thickness as appropriate for the installation country and made of copper as shown below.
- Use a round type UL-listed solderless terminal for the section connected to the main unit. In addition, when clamping this terminal with the cable, use an UL listed tool.

Compatible Cables and Solderless Terminals

The specifications of the terminals for attaching the power cables are as follows.



The size of the solderless terminal to use and the fastening torque of the screws varies depending on the type of terminal block. Use the cable and solderless terminal that is suitable for the specific type of terminal block as shown in the following table. This specifies the model name of the recommended solderless terminals. Use these parts or equivalent parts. If you are unable to use the recommended solderless terminals, ensure that you use terminals of the dimensions shown in the following diagram.

⚠ WARNING

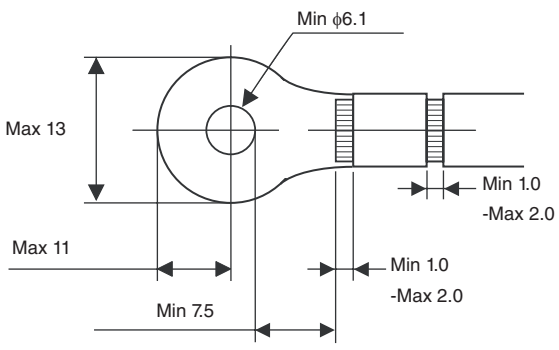
- The power supply unit handles large electrical currents. To maintain safety, use wires with the specifications as shown in the following table, and affix to the terminals at the designated attachment torque.
- Always use solderless terminals with the dimensions as shown in the following diagram.
- The use of parts with dimensions other than as designated creates a risk of the AC power supply unit short circuiting due to the terminal block generating heat and melting because the terminal block of the light power supply unit cannot be attached correctly.

• Power supply terminal L, N (Black)

	JIS	IEC/EN	UL	CSA
Thickness of compatible wiring (using solderless terminal)	14mm ²	14mm ²	AWG6 or AWG8	AWG6 or AWG8
Solderless terminal dimensions	M5 x 10			
Tightening torque	2.0 to 2.5N·m			
Solderless terminal dimensions	<p>Unit: mm</p>			
Solderless terminal recommended part (J.S.T parts)	Model R8-5		When using AWG6: Model R14-5 When using AWG8: Model R8-5	

J.S.T: J.S.T. Manufacturing Co. Ltd.

• Ground terminal G (Green/Yellow)

	JIS	IEC/EN	UL	CSA
Thickness of compatible wiring (using solderless terminal)	14mm ²	14mm ²	AWG6 or AWG8	AWG6 or AWG8
Solderless terminal dimensions	M6 x 15			
Tightening torque	3.5 to 5.0N·m			
Solderless terminal dimensions	 <p>Unit: mm</p>			
Solderless terminal recommended part (J.S.T parts)	Model 8-8NS		When using AWG6: Model R14-6 When using AWG8: Model 8-8NS	

J.S.T: J.S.T. Manufacturing Co. Ltd.

Connecting the cable

In order to attach the power cable to the connector block, connect the wires using the following procedure such that the individual wires cannot directly touch each other.

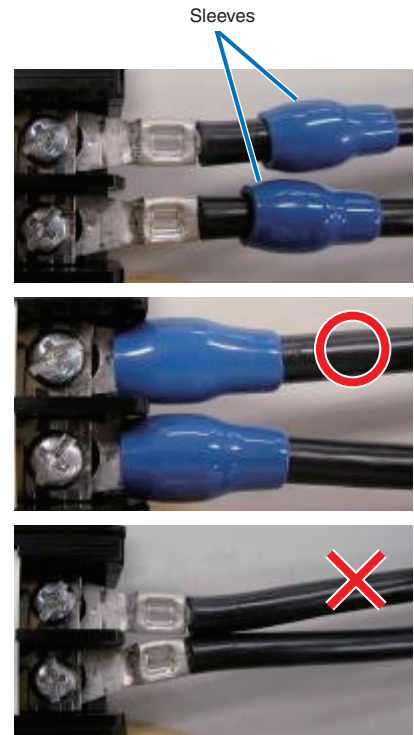
- 1 Remove the power cable sleeves from the terminals to ensure that the sleeves are not pinched by the terminal attachment screw.**

Pull back the sleeves from the terminal area before fastening the screw to prevent the sleeves from being pinched.

- 2 Attach the sleeves after tightening the screw.**

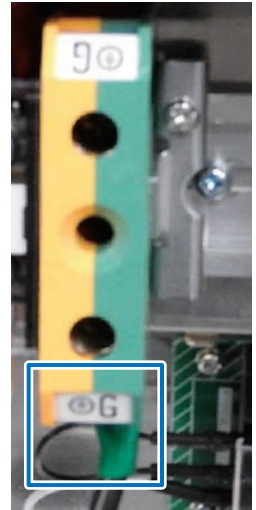
Tighten the fixing screw to the designated torque.

Use sleeves and secure the insulation to ensure that terminals do not touch each other. If the cables are attached to the power supply terminal without using sleeves, there is a risk of the terminals touching each other as shown in the photograph on the right.

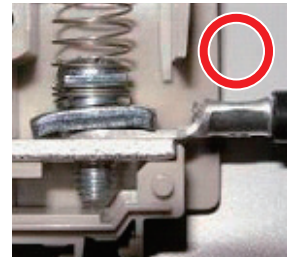


Setting Up Your Projector

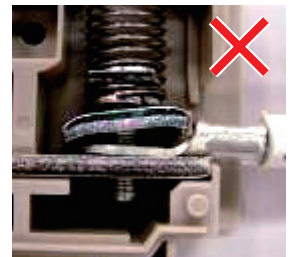
When connecting the cables to the ground terminal block, ensure that parts other than the solderless terminal (such as cable wires and fittings) are not pinched within the terminal fastening area.



When correctly fastened.



When the cable wire has become pinched due to using a solderless terminal with dimensions other than as designated.



2-5-2. Procedure for connecting the power cable (C1 connection)

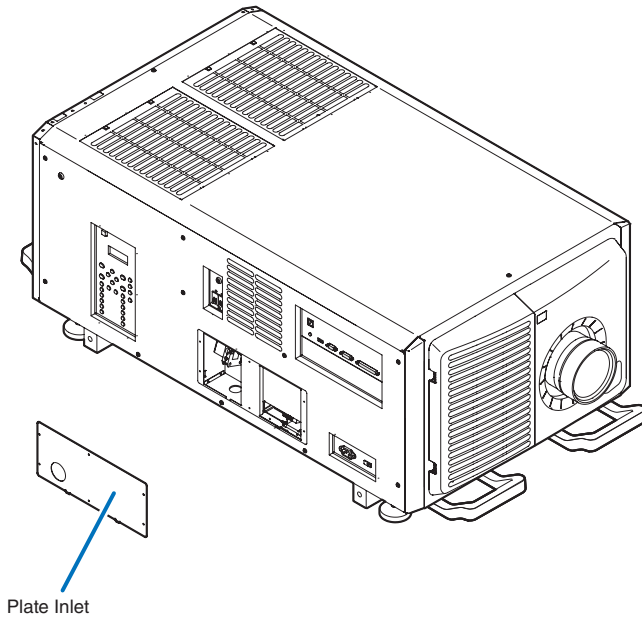
Preparation: Phillips-head screwdriver (No. 2), service key (projector accessory)

WARNING

- Before connecting the power cable, make sure that the AC power supply is disconnected. Otherwise a fire or electric shock may occur.
- A large leak current flows. Do NOT connect the power supply before grounding connection.

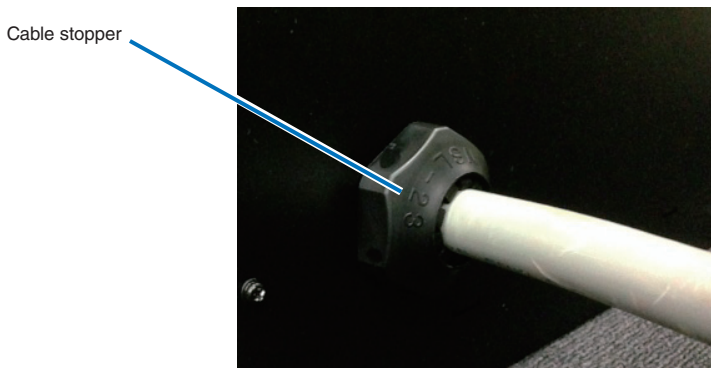
1 Remove the plate inlet.

Remove the plate inlet by loosening the fixing screws (at six points).
In Europe, replace it with the supplied $\phi 35$ plate inlet.



2 Pass the power cable through the cable hole of the plate.

If you use the supplied $\phi 35$ plate inlet, pass the power cable through a commercially available cable stopper and then insert it into the cable hole.

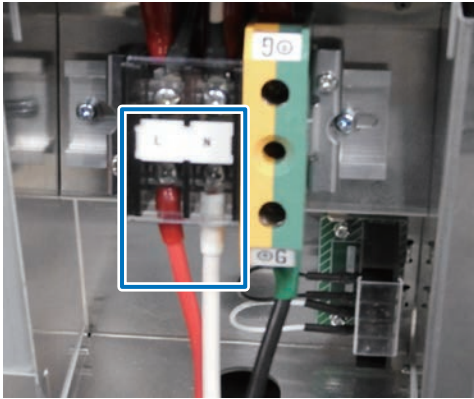


3 Remove the terminal cover of the power supply terminals.

Remove the terminal cover by pulling it upward.

4 Insert the L/N lines of the AC power cable into the connection terminals, and tighten the screws.

Insert the crimping terminals of the AC power cable into the retaining holes of the connection terminals, and tighten the screws with the Phillips-head screwdriver.



WARNING

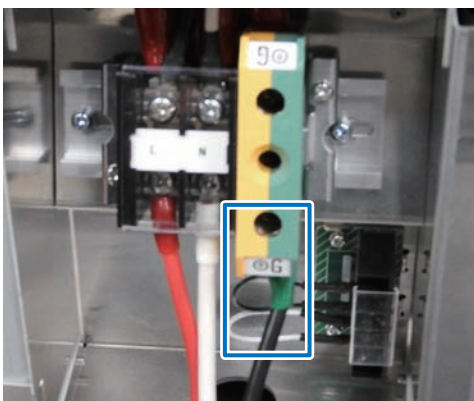
Securely screw the AC power cable to the connection terminals. Also, after tightening the screws, make sure that all the power cable lines are securely screwed. A failure to do this could result in an accident causing death, injury, etc.

5 Put the terminal cover on the power supply terminals.

Follow the reverse procedure to removal of the terminal cover.

6 Insert the grounding cable into the grounding terminal, and screw it.

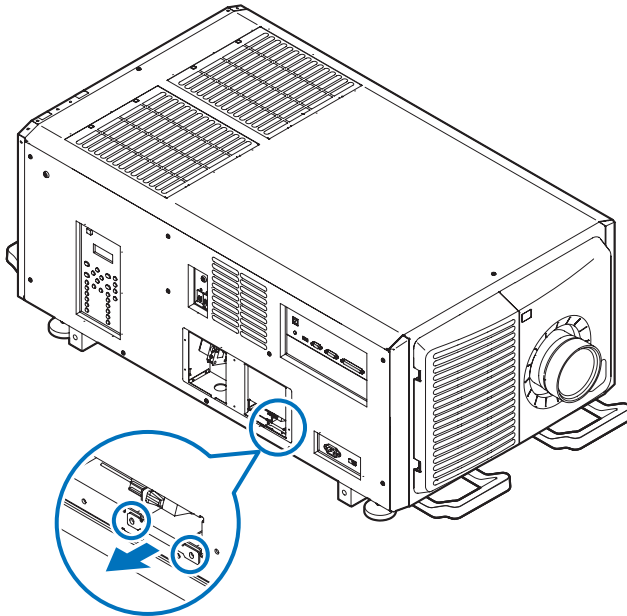
Insert the crimping terminal of the grounding cable into the retaining hole of the connection terminal, and tighten the screw with the Phillips-head screwdriver.



WARNING

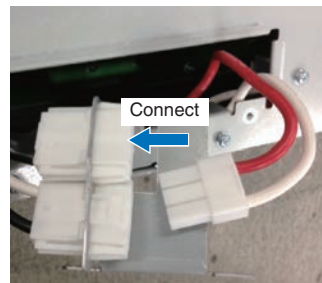
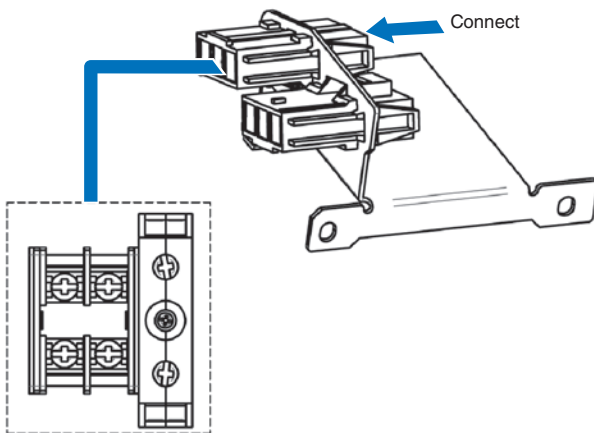
Securely screw the grounding cable to the connection terminal. Also, after tightening the screw, make sure that the screw is securely tightened. A failure to do this could result in an accident causing death, injury, etc.

- 7** Remove the fixing screws (at two points), eject the fixing bracket in the direction of the arrow, and pull out the power connector.



- 8** Configure the power supply for C1 connection.

For C1 connection, connect the inner-side connector.



- 9** Return the power connector and the fixing bracket to their original position, and fix the fixing screws (at two points).

- 10** Fix the plate inlet with the fixing screws (at six points).

In Europe, fix the supplied $\phi 35$ plate inlet.

2-5-3. Procedure for connecting the power cable (C2 connection)

Preparation: Phillips-head screwdriver (No. 2), service key (projector accessory)

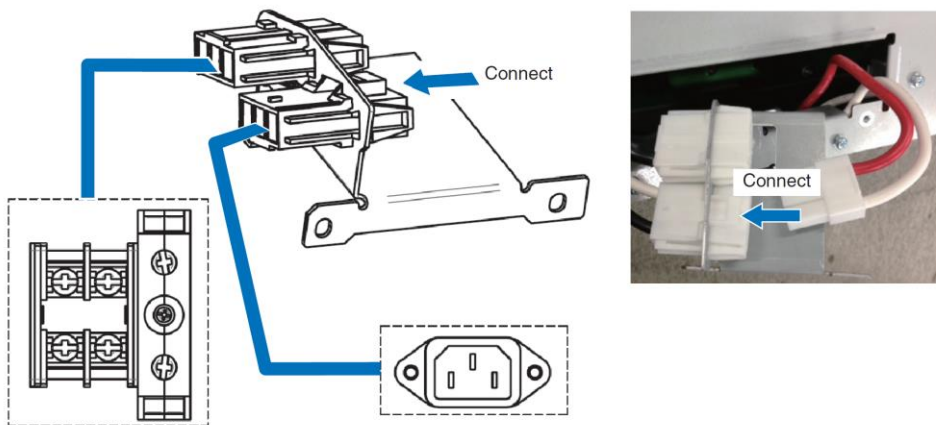
⚠ WARNING

- Before connecting the power cable, make sure that the AC power supply is disconnected. Otherwise a fire or electric shock may occur.
- A large leak current flows. Do NOT connect the power supply before grounding connection.

1 Follow steps **1** to **7** in “2-5-2. Procedure for connecting the power cable (C1 connection)” (page 55).

2 Configure the power supply for C2 connection.

For C2 connection, connect the outer-side connector.

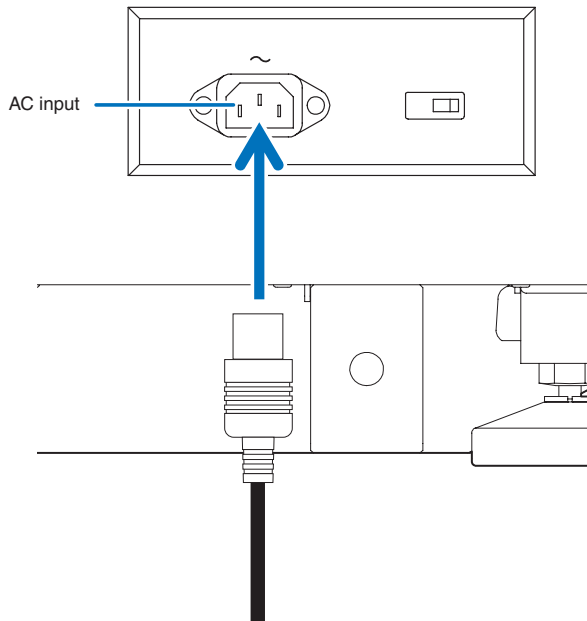


3 Return the power connector and the fixing bracket to their original position, and fix the fixing screws (at two points).

4 Fix the plate inlet with the fixing screws (at six points).

5 Connect the AC power supply cable.

- 1** Connect the AC power supply cable to the projector.



- 2** Connect the power plug to the electrical outlet.

This completes the connection of the AC power supply cable.

Attaching the power cable stopper

To prevent the power cable from accidentally removing from the AC IN of the projector, attach the supplied power cable stopper to clamp the power cable.

CAUTION

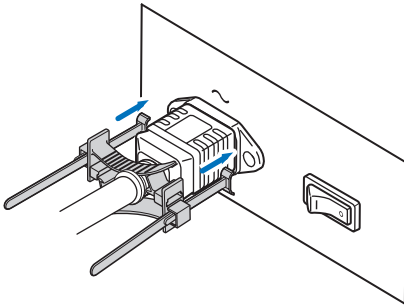
- To prevent the power cable from coming loose, make sure that all the prongs of the power cable are fully inserted into the AC IN terminal of the projector before using the power cable stopper to fix the power cable. A loose contact of the power cable may cause a fire or electric shock.
- Do not bundle the power cable. Doing this could cause heat or a fire.

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.

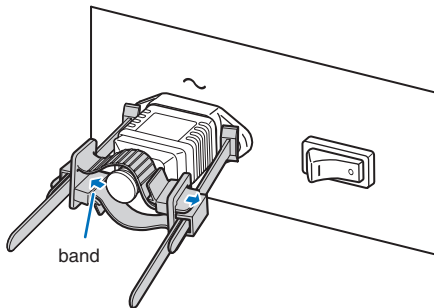
- 1** Set the clamber band to the power cable side, and insert the end of band of the power cable stopper into the slot next to the AC IN on the terminal panel.

Attach the power cable stopper to the other side in the same way.



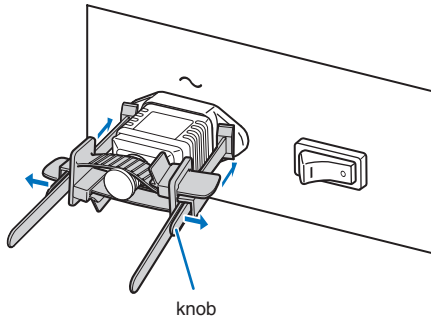
- 2** Pass each band through the slits in the power cable stopper.

Pass the bands through them so that the power cable will be sandwiched from above and below.



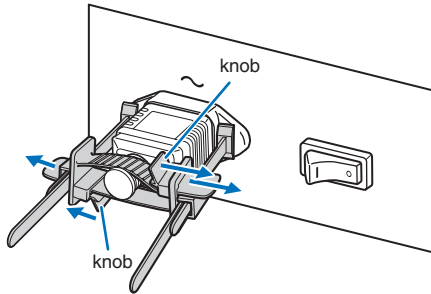
3 Slide the clamber to the hilt of the power cable.

Pulling the knob in the arrow direction allows you to adjust the clamber position. Once the clamber position is adjusted, release the knob to lock the clamber.



4 Pull the band to hold the power cable.

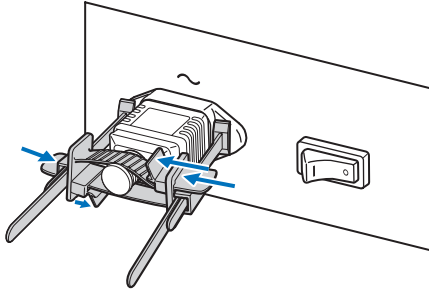
Pulling the knob in the arrow direction allows you to adjust the band position. Pull the top and bottom bands by keeping their balance. Once the band position is adjusted, release the knob to lock.



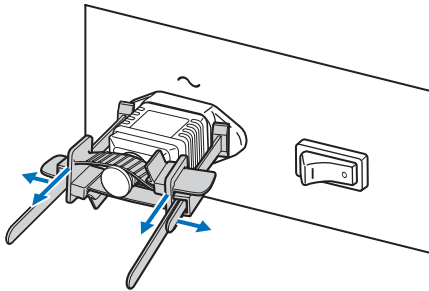
This completes the attachment of the power cable stopper.

Removing the power cable from the power cable stopper

- 1** Pull the knob of the clamper and loosen the band.



- 2** Pull the knob and slide the clamper away from the power plug.



⚠ CAUTION

The projector may become hot temporarily when the power is turned off or if the AC power is disconnected while the projector is projecting. Take care when handling the projector.

2-7. Mounting the Lens Unit

The lens units that can be attached to this projector are shown in the following table.

Since this is a laser projector, the installation procedure of the lens unit is not disclosed. To install or adjust an optional lens unit, contact your dealer/distributor.

MODEL	Magnifying
NC-50LS12Z	1.13–1.66
NC-50LS14Z	1.30–1.85
NC-50LS16Z	1.45–2.17
NC-50LS18Z	1.63–2.71
NC-50LS21Z	1.95–3.26
L2K-30ZM	2.71–3.89

NOTE

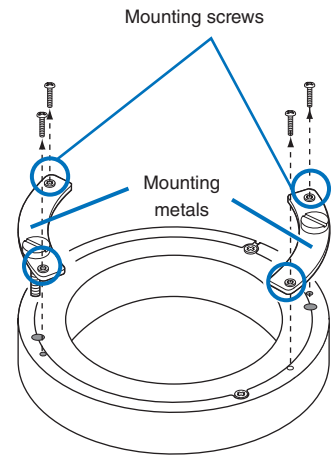
- The other NEC optional lenses are not available on this model.
- The projector and lenses are made of precision parts. Do not subject them to shock or excessive forces.
- Remove the lens unit when moving the projector. If not, the lens could be subject to shock while the projector is being moved, damaging the lens and the lens shift mechanism.
- When removing or installing the lens unit, return the position of the lens to the center before turning off the power to the projector. If the position of the lens is not returned to center, the front cover will interfere with the lens and the cover cannot be removed or installed.
- When installing or removing the lens unit, first confirm that the main power switch to the projector is off, and then disconnect the AC power supply. After the AC power supply has been disconnected, allow the projector to sufficiently cool before starting this work.
- Never touch the lens surface while the projector is operating.
- Be very careful not to let dirt, grease, etc., on the lens surface and not to scratch the lens surface.
- Perform these operations on a flat surface over a piece of cloth, etc., to prevent the lens from getting scratched.
- When leaving the lens off the projector for long periods of time, mount Dust-proof cushion on the projector to prevent dust or dirt from getting inside.

NOTE

- If you remove the lens cover, a tamper event is detected by the tamper detection circuit. When you start the projector after attaching the cover, the following error message is displayed on the LCD screen of the projector main unit.
 - “IMB: Service Door Tamper” (When NP-90MS01 mounted)
- Encrypted contents cannot be displayed while an error message is being displayed. Refer to “3-2. Recovering from Tamper Errors” (page 87) for details on how to clear the error message.

1 Remove two mounting metals of the lens holder.

Remove four mounting screws and remove two mounting metals. These four mounting screws and two mounting metals will be used for lens holder mounting.



2 Place the lens with the face upward.

Check that the place for putting the lens is flat before the work. It is recommended to keep the lens cap set so as to protect the lens from any damage.

3 Insert the lens holder from under the lens.

Align the lens holder slits with two lens insertion guides and insert the lens holder.

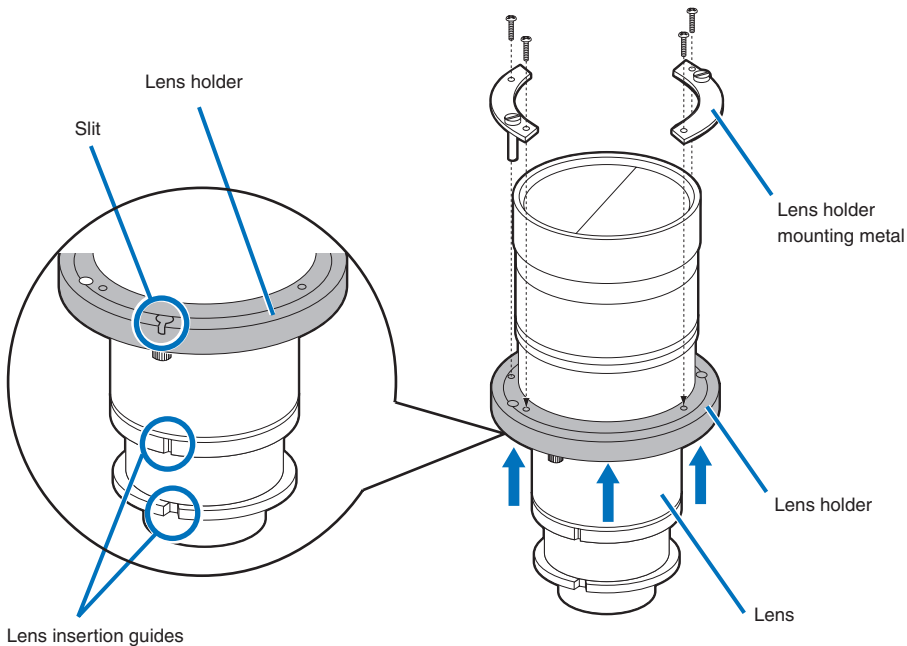
4 Fix two mounting metals of the lens holder with four mounting screws.

5 Attach the gearbox cover.

Attach the attached gearbox cover with two screws.

6 Remove the lens cap.

If the lens has a lens cap, remove the lens cap.



7 Remove the lens cover.

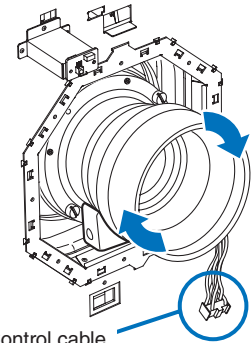
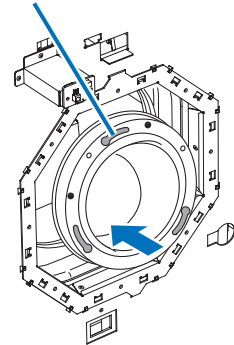
For removal of the lens cover, Refer to "1-5-1. Removing and Mounting the Lens Cover" (page 35).

8 Hold the lens unit with its guide notch faced upward and insert the lens until it cannot go further.

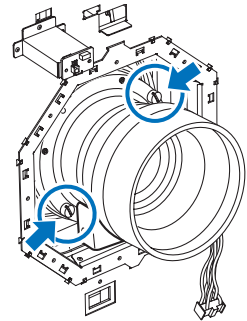
Insert the lens holder into the fixing hole of the lens ring and mount it with rotating it clockwise.

Pay attention not to catch the lens control cable here.

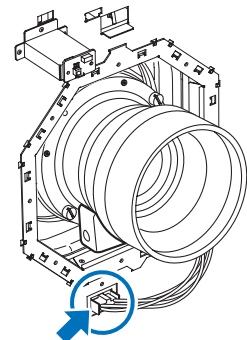
Fixing hole of the lens ring



9 Tighten the two fixing screws for the lens holder.



10 Connect the control cable.



11 Attach the lens cover.

For details on attaching the lens cover, Refer to “1-5-1. Removing and Mounting the Lens Cover” (page 35)
This completes the installation of the lens unit. Removal is done in reverse order of installation.

2-8. Mounting the Option Board

This section describes the procedure of mounting the media block. The following option board can be mounted to the slot of the projector.

Name		Slot
IMB	NP-90MS01	*
	NP-90MS02	

Preparation:

Phillips head screwdriver (No.2) and service key (attached goods).

- **Step 1**
Remove Side Panel from the Projector (See page 37)
- **Step 2**
Mount the Option Board to the Projector (See this page)
- **Step 3**
Mount the Side Panel to the Projector (See page 37)
- **Step 4**
Restore the Tamper Error (See page 87)
Setting up the Projector (See page 84)

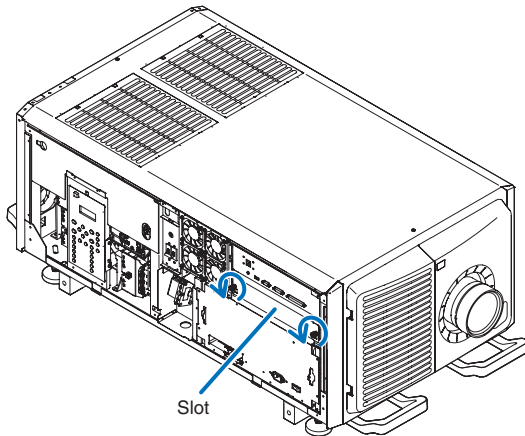
- NOTE**
- If you remove the side panel, a tamper event is detected by the tamper detection circuit. When you start the projector after attaching the cover, the following error message is displayed on the LCD screen of the projector main unit.
 - “IMB: Service Door Tamper”
 - If you remove the blocking panel or option board from a slot, a tamper event is detected by the tamper detection circuit. When you start the projector after attaching the cover, the following error message is displayed on the LCD screen of the projector main unit. Since the marriage is also cleared at the same time, re-marriage is necessary.
 - “IMB: Physical Marriage Tamper”, “IMB: Marriage NOT Active”
 - Encrypted contents cannot be displayed while an error message is being displayed. Refer to “3-2. Recovering from Tamper Errors” (page 87) for details on how to clear the error message.

1 Remove the side panel.

Side panel of the projector should be removed to mount the option board. For the procedure of removing the side panel, refer to “1-5-2. Removing and Mounting the Side Panel” (page 37).

2 Remove the blocking panel from slot.

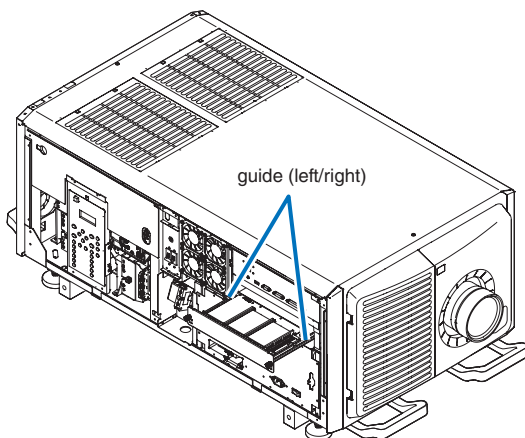
1. Loosen the knurled screws (2 places) of slot until their rotations become idle (❶). Screws cannot be removed.
2. Remove the blocking panel (❷).



NOTE Carefully store the blocking panel and screws that you removed.

3 Mount the option board to the projector.

1. Insert the board by following the guide on either side of the slot.
2. Tighten up the knurled screws (2 places) until it fix.

**4** Mount the side panel to the projector.

This completes the mounting of option board. Next, clear any tamper events. For details on how to clear tamper events, refer to “3-2. Recovering from Tamper Errors” (page 87). A setting to use option board is needed, after recovering from tamper error. For the procedure, refer to “2-8-1. Make the option board usable” (page 84).

2-8-1. Make the option board usable

By registering the mounted option board to the slot, you can use option board by setting up the projector. This procedure is described for the example, when IMB (NP-90MS02) is mounted to slot. For the operation of the projector, refer to projector's "Users Manual".

TIP DCC can be used to set up.
For the procedure by using DCC, refer to "Digital Cinema Communicator v2 Installation Manual".

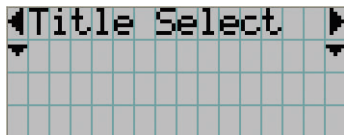
1 Set the projector in standby mode.

2 Enable the service personnel menu.

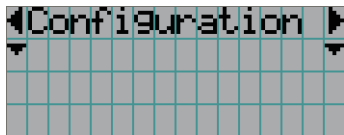
These settings are for our service personnel and cannot normally (user mode) be used. You need to enter a passcode to enable the service personnel menu. Refer to the "4-1-1. When You Use the Service Personnel Menu" (page 100) for the procedure.

3 Press the MENU button on the control panel.

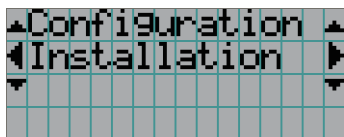
"Title Select" is displayed in the menu. From this procedure on, control panel of the projector will be used.



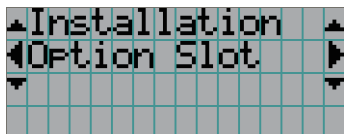
4 Press the LEFT/RIGHT button to display "Configuration" and press the DOWN button.



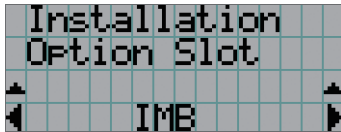
5 Press the LEFT/RIGHT button to display "Installation" and press the DOWN button.



6 Press the LEFT/RIGHT button to display "Option Slot" and press the DOWN button.

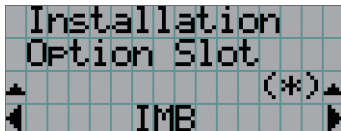


- 7** Press the LEFT/RIGHT button to display “IMB”



- 8** Press the ENTER button.

(*) is displayed to the selected item.



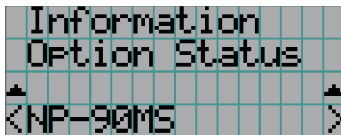
- 9** Press the EXIT button several times.

The projector exits the menu and goes back to the regular screen.

If you press the EXIT button and then select “Yes” and press the ENTER button on a regular screen, you will returned to user mode.

This completes the setting of the projector.

TIP Settings of slot can be confirmed at projector's [Information] - [Option Status]



3. Projector Adjustment and Connecting

3-1. Flow of Adjustment and Connecting

Adjustment and Connecting of the projector accord to the procedure below.

- **Step1**
Turning Your Projector On (See page 90)
- **Step2**
Setting The Date and Time in the Projector (See page 91)
Setting the date of installation of the projector (See page 91)
- **Step3**
Setting the Projector Projection Method (See page 92)
- **Step4**
Adjusting the Lens (See page 93)
Display the test pattern to adjust the screen size, screen angle and focus.
- **Step5**
Connecting with the Image Input Port (See page 95)
- **Step6**
Connecting the Various Control Terminal (See page 96)

This chapter explains the adjustment and connection of the projector with Steps 1 to 6.

Steps 1 to 6 complete the adjustment and connection of the projector. Next, carry out various settings such as color adjustment using DCC. Refer to the "Digital Cinema Communicator v2 Installation Manual" for the procedure.

3-2. Recovering from Tamper Errors

The projector is fitted with a tamper detection circuit. If the cover or a slot device is removed, a tamper event is detected by the tamper detection circuit. When the projector is started after a tamper event has been detected, an error message is displayed on the LCD screen of the projector. The actions that are detected as tamper events and the error messages that are displayed on the LCD screen are as follows.

Action	Error code	Error message
Cover removed <ul style="list-style-type: none"> • Lens cover • Side panel (left/right) 	586	IMB: Service Door Tamper
Slot device or blocking panel removed <ul style="list-style-type: none"> • Blocking panel • Media block 	582 584	(582) IMB: Physical Marriage Tamper (584) IMB: Marriage NOT Active

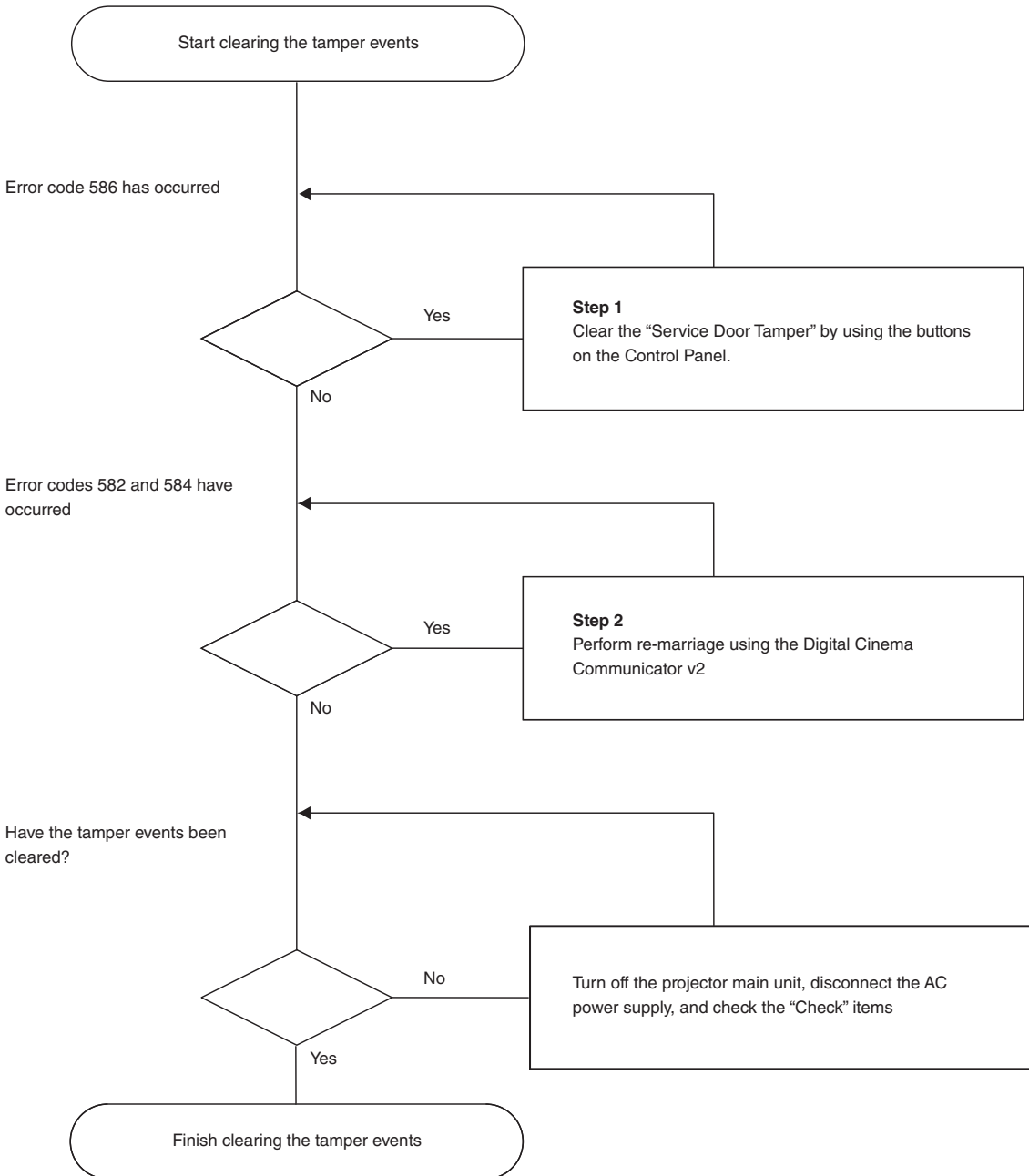
TIP Error codes can be checked when using the DCC.

While the above error messages are being displayed, encrypted contents cannot be displayed. Refer to “3-2-1. Clearing tamper events” (page 88) for details on how to clear the error message.

3-2-1. Clearing tamper events

Be sure to do this while the power of the projector is on (when Power-ON).

If any tamper events have been detected by the tamper detection circuit of the projector main unit, clear the tamper events using the following procedure.



- **Step 1**

- **“Clear the “Service Door Tamper” by using the buttons on the Control Panel.”**

- Refer to “4-1-1. When You Use the Service Personnel Menu” (page 100) for details on logging into the projector with Advanced User or higher privileges using the buttons on the control panel.

- Press and hold the LEFT/RIGHT buttons simultaneously for 3 seconds or more to display the passcode entry screen. Enter your passcode and press the ENTER button. If the right passcode is entered, the Clear SDT menu will be displayed. Press the ENTER button to delete the “IMB:Service Door Tamper”.

- **NOTE**

- When you enter the password, pay enough attention to people around for the password abuse prevention.

- Before entering the password, inspect the password entry device (such as remote controller and/or keypad on the projector) for any evidence of physical tampering. In the event that any suspicious markings are present (such as gouges, extraneous wiring, adhesive materials, etc.) “DO NOT” enter the password and consult with the distributor.

- Always store the password, remote controller, and projector in a safe place and never divulge the password to unauthorized entities.

- Entered password is indicated with * on the LCD.

- In case entered password characters are indicated on the LCD, it is machine trouble. Consult with the distributor.

- **Step 2**

- **“Perform Re-Marriage using the Digital Cinema Communicator v2”**

- DCC is used to perform re-marriage. Refer to “Digital Cinema Communicator v2 Installation Manual” for details.

- **Check**

- **“Attach the lens cover, side panel (left/right)”**

- If you have removed a cover, then attach the cover. Furthermore, if the covers are attached, check that they are attached correctly.

- After attaching the cover, turn the main power switch of the projector on (with the AC power supply turned on), and check that “Tamper Fail” is not displayed on the LCD screen.

- **“Check that the equipment is correctly attached to slot”**

- If there are no devices mounted in slot, attach the blocking panel. Also, if a device is mounted in slot, check that it is securely pushed all the way into the slot.

- After correctly mounting a device in the slot, turn the main power switch of the projector on (with the AC power supply turned on), and check that “Marriage Tamper Fail” is not displayed on the LCD screen.

3-3. Turning your Projector On

NOTE

- Do not use the projector with the lens cap left attached, and do not attach the lens cap while the projector is operating. The lens cap may become hot, causing them to deform or melt.
- 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 SYSTEM status indicator is blinking red without the light source 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.

Preparation:

- Connect the power cable to the projector.
- Supply AC power to the projector.

1 Insert the administrator key horizontally and turn it to the vertical direction.

The administrator key can no longer be removed. The projector will not function unless the administrator key is inserted.

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

A buzzer sounds and the software begins to start. While the software is starting, the POWER indicator is changed from lighting in blue to blinking in blue. After software startup is complete, the projector goes to a standby state. While the projector is in a standby state, the POWER, STATUS, SYSTEM status indicators light in orange. 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.

3 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.

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

Projector turns on.

The POWER indicator lights up green after the completion of activation.

5 Press the LIGHT ON/OFF button on the control panel for three seconds or longer.

The light source is turned on and the screen glows light about 15 seconds later. The douser is closed until the screen glows light (the DOUSER indicator lights green). When the douser is open, the DOUSER indicator turns off.

3-4. Setting the Date and Time in the Projector

The internal clock in the projector operates on coordinated universal time (UTC). You can set the internal projector time to the time in your region by setting the time difference between the standard time in your region and UTC.

When IMB is used, the date and time of IMB are automatically used as the date and time of the projector (UTC).

When IMB is not used, the use of DCC allows you to easily set the date and time of the projector by reading the date and time of the computer where DCC is installed.

To set the local time after selecting the Coordinated Universal Time as the date and time of the projector, use [Date/Time] (P.110), or use DCC. Refer to “Digital Cinema Communicator v2 Installation Manual” for details.

Setting the date of installation of the projector

Set the date of installation of the projector (year/month/day). To set the date of installation, use DCC. Refer to “Digital Cinema Communicator v2 Installation Manual” for details.

3-5. Setting the Projector Projection Method

The projection method can be changed in the projector menu. In the factory default settings, it is set to front (installed on a stand and projecting from the front of the screen).

- 1** Press the LEFT/RIGHT button to display “Configuration” and press the DOWN button.
- 2** Press the LEFT/RIGHT button to display “Installation” and press the DOWN button.
- 3** Press the LEFT/RIGHT button to display “Orientation” and press the DOWN button.
- 4** Press the LEFT/RIGHT buttons to select the projection method.

When shipped from the factory, it is set to [Normal-F].

Normal-F	Front projection. With the projector installed on the pedestal, projection is executed from the front of the screen.
Normal-R	Rear projection. With the projector installed on the pedestal, projection is executed from the back of the screen.
UpsideDown-F	Ceiling front projection. With the projector installed on the ceiling, projection is executed from the front of the screen.
UpsideDown-R	Ceiling rear projection. With the projector installed on the ceiling, projection is executed from the back of the screen.

- 5** Press the ENTER button.

An (*) will be put on the selected projection method.

- 6** Press the EXIT button several times.

The projector exits the menu and goes back to the regular screen.

If you press the EXIT button and then select “Yes” and press the ENTER button on a regular screen, you are returned to user mode.

3-6. Adjusting the Lens

Display the test pattern and adjust the screen size, focus and screen position with the lens unit.

3-6-1. Display the Test Pattern

1 Press the MENU button.

"Title Select" is displayed on the LCD screen at the projector's control panel.

2 Press the DOWN button.

3 Press the LEFT/RIGHT buttons to select "TEST Pattern".

4 Press the DOWN button.

5 Press the LEFT/RIGHT buttons to select "Cross Hatch".

6 Press the ENTER button.

An (*) will be put on the selected test pattern.

3-6-2. Adjusting the Screen Angle

Preparation: Display the zoom/focus adjustment screen by using the following procedure.

- [1] Press the MENU button on the projector's control panel.
"Title Select" appears on the projector's LC display.
- [2] Select "Configuration" menu using LEFT the LEFT/RIGHT button.
- [3] Press the DOWN button.
- [4] Select "Lens Control" using the LEFT/RIGHT button.
- [5] Press the DOWN button.
- [6] Press the ENTER button.
"Focus Zoom" is displayed and you can adjust the focus/zoom.

1 Press the LEFT/RIGHT buttons to roughly adjust the screen size so that the screen height and the image height are the same.

2 Press the UP/DOWN buttons to roughly adjust the focus.

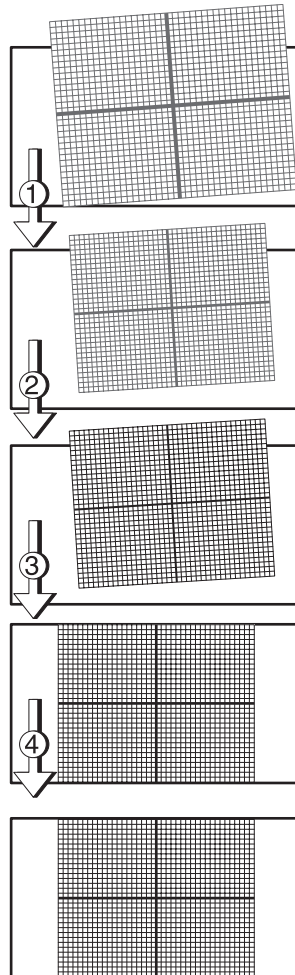
3 Adjust the surface on which the projector is set up and the level adjuster of the projector to adjust the setup position, height, and tilt (front-back and left right) of the projector so that the projected image is level at the screen center.

4 Use the LEFT/RIGHT buttons again to adjust the screen size so that the projected image is kept 0.5 to 1 crosshatch cell portions higher than the top edge of the screen.

5 Finally adjust the focus using the UP/DOWN buttons.

6 Press the EXIT button several times.

The projector exits the menu and goes back to the regular screen.



3-7. Connecting with the Image Input Port

By installing option board to projector, you can add input port. Input port which can add to option board is listed below. For the connection diagram of projector and peripheral equipment, refer to Installation manual of option board.

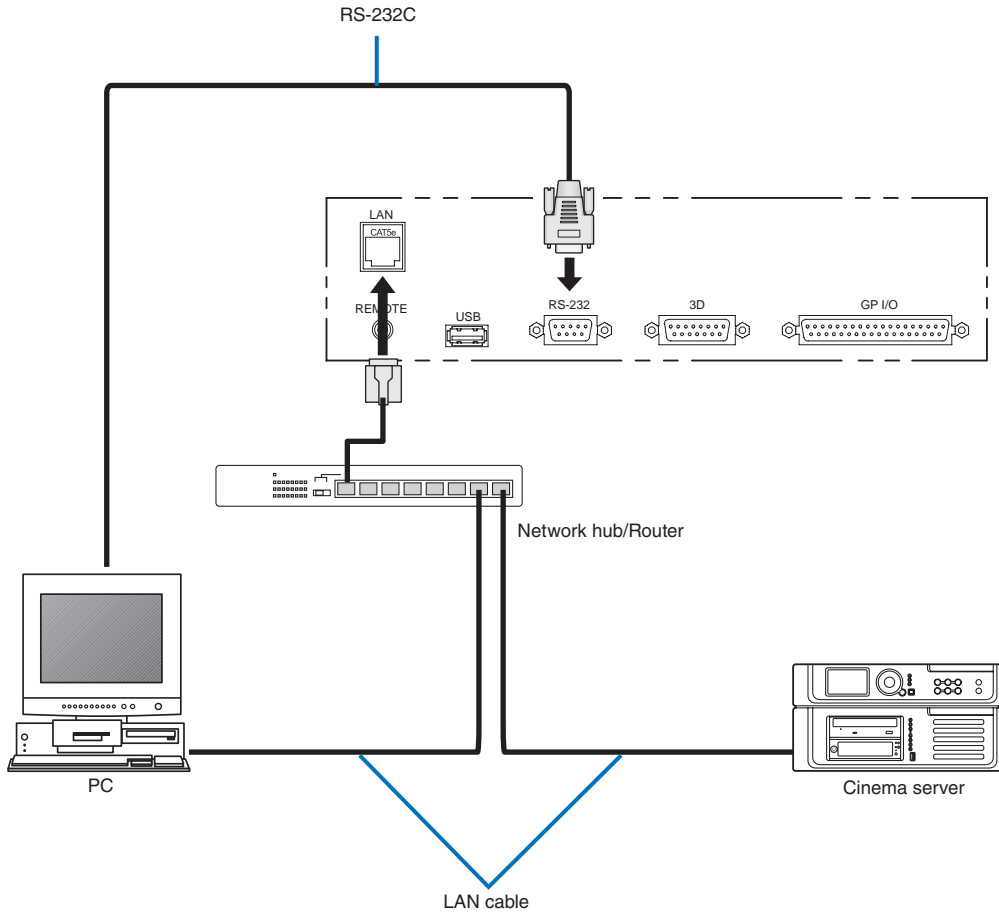
Option Board	Image Input Port
NP-90MS01/NP-90MS02 (Note)	HDMI input port x1 SDI input port x2

(Note) The NP-90MS01/NP-90MS02 video input ports do not support CineLink 2. The NP-90MS01/NP-90MS02 video input ports cannot display the encrypted contents.

3-8. 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. Use a retail RS-232C straight cable for the connection between the projector and the computer.
Ethernet port (LAN)	Use this port when controlling the projector in LAN connection from a PC or a cinema server. Use a retail LAN cable (10/100Base-T) for the connection between the projector and the computer after checking with your network administrator.



This completes the adjustment and connection of the projector. Next, set up the projector from the DCC. Refer to the "Digital Cinema Communicator v2 Installation Manual" for the procedure.

4. LCD Menu

This chapter describes the menus displayed in the LCD screen on the projector's control panel and their functions. For basic operations of menus, refer to the projector's operation manual.

4-1. List of Menu

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

Main menu	Submenu		Description	Reference page
Title Select	"Title Memory Name"		Selects the title of the signal to be projected.	101
	TEST Pattern		Selects the test pattern to be projected.	101
Configuration	Light Setup	Adjust	Adjusts light source brightness.	102
	Lens Control	Lens Position	Adjusts the position of the projected screen.	102
		Focus Zoom	Adjusts the size and focus of the projected screen.	102
	Reset	(FactoryDefault)	Returns the settings to their default values. Selects between preset buttons and titles only, LAN settings only and all settings.	103
		Filter Cleaning	Initializes the air filter usage time (for confirming the filter cleaning time).	103
		(Fan Usage)	Initializes the usage time of the fan.	104
		(Light Usage)	Initializes the usage time of the light source.	104
		(Phosphor)	Initializes the usage time of the Phosphor.	104
		(Diffuser)	Initializes the usage time of the Diffuser.	104
		(Douser Count)	Resets the number of times the douser has been used.	104
		(Setup)	Douser Setup	Sets the douser open/close state.
	(Setup)	Panel Key Lock	Locks the buttons on the projector's control panel so that they cannot be operated.	105
		Auto Key Lock	Enables or disables Auto Key Lock.	106
		Off Timer	Sets the time until the projector power is turned off automatically.	106
		Message	Sets the time to display the message indicating the air filter cleaning cycle.	106
		Silent Mode	Selects whether to use the rear status indicator, buzzer, indicators on the control panel and backlight.	107
		Remote Sensor	Set the remote control receiver on the front and rear of the projector.	107
		Projector ID	You can operate multiple projectors separately and independently with the single remote control that has the Projector ID function. If you assign the same ID to all the projectors, you can conveniently operate all the projectors together using the single remote control.	108
		Installation	(Option Slot)	Configures the device installed in slot (only when the projector is in standby mode).
	(Orientation)		Sets the projection method and cooling fan operating mode.	109
	Lens Type (Note)		This function can not be used.	109
	Lens Calibrate (Note)		This function can not be used.	109
	Lens Center (Note)		Moves the lens shift position to the center (only when the projector power is turned on).	110
(Baudrate)	Sets the PC control terminal (RS-232) data transmission speed (bps).		110	
(Date/Time)	Sets the date and time on the projector.		110	
(New Router Setup)	Sets the router with the default settings when the router built-in the projector has been replaced.		111	
(Fan Speed Mode)	Sets the cooling fan operating mode.		111	
(Service)	Displays the Service man Menu.		111	

Main menu	Submenu		Description	Reference page
Configuration	(Memory)	Light	The content of the selected light memory (light output power value) can be overwritten with the current settings.	113
		Lens	The content of the selected lens memory can be overwritten with the current settings.	
(Title Setup)	Preset Button	Preset Button 1–20	Sets the title to be assigned to the preset buttons (<1> to <10> buttons).	114
Information	Light	Output	Displays the light source output setting.	115
	AC Voltage		Displays the power supply voltage value supplied to the projector.	115
	Preset Button	Preset Button 1–20	Displays the titles which are assigned to the preset buttons (<1> to <10> buttons).	115
	Usage		Displays information related to projector usage.	116
	Error Code		Displays the currently occurring error.	116
	Version	System	Displays the model name and various version information about the projector.	117
		IMB	Displays the vendor name and version information about the media block (IMB).	117
	IP Address	System	Displays the IP address of the projector.	117
	Setup Date		Displays the date when the projector was set up (starting date of the warranty period).	118
Option Status		Displays the link status of the device mounted in slot and projector.	118	

(Note) Requires logging into the projector with Advanced User or higher privileges.

TIP If you are logged in to the projector with Installation privileges, you cannot use the following items.

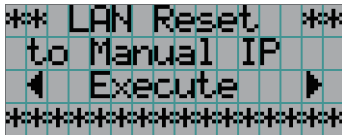
- [Factory Default]-[LAN] (P.103)
- [Reset]-[Fan Usage] (P.104)
- [Reset]-[Light Usage] (P.104)
- [Reset]-[Phosphor] (P.104)
- [Reset]-[Diffuser] (P.104)
- [Configuration]-[Installation]-[Service] (P.111)

Other menu functions

[LAN Reset to Manual IP]

Change the IP address assignment setting for the main body to "Manual".

Press the MENU and EXIT buttons simultaneously for three seconds. When the following screen appears, press the ENTER button for execution.



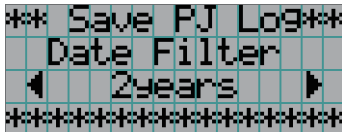
← Pressing the ENTER button executes this function.

[Save PJ Log]

Save a log of the main body into a USB flash drive. Press the UP and ENTER buttons simultaneously. When the following screen appears, specify the duration of the log to save using the LEFT/RIGHT buttons. Pressing the ENTER button displays the duration of the log to save. Check the duration and press the ENTER button to save the log into the USB flash drive. The log is saved into a file with the following name on the USB flash drive:

<projector-model-name> + <main-body-serial-number> + <saving-date (year/month/day)>.txt

Example: Save PJ Log was executed on May 17, 2017, with a serial number of 012345:

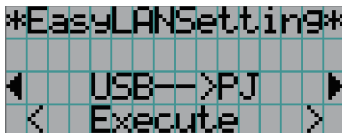


← Use the LEFT/RIGHT buttons to specify the duration of the log to save.

[Easy LAN Setting]

Use a network configuration file saved in a USB flash drive to configure the network settings of the main body. Also, save the network settings of the main body into a file in the USB flash drive.

Press the MENU and SERVICE buttons simultaneously to display the menu screen. For details, refer to the service manual of the main body.



← Pressing the ENTER button executes this function.

TIP Pressing the SERVICE button is a shortcut to displaying the [Configuration]-[Installation]-[Service] menu.

4-1-1. When You Use the Service Personnel Menu

To use the menu for service personnel, you need to input the passcode. This section describes how to display the passcode entry screen and how to enter the passcode. Refer to the Projector Manual for details on how to enter text.

1 Press the MENU button for three seconds or longer.

The passcode input screen will be displayed on the LCD screen at the projector's control panel.
Press the EXIT button to return to the original screen.

2 Enter the passcode and press the ENTER button.

If you make a mistake during input, you can move the cursor by pressing the LEFT/RIGHT buttons and overwrite the passcode.

If the passcode is correct, you can use the menu for service personnel.

NOTE

When you enter the password, pay enough attention to people around for the password abuse prevention.

If you have anxiety the password is cheated, change the password immediately.

Before entering the password, inspect the password entry device (such as remote controller and/or keypad on the projector) for any evidence of physical tampering. In the event that any suspicious markings are present (such as gouges, extraneous wiring, adhesive materials, etc.) "DO NOT" enter the password and consult with the distributor.

Always store the password, remote controller, and projector in a safe place and never divulge the password to unauthorized entities.

Entered password is indicated with * on the LCD.

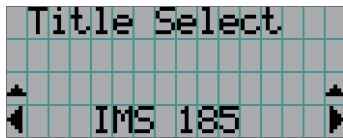
In case entered password characters are indicated on the LCD, it is machine trouble. Consult with the distributor.

4-2. Title Select

4-2-1. Title select (Title Memory)

Select 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 <10> on the projector's control panel and call them up directly using those buttons. (See page 114)



← Displays the currently selected item with asterisk (*).

← Selects the title to be projected.

4-2-2. Test Pattern

Selects the test pattern to be projected.



← Displays the currently selected item with asterisk (*).

← Selects the test pattern to be projected.

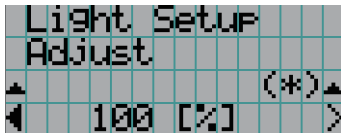
OFF, Alignment, Cross Hatch, Convergence, Red, Green, Blue, White, Black, White 50% [IRE], H-Ramp, Logo, CG-01, CG-02, ME

4-3. Configuration

4-3-1. Light Setup

Adjust

Adjusts the light source brightness (output). This setting is the fraction based on taking the maximum value of light source brightness as 100%.



← Adjusts the output power value (%).

4-3-2. Lens Control

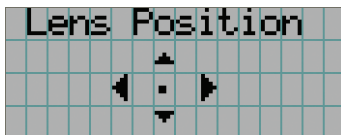
Adjust the position, size, and focus of the projected screen.

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.

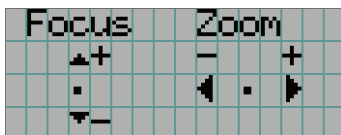


Focus Zoom

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.



4-3-3. Reset

Used when initializing settings and usage times. Some of the items are in the service personnel menu. Refer to “4-1-1. When You Use the Service Personnel Menu” (page 100) for details on how to use these.

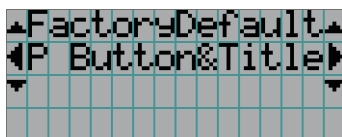
Item	Service Personnel	User
FactoryDefault	○	—
Filter Cleaning	○	○
Fan Usage	○	—
Light Usage	○	—
Phosphor	○	—
Diffuser	○	—
Douser Court	○	—

NOTE When “Light Usage” is reset, “Phosphor” and “Diffuser” are also reset.

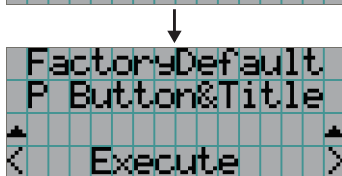
FactoryDefault

Returns the projector main unit settings to the factory default state. You can choose from the following three types of methods.

- Registered preset buttons and title settings
- Network settings
- All adjustment and setting values



← Select the item to be reset.



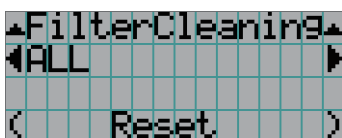
← Press the ENTER button to execute resetting.

P Button & Title	Resets the allocation of preset buttons and all registered titles.
LAN	Resets the network settings.
All	Resets all adjustment and setting values.

NOTE If you are logged in to the projector with Installation privileges, you cannot reset the network settings (LAN).

Filter Cleaning

Resets the air filter usage time (for confirming the filter cleaning time). Select the filter. 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 (for confirming the filter cleaning time).



← Press the ENTER button to display the confirmation screen.

Fan Usage

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



← Press the ENTER button to display the confirmation screen.

Light Usage

Resets the light source usage time. Select the corresponding light source. Press the ENTER button, then select “Yes” in the displayed confirmation screen, and then press the ENTER button to reset the light source usage time.



← Press the ENTER button to display the confirmation screen.

NOTE Resetting Light Usage resets the usage time (Phosphor and Diffuser) of the phosphors and diffusers included in the corresponding light source.

Phosphor

Resets the Phosphor usage time. Select the corresponding phosphor. Press the ENTER button, then select “Yes” in the displayed confirmation screen, and then press the ENTER button to reset the Phosphor usage time.



← Press the ENTER button to display the confirmation screen.

Diffuser

Resets the Diffuser usage time. Select the corresponding diffuser. Press the ENTER button, then select “Yes” in the displayed confirmation screen, and then press the ENTER button to reset the Diffuser usage time.



← Press the ENTER button to display the confirmation screen.

Douser Count

Resets the number of times the douser has been used. Press the ENTER button, then select “Yes” in the displayed confirmation screen, and then press the ENTER button to reset the number of times the douser has been used.



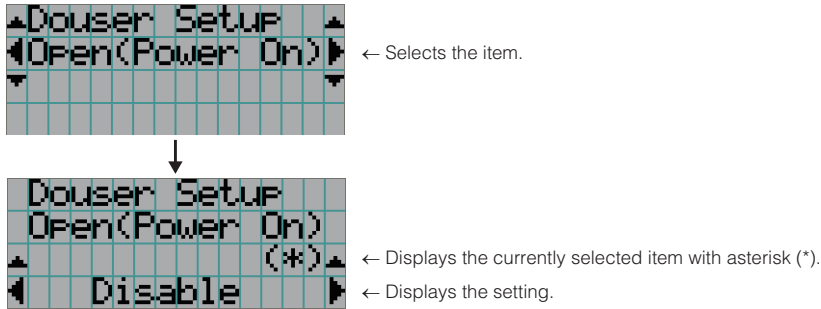
← Press the ENTER button to display the confirmation screen.

4-3-4. Setup

This menu is for service personnel. For the procedure to use it, refer to “4-1-1. When You Use the Service Personnel Menu” (page 100).

Douser Setup

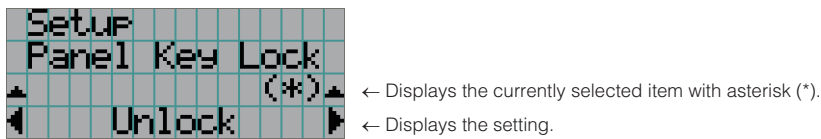
Sets the douser open/close state.



Open(Power On)	When set to Enable, the douser opens after the projector starts up.
Light On	When set to Enable, the douser opens when the light source is turned on.
Title Select	When set to Enable, the douser opens when a title is selected.

Panel Key Lock

The control buttons on your projector are locked to be inoperative.

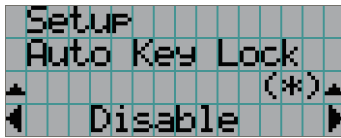


Lock	Enable a lock on the control buttons on your projector.
Unlock	Disable the lock on the control buttons.

NOTE When the buttons on the projector’s control panel are locked, press the EXIT button on the projector for about 10 sec. to unlock them (The key lock setting on the projector becomes Unlock).

Auto Key Lock

Enables or disables Auto Key Lock.



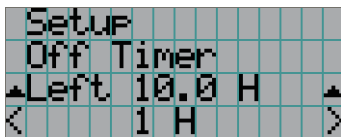
← Displays the currently selected item with asterisk (*).

← Displays the setting.

Enable	Enables the auto key lock function. This applies the key lock automatically if you do not perform any operations from the main unit control panel for 30 seconds after entering the standby state. If you do not perform any operations for 30 seconds after releasing the key lock, the key lock is applied again.
Disable	Disables the auto key lock function. Although the key lock becomes active after entering the standby state, once you release the key lock it is not automatically applied.

Off Timer

Automatically turns off the projector power once the configured time has elapsed. The time until the power is turned off can be set in steps of 1 hour (up to a maximum of 24 hours). The timer starts from when the setting is applied by pressing the ENTER button. While the timer is running, the remaining time is displayed in the format "Left *.* H". Set to "No Preset" to stop the timer.

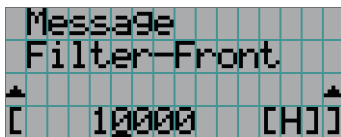


← Displays the remaining time until the power is turned off.

← Sets the time until the power is turned off. (No Preset: Timer off)

Message

Sets the time until the air filter cleaning cycle (units: hours). Once the usage time of the air filter exceeds the configured time, the message ("Filter Time Over") is displayed on the LCD screen. The default setting is set to "0 (----) [H]". In this setting, "Message informing the air filter cleaning time" is not displayed.

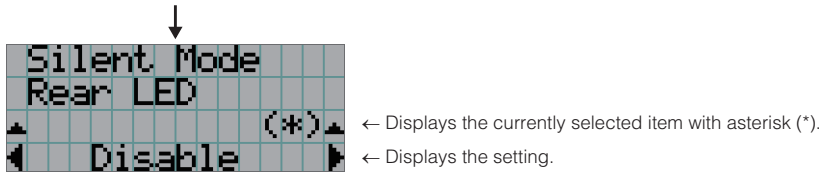
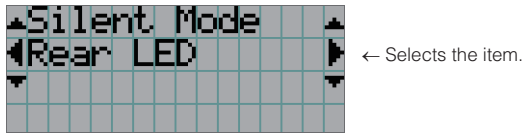


← The current setting value is displayed with an asterisk (*).

← Sets the time until the cleaning cycle (units: hours).

Silent Mode

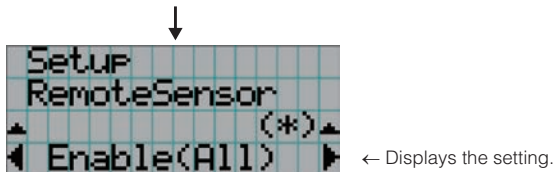
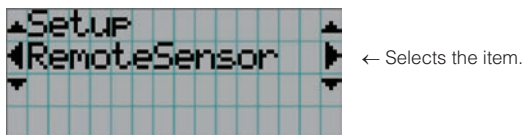
Sets whether the rear (SYSTEM/LIGHT) status indicator, buzzer, indicators on the projector's control panel, illumination, and LCD screen backlight are enabled or disabled.



Rear LED	Sets whether to use or not use the rear (SYSTEM/LIGHT) status indicator. Enable: Use Disable: Not use (the rear (SYSTEM/LIGHT) status indicator does not light up)
Buzzer	Sets whether to use or not use the buzzer. Enable: Use Disable: Not use (the buzzer does not sound)
Control Button	Sets whether to use or not use the indicators on the projector's control panel. Enable: Use Disable: Not use (the LED next to the buttons do not light up)

Remote Sensor

This option determines which remote sensor on the projector is enabled in wireless mode.



Enable(All)	Enable remote control receiver on the front and rear.
Disable(All)	Disable remote control receiver on the front and rear.
Front Only	Enable remote control receiver on the front.
Rear Only	Disable remote control receiver on the front.

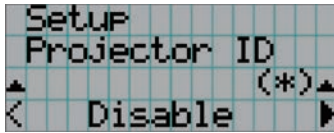
NOTE If the remote control system does not function when direct sunlight or strong illumination strikes the remote control sensor of the projector, change another option.

Projector ID

You can operate multiple projectors separately and independently with the single remote control that has the Projector ID function. If you assign the same ID to all the projectors, you can conveniently operate all the projectors together using the single remote control. To do so, you have to assign an ID number to each projector.



← Selects the item.



← Displays the setting.

Projector ID NUMBER		Select a number from 1 to 64 you wish to assign to your projector.
Projector ID	Disable	The Projector ID function is disabled.
	1 to 64	The Projector ID function is enabled.

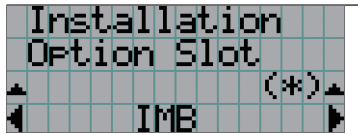
NOTE If you enable Projector ID function, the projector cannot be operated by using the remote control that does not support the Projector ID function. (In this case the buttons on the projector cabinet can be used.)

4-3-5. Installation

This menu is the service personnel menu. For the using service personnel menu, refer to “4-1-1. When You Use the Service Personnel Menu” (page 100).

Option Slot

Configures the devices mounted in slot. This menu is active in standby mode only.

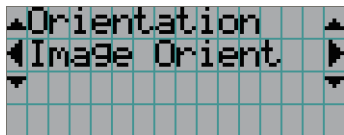


← Displays the currently selected item with asterisk (*).
 ← Displays the setting.

IMB	Media block (NP-90MS01/NP-90MS02)
No Board	No device mounted

Orientation

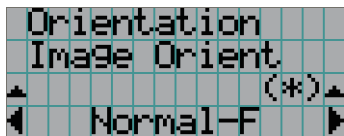
Set the projection method (Image Orient) to match the installation conditions of the projector and screen. Furthermore, set the cooling fan operation (Fan Tilt Setting) to match the installation conditions of the projector.



← Select the item and press the ENTER button to display the menu.

Image Orient	Set the projection method.
--------------	----------------------------

(If you selected “Image Orient”)



← Displays the currently selected item with asterisk (*).
 ← Displays the setting.

Normal-F	Front projection. With the projector installed on the pedestal, projection is executed from the front of the screen.
Normal-R	Rear projection. With the projector installed on the pedestal, projection is executed from the back of the screen.
UpsideDown-F	Ceiling front projection. With the projector installed on the ceiling, projection is executed from the front of the screen.
UpsideDown-R	Ceiling rear projection. With the projector installed on the ceiling, projection is executed from the back of the screen.

Lens Type

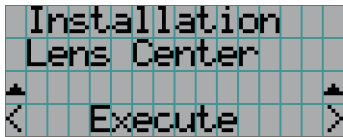
This function can not be used.

Lens Calibrate

This function can not be used.

Lens Center

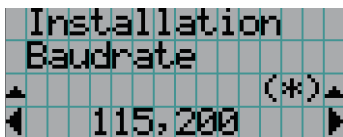
Shifts the lens position at the center. The center position may slightly shift depending upon mounting conditions of the lens. This menu item is available only when the projector power is turned on and you are logged into the projector with Advanced User or higher privileges.



← Press the ENTER button to execute moving.

Baudrate

To select the transmission speed (bps) for your projector (SYSTEM) and a PC when they are connected by a commercially available RS-232C straight cable. Select one from 4800, 9600, 19200, 38400, 57600 and 115200. Select the transfer speed corresponding to the speed of the connected devices.



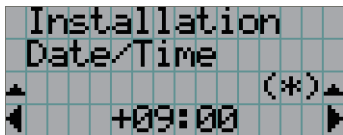
← Displays the currently selected item with asterisk (*).

← Displays the setting.

Date/Time

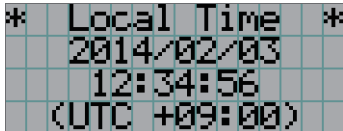
Use this to set the date and time on the projector.

The internal clock in the projector uses coordinated universal time (UTC). This sets the time difference between the standard time in your region and UTC.



← Displays the currently setting with asterisk (*).

← Sets the time difference between the standard time in your region and UTC.

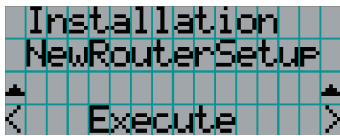


Press the ENTER button to check the time difference between the built-in projector clock and UTC.

TIP When IMB is used, the date and time of IMB are automatically used as the date and time of the projector (UTC). When IMB is not used, the use of DCC allows you to easily set the date and time of the projector by reading the date and time of the computer where DCC is installed. To set the local time after selecting the Coordinated Universal Time as the date and time of the projector, use [Date/Time], or use DCC. Refer to "Digital Cinema Communicator v2 Installation Manual" for details.

New Router Setup

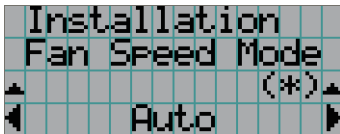
Sets the router with the default settings when the router built-in the projector has been replaced.



← Press the ENTER button to execute the initial setting.

Fan Speed Mode

It adjusts the rotation speed of the internal cooling fan.



← Displays the currently selected item with asterisk (*).

← Displays the setting.

Auto	The fan rotates at the optimal speed according to the temperature sensor inside the projector.
High Speed	The fan always rotates at high speed.

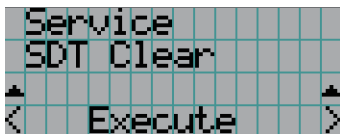
NOTE It is recommended that you select "High Speed" if you use the projector non-stop for consecutive days.

Service

Use buttons on the control panel of the projector main body to display the serviceman menu, which you can use after logging in with Service privilege. Pressing the SERVICE button is a shortcut to displaying this menu.

[SDT Clear]

The password input screen to clear Service Door Tamper is displayed.



← Pressing the ENTER button displays the password input screen.



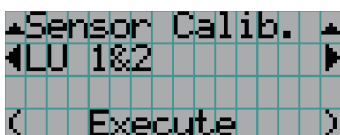
← Enter the password.

[Sensor Calibration]

When installing this device, measure the initial brightness of the light source and save the measured value into the main body. Once it is saved, it is used as reference to display the current brightness as a percentage.

This function can be used when the main body is on standby.

Use this function only if necessary.



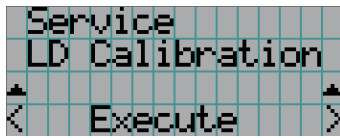
← Pressing the ENTER button executes this function.

[LD Calibration]

Calibrate the light source to save light source adjustment data into the main body.

This function can be used only when the main body is on standby.

Use this function only if necessary.

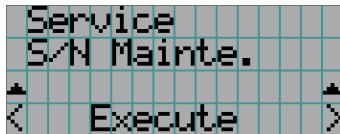


← Pressing the ENTER button executes this function.

[S/N Maintenance]

Use the function to maintain the main body serial number when replacing a board in the main body during maintenance, etc.

This menu can be used only during standby.



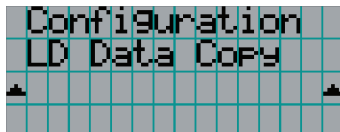
← Pressing the ENTER button executes this function.

[LD Date Copy]

Use the function to maintain the light source adjustment data of the main body after replacing a board in the main body during maintenance, etc.

This menu can be used only during standby.

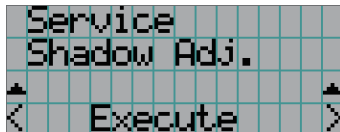
For details, refer to the service manual.



[Shadow Adj.]

Use the function to adjust shadow. This menu can be used only during standby.

On the confirmation screen shown by pressing the ENTER button, selecting "Yes" and pressing the ENTER button automatically starts up the projector to project an entirely white image. During the use of this function, the output of the light source cannot be adjusted (Light Setup).



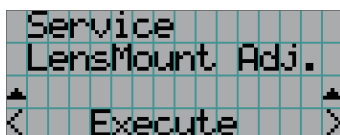
← Pressing the ENTER button executes this function.

[Lens Mount Adj.]

Use the function to adjust the lens mount (focus balance adjustment).

This menu can be used only during standby.

On the confirmation screen shown by pressing the ENTER button, selecting "Yes" and pressing the ENTER button automatically starts up the projector to project a green cross-hatching image. During the use of this function, the output of the light source cannot be adjusted (Light Setup).



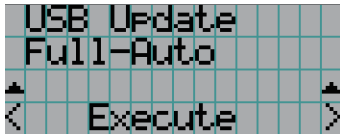
← Pressing the ENTER button executes this function.

[Security Key]

This function cannot be used in this device.

[USB Update]

Use the function to install software or data for the main body by using the USB flash drive in which a release package for updating the main body or a backup file for the main body is saved. For details, refer to the service manual.



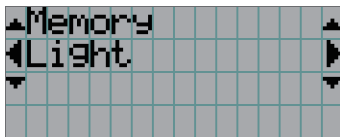
← Pressing the ENTER button executes this function.

4-3-6. Memory

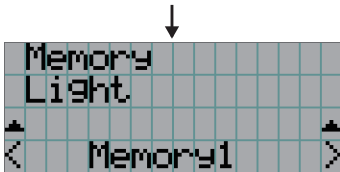
This menu is the service personnel menu. For the using service personnel menu, refer to “4-1-1. When You Use the Service Personnel Menu” (page 100).

The selected lens memory (lens adjustment value) and the content of the light memory (light output power value) can be overwritten with the current settings. Press the LEFT/RIGHT buttons to select the light memory or the lens memory then press the “ENTER” button to display the confirmation screen. Select “Yes” in the confirmation screen, and then press the ENTER button. The selected memory (light memory or lens memory) is overwritten with the current settings.

NOTE Lens memory and light memory cannot be newly registered. Use DCC to register the lens memory and light memory in advance. Refer to “Digital Cinema Communicator v2 Installation Manual” for details registering the lens memory and light memory.



← Select the light memory or lens memory.



← Select the memory name of the setting to overwrite and press the ENTER button to display the confirmation screen.

Light	Select to change the values of the light memory settings.
Lens	Select to change the values of the lens memory settings.

4-4. Title Setup

This menu is the service personnel menu. For the using service personnel menu, refer to “4-1-1. When You Use the Service Personnel Menu” (page 100).

4-4-1. Preset Button

Use this button to set the titles to be assigned to the preset buttons (<1> to <10> buttons).

You cannot assign the same title to several preset buttons. If you want to assign any title to another number, cancel the assignment once and then set it to any button again.

The “Preset Button 1 to Preset Button 10” settings correspond to buttons <1> to <10> on the control panel. To select the titles allocated to “Preset Button 11 to Preset Button 20”, press the <1> to <10> button while holding down the <Up> button on the control panel.



← Select the preset button number (1 to 20).



← Display the selected number of the title.

← Select the titles to be assigned to the preset buttons.
 Select the titles from those registered in advance.
 To clear assignment to preset buttons, select “---”.

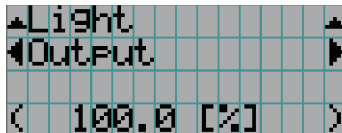
4-5. Information

Displays information relating to the light source, the usage time of the projector, the version information and error codes.

4-5-1. Light

Output

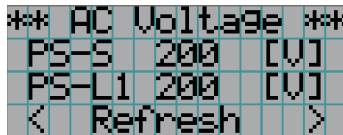
Displays the value of the light source output setting (%).



← Displays the current setting (%).

4-5-2. AC Voltage

Displays the power supply voltage value supplied to the projector.



PS-S	Supply voltage value of projector power supply.
PS-L1	Supply voltage value of light power supply.

4-5-3. Preset Button

Displays the titles assigned to the preset buttons (<1> to <10> buttons) on the projector's control panel.



← Selects the preset button number whose contents you want to display.

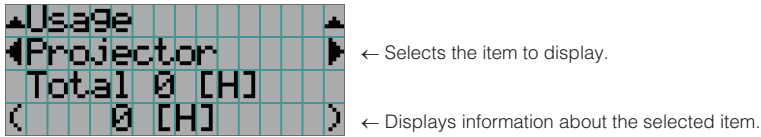
← Displays the assigned title numbers.

← Displays the registered names of the assigned titles.

TIP To select a title allocated to one of "Preset Button11" to "Preset Button20", 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.

4-5-4. Usage

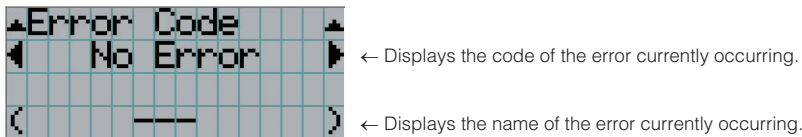
Displays information related to the projector usage, such as the usage time of the projector, light source, air filters, and fan.



Projector	Displays the usage time of the projector.
Filter Cleaning	Displays the usage time of the air filters (for confirming the filter cleaning time).
Fan Usage	Displays the usage time of the fan.
Light Usage	Displays the usage time of the light source.
Phosphor	Displays the usage time of the phosphor.
Diffuser	Displays the usage time of the diffuser.
Douser count	Resets the number of times the douser has been used.

4-5-5. Error Code

Displays the error code when an error occurs. See the "Error Code List" in the Appendix for details on error codes. When multiple errors occur, you can display them by pressing the LEFT/RIGHT buttons.

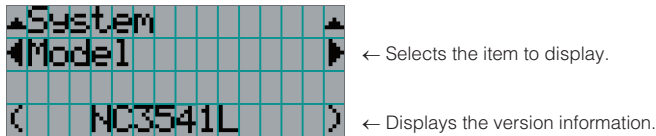


4-5-6. Version

Displays the version information about the projector, optional boards and IMB.

System

Displays the version information of the projector.

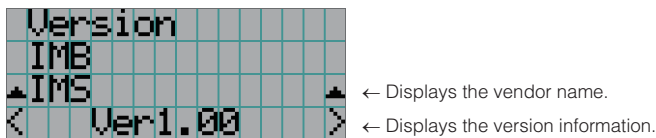


Display items are as follows.

- Model
- Kernel
- RFS
- Data
- ICP ConfigFile
- Slave Firmware
- Set Ctrl FPGA
- SSL Firmware
- SSL FPGA
- LD Driver1
- LD Driver3
- Router
- Serial No.
- U-Boot
- Main Software
- ICP
- Slave BIOS
- Slave Data
- SSL BIOS
- SSL Data
- Secure Processor
- LD Driver2
- LD Driver4

IMB

Displays the vendor name and version information about the media block (IMB). When the projector is in standby mode, the vendor name is blank and the version information displays “---”. Displays “Not Use” when IMB is not mounted to the projector.



* When the NP-90MS01/NP-90MS02 is mounted, the vendor name displays “IMS”.

4-5-7. IP Address

Displays the IP address set in the projector.

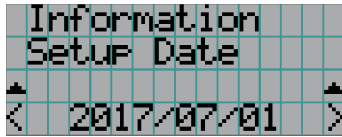


System	Displays the IP address set for the projector (System).
--------	---

4-5-8. Setup Date

Displays the date when the projector was setup (starting date of the warranty period).

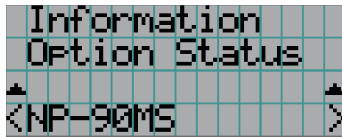
The setup date is configured by using DCC. Refer to "Digital Cinema Communicator v2 Installation Manual" for details.



← Displays the date when the projector was set up (starting date of the warranty period).

4-5-9. Option Status

Displays the link status of the device mounted in slot on the projector. The device name is displayed in () when the projector is in standby or when connection to the device cannot be confirmed.



← Displays the link status of the device in slot.

- NP-90MS: NP-90MS01/NP-90MS02
- <Vendor Name> IMB: Media block
- No Board: No device mounted

5. Appendix

5-1. List of Registered Titles (when shipped from the factory)

Preset Button	Title Number	TITLE NAME	INPUT	FILES										MCGD
				PCF			TCGD				3D File	SCREEN	MCGD	
				FILE NAME	Input Size (HxV)	SOURCE Aspect Ratio	SAME FILE NAME	Tolerance Box	White Clip					
1	001	IMS Auto	IMB	DCDM_XYZ_Auto	0x0	0	DC28_DC1_XYZE_314_351	Not Use	Use	Disable	4096x2160 No Crop	M101		
2	002	IMS 185	IMB	DC4K_DCDM_XYZ_185	3996x2160	0	DC28_DC1_XYZE_314_351	Not Use	Use	Disable	4096x2160 No Crop	M101		
3	003	IMS 239	IMB	DC4K_DCDM_XYZ_239	4096x1714	0	DC28_DC1_XYZE_314_351	Not Use	Use	Disable	4096x2160 No Crop	M101		

5-2. Error Code List

Please inquire your dealer/distributor about action to be taken for each error code.

Error Code	Error message	Description
5	Light Unlit	The light source is not on.
12	EEPROM R Fail	E2PROM data read error is detected.
13	Interlock Fail	Interlock is activated.
15	EEPROM W Fail	E2PROM data write error is detected.
120	DLP Ack Fail	ICP failed operation. It could be caused by configuration files lost, disk space issue, or DISKCHIP corruption issue.
121	Lens Fail	Lens unit control error.
135	FMT FPGA Boot Fail	FMT FPGA failed to boot.
136	FMT FPGA System Fail	FMT FPGA failed to system startup.
137	LoginMgr Comm Fail	Login Manager communication error.
138	LoginMgr Boot Fail	Login Manager failed to boot.
141	DLP CommE Fail	No communication with the ICP board and DCC.(Communication I/F is Ethernet)
143	FMT Board Config Mismatch	DPSW setting of FMT board is inappropriate.
165	GPI MACRO(n) Selection Invalid	Selection of preset button (n) through GPI is invalid because metadata is enabled. * This message would be shown on Log, not on LCD.
166	GPI Control Invalid	Projector control through GPI is invalid because projector is busy. * This message would be shown on Log, not on LCD.
177	Tamper Fail	Service door tamper switch of projector is open.
178	Marriage Tamper Fail	Marriage tamper switch of projector is open.
190	The Validity has expired.	The time limit for use of the projector has expired. * In cases when the validity setting has been configured with the projector.
191	Different Serial Number	There is a mismatch in the serial number of the main unit internally saved on the projector.
192	Model Code Mismatch	There is a mismatch in the model code of the main unit internally saved on the projector.
230	Router Fail	Failed to control router.
271	IMB:SD Tamper Terminate	Terminated service door tamper event latched by IMB. * This message would be shown on Log, not on LCD.
301	System Error	ICP system status error.
302	Self Test Error	ICP system status error. To recover the issue, update ICP to higher than Prod3.0 or equal. If that can not remove the issue, remove and reset the ICP board.
303	Install Release Package Error	ICP system status error. It could be caused by disk space issue or DISKCHIP corruption issue.
304	Load Release Package Error	ICP system status error. It could be caused by disk space issue or DISKCHIP corruption issue.
305	Key Error	ICP system status error.
306	Certificate Error	ICP system status error.
329	Sequence Data File Mismatch	ICP system status error.
331	Flash Checksum Error - Sequence Data	ICP system status error.
333	Satellite Hardware Mismatch	ICP system status error.
334	FSB Flash Update Error	ICP system status error.
335	Red Satellite Reports Reset	ICP system status error.
336	Red Satellite Serial Link Error	ICP system status error.
337	Red Satellite Firmware Configuration Error	ICP system status error.
342	Green Satellite Reports Reset	ICP system status error.
343	Green Satellite Serial Link Error	ICP system status error.

Error Code	Error message	Description
344	Green Satellite Firmware Configuration Error	ICP system status error.
349	Blue Satellite Reports Reset	ICP system status error.
350	Blue Satellite Serial Link Error	ICP system status error.
351	Blue Satellite Firmware Configuration Error	ICP system status error.
356	RTC Error	Indicates that ICP RTC is set to a date before January 1, 2009, and is likely invalid. If the year value is less than 2009, then the time is considered to be "invalid".
357	Satellite Flash Update Incomplete	ICP system status error.
358	Red Satellite Flash Connection Error	ICP system status error.
359	Red Satellite Flash Update Error	ICP system status error.
360	Red Satellite Flash Update Incomplete	ICP system status error.
361	Red Satellite Flash Hardware Failure	ICP system status error.
362	Red Satellite Memory Initialization failed	ICP system status error.
363	Red Satellite Status Failure	ICP system status error.
364	Green Satellite Flash Connection Error	ICP system status error.
365	Green Satellite Flash Update Error	ICP system status error.
366	Green Satellite Flash Update Incomplete	ICP system status error.
367	Green Satellite Flash Hardware Failure	ICP system status error.
368	Green Satellite Memory Initialization failed	ICP system status error.
369	Green Satellite Status Failure	ICP system status error.
370	ICP Frame Memory Test Result Fail	ICP self test error due to "Frame memory error".
371	HSS Link Test Result Fail	ICP self test error due to "HSS Link ".
373	Blue Satellite Flash Connection Error	ICP system status error.
374	Blue Satellite Flash Update Error	ICP system status error.
375	Blue Satellite Flash Update Incomplete	ICP system status error.
376	Blue Satellite Flash Hardware Failure	ICP system status error.
377	Blue Satellite Memory Initialization failed	ICP system status error.
378	Blue Satellite Status Failure	ICP system status error.
380	DRS Error(Low Battery)	FMT board low battery. *When this error has occurred, IMB can not Marriage with the projector. *After this error has occurred, Integrity Error will occur when you turn on the power again.
381	SEC No Battery	No communication with the secure processor. *When this error has occurred, IMB can not Marriage with the projector. *After this error has occurred, Integrity Error may occur when you turn on the power again.
500	IMB Comm Fail	No communication with the IMB.
510	IMB:System Error	IMB Status error.
511	IMB:Self Test Error	IMB Status error.
519	IMB:Certificate or Key Error	IMB Status error.
520	IMB:ICP Communications Status	IMB fails to do logical marriage to ICP when IMB powers up. Because of no communications with ICP during logical marriage.
537	IMB:RTC Error	IMB RTC is "invalid".
542	IMB:FPGA Configuration Error	IMB Status error.
543	IMB:FPGA Temperature out of range	IMB Status error.
550	IMB:Supply voltage out of range	IMB Status error.
574	IMB:Security Tamper	Security tamper condition exists in IMB.
577	IMB:Security Battery Event	Battery tamper condition exists in IMB.
581	IMB:Security Enclosure Not Armed	IMB security not armed.
582	IMB:Physical Marriage Tamper	Physical marriage tamper event is latched in IMB.
583	IMB:Logical Marriage Tamper	Logical marriage tamper event exists in IMB.
584	IMB:Marriage NOT Active	Marriage between ICP and IMB has NOT been established.(Not Active)

Appendix

Error Code	Error message	Description
586	IMB:Service Door Tamper	Service door tamper event is latched in IMB.
588	IMB:Security Battery Low Warning	Close to "(577) IMB: Security Battery Event".
1000	Slave Comm Fail	Failed to communicate with slave MCU.
1003	Slave Ack Fail	Slave fails to execut the command.
1004	Slave Not Ready	Slave Power Ready error.
1005	Slave No Notify	Slave Power/Light Notify error.
1008	LU2:LD Data Comp.Fail	There is an inconsistency with the LU2 adjustment data or there is an error with the device for saving the LU adjustment data.
1009	LU2:LD Data Warning	LU2 adjustment data is corrupted or the adjustment data of LU2 is empty.
1010	LU1:LD Data Comp.Fail	There is an inconsistency with the LU1 adjustment data or there is an error with the device for saving the LU adjustment data.
1011	LU1:LD Data Warning	LU1 adjustment data is corrupted or the adjustment data of LU1 is empty.
1050	SSL Comm Fail	Failed to communicate with ssl MCU.
1053	SSL Ack Fail	SSL fails to execut the command.
1054	SSL Not Ready	SSL Power Ready error.
1055	SSL No Notify	SSL Power/Light Notify error.
1111	Filter-Front Cleaning Time	The time to clean Filter-Front.
1112	Filter-Side Cleaning Time	The time to clean Filter-Side.
1113	Filter-Top(L) Cleaning Time	The time to clean Filter-Top(L) .
1114	Filter-Top(R) Cleaning Time	The time to clean Filter-Top(R) .
1200	Fan-LD-L1 Stop	Fan LD-L1 has stopped.
1201	Fan-LD-L2 Stop	Fan LD-L2 has stopped.
1202	Fan-LD-L3 Stop	Fan LD-L3 has stopped.
1203	Fan-LD-L4 Stop	Fan LD-L4 has stopped.
1204	Fan-LD-L5 Stop	Fan LD-L5 has stopped.
1205	Fan-LD-L6 Stop	Fan LD-L6 has stopped.
1206	Fan-LD-R1 Stop	Fan LD-R1 has stopped.
1207	Fan-LD-R2 Stop	Fan LD-R2 has stopped.
1208	Fan-LD-R3 Stop	Fan LD-R3 has stopped.
1209	Fan-LD-R4 Stop	Fan LD-R4 has stopped.
1210	Fan-LD-R5 Stop	Fan LD-R5 has stopped.
1211	Fan-LD-R6 Stop	Fan LD-R6 has stopped.
1212	Fan-HRU(LS)L Stop	Fan HRU(LS)L has stopped.
1213	Fan-HRU(LS)R Stop	Fan HRU(LS)R has stopped.
1214	Fan-LS-L1 Stop	Fan LS-L1 has stopped.
1215	Fan-LS-L2 Stop	Fan LS-L2 has stopped.
1216	Fan-LS-L3 Stop	Fan LS-L3 has stopped.
1217	Fan-LS-R1 Stop	Fan LS-R1 has stopped.
1218	Fan-LS-R2 Stop	Fan LS-R2 has stopped.
1219	Fan-LS-R3 Stop	Fan LS-R3 has stopped.
1220	Fan-EX-R1 Stop	Fan EX-R1 has stopped.
1221	Fan-EX-R2 Stop	Fan EX-R2 has stopped.
1222	Fan-EX-R3 Stop	Fan EX-R3 has stopped.
1223	Fan-EX-R4 Stop	Fan EX-R4 has stopped.
1224	Fan-EX-L1 Stop	Fan EX-L1 has stopped.
1225	Fan-EX-L2 Stop	Fan EX-L2 has stopped.
1226	Fan-EX-L3 Stop	Fan EX-L3 has stopped.
1229	Fan-EX1 Stop	Fan EX1 has stopped.
1230	Fan-EX2 Stop	Fan EX2 has stopped.
1231	Fan-EX3 Stop	Fan EX3 has stopped.
1232	Fan-EX4 Stop	Fan EX4 has stopped.
1233	Fan-EX5 Stop	Fan EX5 has stopped.
1234	Fan-EX6 Stop	Fan EX6 has stopped.
1235	Fan-EX7 Stop	Fan EX7 has stopped.

Error Code	Error message	Description
1236	Fan-EX8 Stop	Fan EX8 has stopped.
1237	Fan-EX9 Stop	Fan EX9 has stopped.
1238	Fan-EX10 Stop	Fan EX10 has stopped.
1239	Fan-EX11 Stop	Fan EX11 has stopped.
1240	Fan-ELE1 Stop	Fan ELE1 has stopped.
1241	Fan-ELE2 Stop	Fan ELE2 has stopped.
1242	Fan-ELE3 Stop	Fan ELE3 has stopped.
1243	Fan-ELE4 Stop	Fan ELE4 has stopped.
1244	Fan-PS1 Stop	Fan PS1 has stopped.
1245	Fan-PS2 Stop	Fan PS2 has stopped.
1246	Fan-PS3 Stop	Fan PS3 has stopped.
1247	Fan-PS4 Stop	Fan PS4 has stopped.
1248	Fan-PS5 Stop	Fan PS5 has stopped.
1249	Fan-PS6 Stop	Fan PS6 has stopped.
1250	Phosphor Wheel1 Stop	Phosphor Wheel1 has stopped.
1251	Diffuser Motor1 Stop	Diffuser Motor1 has stopped.
1252	Phosphor Wheel2 Stop	Phosphor Wheel2 has stopped.
1253	Diffuser Motor2 Stop	Diffuser Motor2 has stopped.
1275	Fan-PRISM Stop	Fan PRISM has stopped.
1276	Fan-DMD1 Stop	Fan DMD1 has stopped.
1277	Fan-DMD2 Stop	Fan DMD2 has stopped.
1278	Fan-DMD3 Stop	Fan DMD3 has stopped.
1279	Fan-HRU(PRISM)1 Stop	Fan HRU(PRISM)1 has stopped.
1280	Fan-HRU(PRISM)2 Stop	Fan HRU(PRISM)2 has stopped.
1300	OverTemp.LD1-TOP	Set inside temperature (LD1-TOP) is abnormal.
1301	OverTemp.LD2-TOP	Set inside temperature (LD2-TOP) is abnormal.
1302	OverTemp.LD1-R1	Set inside temperature (LD1-R1) is abnormal.
1303	OverTemp.LD1-R2	Set inside temperature (LD1-R2) is abnormal.
1304	OverTemp.LD1-R3	Set inside temperature (LD1-R3) is abnormal.
1305	OverTemp.LD1-R4	Set inside temperature (LD1-R4) is abnormal.
1306	OverTemp.LD1-B	Set inside temperature (LD1-B) is abnormal.
1307	OverTemp.LD1-EX1	Set inside temperature (LD1-EX1) is abnormal.
1308	OverTemp.LD1-EX2	Set inside temperature (LD1-EX2) is abnormal.
1309	OverTemp.LD1-EX3	Set inside temperature (LD1-EX3) is abnormal.
1310	OverTemp.LD1-EX4	Set inside temperature (LD1-EX4) is abnormal.
1311	OverTemp.LD2-R1	Set inside temperature (LD2-R1) is abnormal.
1312	OverTemp.LD2-R2	Set inside temperature (LD2-R2) is abnormal.
1313	OverTemp.LD2-R3	Set inside temperature (LD2-R3) is abnormal.
1314	OverTemp.LD2-R4	Set inside temperature (LD2-R4) is abnormal.
1315	OverTemp.LD2-B	Set inside temperature (LD2-B) is abnormal.
1316	OverTemp.LD2-EX1	Set inside temperature (LD2-EX1) is abnormal.
1317	OverTemp.LD2-EX2	Set inside temperature (LD2-EX2) is abnormal.
1318	OverTemp.LD2-EX3	Set inside temperature (LD2-EX3) is abnormal.
1319	OverTemp.LD2-EX4	Set inside temperature (LD2-EX4) is abnormal.
1320	OverTemp.HS-PW1	Set inside temperature (HS-PW1) is abnormal.
1321	OverTemp.HS-LD1	Set inside temperature (HS-LD1) is abnormal.
1322	OverTemp.HS-PW2	Set inside temperature (HS-PW2) is abnormal.
1323	OverTemp.HS-LD2	Set inside temperature (HS-LD2) is abnormal.
1324	OverTemp.LD1-PHOTOSENS	Set inside temperature (LD1-PHOTOSENS) is abnormal.
1327	OverTemp.LD2-PHOTOSENS	Set inside temperature (LD2-PHOTOSENS) is abnormal.
1330	OverTemp.DMD-INTAKE	Set inside temperature (DMD-INTAKE) is abnormal.
1331	OverTemp.DMD-INNER	Set inside temperature (DMD-INNER) is abnormal.
1332	OverTemp.CIRCULATE	Set inside temperature (CIRCULATE) is abnormal.
1333	OverTemp.INTAKE	Set inside temperature (INTAKE) is abnormal.

Appendix

Error Code	Error message	Description
1334	OverTemp.ELECTRO-BOX	Set inside temperature (ELECTRO-BOX) is abnormal.
1400	OverTemp.LD1-TOP Precaution	Set inside temperature (LD1-TOP) is close to over temperature.
1401	OverTemp.LD2-TOP Precaution	Set inside temperature (LD2-TOP) is close to over temperature.
1402	OverTemp.LD1-R1 Precaution	Set inside temperature (LD1-R1) is close to over temperature.
1403	OverTemp.LD1-R2 Precaution	Set inside temperature (LD1-R2) is close to over temperature.
1404	OverTemp.LD1-R3 Precaution	Set inside temperature (LD1-R3) is close to over temperature.
1405	OverTemp.LD1-R4 Precaution	Set inside temperature (LD1-R4) is close to over temperature.
1406	OverTemp.LD1-B Precaution	Set inside temperature (LD1-B) is close to over temperature.
1407	OverTemp.LD1-EX1 Precaution	Set inside temperature (LD1-EX1) is close to over temperature.
1408	OverTemp.LD1-EX2 Precaution	Set inside temperature (LD1-EX2) is close to over temperature.
1409	OverTemp.LD1-EX3 Precaution	Set inside temperature (LD1-EX3) is close to over temperature.
1410	OverTemp.LD1-EX4 Precaution	Set inside temperature (LD1-EX4) is close to over temperature.
1411	OverTemp.LD2-R1 Precaution	Set inside temperature (LD2-R1) is close to over temperature.
1412	OverTemp.LD2-R2 Precaution	Set inside temperature (LD2-R2) is close to over temperature.
1413	OverTemp.LD2-R3 Precaution	Set inside temperature (LD2-R3) is close to over temperature.
1414	OverTemp.LD2-R4 Precaution	Set inside temperature (LD2-R4) is close to over temperature.
1415	OverTemp.LD2-B Precaution	Set inside temperature (LD2-B) is close to over temperature.
1416	OverTemp.LD2-EX1 Precaution	Set inside temperature (LD2-EX1) is close to over temperature.
1417	OverTemp.LD2-EX2 Precaution	Set inside temperature (LD2-EX2) is close to over temperature.
1418	OverTemp.LD2-EX3 Precaution	Set inside temperature (LD2-EX3) is close to over temperature.
1419	OverTemp.LD2-EX4 Precaution	Set inside temperature (LD2-EX4) is close to over temperature.
1420	OverTemp.HS-PW1 Precaution	Set inside temperature (HS-PW1) is close to over temperature.
1421	OverTemp.HS-LD1 Precaution	Set inside temperature (HS-LD1) is close to over temperature.
1422	OverTemp.HS-PW2 Precaution	Set inside temperature (HS-PW2) is close to over temperature.
1423	OverTemp.HS-LD2 Precaution	Set inside temperature (HS-LD2) is close to over temperature.
1424	OverTemp.LD1-PHOTOSENS Precaution	Set inside temperature (LD1-PHOTOSENS) is close to over temperature.
1427	OverTemp.LD2-PHOTOSENS Precaution	Set inside temperature (LD2-PHOTOSENS) is close to over temperature.
1430	OverTemp.DMD-INTAKE Precaution	Set inside temperature (DMD-INTAKE) is close to over temperature.
1431	OverTemp.DMD-INNER Precaution	Set inside temperature (DMD-INNER) is close to over temperature.
1432	OverTemp.CIRCULATE Precaution	Set inside temperature (CIRCULATE) is close to over temperature.
1433	OverTemp.INTAKE Precaution	Set inside temperature (INTAKE) is close to over temperature.
1434	OverTemp.ELECTRO-BOX Precaution	Set inside temperature (ELECTRO-BOX) is close to over temperature.
1500	P3P3V SAT PGOOD Fail	Error detected with 3.3V power supply for FSB.
1501	P2P5V SAT PGOOD Fail	Error detected with 2.5V power supply for FSB.
1512	Slave EEPROM Write Fail	I2C Device Access Error.
1528	Lens Install SW0 Activation	Lens Install Switch 0 is open.
1529	Lens Install SW1 Activation	Lens Install Switch 1 is open.
1536	LU1 Error Stop	An error has been detected with the LU1.
1537	LU2 Error Stop	An error has been detected with the LU2.
1538	Slave EEPROM Read Fail	Slave Device Access Error.
1541	LU1 Comm Fail	LU1 communication error.
1600	Fan-LD-L1 Stop Precaution	Fan LD-L1 Stop Precaution.
1601	Fan-LD-L2 Stop Precaution	Fan LD-L2 Stop Precaution.
1602	Fan-LD-L3 Stop Precaution	Fan LD-L3 Stop Precaution.
1603	Fan-LD-L4 Stop Precaution	Fan LD-L4 Stop Precaution.
1604	Fan-LD-L5 Stop Precaution	Fan LD-L5 Stop Precaution.
1605	Fan-LD-L6 Stop Precaution	Fan LD-L6 Stop Precaution.
1606	Fan-LD-R1 Stop Precaution	Fan LD-R1 Stop Precaution.
1607	Fan-LD-R2 Stop Precaution	Fan LD-R2 Stop Precaution.
1608	Fan-LD-R3 Stop Precaution	Fan LD-R3 Stop Precaution.
1609	Fan-LD-R4 Stop Precaution	Fan LD-R4 Stop Precaution.
1610	Fan-LD-R5 Stop Precaution	Fan LD-R5 Stop Precaution.
1611	Fan-LD-R6 Stop Precaution	Fan LD-R6 Stop Precaution.
1612	Fan-HRU(LS)L Stop Precaution	Fan HRU(LS)L Stop Precaution.

Error Code	Error message	Description
1613	Fan-HRU(LS)R Stop Precaution	Fan HRU(LS)R Stop Precaution.
1614	Fan-LS-L1 Stop Precaution	Fan LS-L1 Stop Precaution.
1615	Fan-LS-L2 Stop Precaution	Fan LS-L2 Stop Precaution.
1616	Fan-LS-L3 Stop Precaution	Fan LS-L3 Stop Precaution.
1617	Fan-LS-R1 Stop Precaution	Fan LS-R1 Stop Precaution.
1618	Fan-LS-R2 Stop Precaution	Fan LS-R2 Stop Precaution.
1619	Fan-LS-R3 Stop Precaution	Fan LS-R3 Stop Precaution.
1620	Fan-EX-R1 Stop Precaution	Fan EX-R1 Stop Precaution.
1621	Fan-EX-R2 Stop Precaution	Fan EX-R2 Stop Precaution.
1622	Fan-EX-R3 Stop Precaution	Fan EX-R3 Stop Precaution.
1623	Fan-EX-R4 Stop Precaution	Fan EX-R4 Stop Precaution.
1624	Fan-EX-L1 Stop Precaution	Fan EX-L1 Stop Precaution.
1625	Fan-EX-L2 Stop Precaution	Fan EX-L2 Stop Precaution.
1626	Fan-EX-L3 Stop Precaution	Fan EX-L3 Stop Precaution.
1629	Fan-EX1 Stop Precaution	Fan EX1 Stop Precaution.
1630	Fan-EX2 Stop Precaution	Fan EX2 Stop Precaution.
1631	Fan-EX3 Stop Precaution	Fan EX3 Stop Precaution.
1632	Fan-EX4 Stop Precaution	Fan EX4 Stop Precaution.
1633	Fan-EX5 Stop Precaution	Fan EX5 Stop Precaution.
1634	Fan-EX6 Stop Precaution	Fan EX6 Stop Precaution.
1635	Fan-EX7 Stop Precaution	Fan EX7 Stop Precaution.
1636	Fan-EX8 Stop Precaution	Fan EX8 Stop Precaution.
1637	Fan-EX9 Stop Precaution	Fan EX9 Stop Precaution.
1638	Fan-EX10 Stop Precaution	Fan EX10 Stop Precaution.
1639	Fan-EX11 Stop Precaution	Fan EX11 Stop Precaution.
1640	Fan-ELE1 Stop Precaution	Fan ELE1 Stop Precaution.
1641	Fan-ELE2 Stop Precaution	Fan ELE2 Stop Precaution.
1642	Fan-ELE3 Stop Precaution	Fan ELE3 Stop Precaution.
1643	Fan-ELE4 Stop Precaution	Fan ELE4 Stop Precaution.
1644	Fan-PS1 Stop Precaution	Fan PS1 Stop Precaution.
1645	Fan-PS2 Stop Precaution	Fan PS2 Stop Precaution.
1646	Fan-PS3 Stop Precaution	Fan PS3 Stop Precaution.
1647	Fan-PS4 Stop Precaution	Fan PS4 Stop Precaution.
1648	Fan-PS5 Stop Precaution	Fan PS5 Stop Precaution.
1649	Fan-PS6 Stop Precaution	Fan PS6 Stop Precaution.
1650	Phosphor Wheel1 Stop Precaution	Phosphor Wheel1 Stop Precaution.
1651	Diffuser Motor1 Stop Precaution	Diffuser Motor1 Stop Precaution.
1652	Phosphor Wheel2 Stop Precaution	Phosphor Wheel2 Stop Precaution.
1653	Diffuser Motor2 Stop Precaution	Diffuser Motor2 Stop Precaution.
1675	Fan-PRISM Stop Precaution	Fan PRISM Stop Precaution.
1676	Fan-DMD1 Stop Precaution	Fan DMD1 Stop Precaution.
1677	Fan-DMD2 Stop Precaution	Fan DMD2 Stop Precaution.
1678	Fan-DMD3 Stop Precaution	Fan DMD3 Stop Precaution.
1679	Fan-HRU(PRISM)1 Stop Precaution	Fan HRU(PRISM)1 Stop Precaution.
1680	Fan-HRU(PRISM)2 Stop Precaution	Fan HRU(PRISM)2 Stop Precaution.
1700	SensorFail LD1-TOP	Failed to read LD1-TOP sensor.
1701	SensorFail LD2-TOP	Failed to read LD2-TOP sensor.
1702	SensorFail LD1-R1	Failed to read LD1-R1 sensor.
1703	SensorFail LD1-R2	Failed to read LD1-R2 sensor.
1704	SensorFail LD1-R3	Failed to read LD1-R3 sensor.
1705	SensorFail LD1-R4	Failed to read LD1-R4 sensor.
1706	SensorFail LD1-B	Failed to read LD1-B sensor.
1707	SensorFail LD1-EX1	Failed to read LD1-EX1 sensor.
1708	SensorFail LD1-EX2	Failed to read LD1-EX2 sensor.

Appendix

Error Code	Error message	Description
1709	SensorFail LD1-EX3	Failed to read LD1-EX3 sensor.
1710	SensorFail LD1-EX4	Failed to read LD1-EX4 sensor.
1711	SensorFail LD2-R1	Failed to read LD2-R1 sensor.
1712	SensorFail LD2-R2	Failed to read LD2-R2 sensor.
1713	SensorFail LD2-R3	Failed to read LD2-R3 sensor.
1714	SensorFail LD2-R4	Failed to read LD2-R4 sensor.
1715	SensorFail LD2-B	Failed to read LD2-B sensor.
1716	SensorFail LD2-EX1	Failed to read LD2-EX1 sensor.
1717	SensorFail LD2-EX2	Failed to read LD2-EX2 sensor.
1718	SensorFail LD2-EX3	Failed to read LD2-EX3 sensor.
1719	SensorFail LD2-EX4	Failed to read LD2-EX4 sensor.
1720	SensorFail HS-PW1	Failed to read HS-PW1 sensor.
1721	SensorFail HS-LD1	Failed to read HS-LD1 sensor.
1722	SensorFail HS-PW2	Failed to read HS-PW2 sensor.
1723	SensorFail HS-LD2	Failed to read HS-LD2 sensor.
1724	SensorFail LD1-PHOTOSENS	Failed to read LD1-PHOTOSENS sensor.
1727	SensorFail LD2-PHOTOSENS	Failed to read LD2-PHOTOSENS sensor.
1730	SensorFail DMD-INTAKE	Failed to read DMD-INTAKE sensor.
1731	SensorFail DMD-INNER	Failed to read DMD-INNER sensor.
1732	SensorFail CIRCULATE	Failed to read CIRCULATE sensor.
1733	SensorFail INTAKE	Failed to read INTAKE sensor.
1734	SensorFail ELECTRO-BOX	Failed to read ELECTRO-BOX sensor.
2000	IntegrityFail	Integrity error with the internal software code of the projector. * When this error has occurred, the projector will not accept any external demands. Communication with external devices will not be performed either.
2002	LD B Stop	An error with channels of the LD drivers.
2003	LD VIN Error	An error with the VIN of any one of the LD Drivers.
2004	LD R Stop	An error with channels of the LD drivers.
2005	LD G Stop	An error with channels of the LD drivers.
2010	Incorrect power-off	PowerOff was not performed correctly last time.
2013	LU1 Unlit	LU1 is not on.
2014	LU2 Unlit	LU2 is not on.
2200	SetCtrl FPGA DONE Fail	SetCtrl FPGA Configuration Error.
2201	VCCINT PGOOD Fail	Error detected with VCCINT (1.0V) power supply for FMT FPGA.
2202	SetCtrl FPGA Comm Fail	Communication error with SetCtrl FPGA.
2203	I2C(SET_TH-A/D) ACK Fail	I2C Device Access Error.
2204	I2C(SET_TH-A/D) Tout	I2C Device Access Error.
2205	I2C(PressSens) ACK Fail	I2C Device Access Error.
2206	I2C(PressSens) Tout	I2C Device Access Error.
2209	SSL FPGA Comm2 Fail	Communication error with SSL FPGA.
2210	Slave Data Fail(Fan)	Slave CPU data error.
2211	Slave Data Fail(Pump)	Slave CPU data error.
2212	Slave Data Fail(LD)	Slave CPU data error.
2213	SET_Pump Fail	Pump(DMD Fan) Access Error.
2214	I2C(SET_Pump) ACK Fail	I2C Device Access Error.
2215	I2C(SET_Pump) Tout	I2C Device Access Error.
2216	I2C(Exp-1) ACK Fail	I2C Device Access Error.
2217	I2C(Exp-1) Tout	I2C Device Access Error.
2218	I2C(Exp-2) ACK Fail	I2C Device Access Error.
2219	I2C(Exp-2) Tout	I2C Device Access Error.
2220	I2C(Exp-3) ACK Fail	I2C Device Access Error.
2221	I2C(Exp-3) Tout	I2C Device Access Error.
2222	I2C(EEPROM-KEY) ACK Fail	I2C Device Access Error.

Error Code	Error message	Description
2223	I2C(EEPROM-KEY) Tout	I2C Device Access Error.
2250	SSL FPGA DONE Fail	SSL FPGA Configuration Error.
2251	SSL FPGA Comm Fail	Communication error with SSL FPGA.
2252	LU2 Comm Fail	LU2 communication error.
2253	I2C(PhotoSens1) ACK Fail	I2C Device Access Error.
2254	I2C(PhotoSens1) Tout	I2C Device Access Error.
2255	I2C(PhotoSens2) ACK Fail	I2C Device Access Error.
2256	I2C(PhotoSens2) Tout	I2C Device Access Error.
2259	I2C(SSL_TH-A/D1) ACK Fail	I2C Device Access Error.
2260	I2C(SSL_TH-A/D1) Tout	I2C Device Access Error.
2261	I2C(SSL_TH-A/D2) ACK Fail	I2C Device Access Error.
2262	I2C(SSL_TH-A/D2) Tout	I2C Device Access Error.
2267	I2C(LD1_RD) Fail	I2C Device Access Error.
2268	I2C(LD2_RD) Fail	I2C Device Access Error.
2269	I2C(LD1_WR) Fail	I2C Device Access Error.
2270	I2C(LD2_WR) Fail	I2C Device Access Error.
2271	I2C(LD1_CMP) Fail	I2C Device Access Error.
2272	I2C(LD2_CMP) Fail	I2C Device Access Error.
2273	SSL Data Fail(Fan)	SSL CPU data error.
2274	SSL Data Fail(Pump)	SSL CPU data error.
2275	SSL Data Fail(LD)	SSL CPU data error.
2276	LU1_Pump1 Fail	LU1 Pump1 Access Error.
2277	LU1_Pump2 Fail	LU1 Pump2 Access Error.
2278	LU2_Pump1 Fail	LU2 Pump1 Access Error.
2279	LU2_Pump2 Fail	LU2 Pump2 Access Error.
2280	LU1 OverTemp-R	Set inside temperature (LU1) is abnormal.
2281	LU2 OverTemp-R	Set inside temperature (LU2) is abnormal.
2282	Administrator Key Off	Administrator key is turned off.
2283	LU1 OverTemp	LU1 over temperature.
2284	LU2 OverTemp	LU2 over temperature.
2285	LU1_Fan Stop	LU1 Fan has stopped.
2286	LU2_Fan Stop	LU2 Fan has stopped.

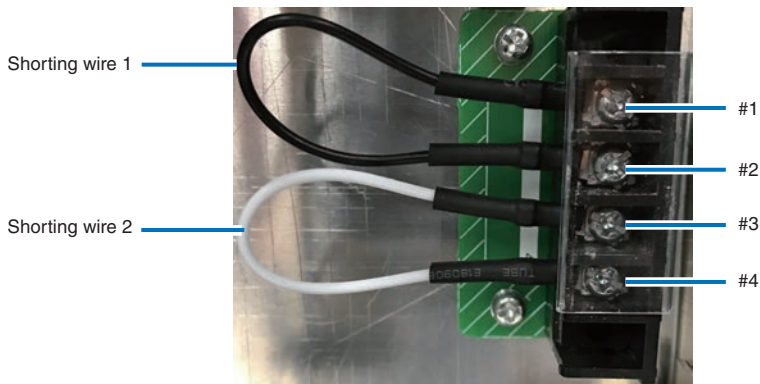
5-3. Remote Interlock Connector

This connector functions as safety device for the projector. The contacts are normally closed. When an abnormality occurs, the contacts open to immediately stop the projector (interlock state) (shipped with a shorting wire installed). By replacing the shorting wire with wiring and attaching it to the contacts, the projector can be immediately stopped remotely when an abnormality occurs in the projector.

Follow the following procedure to recover from the interlock state.

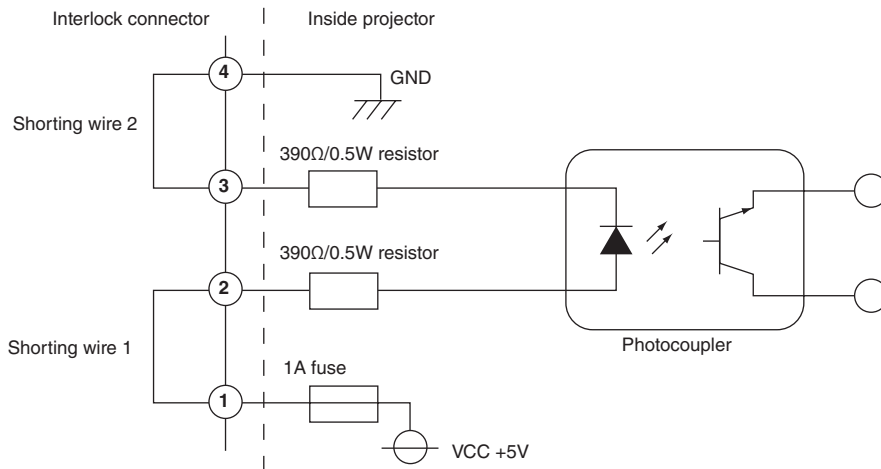
- 1** Disconnect the AC power supply to the projector body.
- 2** Remove the plate inlet or side panel (page 37).
- 3** Connect the contacts to the remote interlock connector and attach the plate inlet or side panel.
- 4** Connect the AC power supply to the projector body.

Remote interlock connector (exterior view)



- The remote interlock terminal is equipped on inside of the side cover. Remove the plate inlet or side panel for connection.
- Securely reinstall the plate inlet or side panel.

Circuit diagram



Connector no.	Photocoupler ON/OFF	Description
①	—	+5V supply
②	ON/OFF	Connects to the photocoupler anode inside the projector
③	ON/OFF	Connects to the photocoupler cathode inside the projector
④	—	Ground

- **When the length of the wiring is less than 5 m (approximate)**

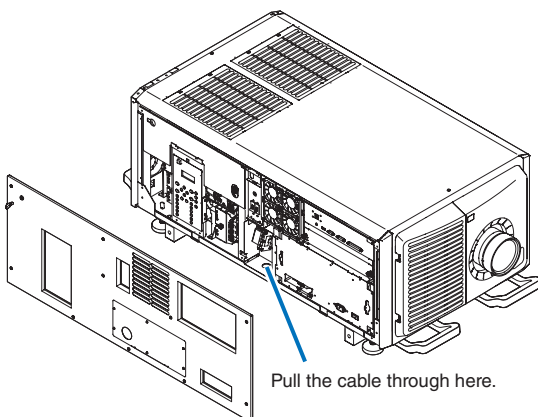
Remove shunting wire 1 or shunting wire 2 and connect the external contacts (switch) to the projector interlock terminal (① and ②) or (③ and ④) by cable.

- The projector operates normally when the contacts are closed and the system shuts off when the contacts are open.
- A power supply external from the projector is not necessary.
- A maximum of 2 sets of external contacts can be connected. If you are only using a single set of external contacts, connecting the shunting wire to the interlock terminal you are not using.
- The minimum rating required of the external contacts is 2mA.

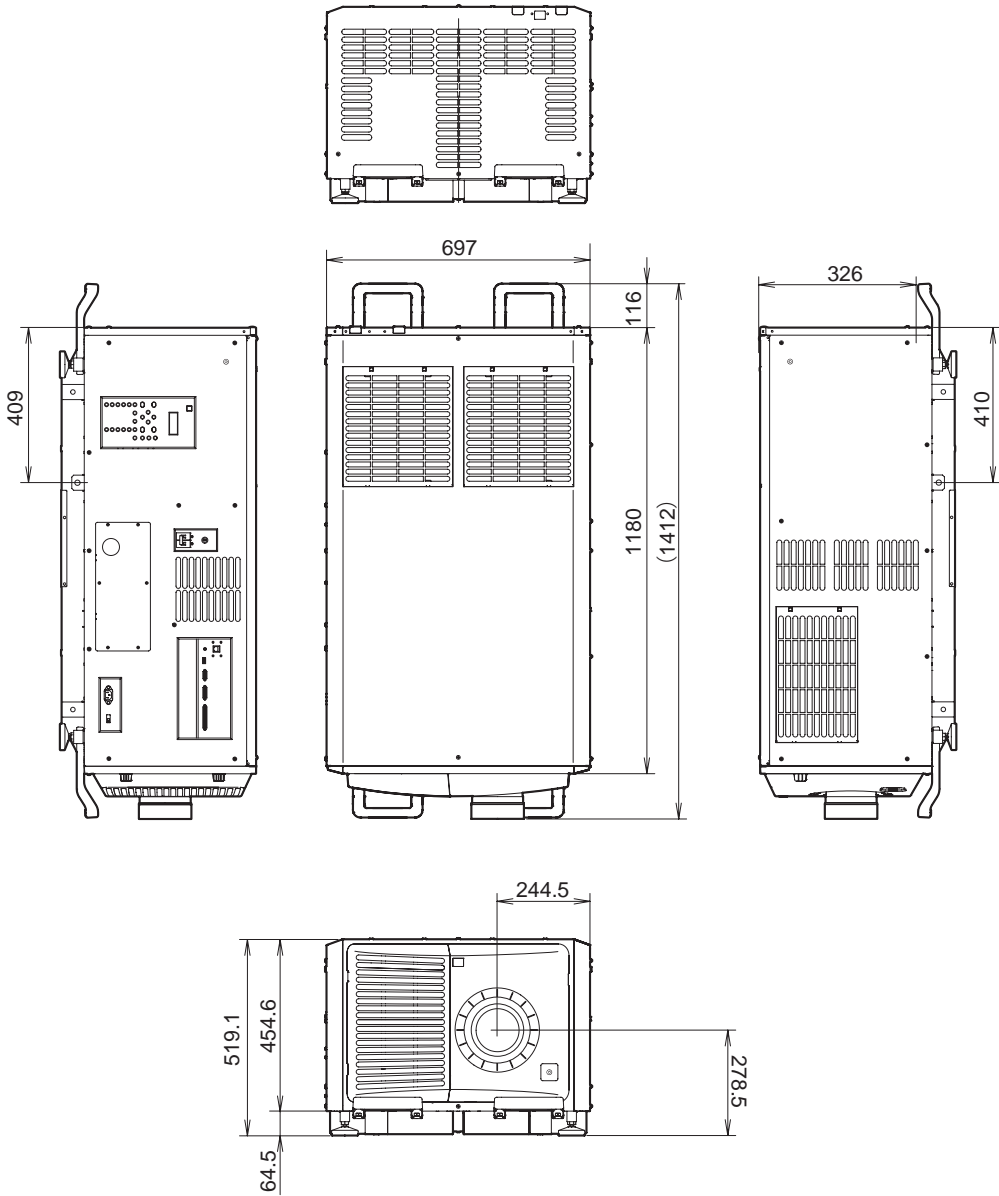
- **When the length of the wiring is at least 5 m (approximate)**

Remove shunting wire 1 and shunting wire 2 and connect the external device to the projector interlock terminals (② and ③) (do not use ① and ④).

- Connect terminal ② to the positive side of the external device and connect terminal ③ to the negative side.
- The projector operates normally when a voltage in the range of DC5 to 16V is applied between terminals ② and ③, and the system shuts off when the voltage is 0V.
- The minimum rated current required of the external device varies depending on the voltage applied between the terminals by the external device.
- When feeding the cable out from the projector, feed it so that it passes through the hole on the side face of the projector.



5-4. Outline Drawing



Units: mm

5-5. Index

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