NEC

MultiSync XT5000
## High Light Output Projection System

User's Manual

CAUTION: To turn off main power, be sure to remove the plug from power outlet. The power outlet socket should be installed as near to the equipment as possible, and should be easily accessible.

3. GSGV Acoustic Noise Information Ordinance:

The sound pressure level is less than 70 dB(A) according to ISO 3744 or ISO 7779.

WARNING

TO PREVENT FIRE OR SHOCK HAZARDS, DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE. ALSO DO NOT USE THIS UNIT'S POLARIZED PLUG WITH AN EXTENSION CORD RECEPTACLE OR OTHER OUTLETS, UNLESS THE PRONGS CAN BE FULLY INSERTED. REFRAIN FROM OPENING THE CABINET AS THERE ARE HIGH-VOLTAGE COMPONENTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

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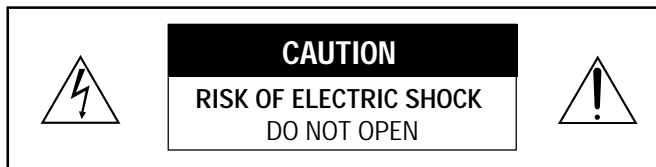
CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT OPEN COVER. NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

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

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

DOC compliance Notice

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

Precautions

Please read this manual carefully before using your NEC MultiSync XT5000 Projector and keep the manual handy for future reference.

WARNING

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

AVERTISSEMENT

POUR EVITER UN FEU OU UN RISQUE D'ELECTROCUTION NE PAS EXPOSER CET ENSEMBLE A LA PLUIE OU A L'HUMIDITE; DE MEME, NE PAS BRANCHER LA PRISE POLAIRE AVEC UNE RALLONGE A MOINS QUE LES DENTS DE LA PREMIERE NE S'Y INSERENT PLEINEMENT.
EVITER D'OUVRIR LE COFFRET CAR IL Y A, A L'INTERIEUR, DES COMPOSANTS SOUMIS A UNE HAUTE-TENSION; POUR LES REPARATIONS, S'ADRESSER A UN PERSONNEL QUALIFIE.

ATTENTION
RISQUE D'ELECTROCUTION
NE PAS OUVRIR

ATTENTION: POUR EVITER LES RISQUES D'ELECTROCUTION, NE PAS OUVRIR LE COUVERCLE. AUCUN DES ELEMENTS INTERNES NE DOIT ETRE REPARE PAR L'UTILISATEUR. NE CONFIER L'ENTRETIEN QU'A UN PERSONNEL QUALIFIE.

L'éclair fléché dans un triangle équilatéral est destiné à avertir l'utilisateur de la présence, dans l'appareil, d'une zone non-isolée soumise à une haute-tension dont l'intensité est suffisante pour constituer un risque d'electrocution.

Le point d'exclamation dans un triangle équilatéral est destiné à attirer l'attention de l'utilisateur sur la présence d'informations de fonctionnement et d'entretien importantes dans la brochure dccompagnant l'appareil.

DOC avis de conformation

Cet appareil numérique de la classe A respecte toutes les exigences du Réglement sur le Matériel D'interférence du Canada.

CAUTION

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

Important Safeguards

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

Installation

1. Place the projector on a flat, level surface and in a dry area free from dust and moisture.
2. Do not place the projector in direct sunlight, near heaters or heat radiating appliances.
3. Exposure to direct sunlight, smoke or steam could harm internal components.
4. Handle your projector carefully. Dropping or jarring your projector could damage internal components.
5. Do not place heavy objects on top of the projector.
6. If you wish to have the projector installed on the ceiling:
   a Do not attempt to install the projector yourself.
   b The projector must be installed by qualified technicians in order to ensure proper operation and reduce the risk of bodily injury.
   c In addition, the ceiling must be strong enough to support the projector and the installation must be in accordance with any local building codes.
   d Please consult your dealer for more information.
   e Do not attempt to stack projectors on the ceiling.

Power Supply

1. The projector is designed to operate on a power supply of 1.0KW AC100-120 / 1.5KW AC200-240V 50/60Hz. Ensure that your power supply fits this requirement before attempting to use your projector.
2. Handle the power cable carefully and avoid excessive bending. A damaged cord can cause electric shock or fire.
3. If the projector will not be used for an extended period of time, disconnect the plug from the power outlet.
4. Placing the power cord and the RGB cable closely to each other can cause beat noise. If this happens, keep the two separated so that beat noise is not generated.

Cleaning

1. Unplug the projector before cleaning.
2. Clean the cabinet periodically with a damp 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.

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 8 inches (20cm) of space between your projector and a wall. Allow at least 20 inches (50 cm) of space between the ventilation duct outlet and object.
2. Prevent foreign objects such as paper clips and bits of paper from falling into your projector. Do not attempt to retrieve any objects that might fall into your projector. Do not insert any metal objects such as a wire or screwdriver into your projector. If something should fall into your projector, disconnect it immediately and have the object removed by a qualified your service person.
3. Do not place any liquids on top of your projector.

CAUTION: High Pressure Lamp May Explode if Improperly Handled. Refer Servicing to Qualified Service Personnel.

Lamp Caution: Please read before operation
Due to the lamp being sealed in a pressurized environment, there is a small risk of explosion, if not operated correctly. There is minimal risk involved, if the unit is in proper working order, but if damaged or operated beyond the recommended 1500 hours, the risk of explosion increases.

Please note that there is a warning system built in, that displays the following message when you reach 1500 hours of operation″ Lamp Running Time is Over 1500 Hours!!″ When you see this message please contact your NEC Dealer for a replacement.

If the lamp does explode, smoke will be discharged from the vents located on the side of the unit. This smoke is comprised of glass in particulate form and Xenon gas, and will not cause harm if kept out of your eyes. If your eyes have been exposed to this gas, please flush your eyes out with water immediately and seek immediate medical attention. **Do not rub your eyes! This could cause serious injury.**

WARNING: Do not look into the lens while the projector is on. Serious damage to your eyes could result.

CAUTION
Do not unplug the power cable from the wall outlet under any one of the following circumstances. Doing so can cause damage to the projector:
- While the Hour Glass icon appears.
- While the message "Please wait a little." appears. This message will be displayed after the projector is turned off.
- Immediately after the power cable is plugged into the wall outlet (the POWER indicator has not changed to a steady amber glow).
- Immediately after the cooling fan stops working (After the projector is turned off with the POWER OFF button the cooling fan continues to work for 3 minutes while the Two Digit INDICATOR "--" flashes).

Recommandations importantes

Ces instructions de sécurité ont pour but d'assurer une longue vie à votre projecteur et d'éviter un incendie ou une décharge électrique. Prière de les lire avec attention et de tenir compte de tous les avertissements.

Installation

1. Placer le projecteur sur une surface plate et de niveau, et dans un endroit sec et à l'abri des poussières et de l'humidité.
2. Ne pas exposer le projecteur aux rayons directs du soleil, ni le placer près d'un chauffage ou de dispositifs de radiation de chaleur.
3. L'exposition aux rayons directs du soleil, à la fumée ou à la vapeur pourrait endommager des composants internes.
4. Manipuler le projecteur avec précautions. Laisser tomber le projecteur ou lui donner des chocs pourrait endommager des composants internes.
5. Ne pas poser d'objets lourds sur le dessus du projecteur.
6. Si vous voulez installer le projecteur au plafond:
   a. N'essayez pas d'installer le projecteur vous-même.
   b. Le projecteur doit être installé par un technicien qualifié pour garantir une installation réussie et réduire le risque d'éventuelles blessures corporelles.
   c. De plus le plafond doit être suffisamment solide pour supporter le projecteur et l'installation doit être conforme aux réglementations locales de construction.
   d. Veuillez consulter votre revendeur pour de plus amples informations.

Alimentation

1. Le projecteur est conçu pour fonctionner sous une tension d'alimentation de 1,0KW CA100-120 / 1,5 KW CA 200-240 V 50/60 Hz. S'assurer que la tension du secteur soit conforme à ces caractéristiques avant d'utiliser le projecteur.
2. Manipuler le cordon d'alimentation avec précautions et éviter des flexions excessives. Un cordon endommagé peut occasionner une décharge électrique ou un incendie.
3. Si le projecteur ne doit pas être utilisé pendant une longue période, débrancher la fiche de la prise de courant.
4. Placer le cordon d'alimentation et le câble RGB tout près l'un de l'autre peut occasionner un bruit de battement. Si cela se produit, les maintenir séparés jusqu'à ce que le bruit de battement disparaisse.

Nettoyage

1. Débrancher le projecteur avant de le nettoyer.
2. Nettoyer régulièrement le boîtier extérieur avec un chiffon humide. S'il est très sale, utiliser un détergent doux. Ne jamais utiliser de détergent forts ou de solvants tels que de l'alcool ou du diluant.
3. Utiliser un souffleur ou du papier pour objectif pour nettoyer l'objectif, et faire attention de ne pas griffer ou endommager l'objectif.

Précautions contre l'incendie ou la décharge

1. S'assurer qu'il y ait une ventilation suffisante et que les ouvertures ne soient pas obstruées afin d'éviter des concentrations potentiellement dangereuses d'ozone et l'accumulation de chaleur à l'intérieur du projecteur. Laisser au moins 20 cm d'espace entre le projecteur et un mur.
2. Empêcher tous objets étrangers tels que des attaches trombones ou des morceaux de papier de tomber à l'intérieur du projecteur. Ne pas essayer de récupérer des objets qui seraient tombés dans le projecteur. Ne pas introduire d'objets métalliques tels qu'un fil ou un tournevis dans le projecteur. Si quelque-chose doit tomber dans le projecteur, le débrancher immédiatement et faire enlever l'objet par un technicien agréé NEC.
3. Ne pas poser de liquides sur le dessus du projecteur.

ATTENTION : La lampe à haute pression peut exploser si elle est manipulée incorrectement. Confier l'entretien à du personnel d'entretien qualifié.

Précautions avec la lampe : lire avant l'utilisation
La lampe a été scellée dans un environnement sous pression, et il y a donc un petit risque d'explosion, si elle n'est pas utilisée correctement. Le risque est minime si l'appareil est en bon ordre de marche, mais s'il est endommagé ou utilisé au-delà des 1500 heures recommandées, le risque d'explosion augmente alors.
Il est à noter l'existence d'un système d'avertissement intégré, lequel affiche le message "Lamp Running Time is Over 1500 Hours!! (Le temps de fonctionnement de la lampe a dépassé 1500 heures !! ") " lorsque les 1500 heures de fonctionnement sont atteintes. Lorsque ce message appara"t, prière de contacter son revendeur NEC pour un remplacement.
Si la lampe explose, de la fumée peut être produite par les fentes d'aération situées sur le côté de l'appareil. Cette fumée est composée de verre sous forme de particules et de gaz de Xenon, et n'est pas nuisible si elle est maintenue à distance des yeux. Si les yeux sont exposés à ce gaz, les rincer immédiatement à l'eau courante et consulter tout de suite un médecin. **Ne pas frotter les yeux ! Cela pourrait provoquer une grave blessure.**

AVERTISSEMENT :
Ne pas regarder dans l'objectif lorsque le projecteur est allumé. De sérieux dommages aux yeux pourraient en résulter.

LIMITED WARRANTY (USA and Canada only)

NEC Technologies, Inc.(hereafter NECTECH)warrants this product to be free from defects in material and workmanship under the following terms.

HOW LONG IS THE WARRANTY
Parts and labor are warranted for (1) One Year from the date of the first customer purchase. The lamp is warranted for 1000 hours of operating time or 90 days, whichever comes first. Decrease in lamp light output level is not covered by this warranty.

WHO IS PROTECTED
This warranty may be enforced only by the first purchaser.

WHAT IS COVERED AND WHAT IS NOT COVERED
Except as specified below, this warranty covers all defects in material or workmanship in this product. The following are not covered by the warranty:
1. Any product which is not distributed in the U.S.A. or Canada by NECTECH or which is not purchased in the U.S.A. or Canada, from an authorized NECTECH dealer.
   If you are uncertain as to whether a dealer is authorized, please contact NECTECH at 800-836-0655.
2. Any product on which the serial number has been defaced, modified or removed.
3. Damage, deterioration or malfunction resulting from:
   a. Accident, misuse, abuse, neglect, fire, water, lightning or other acts of nature, unauthorized product modification, or failure to follow instructions supplied with the product.
   b. Repair or attempted repair by anyone not authorized by NECTECH.
   c. Any shipment of the product (claims must be presented to the carrier).
   d. Removal or installation of the product.
   e. Any other cause which does not relate to a product defect.
4. Cartons, batteries, external cabinets, magnetic tapes, or any accessories used in connection with the product.

WHAT NEC WILL COVER
We will pay labor and material expenses for covered items, but we will not pay for the following:
1. Removal or installation charges.
2. Costs of initial technical adjustments(set-up), including adjustment of user controls. These costs are the responsibility of the NECTECH dealer from whom the product was purchased.
3. Payment of shipping charges.

HOW YOU CAN GET WARRANTY SERVICE
1. To obtain service on your product, consult the dealer from whom you purchased the product, or ship it prepaid to any authorized NECTECH service center.
2. Whenever warranty service is required, the original dated in voice (or a copy) must be presented as proof of warranty coverage, and should be included in any shipment of the product. Please also include in any mailing, your name, address and a description of the problem (s).
3. For the name of the nearest NECTECH authorized service center, call NECTECH at 800-836-0655.

LIMITATION OF IMPLIED WARRANTIES
All implied warranties, including warranties of merchantability and fitness for a particular purpose, are limited in duration to the length of this warranty.

EXCLUSION OF DAMAGES
NECTECH's liability for any defective product is limited to the repair or replacement of the product at our option. NECTECH shall not be liable for:
1. Damage to other property caused by any defects in this product, damages based upon inconvenience, loss of use of the product, loss of time, commercial loss; or
2. Any other damages whether incidental, consequential or otherwise. Some states do not allow limitation on how long an implied warranty lasts and/or do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations and exclusions may not apply to you.

HOW STATE LAW RELATES TO THE WARRANTY
This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

FOR MORE INFORMATION, TELEPHONE 800-836-0655
  NEC TECHNOLOGIES, INC.
  1250 N. Arlington Heights Road, Suite 500
  Itasca. Illinois 60143-1248

NOTE: All products returned to NECTECH for service MUST have prior approval. To get approval, call NEC Technologies at 800-836-0655.

TABLE OF CONTENTS

INTRODUCTION

This section introduces you to your new MultiSync XT5000 Projector, provides a list of materials that comes with your projector and describes the features and controls.

Congratulations On Your Purchase Of The MultiSync XT5000 Projector

The MultiSync XT5000 is one of the finest, most technically advanced projectors available today. The XT5000 enables you to project exceptionally bright, precise images up to 500 inches across (measured diagonally) from your PC or Macintosh computer (desktop or notebook), VCR, document camera, laser disc player, DVD player and even an HD VCR or HD laser disc player.

You can use the projector on a tabletop or cart, you can permanently mount it on a ceiling*, or you can use the projector to project images from behind the screen. The remote control can be used in a wired or wireless configuration.

Features you'll enjoy :

* A high-performance 1.0 KW Xenon lamp that delivers 4500 ANSI lumens (High Bright mode) and 4000 ANSI lumens (Normal mode) and lamp life is 1500 hours.
* NEC's unique DLP™ based light engine offers true color reproduction.
* XT5000 can accommodate any picture size from 80 to 500 inches (measured diagonally).
* The XT5000 projects images with uniform brightness while colors remain true to their original source.
* The projector can be double or even triple stacked without an external frame, producing bright images of 9,000 or 13,500 ANSI lumens in addition, double or triple stacking offers built-in redundancy.
* An image can be projected from in front or behind a screen, and the projector can even be installed on the ceiling*.
* Supports RGB digital, HDTV and DVD signals as well as most IBM VGA, S-VGA, XGA, SXGA(scaling), Macintosh or any other RGB signals within a horizontal frequency range or 15 to 83.5 kHz and a vertical frequency range of 50 to 85 Hz. This includes NTSC3.58, PAL, PAL60, SECAM, NTSC4.43, Y/C and 1080I, 720P and 480P HDTV standard video signals.
* Built-in telecine detection enables 3:2 pull-down correction with no external processing necessary, eliminating jitter and artifacts to allow for original film source motion quality.
* A newly designed menu system provides for easy setup and operation of the projector.
* The remote control can be used wired or wireless.
* Installing the projector on the ceiling must be done by authorized NEC technicians.
  Consult your NEC dealer for more information.

Digital Light Proccessing and DLP are trademarks of Texas Instruments.

Getting Started

The fastest way to get started is to take your time and do everything right the first time. Taking a few minutes now to review the manual may save you hours later on. At the beginning of each section of the manual you'll find an overview. If the section doesn't apply, you can skip it.

What's In The Box?

Make sure your box contains everything listed. If any pieces are missing, contact your dealer. Please save the original box and packing materials if you ever need to ship the projector.

* NEC MultiSync XT5000 Projector
* Remote Control with Remote Cable (wireless/wired).
* DFP Cable
* Power Cable
* Power Cable Stopper
* Two AAA Batteries
* User Manual

1. Part Names and Functions

Stacking Pad (4 pcs)

Digital Input Terminal Panel

Remote Sensor

PC Card Slot

Insert a flash memory card here to upgrade the projector system software or copy data

Lens (Optional)

Input Terminal Panel

Ventilation (in)

Carrying Handle

Ventilation (out)

Release Lever (both sides)
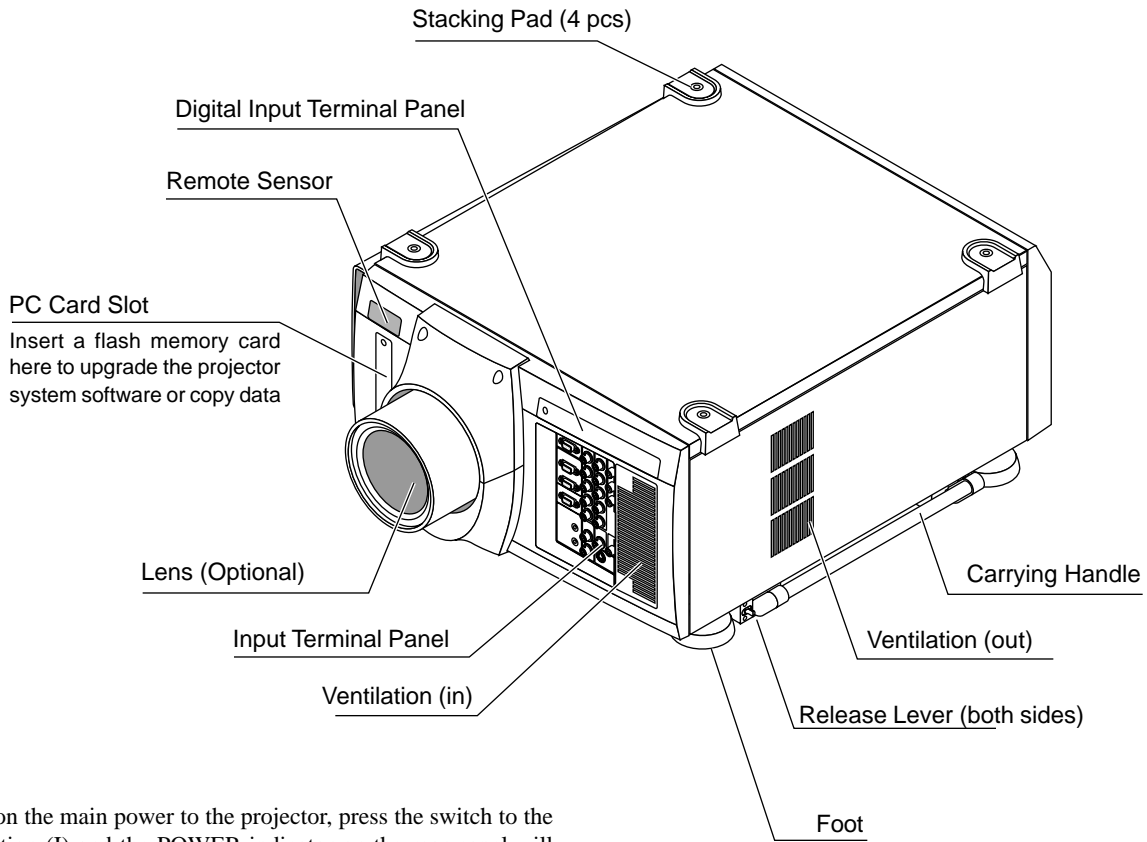
* To turn on the main power to the projector, press the switch to the ON position (I) and the POWER indicator on the rear panel will turn amber in color.
  Press to the OFF position (0) to turn the main power off.

Foot

NOTE: When turning off the main power, first return the projector to the standby condition by pressing the POWER OFF button on the remote control or the POWER button on the rear panel and then turn off the main POWER switch. These procedures are necessary to protect your projector and the connected equipment.

Power Switch (Main power)*

AC INPUT

Connect the supplied power cord here (AC 100-120 / 200-240V).

Ventilating duct (out)

Ventilation (out)

Ventilation (in)

Controls

Ventilation (in)
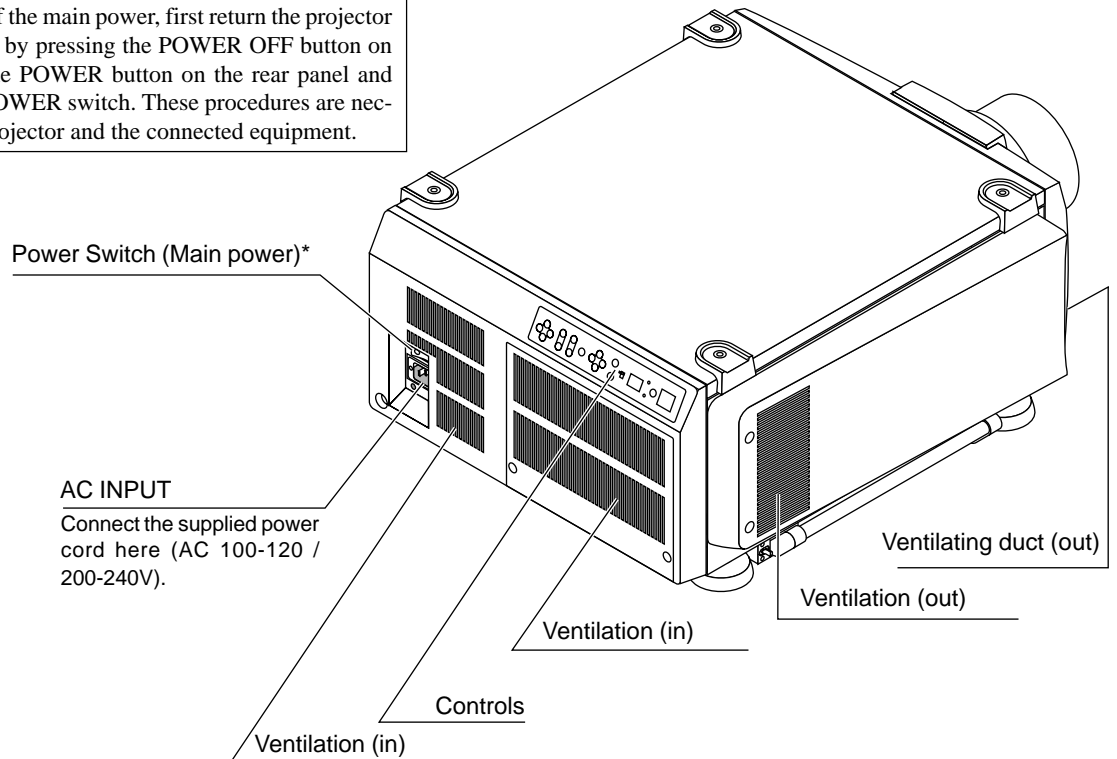
Controls
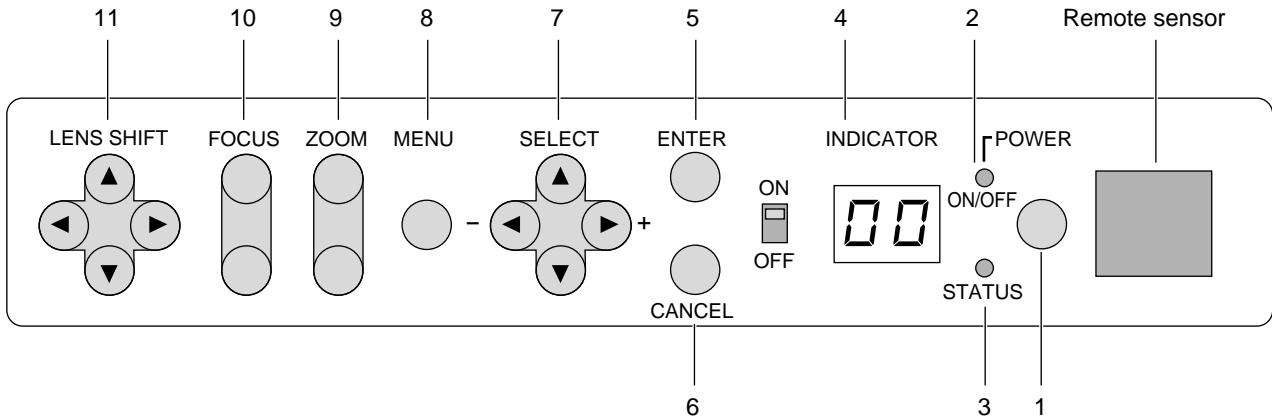
1. Power Button

Press to turn the projector on when the projector is in the standby condition (Main Power switch must be on and the POWER indicator lit amber). Press and hold for 2 seconds to turn off the projector.

2. Power Indicator

When this indicator is green, the projector is on; when the indicator is amber, it is in standby mode.

NOTE: After the projector is turned off, the indiacator "--" flashes for three minutes to show that the cooling fan is working.
Do not turn off the main power during that time. After "--" stops flashing, the POWER indicator will change to a steady amber glow and the projector will be in the stand-by mode.

3 Status Indicator

When the projector is used with the ISS-6020 switcher on SW1 level or SW2 level mode, this indicator flashes when the projector is not connected with the switcher correctly
or when the switcher is turned off.

4 Two Digit Display

INDICATOR: Displays projector error codes. The current projector ID(address) is displayed in normal operation.
ON/OFF Switch: Turns the INDICATOR on or off.

5 Enter Button

Executes your menu selection and activates items selected from the menu. When the slidebar or dialog box is diplayed:
Pressing this button confirms adjustments/setting and returns to the previous menu display.

6 Cancel Button

Press this button to exit the menu. Press this button to return the adjustments to the last condition while you are in the adjustment or setting menu.

7 Select (Up/Down/Left/Right) Button

Up/Down: Use these buttons to select the menu of the item you wish to adjust.
Left/Right: Use these buttons to change the level of a selected menu item.

8 Menu Button

Displays the main menu for operation.
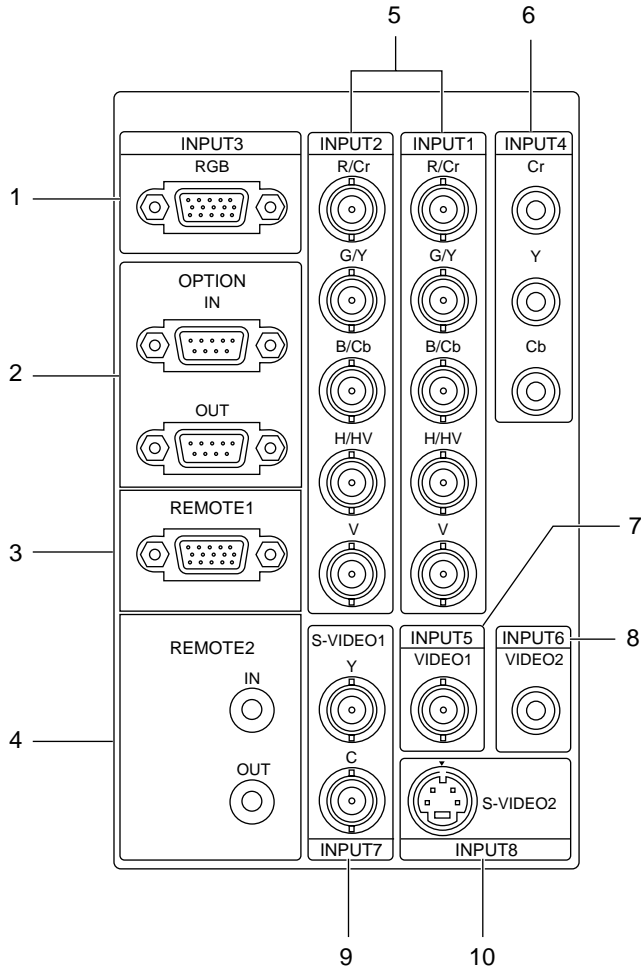
9 Zoom Button

Zoom the lens in and out.

10 Focus Button

Adjust the lens focus.

11 Lens Shift Button

Adjust the lens offset by shifting the projected image position horizontally and vertically.

Terminal Panel

1 INPUT 3 RGB Connector (Mini D-Sub 15 pin)
Connect your PC or other analog RGB equipment such as a high-definition document camera.

2 Option Connector (Mini D-Sub 9 pin)
For system expansion such as PC-control.
IN: connect to the external equipment such as PC.
OUT: for daisy-chaining multiple projectors and operating them with the same external equipment. To do so, connect to a second projector' s IN terminal to relay the input at the IN terminal of the first projector until all the projectors are connected.

3 REMOTE 1 Connector (Mini D-Sub 15 pin)
This terminal allows external control of the projector from either the Switcher or from an external control. When the Switcher is used, connect to the REMOTE 1 terminal on the back of the Switcher.

NOTE: This projector is compatible with the ISS-6020 Switcher.

4 REMOTE 2 Jacks
IN: wired remote control input.
OUT: for daisy-chaining multiple projectors and operating them with the same remote control. To do so, connect to a second projector' s IN terminal to relay the input at the IN terminal of the first projector until all the projectors are connected.

5 INPUT 1 and INPUT 2 Terminals (BNC)
Connect R,G,B,H (Horizontal sync) and V (Vertical sync) outputs of the external equipment such as the Switcher. If using a component with a combined sync (SYNC) output, connect it to the H/V terminal.
Also connect component video outputs (Y/Cb/Cr) of the external equipment such as DVD player.

NOTE: The INPUT 2 terminal does not support SW1 Level and SW2 Level modes for the ISS-6020 switcher.

6 INPUT 4 Cr/Y/Cb Terminal (RCA)
Connect component video outputs (Y/Cb/Cr) of the external equipment such as DVD player.

NOTE: This terminal accepts component signal only.

7 INPUT 5 VIDEO 1 Terminal (BNC)
Connect to the BNC video output of the external equipment such as a VCR or laser disk player.

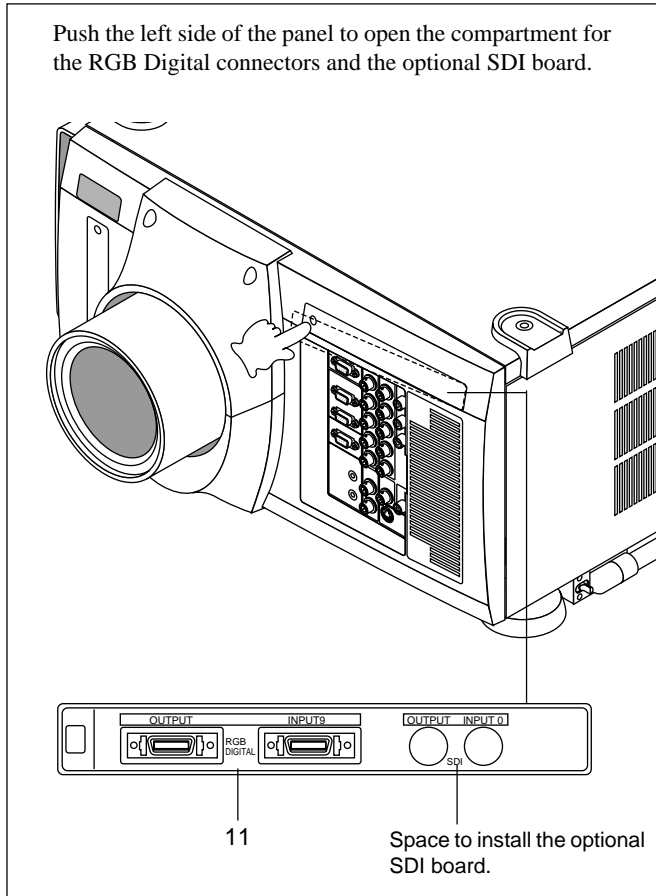**8 INPUT 6 VIDEO 2 Terminal (RCA)**
Connect to the RCA video output of the external equipment such as a VCR or laser disk player.

9 INPUT 7 S-VIDEO 1 Terminal (BNC)
Connect to the Y/C separate BNC video outputs of the external equipment such as a VCR or laser disk player.

10 INPUT 8 S-VIDEO 2Terminal (Mini DIN 4 pin)

Connect to the S-video output of the external equipment such as a VCR with an S-video output. This terminal allows switching between S2 and S1 VIDEO input modes. See the "S-Video Mode Select" section for more information.

Push the left side of the panel to open the compartment for the RGB Digital connectors and the optional SDI board.

11

Space to install the optional SDI board.

11 RGB Digital Input/Output Connectors (MDR 20 pin)

These connectors are used for double or triple stacking.
Use the supplied DFP cable to connect the OUTPUT terminal of the first projector to the second projector's INPUT until all the projectors are connected. These connectors can also be used to accept TMDS standard (Pannel Link) digital signal output from a digital ready computer. In this case some graphics cards may cause flickering noise on the screen.

List of Recommended Graphics Cards

Manufacturer	Product	Card I/F	Connector
I-O Data Devices, Inc.	GA-SS21P8/PCI	PCI	DFP 20P
	GA-SM02P2/CB	PCMCIA	DFP 20P
ATI Technologies, Inc.	Expert LCD	AGP	DFP 20P

As of October 31, 1999

NOTE:
* These connectors support a maximum resolution of 1024×768 (XGA).
* A DFP cable must be 5 m (16.4 feet) or less in length.
* Contact your dealer for installing the optional SDI board.

Remote Control

PEMOTE CONTROLLER
RD-364E
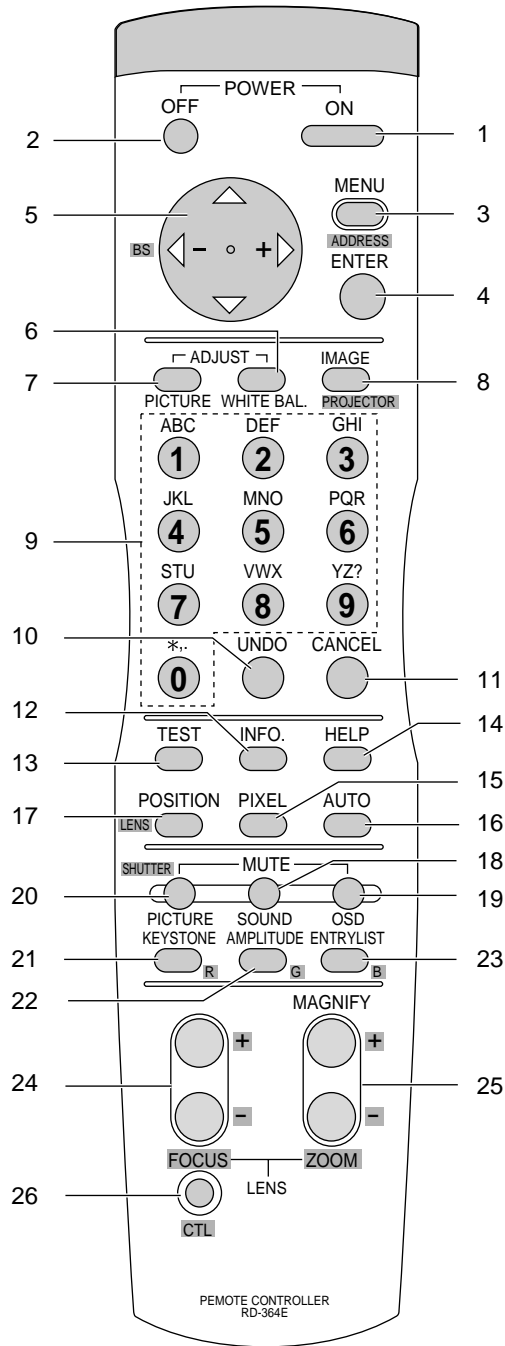
1 POWER ON

Press to turn on the projector. The POWER indicator lights up green.

2 POWER OFF

Press and hold this button for a minimum of two seconds to turn off the projector.

3 MENU

Press to display the main menu.
While pressing and holding CTL, press this button to display the Remote Control ID dialog box to specify the remote control ID.

4 ENTER

Executes the menu selection and activates items selected from the menu. When the slidebar or dialog box is diplayed:
Pressing this button confirms adjustments/setting and returns to the previous menu display.

5 CURSOR (Up/Down/Left/Right)

When pressed together, the CTL and ◀ buttons work as a Back Space key in the entry screen.
Pressing and holding CTL, then this button moves the menu, slidebar or dialog box.

6 ADJUST WHITE BAL

Press to display the Color adjustment screen. Pressing this button sequentially selects "Color Temperature" → "White Balance"→"Switcher RGB Gain"→"Ref.White Bal".

7 ADJUST PICTURE

Press to display the Picture adjustment screen. Pressing this button sequentially selects "Brightness" → "Contrast" → "Color" → "Hue" → "Sharpness" → "V-Aperture".

8 IMAGE/PROJECTOR

Press to display the Image Option screen. Pressing this button sequentially selects "Image Mode" → "Video Mode" → "Signal Level"
While pressing and holding CTL, pressing this button rotates "Timer" → "Menu" → "Setup" → "Link Mode" → "Switcher Control" → "External Control" → "Passcode".

9 INPUT

Use to select an input, to name a signal, or to enter a passcode during input registration.
1--INPUT 1 for RGBHV/Y, Cb/Pb, Cr/Pr
2--INPUT 2 for RGBHV/Y, Cb/Pb, Cr/Pr
3--INPUT 3 for RGB
4--INPUT 4 for Y, Cb/Pb, Cr/Pr
5--INPUT 5 for VIDEO 1
6--INPUT 6 for VIDEO 2
7--INPUT 7 for S-VIDEO 1
8--INPUT 8 for S-VIDEO 2
9--INPUT 9 for RGB DIGITAL (Panel Link) input
0--INPUT 0 for SDI input on the optional SDI board

10 UNDO

Press to return the adjustments and settings to the previous condition. While pressing and holding CTL, pressing this button clears all the menus or ajustment/setting screen. At this time the adjustments/settings are stored in memory.

11 CANCEL

Press to exit the menu.
Press this button with CTL to return to the previous menu while the menus appear. This feature allows you to adjust several items concurrently.

12 INFO

Displays the "Source Information" or "Projector Information" window. This button toggles between these two windows.

13 TEST

Press to display the test pattern. Pressing this button sequentially selects nine test patterns.

14 HELP

Provides online help.

15 PIXEL

Displays the Pixel Adjust screen to adjust the clock and phase.

16 AUTO

Press to adjust Position-H/V and Pixel Clock/Phase for an optimal picture.

17 POSITION

Press to display the Blanking screen; press again to display the Position screen.
While pressing and holding CTL, pressing this button displays the Lens Shift adjustment screen.

18 MUTE SOUND

(available only when using with the ISS -6020 or IPS4000)
Turns off the sound for a short period of time. Press again to restore the sound.

19 MUTE OSD

Press to turn off the on-screen display. Press again to restore the on-screen display.

NOTE: You can also turn off the on-screen display by pressing and holding CTL and then pressing MUTE OSD; doing this again restores it. In this case any adjustment will still change the projector's memory settings. This mode is available even when an input is switched to another or the power is turned off using the POWER OFF button on the remote control.

20 MUTE PICTURE

Press to turn off the picture for a short period of time. Press again to restore the picture. Pressing and holding CTL, then pressing this button shuts off the light completely.

21 KEYSTONE (R)

Press to display the Keystone Correction screen.

22 AMPLITUDE (G)

Service personnel only.

23 ENTRY LIST (B)

Press to display the Entry List screen.

24 FOCUS (+/–)

While pressing and holding CTL, pressing this button allows you to adjust the lens focus.

25 MAGNIFY/ZOOM (+/–)

Magnify the size of a target portion.
While pressing and holding CTL, pressing this button allows you to zoom the lens in and out.

26 CTL

Used in conjunction with other buttons, similar to a shift key on a computer.

27 Infrared Transmitter

Direct the remote control toward the remote sensor on the projector cabinet.

28 Remote Jack

Connect your remote control cable here for wired operation.

Remote Control Precautions

- Use the remote control within a distance of about 7m (23feet) and at an angle of 30˚ above, below, to the left and to the right of the remote control sensor located at the front of the main unit.
- The remote control system may not function when direct sunlight or strong illumination strikes the remote control sensor of the main unit, or when there is an obstacle in the path.
- When remote control buttons are pressed and held, main unit function keys may not operate.
- Do not subject to strong shock.
- Do not allow water or other liquid to splash on the remote control. If the remote control gets wet, wipe it dry immediately.
- Avoid exposure to heat and steam.
- Remove the batteries from the remote control when the remote control is not going to be used for a long period.

You cannot operate the projector using the remote control if:
- the remote ID is not set to [00].
- the remote ID is not the same as the projector ID.

See page E-28 for setting remote ID and page E-40 for setting projector ID.

Remote Control Battery Installation

Installing the Remote Control Batteries
When it comes time to replace the batteries, two "AAA" type will be required.

1. Press and open the cover.
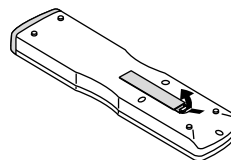
2. Align and insert the batteries according to the (+) and (-) indications inside the case.

3. Replace the cover.

2. INSTALLATION

This section describes how to install the lens, set up the projector and how to connect video and audio sources.

Optional Lens Installation

Four optional lenses are available: TL-08SF, TL-1Z, TL-2Z and TL-4Z.

Preparation

* Turn the projector off, wait for the cooling fan to stop, then turn off the main power switch on the rear panel.
  Check that the projector has cooled off sufficiently before proceeding.
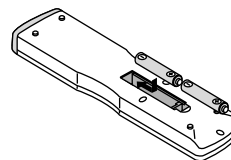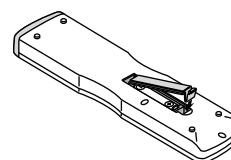
CAUTION

* The projector and lens contain high-precision parts. Do not induce shock to the projector or the lens.
* Do not touch the lens surface. Doing so can degrade the optical performance.

Installation Procedures

1. Remove the upper and the lower lens hood.

    1) Remove the protective sponge.
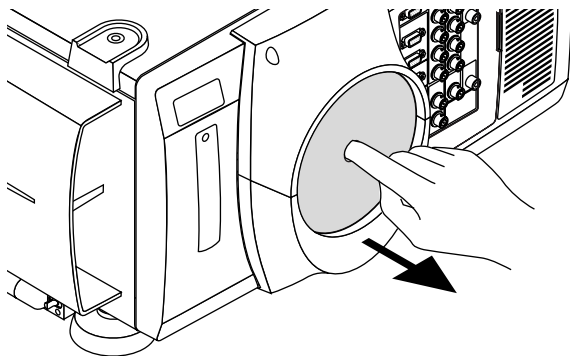
    2) Remove the two screws. Push down on the lower lens hood then lift up and pull off the upper lens hood.
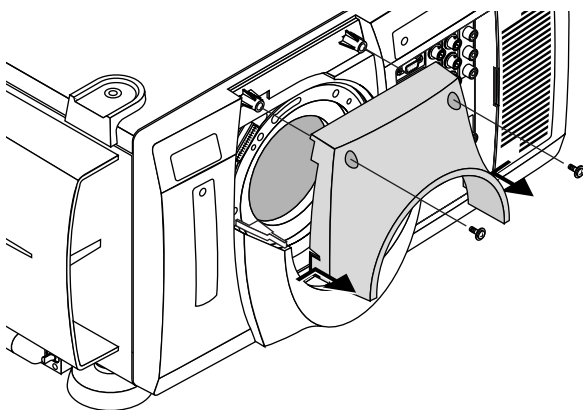
    3) Lift up the lower lens hood by 1 cm to release the hook. Remove the lower lens hood.

Hook
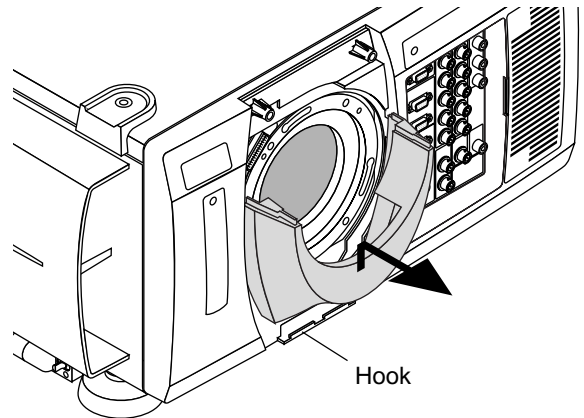
2. Attach the lens unit.

    1) Remove the lens cap from the rear.
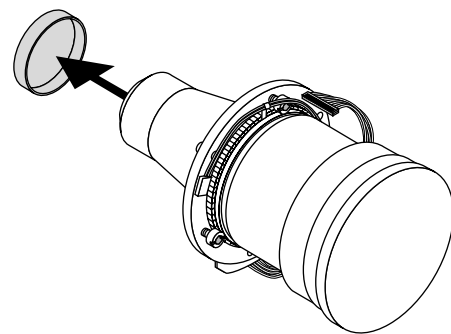
    2) Insert the lens so that the three pins on the lens unit are properly lined up with the holes on the projector.

Fixed pin
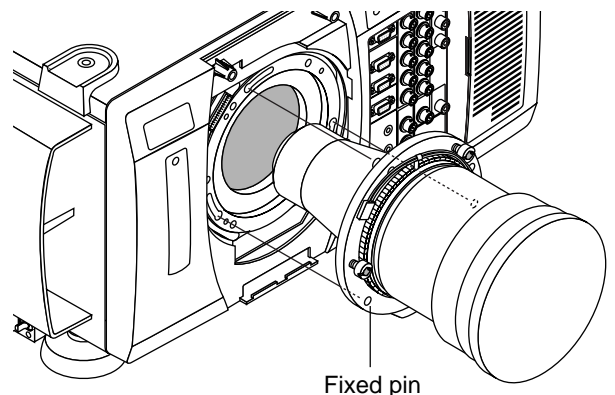
NOTE: Do not remove the front lens cap during lens installation. The lens cap helps minimize any marring of the front lens element.

3) Rotate the lens barrel clockwise to fix the lens unit.

Lens barrel
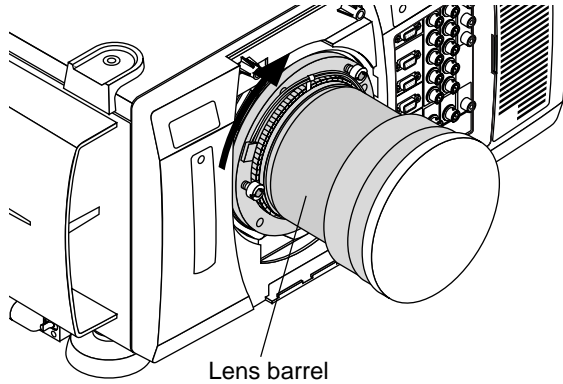
3. Secure the fixed screws and connect the extension cable attached to the projector.
1) Secure the three screws on the lens holder.
2) Insert the connector of the lens unit into the socket of the extension cable attached to the projector.
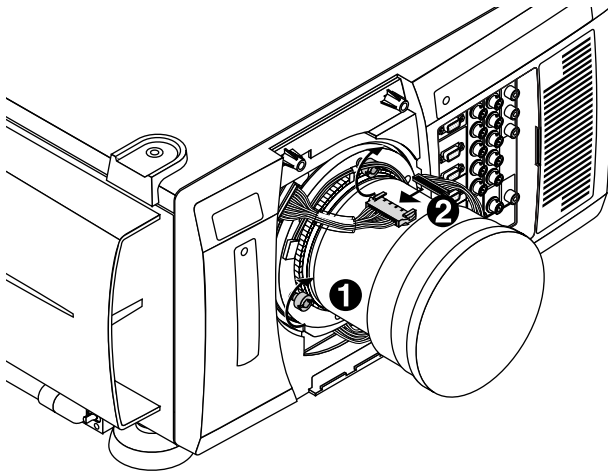
4. Reattach the lens hood.
1) Insert the lower lens hood into the hook.

Hook
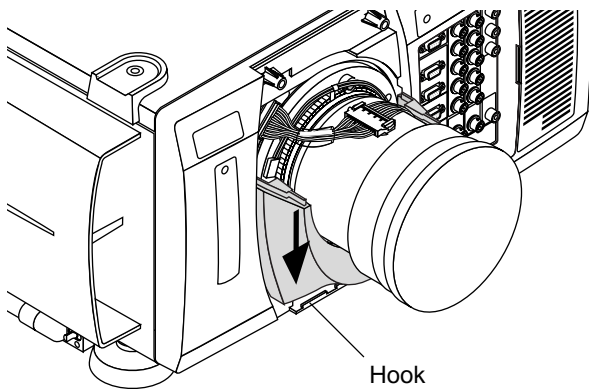
2) Insert the upper lens hood while pushing the left and right bottom. Secure the two screws.
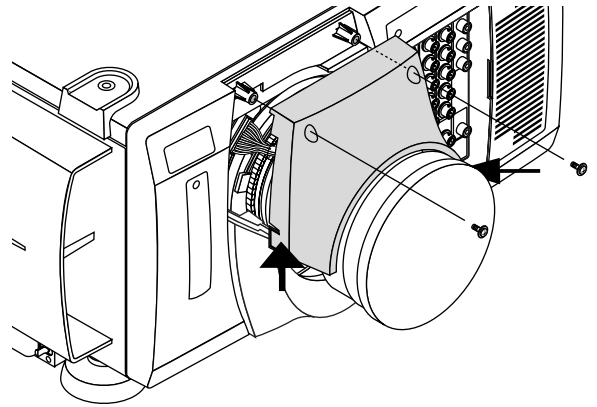
NOTE: This completes installation for the optional lens TL-08SF and TL-1Z. For TL-2Z and TL-4Z, attach the supplied dust cap as shown on the next step.

5. Attach the dust cap.
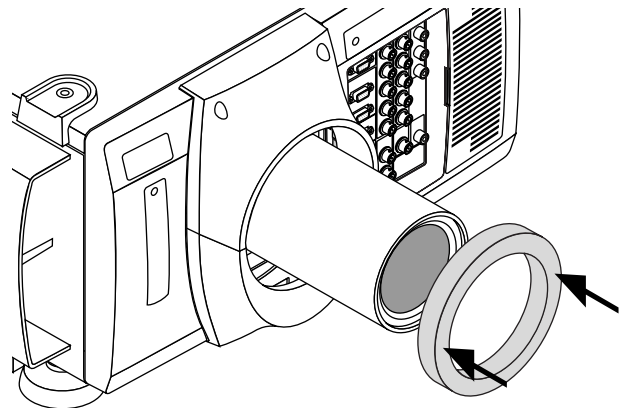
Setting Up The projector

To set up and use the projector, you must first do:

1. Determine the screen size and the optional lens to be used.

NOTE: Refer to page E-14 for lens installation.

2. Set up a screen or select a non-glossy white wall onto which you can project your image.

Moving The Projector

Always carry your projector by the handle. Ensure that the power cord and any other cables connecting to video sources are disconnected before moving the projector. When moving the projector or when it is not in use, cover the lens with the lens cap.
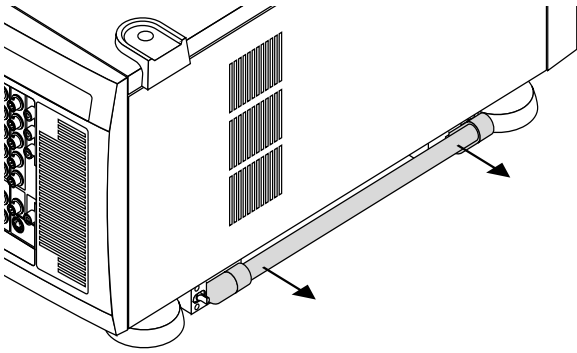
Pulling Out the Handles
Pull out the handle until it clicks into place.
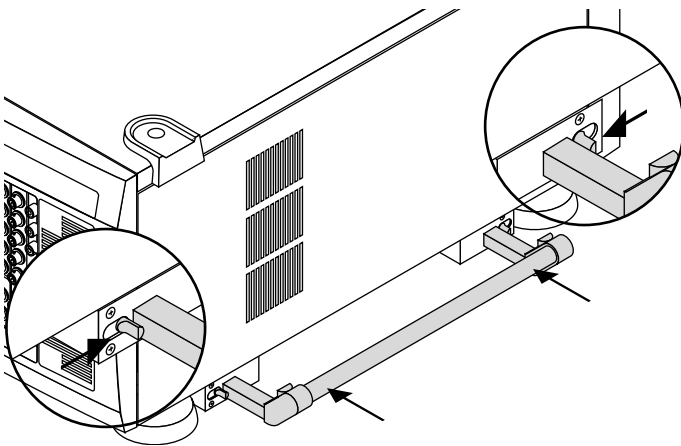
Retracting the Handles
1) Push the lever to unlock and 2) retract the handle.

Selecting A Location The further your projector is from the screen or wall, the larger the image. The minimum size the image can be projected is 80" (2 m) measured diagonally. The largest the image can be is 500" (12.7 m).
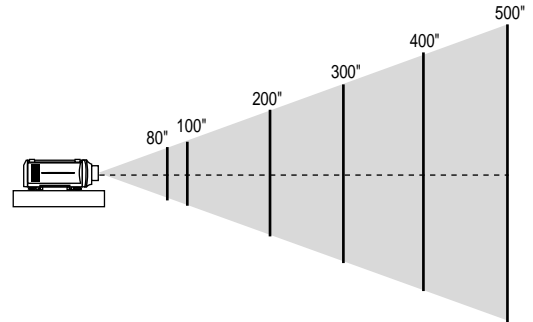
WARNING

• Only use your projector on a solid, level surface. If the projector falls to the ground, you can be injured and the projector severely damaged.
• Do not use the projector where temperatures vary greatly. The projector must be used at temperatures between 40 degrees F (5 degree C) and 95 degrees F (35 degree C).
• Do not expose the projector to moisture, dust, or smoke. This will degrade the screen image.
• Ensure that you have adequate ventilation around your projector for proper heat dissipation. Do not cover the vents on the projector cabinet.

Attaching the Power Cable Stopper

The Power cable stopper is provided with the projector so that the cable cannot be accidentally unplugged from the AC IN.

1) Remove two screws.
   These screws are used later again.
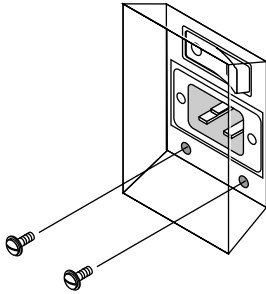
2) Plug the power cable into the AC IN and then attach the stopper.

Power cable
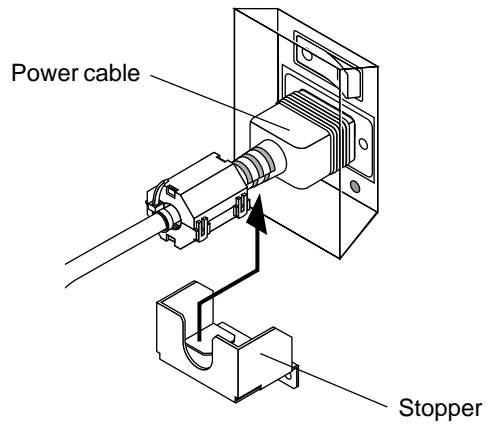
Stopper

3) Fix the stopper using the two screws.
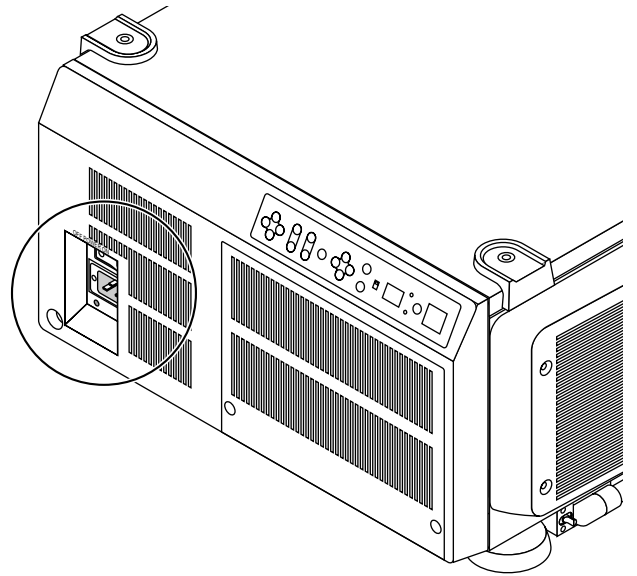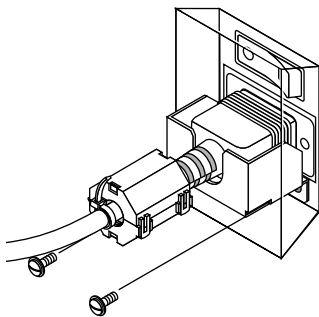
Screen Size and Projection Distance

1. Place your projector on a flat level surface at the optimal distance from the screen. (Avoid having bright room lighting or sun light directly on the screen or projection surface.)
2. Connect the power cable, remove the lens cap and turn the projector on. (If no input signal is available, the projector will display a black screen.)
3. Ensure that the projector is square to the screen.
4. Move the projector left or right to center the image horizontally on the screen.
5. To move the projected image up or down, adjust the Lens Shift Control.
6. Adjust the focus and the zoom.

> NOTE: When using the zoom lens, it is recommended that the projector is positioned at an angle of from -15 to +15 degrees from the horizontal.

Shutter mechanism

The XT5000 projector is equipped with "Shutter" feature, which allows the user to shut off the light completely on the screen. To use the shutter function, hold down the CTL button, and press the MUTE PICTURE button on the remote control.

While projecting an image with lower resolution than the projector's native resolution (1024×768), if you want to enlarge the image to fill the screen in the Native mode, proceed as follows:

1. Tturn on the "Native with Zoom" on the Resolution window. See page E-34.
2. Press ENTER to close the window.
3. While pressing and holding CTL, press MAGNIFY or FOCUS on the remote control to zoom the lens in or adjust the lens focus.

Projection Distance and Screen Size
Unit: m (feet)

| Lens	Model	TL-08SF	TL-1Z	TL-2Z	TL-4Z
	Magnification	0.84	1.5-2.5	2.5-4.0	4.0-7.0
Screen Size (Diagonal) / Projection Distance	80"	1.4 (4.48)	2.5-4.0 (8.00-13.33)	4.1-6.5 (13.34-21.33)	6.6-11.3 (21.34-37.33)
	100"	1.7 (5.60)	3.1-5.0 (10.00-16.66)	5.1-8.1 (16.67-26.66)	8.2-14.2 (26.67-46.66)
	200"	3.4 (11.20)	6.1-10.1 (20.00-33.33)	10.2-16.2 (33.34-53.33)	16.3-28.4 (53.34-93.33)
	300"	5.1 (16.80)	9.2-15.2 (30.00-50.00)	15.3-24.3 (50.00-80.00)	24.4-42.6 (80.00-140.00)
	400"	6.8 (22.40)	12.2-20.3 (40.00-66.66)	20.4-35.5 (66.67-106.66)	32.6-56.8 (106.67-186.66)
	500"	8.5 (28.00)	15.2-25.4 (50.00-83.33)	25.4-40.6 (83.34-133.33)	40.7-71.1 (133.34-233.33)

* The values for projection distance are estimated.

Lens Shift Adjustable Range

Lens can be shifted within the shaded area as shown below using the normal projection position as a starting point.
(H: width of projected image, V: height of projected image)

LENS SHIFT

For TL-1Z, TL-2Z, TL-4Z

For TL-08SF
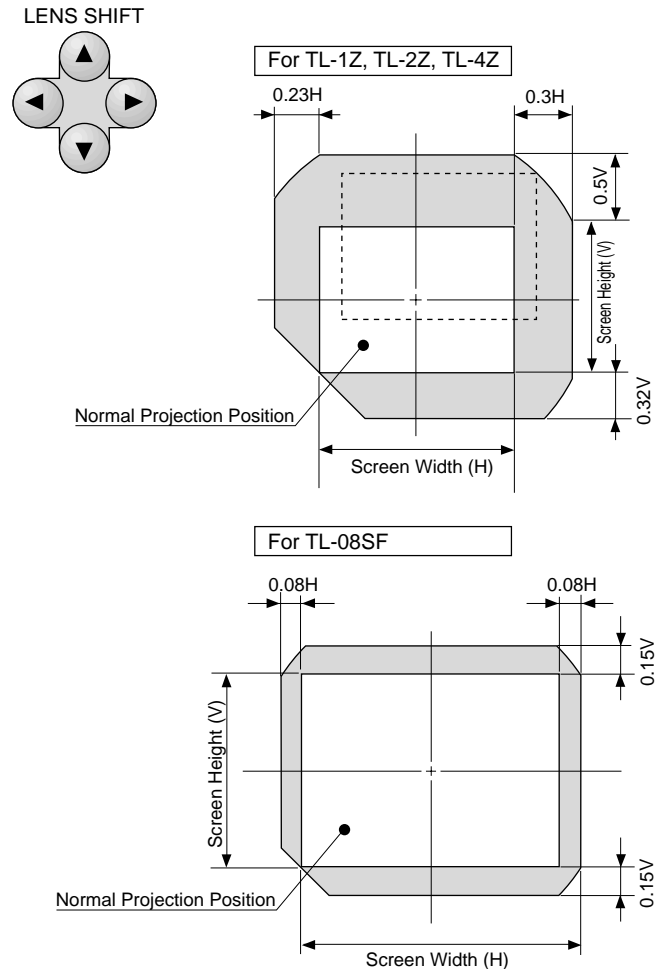
Unit: m (feet)

Screen Size	H	V
80"	1.6(5.33)	1.2(4.00)
100"	2.0(6.67)	1.5(5.00)
150"	3.0(10.00)	2.3(7.50)
200"	4.0(13.33)	3.0(10.00)
300"	6.1(20.00)	4.6(15.00)
400"	8.1(26.67)	6.1(20.00)
500"	10.2(33.33)	7.6(25.00)

Top View

Normal projection

Lens shifted

Screen

Side View

Screen

Lens shifted

Normal projection
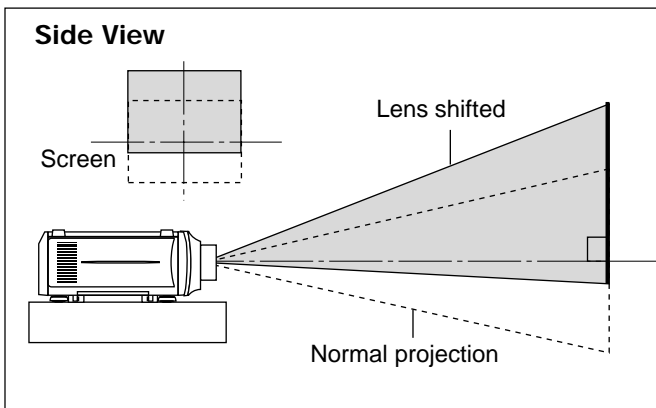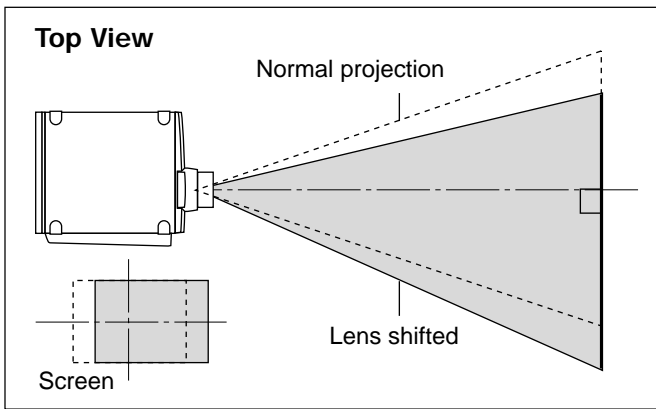
Reflecting The Image

Using a mirror to reflect your projector's image enables you to enjoy a much larger image in a much smaller space. Contact your dealer if you need a mirror.

If you're using a mirror and your image is inverted, use the [Main Menu] → [Projector Options] → [Setup] → [Orientation] to select the correct orientation.

(See page E-39.)

Rear Screen Projection

You can use your XT5000 to project an image from the rear onto a transparent screen. The projection distance is the same for both rear and front projection. Contact your dealer if you need a transparent screen.

If you're projecting the image from the rear and your image is inverted, use the [Main Menu] → [Projector Options] → [Setup] → [Orientation] to access to correct the orientation. (See page E-39.)

Stack Projection (up to three units)

The MultiSync XT5000 can be stacked without any additional framing (gravity stacking). One unit can be stacked on top of the other up to three units.

Make sure that each foot is securely seated on the stacking pad.

NOTE: See next page for more details.

Screen center
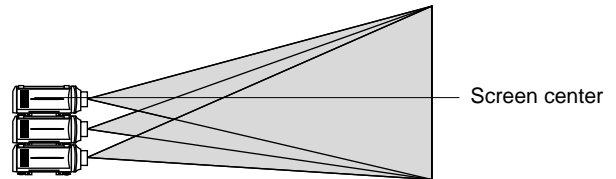
Setting up for Double or Triple Stacking in Link Mode

Master projector

Slave projector

DFP cable (supplied)

DFP cable (supplied)

bi-directional RS-232C cable (not supplied)
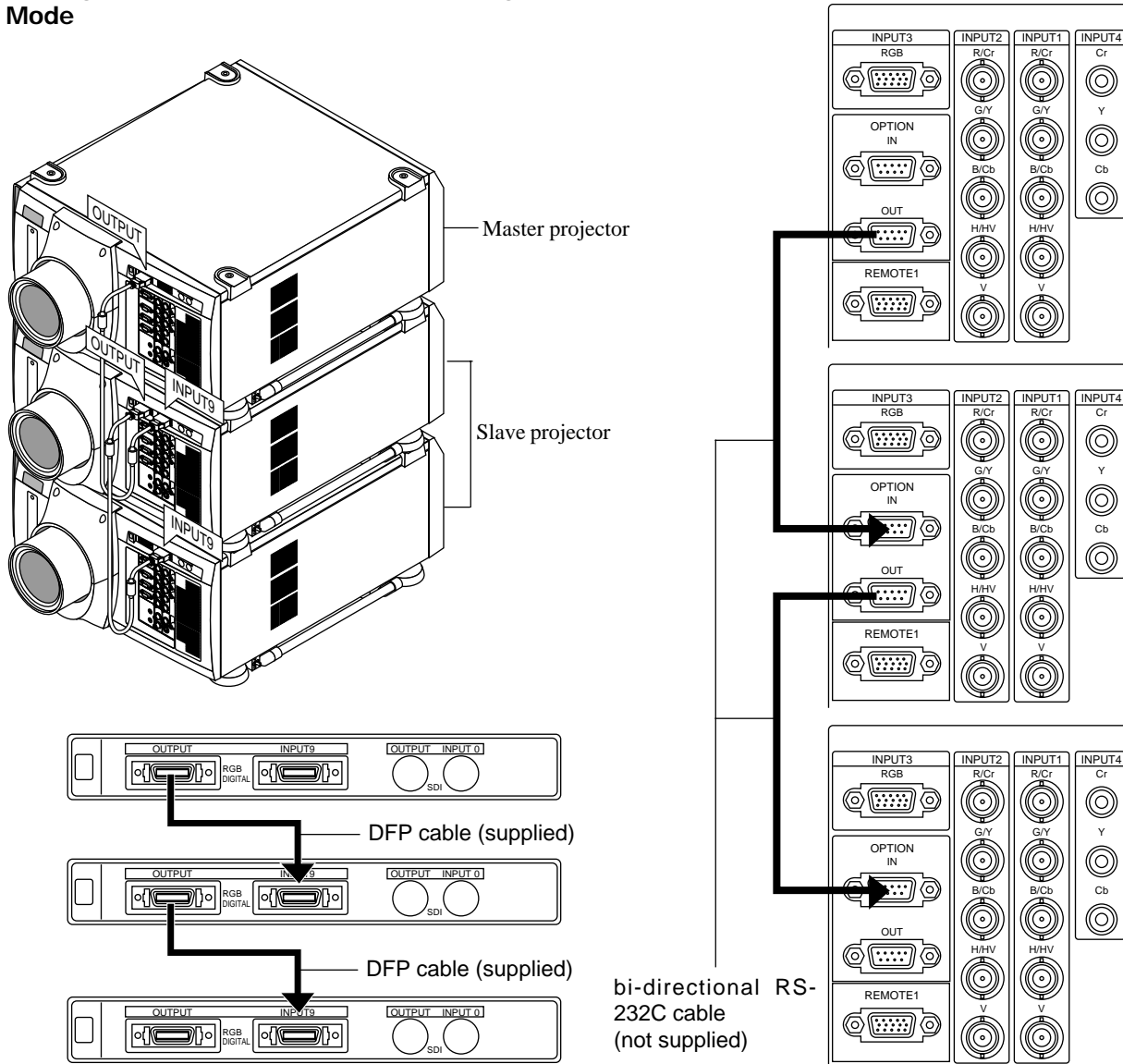
NOTE: SW 1 Level and SW 2 Level of Switcher Control are not available on Link Mode.

For double or triple stacking, follow the instructions described below.

1) Stacking the Projectors
1-1. Place the projectors at the proper height for best screen to projector relationship. Make sure that all projectors have the same display orientation.

2) Hookup
2-1. Use the supplied DFP cable to connect the RGB DIGITAL output (INPUT 9) of the master projector to the RGB DIGITAL input of the slave projector (the second and third stack) until all the projectors are connected.

2-2. Next, using a commercially available, bi-directional RS-232C cable connect the OPTION OUT terminal of the master projector to the OPTION IN terminal of the slave projector(s) until all the projectors are connected.

NOTE: When inputting signals other than those listed on page E-44, use a commercially available distribution amplifier between the projector and those signals because those signals are not compatible with this projector in the Digital Link mode.

2-3. Turn all the projectors on and roughly make some optical adjustments to each projector.

3) Adjust and register signals to be projected in Link mode and stack application.

Signal Data Preparation

3-1. Creating data for the master projector and copying data to the slave projectors.

3-1-1. Choose one projector as the master.

3-1-2. Turn the master projector on.

3-1-3. Display all desired input signals, make adjustment to each signal, then save all adjustments on the master projector. (Adjustments will be saved automatically.)

3-1-4. Turn the master projector off (standby mode).

3-1-5. Store all the adjustments on a PC card from the master projector.

3-1-5-1Remove the PC Card slot decorative panel to access the PC card slot. Insert a PC card into this slot.

3-1-5-2. Press and hold CANCEL, then press POWER on the rea panel of the master projector.

The POWER indicator will change to steady green and the PC Card Access indicator will start flashing. After storing data on the PC card, the POWER indicator will change to amber.

3-1-5-3. Remove the PC card from the slot of the master projector.

3-1-6. Transfer the data to the other slave projectors using the PC card so that all the projectors have the same data in memory.

3-1-6-1. Insert the PC card into the slot of a slave projector.

NOTE: Since data in the slave projectors will be lost at this time, make backup copies of them before proceeding.

3-1-6-2. Press and hold ENTER, then press MENU on the rear panel of the slave projector. The POWER indicator will change to steady green and the PC Card Access indicator will start flashing to indicate that the data is being copied from the PC card to the slave projector. After storing data on the PC card, the POWER indicator will

change to amber. After copying data to the slave projector, the POWER indicator will change to amber.

3-1-6-3. Remove the PC card from the slave projector. (If you are triple stacking the projectors, repeat steps from 3-1-6-1 for the third projector.)

NOTE: Signal list for Video signals such as Video, S-Video and Component video) that have been once changed to RGB (digital) cannot be edited. See "Compatible Input Signal List" page E-44 for compatible signals.

4) Link Mode Setting

4-1 Assign a unique Projector ID for each projector.

4-1-1. Select [Main Menu] → [Projector Options] → [Setup] →[Page 3] → [Projector ID]. See page E-40 for specifying ID.

4-1-2. Specify a unique projector ID for each projector.

4-2 Select the same communication speed for all the projectors.

4-2-1. Select [Main Menu] → [Projector Options] → [Setup] →[Page 4] → [Speed]. See page E-40 for setting the communication speed.

4-2-2. Select the appropriate speed between 4800 and 38400.

4-3 Set the Link Mode on each projector.

4-3-1. Select [Main Menu] → [Projector Options] → [Link Mode].

4-3-2. Select [Slave] on the slave projector(s).

4-3-3. Select [Master] on the master projectors. See page E-40 for setting Link Mode.

4-4 Project a source image from all projectors

4-4-1. Display any signal onto the screen.

4-4-2. Check to see if the imags on the master projector are displayed in syncronization with the ones on the other slave projectors while the projectors are in link mode.

4-5 Make adjustments to the slave projector(s).

NOTE: See "7. List of Menu Items Available on Link Mode" on page E-45 for more information.

4-5-1. Temporarily, change the master projector from Master to Standalone. Make sure that the slave projectors are still in Slave mode.

4-5-2. Display a source you want to adjust from the master projector.

4-5-3. On the Slave Projector(s) select the same signal From the Entry List (same No.) as that of the master projector. Display it from the slave projectors.

4-5-4. Adjust Blanking and Position to match the image of the master projector. See page E-34 for Blanking and Position adjustment.

4-5-5. Make Picture adjustment such as brightness, contrast, or color temperature.

4-5-6. Change the master projector from Standalone to Master to activate the Link Mode

4-6 Display the desired source. This completes the Link Mode adjustment procedure.

4-7 Display the internal crosshatch test pattern.

NOTE: Use a different single color for each projector. Example:

4-8 Turn on Green of one projector (master), then Red of another (slave 1) and Blue of the other (slave 2).

5) Adjust the lens shift, zoom and focus to clearly display all three projected patterns.

5-1. Adjust the Lens Shift using the LENS SHIFT button on the rear panel. You can also adjust the Lens Shift by pressing and holding CTL and pressing the POSITION button on the remote control. For Lens Shift Adjustable Range, see page E-18.

5-2. Zoom the lens in and out by using the ZOOM button on the rear panel or the remote control.

5-3. Adjust the lens focus by using the FOCUS button on the rear panel or the remote control.

NOTE: If the physical (vertical) alignment of the projector(s) is/are not correct, adjust the height of the feet. If there is any keystone distortion, use Keystone adjustment to correct and save the settings on each projector. See page E-35 and E-39 for Keystone correction.

This completes set-up and adjustments. An image is projected from the master projector. See page E-40 for Link mode.

3. CONNECTIONS

When used in standalone operation

Connecting Your PC Or Macintosh Computer

Connecting your PC or Macintosh computer to XT5000 Projector will enable you to project your computer's screen image for an impressive presentation.

To connect to a PC or Macintosh :
1. Turn off the power to your projector and computer.
2. Use a signal cable (not provided) to connect your PC or Macintosh computer to the projector.
3. Turn on the projector and the computer.
4. If the projector goes blank after a period of inactivity, it may be caused by a screen saver installed on the computer.

Connecting Your Document Camera

You can connect the projector to a document camera. To do so, simply:
1. Turn off the power to your projector and document camera.
2. Use a standard video cable to connect your document camera to the Video input on your projector. Or connect to the INPUT3 (RGB) on your projector.
3. Turn on the projector and the document camera.

NOTE: Refer to your document camera's owner's manual for more information about your camera's video output requirements .

Connecting Your VCR Or Laser Disc Player

Use common RCA cables (not provided) to connect your VCR or laser disc player to your MultiSync XT5000 Projector. To make these connections, simply:
1. Turn off the power to your projector and VCR or laser disc player.
2. Connect one end of your RCA cable to the video output connector on the back of your VCR or laser disc player, connect the other end to the Video input on your projector. Use standard RCA audio patch cords to connect the audio from your VCR or laser disc player to your projector (if your VCR or laser disc player has this capability). Be careful to keep your right and left channel connections correct for stereo sound.
3. Turn on the projector and the VCR or laser disc player.

NOTE: Refer to your VCR or laser disc player owner's manual for more information about your equipment's video output requirements.
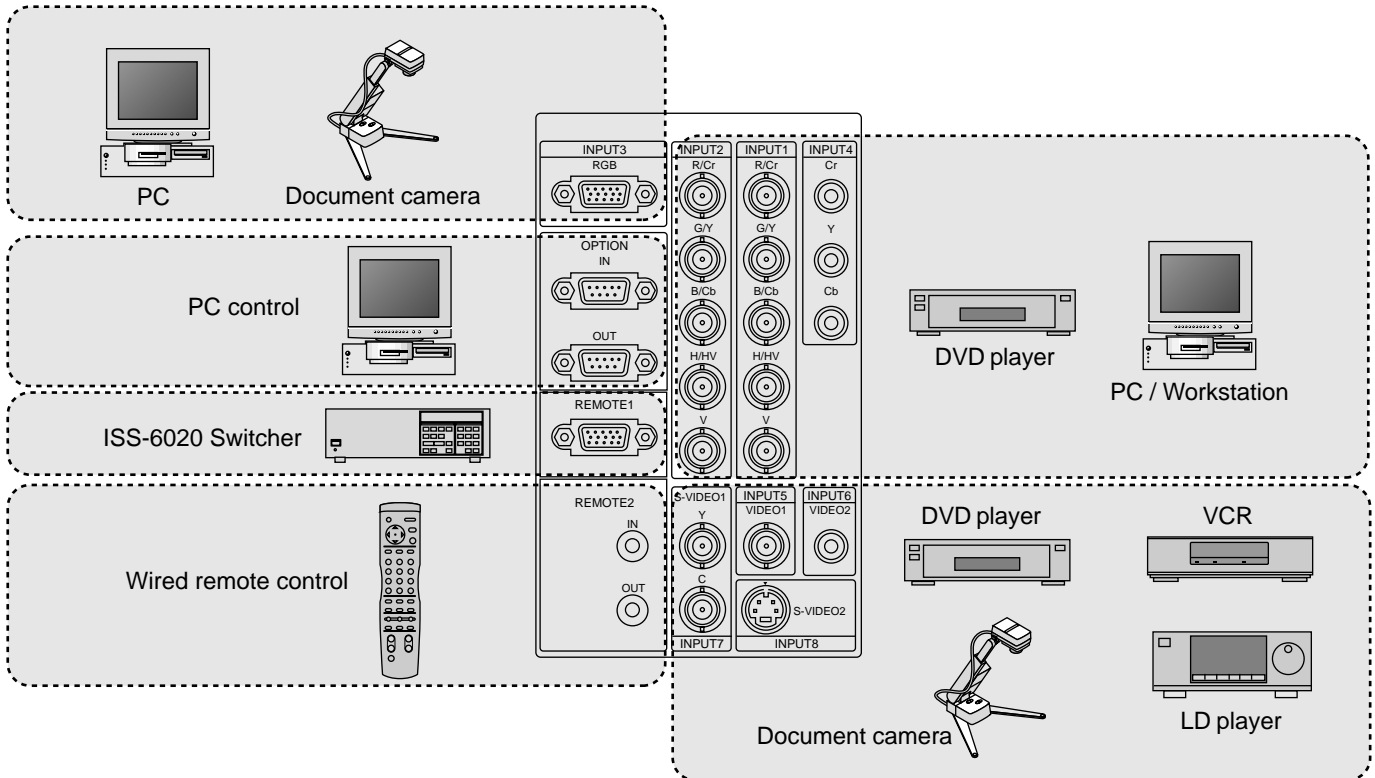
When Used with One Switcher (ISS-6020/ISS-6020G)

Up to 10 input signals can be accepted when the projector is connected to one Switcher. Using the projector with the Switcher allows easy adjustment and signal selection.
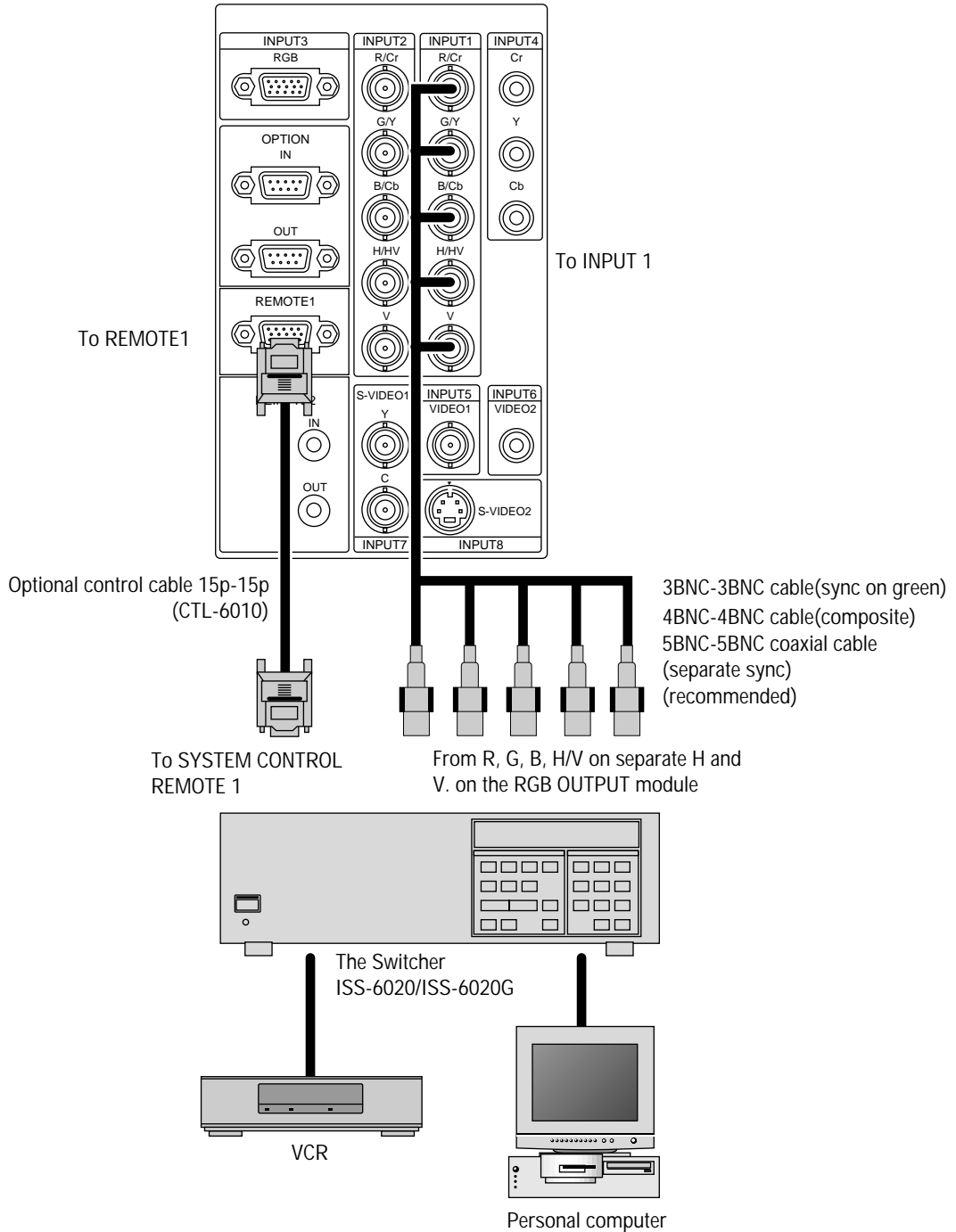
- Select [Main Menu] → [Projector Options] → [Switcher Control] → [SW1 Level]. See page E-40 for the information in detail.
- For more information on the Switcher, refer to the user's manual accompanying the ISS-6020/ISS-6020G Switcher.
- All cables mentioned above are optional.

When Used with Two or More Switchers (100 Inputs)

Up to 100 inputs can be accepted using the NEC ISS-6020 Switcher.

How to make connections:

1 Connect the REMOTE 1 terminal of the master Switcher to the REMOTE 1 of the projector using the optional control cable (15p-15p/CTL-6010).
2 Next connect the REMOTE 2 terminal of the master Switcher to the REMOTE 1 terminal of the first slave Switcher using the same optional control cable as mentioned above. Third, connect the REMOTE 2 terminal of the first slave to the REMOTE 1 of the second slave, and the REMOTE 2 terminal of the second slave to the REMOTE 1 terminal of the third slave (— and the REMOTE 2 of the ninth slave to the REMOTE 1 of the tenth slave). Connect all the Switchers with optional control cables.

• Select [Main Menu] → [Projector Options] → [Switcher Control] → [SW2 Level]. See page E-40 for the information in detail.
• Refer to the user's manual accompanying the Switcher.
• Cables mentioned are not included with the projector.

NOTE:
• Be sure to set all the slide switches (S8603) of the Switcher to RS-422 positions. Set the one on the last slave Switcher to the appropriate position to match the connected equipment such as a personal computer. (RS-422/RS-232C for PC control of projector)
• Set the DIP switch S8601 of the Switcher.
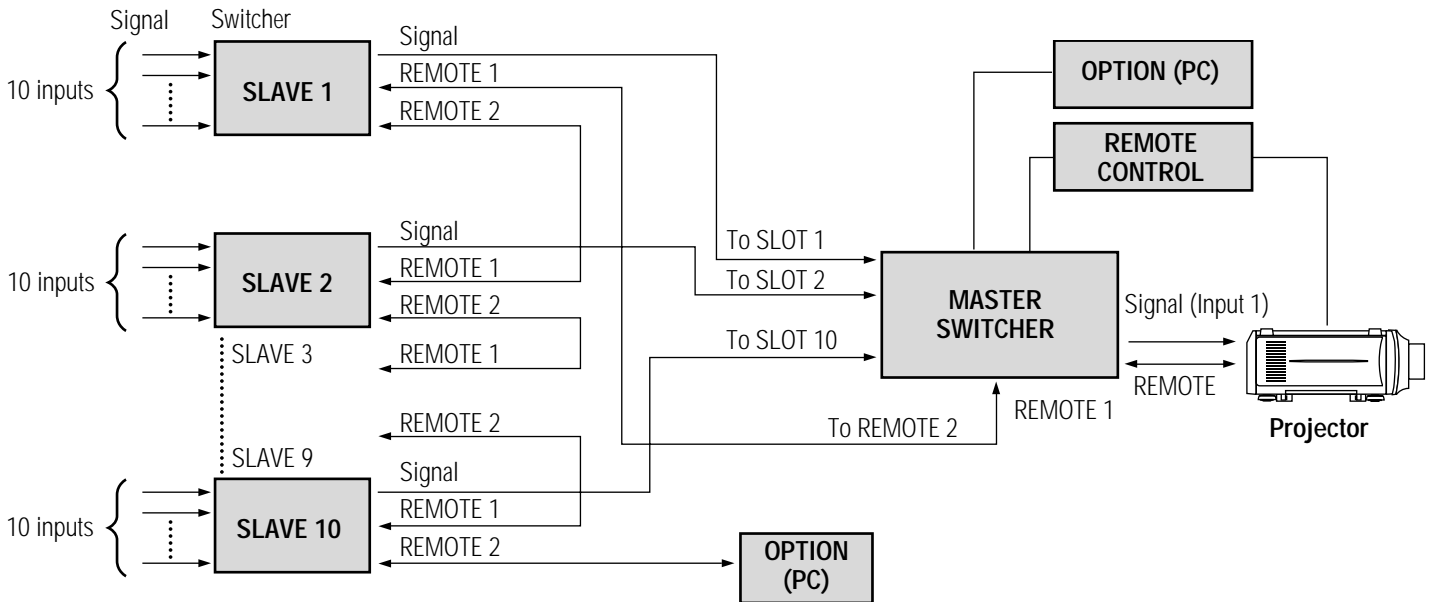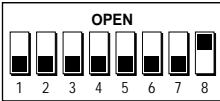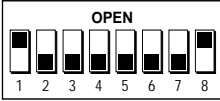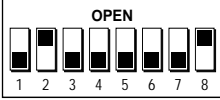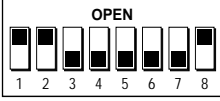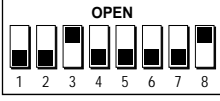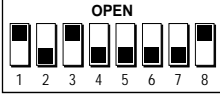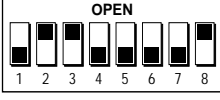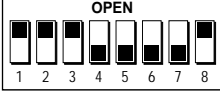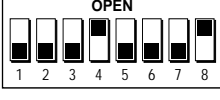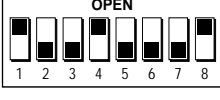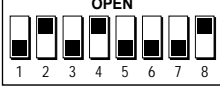
NOTE: The optional remote control RC-6320 for ISS-6020 will not work correctly in the SW Level 1 or 2 mode.

Set the DIP switch (S8601) of the Switcher as follows:

NOTE: Slave numbers 1 to 10 must correspond to the master's slot numbers 1 to 10.

ISS-6020 ISS-6020G	Output to	Setting of S8601
Master	The Projector	
Slave 1	Slot 1 of the Master	
Slave 2	Slot 2 of the Master	
Slave 3	Slot 3 of the Master	
Slave 4	Slot 4 of the Master	
Slave 5	Slot 5 of the Master	
Slave 6	Slot 6 of the Master	
Slave 7	Slot 7 of the Master	
Slave 8	Slot 8 of the Master	
Slave 9	Slot 9 of the Master	
Slave 10	Slot 10 of the Master	

REMOTE 1 Connector
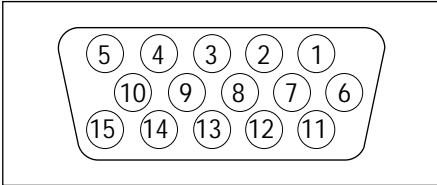
This connector is used for either connecting the ISS-6020/ISS-6020G Switcher or a third party external control device. When the Switcher is used, connect it with the optional control cable (15-15 pin; 50 ft./16m; CTL-6010) to this connector.

When used with the Switcher.

Pin No.	FUNCTION
1, 2, 6 and 7	Sending and receiving data when the Switcher is used.
9	Identifying the Projector
15	Ground
Others	Used inside the Projector. Normally set to OPEN.

When using with the Switcher ISS-6020/ISS-6020G, connect no. 1,2,6,7,9 and15 pins of the projector to the same no. pins of the switcher as shown below.
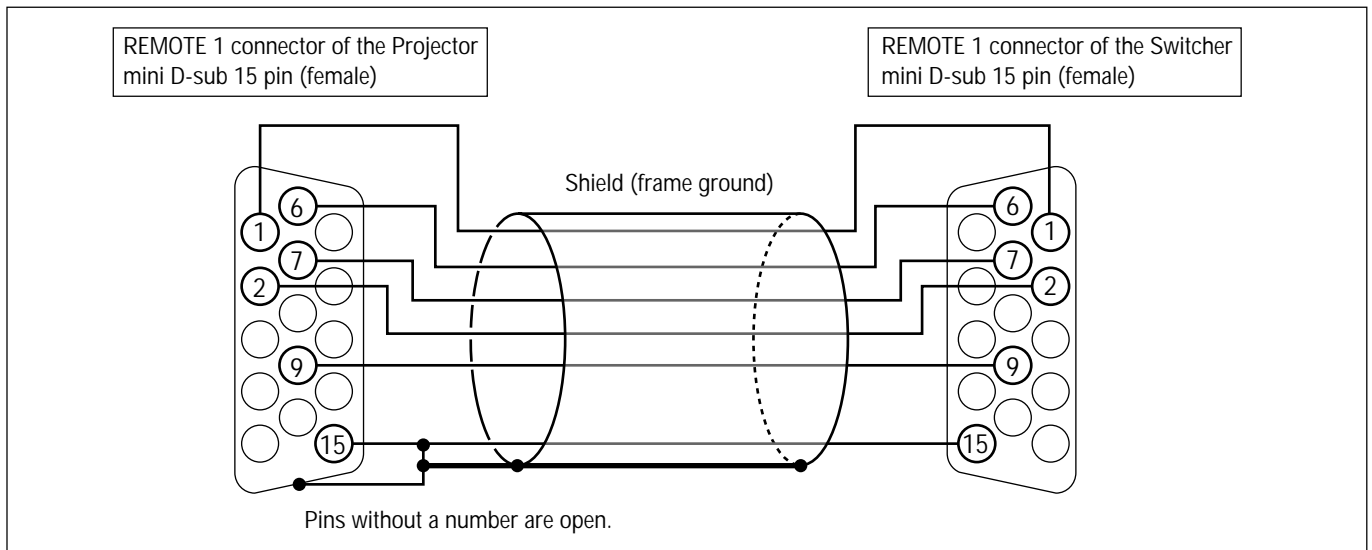
Pin Configuration of Optional CTL-6010 Cable

When used in stand alone operation.

Pin No.	SHORT/OPEN				FUNCTION
14	SHORT OPEN				External control mode ON External control mode OFF
5	SHORT OPEN				POWER ON POWER OFF
10	SHORT OPEN				PICTURE MUTE ON PICTURE MUTE OFF
4,8,12,11	11pin	12pin	8pin	4pin	
	OPEN	OPEN	OPEN	OPEN	RGB 1 (INPUT 1)
	OPEN	OPEN	OPEN	SHORT	VIDEO 1 (INPUT 5)
	OPEN	OPEN	SHORT	OPEN	S-VIDEO 1 (INPUT 7)
	OPEN	OPEN	SHORT	SHORT	COMPONENT (INPUT 4)
	OPEN	SHORT	OPEN	OPEN	SDI
	OPEN	SHORT	OPEN	SHORT	RGB 2 (INPUT 2)
	OPEN	SHORT	SHORT	OPEN	VIDEO 2 (INPUT 6)
	OPEN	SHORT	SHORT	SHORT	S-VIDEO 2 (INPUT 8)
	SHORT	OPEN	OPEN	OPEN	RGB (DIGITAL) (INPUT 9)
	SHORT	OPEN	SHORT	OPEN	RGB 3 (INPUT 3)

* When the combinations other than specified in the above table are selected, the input will be forcefully switched to RGB 1.
* The term "SHORT" means to connect with pin 15
* When in the external control mode, the POWER, INPUT and PICTURE MUTE buttons on the remote control will not function.

NOTE: Pin 13 is the external remote signal terminal. The projector can be controlled by the same format signal as the supplied remote control from the external controller regardless of setting on Pin 14.

NOTE: When turning off the power to the projector using the external control, do not disconnect the plug from the power outlet. These procedures are to protect your projector and the connected equipment.

Operating Multiple Projector with Remote Control

You can operate multiple projectors with the same remote control in wireless operation.

To do so:

1. Select [Main Menu]→[Projector Options]→[Setup]→[Page 3]→[Projector ID] and assign an ID number to each projector. See also page E-40.

2. On the remote control specify the ID number of the projector to be adjusted. Press and hold the CTL and press MENU (ADDRESS) button to enter the ID number.

   You can operate the projector assigned the same ID number as the remote control.

Projector ID= 01   Projector ID= 02   Projector ID= 03

Remote Address = 03
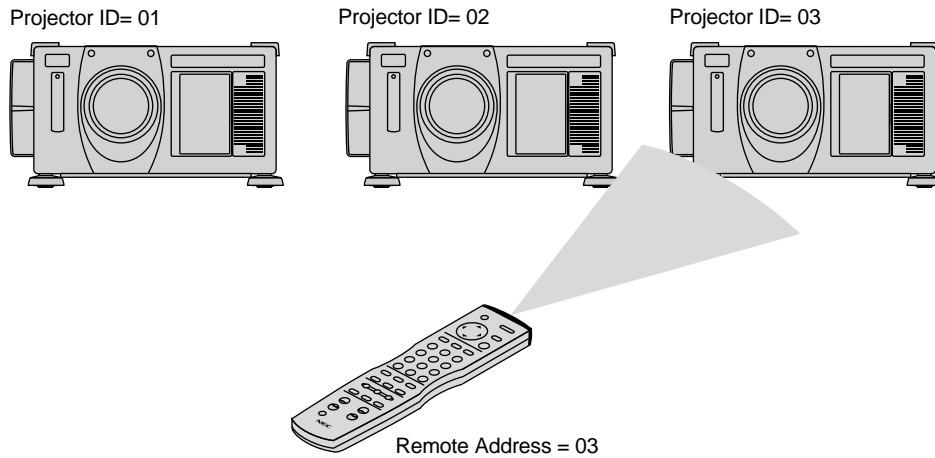
You can daisy-chain multiple projectors and operate them separately with the same remote control in wired operation.

To do so:

Use the remote control cable to connect the Remote Control Output of one projector to the Remote Control Input of the next until all the projectors are connected. Only one remote control cable is supplied with the projector. Additional remote control cables are optional.

REMOTE 2

IN

OUT

Projector ID= 01   Projector ID= 02   Projector ID= 03

Remote Address = 03
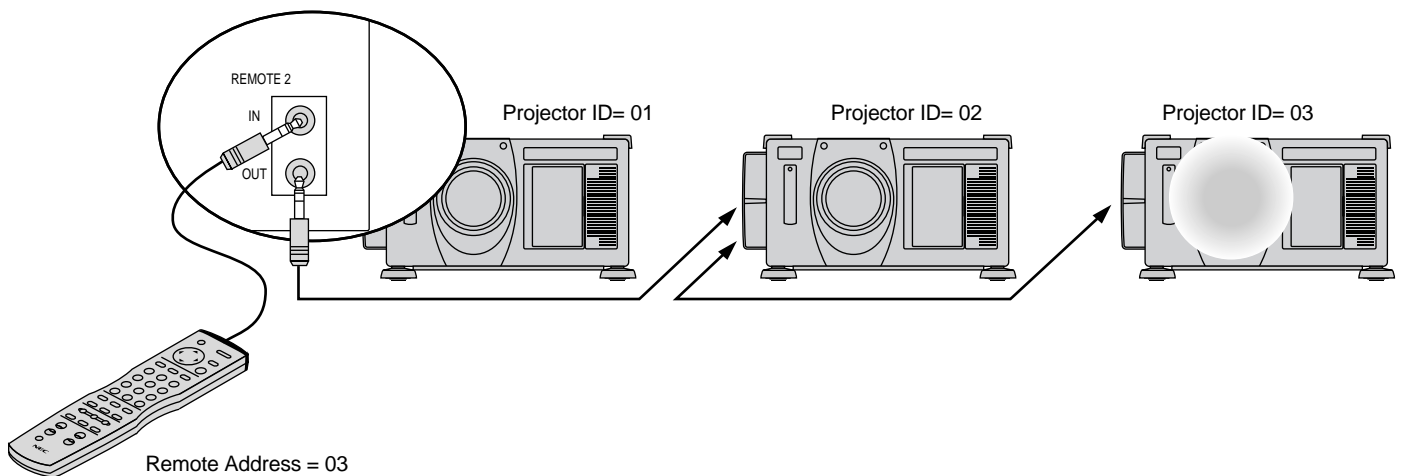
4. OPERATION

This section describes how to select a computer or video source, adjust the picture and sound, edit a signal and adjust all other settings and adjustments for proper projector set-up.

General Controls

Before you turn on the projector ensure that the computer or video source is turned on and that the lens cap is removed.

1. Turn On The Projector

Plug the supplied power cable into the AC outlet. The main power switch is on the rear panel of the projector. By turning this switch on, the projector will go into its standby mode and the POWER indicator will glow amber. Only after you press the 'POWER ON' button on the remote control or projector cabinet will the POWER light turn to green and the projector will fully turn on.

2. Select The Computer Or Video Source

Press the INPUT button on the remote control to select the desired source. Or press the MENU button on the remote control and use the Source Select to select your video source: Video, S-Video, RGB, Y/Cr/Cb, RGB Digital or SDI.

3. Adjust The Image

Press the ADJUST PICTURE button or the ADJUST WHITE BAL on the remote control or use the [Main menu]->[Adjustments] to adjust the picture.

4. Turn Off The Projector

First press the POWER OFF button on the remote control or the projector cabinet. Allow the fan to cool the projector for three minutes. This will extend the life of the lamp. After the cooling fan stops working, the POWER indicator will change to a steady amber glow and the projector will be in the stand-by mode. Then turn off the main power switch on the rear panel. The POWER indicator will go out. If you desire to move the projector then unplug the power cable.

IMPORTANT:
• The projector should be unplugged if it will not be used for an extended period.
• If you want to turn off the image briefly (five minutes or less), press the MUTE PICTURE button instead of turning the projector off and on.
• The projector will display a black, blue image or logo if no input signal is present.
• Do not turn the projector off and then immediately back on. The Projector needs to cool down for three minutes before it is powered on again.

CAUTION: Do not turn off the main power while the cooling fan is working.

Using The Menus

1. Press the MENU button on the remote control to display the Main menu.
2. Use the ▲ or ▼ button on the remote control to select the sub menu.
3. The right-oriented delta symbol indicates further choices are available. Press the ▶ button to highlight the item you want to adjust or set in the selected menu.
4. Press the ▲ or ▼ button on the remote control to select the item.
5. Press the ENTER button on the remote control to display the adjustment screen or dialog box.
6. Adjust the level or turn the selected item on or off by using ◀ or ▶ on the remote control. The on-screen slide bar will show you the amount of increase or decrease.

NOTE: The change is stored automatically when any one of the following procedures is performed:
* The on-screen dissapears.
* The projector goes into standby.
* One input is switched to another.

7. Repeat steps 2-5 to adjust an additional item, or press the CANCEL button on your remote control to quit.

Using the Magifying Glass Icon

When the image is magnified with the MAGNIFY button on the remote control, pressing CTL and any one of ◀, ▶, ▲, or ▼ will display the magnifying glass icon.
At this time you can select any part of the screen and expand it.
To move the magnifying glass icon, use ◀, ▶, ▲, ▼.
Press CTL and any one of ◀, ▶, ▲, or ▼ again and the manifying glass icon will disappear.

A List of Direct Key Combinations

CTL+ INPUT (1-10)	Switches to any selected signal found in the Entry List. To enable this combination, you must first assign specific remote keys for direct input selection in the Entry Edit window.
CTL+ ENTER (While displaying Entry list)	Displays the Entry Edit Command window.
CTL+ MUTE PICTURE(SHUTTER)	Blocks all Projector Light Output.
CTL+CANCEL	Returns to the previous menu without closing the slidebar or dialog.
CTL+ UNDO	Clears all menus or adjustment/setting screens. All adjustments are saved automatically.
CTL+ ◄ / ► / ▲ / ▼	Moves the slidebar or dialog box horizontally or vertically.
While using zoom on remote control:	Displays the magnifying glass icon.
CTL+ ◄ (BS)	Deletes one letter or numeral in the entry screen.
CTL+TEST	Displays the Passcode Entry window.
INPUT(1-10) in SW Level mode	Displays the Select switcher Input Slot window. NOTE: This feature is available for SW 2 Level mode only. When the SW 1 Level mode is selected, pressing INPUT key switches to the corresponding slot without displaying the Select Slot window.
CTL+ MENU (ADDRESS)	Displays the remote ID entry window.
CTL+ ADJUST IMAGE (PROJECTOR)	Sequentially selects the Projector Options sub menu.
CTL+ POSITION (LENS)	Displays the Lens Shift control window.
CTL+ KEYSTONE (R)	Turns on red. Available only when the projector is in the test pattern mode.
CTL+ AMPLITUDE (G)	Turns on green. Available only when the projector is in the test pattern mode.
CTL+ ENTRY LIST (B)	Turns on blue. Available only when the projector is in the test pattern mode.
CTL+ MAGNIFY (ZOOM)	Zooms the lens in and out
CTL+ (FOCUS)	Adjusts the lens focus.

Menu Tree

Menu   **Sub menu**   *   **Items**

* When Switcher Control is turned on:

| Source Select |
| Switcher |
| Entry List |

Menu:
- Source Select
- Adjustments
- Image Options
- Projector Options
- PC Card Files
- Help
- Test Pattern

Sub menu (Source Select):
- RGB 1
- RGB 2
- RGB 3
- Component (YCrCb)
- Video 1
- Video 2
- S-Video 1
- S-Video 2
- more
  - RGB (DIGITAL)
  - SDI
  - Entry List

Items (Picture):
- Brightness
- Contrast
- Color
- Hue
- Sharpness
- V-Aperture

- Top/ Bottom/ Left/ Right

Item	Value
Auto Adjust	On/Off
Position	Horizontal/Vertical
Pixel Adjust	Clock/Phase
Resolution	Auto/Native/Native with Zoom
Video Filter	(4 Level)

- Brightness R/G/B
- Contrast R/G/B

- Gain R/G/B
- Volume

- Brightness R/G/B
- Contrast R/G/B

Item	Value
Lamp Mode	Variable/Auto/High-Bright
Lamp Output	

- All Data/ Current Signal

Sub menu (Adjustments):
- Picture
- Blanking
- Image
- Color Temperature
- White Balance
- Switcher
- more
  - Keystone
  - Ref. White Bal.
  - Lamp
  - Factory Default

Sub menu (Image Options):
- Image Mode
- Video Mode
- Signal Level

Item	Value
Aspect Ratio	Normal/Zoom/Wide Zoom/Cinema/Anamorphic
VD Delay	0/2. 5u/5u/10u
Clamp Timing	Auto/Tri-Sync/Front Porch

Item	Value
Gamma	NTSC,Graphics,Graphics/NTSC,PAL/SECAM2.8,PAL/SECAM,Natural1,Natural2
Noise Reduction	Luminance OFF/Low/Medium/High, Chrominance OFF/Low/Medium/High
Color Matrix	Select Color Matrix HDTV/SDTV, Select Color Matrix Type B-Y/R-Y, U/V, Cb/Cr, Pb/Pr, IVX
Y/C Delay	(-8 ~ +8)
Motion Select	Still/Adaptive
Motion Level	(-2~+2)
YTR Adjustment	Gain(0~7)
CTR Adjustment	Gain(0~7)
Telecine	Off/Auto

- Auto Control — Execute Auto Control
- White
- R/G/B Gain
- Y/Cb/Cr Gain
- Y/Pb/Pr Gain

Sub menu (Projector Options):
- Timer
- Menu
- Setup
- Link Mode
- Switcher Control
- Passcode

- On/Off Timer
- Sleep Timer — Off/0:30/1:00/1:30/2:00

Item	Value
Language	English/Deutsch/Français/Italiano/Español/Svenska/Japanese
Menu Display Time	Manual/Auto 3sec/Auto 10sec/Auto 30sec
Date,Time Preset	
Display Select	Date/Time/Input Terminal/Source Name/Projector ID
Date Format	DD/MM/YY *

Item	Value
Orientation	Front Floor/Rear Ceiling/Rear Floor/Front Ceiling
Background	Blue/Black/Logo
Signal Select	RGB1/RGB2 Auto/RGB Component, VIDEO1,2/S-VIDEO1,2/Switcher Auto/NTSC3.58/NTSC4.43/PAL/PAL60/SECAM
Power Management	On/Off
Power Off Confirmation	On/Off
Keystone Save	On/Off
User Name	
Closed Caption	Off/Caption1-4/Text1-4
S-Video Mode Select	Off/S1/S2
Sync Termination	RGB1/RGB2 75Ω/Hi-Z
Projector ID	Enable/Disable 1-64
Default Source Select	Last/Select
Communication Port	D-SUB/IR
Communication Speed	4800/9600/19200/38400

- Standalone/Master/Slave

- Standalone/SW 1 Level/SW 2 Level

- Entry/Disable

Sub menu (PC Card Files / Help):
- Contents
- Source Information
- Projector Information

Item	Value
Source Name	
Input Terminal	
Entry No.	
Horizontal Frequency	
Vertical Frequency	
Sync Polarity	
Signal Type	
Video Type	
Sync Type	Separate Sync/G-Sync/Tri-Sync/Mix Sync
Interlace	Interlace/Non-Interlace
Resolution	
Direct Key	
Aspect Ratio	
Gamma	
Noise Reduction	
Color Matrix	
Matrix Type	

Item	Value
User Name	
Serial Number	
Lamp Hour Meter	
Filter Usage	
Projector Usage	
Version	BIOS/Firmware/Data/SUB-CPU
Formatter Version	CPU/PROM/Prism
Link Mode	

Sub menu (Test Pattern):
- Red/ Green/ Blue
- Cross Hatch
- Gray Scale
- Raster (0%)
- Raster (25%)
- Raster (50%)
- Raster (100%)
- Focus
- Raster Blue
- Raster Gray

NOTE: Items indicated in white are not available.

Menu Elements

Tab

Title bar

Highlight

Solid triangle

Cancel Button

OK Button

Check box

Radio button

Slide bar
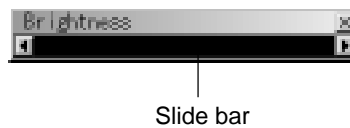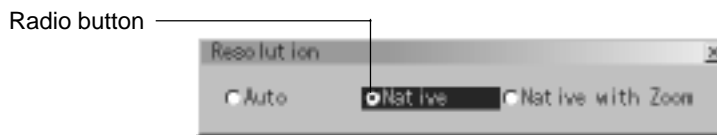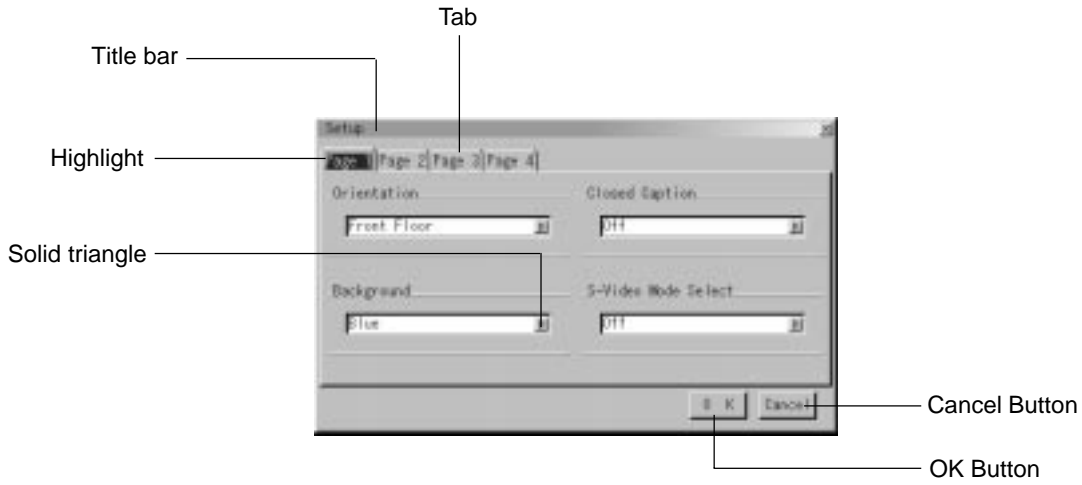
Menu windows or dialog box typically have the following elements:

Title bar: Indicates the menu title.

Highlight: Indicates the selected menu or item.

Solid triangle: Indicates further choices are available. A highlighted triangle indicates the item is active.

Tab: Indicates a group of features in a dialog box. Selecting any tab brings its page to the front.

Radio button: Use this round button to select an option in a dialog box.

Check box: Place a checkmark in the square box to turn the option On.

Slide bar: Indicates settings or the direction of adjustment.

OK button: Press to confirm your setting. You will return to the previous menu.

Cancel button: Press to cancel your setting. You will return to the previous menu.

Menu Descriptions & Functions

Source Select

Enables you to select a video source such as a VCR, DVD player, laser disc player, computer or document camera depending on what is connected to your inputs.

Press the up/down buttons on your remote control or the projector cabinet to highlight the menu for the item you want to adjust.

* RGB1,2,3
* Component (YCbCr)
* Video 1, 2
* S-Video 1, 2
* RGB Digital
* SDI
* Entry List—Displays the list of the entry signals. Use the ▲/▼ buttons on your remote control or the projector cabinet to select the signal and press the ENTER button on the remote control or the projector cabinet to project the image of the selected source.

Entry Edit Command (Expert mode only)

You can edit the signal on the entry list.
To do so:

1) While pressing and holding CTL, press ENTER on the remote control to display the Entry Edit Command window.
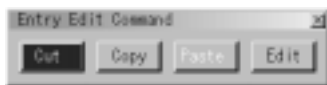
* **Cut** Enables you to remove a selected signal from the list and place it on the "clipboard" in the projector.
* **Copy** Enables you to copy a selected signal from the list and place it on the "clipboard" in the projector.
* **Paste** Enables you to paste the signal placed on the "clip-board" to any other line of the list. To do this, select "Paste" and then select the line number you want to paste to. Last press ENTER.

* **Edit** Enables you to change source name or assign the direct key.
* The following buttons are not available for the currently projecting signals:
  1) The Cut and Paste buttons on the Entry Edit Command screen
  2) The Input Terminal button on the Entry Edit screen

When complete, select OK and press ENTER. To exit without storing setting, select Cancel.
Select "Source Name" and press ENTER to display the Source Name Edit window. You can change source name on this window.

Select "Input Terminal" and press ENTER to display the Input Terminal window. You can change input terminal on this window.

Select "Direct Key" and press ENTER to display the Direct Key window. You can assign specific remote keys for direct signal input selection.

NOTE: Existing direct key settings are overwritten with new settings.

Select "List" and press ENTER to display the direct Key assignment list.
Select "OK" and press ENTER to close the window.
To close the List window, press CANCEL on the remote.

Adjustments
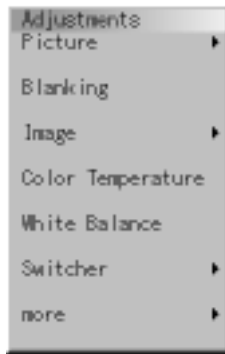
The Asjustments Menu provides access to controls for your image. Use the ▲/▼ buttons on your remote control or the projector cabinet to highlight the menu for the item you want to adjust.

Picture
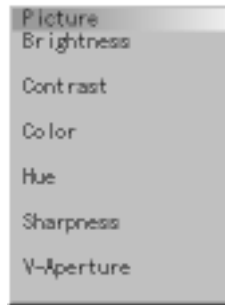
Brightness: Adjusts the brightness level or the back raster intensity.
Contrast: Adjusts the intensity of the image according to the incoming signal.
Color: Increases or decreases the color saturation level (not available for RGB).
Hue: Varies the color level from +/- green to +/-blue. The red level is used as reference. This adjustment is only valid for Video and Component inputs (Not available RGB).
Sharpness: Controls the detail of the image for Video (Not available for RGB and Component).
V-Aperture: Adjusts edge enhancement in the vertical direction. (Not available for RGB)

Blanking

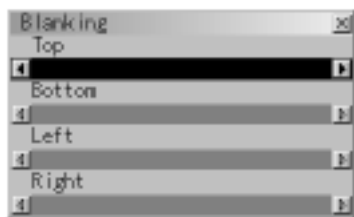

This feature allows you to mask any unwanted area of the screen image.

Image

Auto Adjust:
When "Auto Adjust" is set to "On", the projector automatically determines the best resolution for the current RGB input signal to project an image using NEC's Advanced AccuBlend Intelligent Pixel Blending Technology. The image can be automatically adjusted for geometry and stability; "Horizontal Position", "Vertical Position" and "Pixel Adjust."

On: Automatically adjusts image "Horizontal Position", "Vertical Position" and "Pixel Adjust."
Off: User can adjust the image display functions ("Horizontal Position", "Vertical Position" and "Pixel Adjust") manually.

Horizontal/Vertical Position (when Auto Adjust is off):
Adjusts the image location from left to right.
This adjustment is made automatically when the Auto Adjust is turned on.

Pixel Adjust (when Auto Adjust is off):
Displays the Clock and Phase adjustments.
Clock: Use this item with the "Auto Adjust off" to fine tune the computer image or to remove any vertical banding that might appear.
Phase: Use this item to adjust the clock phase or to reduce video noise, dot interference or cross talk. (This is evident when part of your image appears to be shimmering.) Use the ◀ and ▶ buttons to adjust the image.
Use "Phase" only after the "Clock" is complete.

Resolution (when Auto Adjust is off):
This allows you to activate or deactivate the Advanced AccuBlend feature.
Auto: Turns on the Advanced AccuBlend feature. The projector automatically reduces or enlarges the current image to fit the full screen.
Native: Turns off the Advanced AccuBlend feature. The projector displays the current image in its true resolution.

NOTE: While you are displaying an image with higher resolution than the projector's native resolution, even when you are in the Native mode, the image is displayed full screen using the Advanced AccuBlend feature.

Native with Zoom: Enlarges the image to fill the screen in the Native mode.

NOTE: Unless the projector is used at 0 degree of lens vertical offset, you cannot get a correct display position.

Video Filter

This feature reduces video noise. Select the appropriate filter for your signal.
Bar 0 .... Off
Bar 1/3 .... High
Bar 2/3 .... Medium
Bar full .... Low

Color Temperature

This feature adjusts the color temperature using the slide bar.

White Balance (Expert mode only)

This feature adjusts the white balance for each signal.
For Video/RGB ..... Brightness for each color (RGB) is used to adjust the black level of the screen; Contrast for each color (RGB) to adjust the white level of the screen.
For Y/Cb/Cr .... Brightness for each color (Y/Cb/Cr) is used to adjust the white level of the screen; Contrast for each color (Y/Cb/Cr) is used to adjust the black level of the screen.

Switcher (available only when used with ISS-6020)
Gain
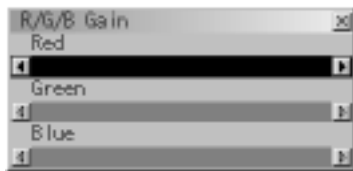
This feature adjusts the input level of the signal. This must be done to each color:R, G, and B.

Volume
This feature adjusts the volume of the audio output. Adjust the sound corresponding to the slot.

Keystone

Keystone is the distortion of a projected image that usually creates a wider top than bottom. Aiming a projector upward on a wall rather than straight at a wall creates this distortion. Use the ◀ or ▶ buttons on the slide bar to correct this keystone (trapezoidal) distortion.

NOTE: With the projector aimed directly at the screen the maximum keystone angle that can be corrected is +/- 15 degrees.

Reference White Balance (Expert mode only)

This feature adjusts the white balance that is used as a reference. This adjustment affects all sources. The Ref.White Bal. is available for test pattern only.

Lamp (Expert mode only)

Lamp Mode
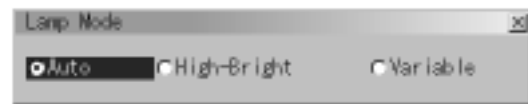
This feature allows the lamp power supply to operate under three settings.
Auto: This setting keeps the projector's original light output level for a certain period of time.
High-Bright: This setting consumes maximum current from the AC input and results in the most light output.

NOTE: The High Bright mode shortens the lamp life. Be sure to use this mode at temperature of 95° F (35°C) or less.

Variable: This setting allows the lamp power supply to draw a variable amount of current from the AC input source and allows for maximum power consumption and variable light output.

Lamp Output

When selecting "Variable", use the slidebar to adjust for desired projector light output.

Factory Default
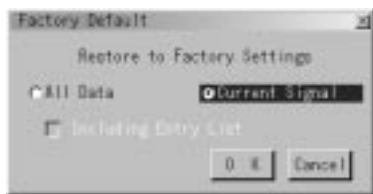
Returns all adjustments and settings to the factory preset level.

All Data: Resets all adjustments and settings for all the signals to the factory preset.

Including Entry List: Also deletes all the signals in the Entry List and returns to the factory preset.

Current Signal: Resets the adjustments for the current signal to the factory preset levels.

NOTE: The items that can be reset are all the items in the Adjustments and Image Options except for Keystone and Lamp Output.

Image Options
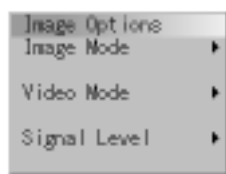
Provides optional controls such as gamma correction, component signal selection, wide screen and video noise reduction features.

Image Mode
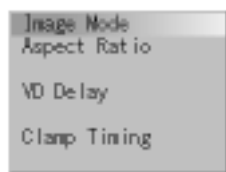
Aspect Ratio: This feature allows you to display the incoming video signal in the correct proportion.

Normal: Displays normal video picture with a 4-to-3 aspect ratio as is.

Zoom: Displays DVD's video picture with a 16-to-9 aspect ratio expanded in the horizontal and vertical direction, maintaining the original proportion.

Wide Zoom: Displays DVD's squeezed video picture with a 16-to-9 aspect ratio expanded in the horizontal direction, converted to 4-to-3 aspect ratio.

Cinema: Displays DVD's squeeze video picture with a 16-to-9 aspect ratio compressed in the vertical direction, maintaining the 16-to-9 aspect ratio.

Anamorphic: Select this mode for use of anamorphic lens. This mode will change the aspect ratio according to the lens.

VD Delay (Expert mode only):

This feature is used to correct vertical jitter of non-standard interlaced signal. Select one of the three VD delay levels.

Clamp Timing (Expert mode only):

This function sets the standard black level position of the displayed image. Select one of the following three options.

Auto: Normal setting.
Tri-Sync: Setting for HDTV signal
Front Porch: For other settings than above

Video Mode

Gamma

This option corrects gamma. Select the appropriate item.

NTSC : Setting for NTSC signals
Graphics : Setting for Computer Graphics
Graphics/NTSC : Setting for both Computer Graphics and NTSC signals
PAL/SECAM 2.8 : Setting for PAL and SECAM signals at the gamma value of 2.8
PAL/SECAM : Setting for PAL and SECAM signals
Natural 1 : Setting for Video and S-Video signal
Natural 2 : Setting for component signal

Noise Reduction

Select one of the following three levels for reducing video noise.
Low, Medium or High.

NOTE: The lower the Noise Reduction level, the better the image quality. Increasing Noise Reduction lowers video bandwidth.

Color Matrix

First, select an appropriate color matrix for your input signal, either HDTV or SDTV. Then select an appropriate matrix type from B-Y/R-Y, Cb/Cr, Pb/Pr or IVX.

NOTE: The Color Matrix feature is available for component video signal only.

Y/C Delay: Adjusts Y/C delay level.
Motion Select: Sets the interpolation method. Selects Still or Adaptive. Still is used for non moving images such as a document camera. Select Adapter for all motion video.
Motion Level: Adjusts level of motion detection when Adaptive is selected.
YTR Adjustmen (Expert mode only):
                 Adjusts Luminance Transient Time.
CTR Adjustment (Expert mode only):
                 Adjusts Chroma Transient Time.

Telecine(Expert mode only)
Use 3:2 pull down correction to eliminate jitter and artifacts in video.
    Auto: For film source such as a DVD player
    Off: For signals other than film sources

Signal Level

This function is only active when multiple projectors are in use.
Auto Control: Select OK to execute Auto Control.
White: Adjust saturation at the white peak.
R/G/B, Y/Cb/Cr or Y/Pb/Pr Gain (for Expert mode only):
                Adjust RGB, Component or HDTV Gain to match multiple projector color uniformity.

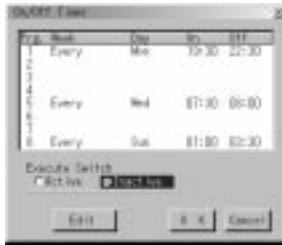## Projector Options

Enables you to set preferences and other operating options.

Timer

Enables you to turn on or off your projector automatically at a specified time. Two timer functions are available: On/Off Timer and Sleep Timer.

On/Off Timer

Up to eight settings can be programmed.
- Before setting On/Off Timer, maker sure that Date, Time Pre-set feature is set.
- Even after setting On/Off Timer, turning the projector on or off with the remote control is possible.
- There are two time display formats: 24-hour or AM/PM format.

1. Open the On/OFF Timer window.
2. Select EDIT and press ENTER on the remote control to open the EDIT window.

3. Set the Week, Day, On-Time and Off-Time using the CURSOR buttons and INPUT buttons (1 thru 10). To cancel the on-time or off time, use Delete.
4. Select Set and press the ENTER button on the remote control to complete the setting. To close, select Close.
5. To enable your setting, select Active on the Execute Switch.
6. Select OK and press the ENTER button on the remote control to complete the setting.

NOTE: When On Timer is set and the projector is in the standby mode, the "00" display on the INDICATOR flashes to show that On Timer program is active.

The projector must be in stand-by mode at the time of turning on. The preset power-on time will be void if the cooling fan is working or an error occurs.

Sleep Timer
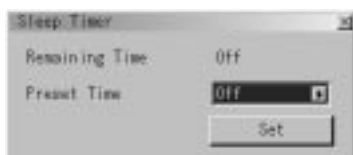
1. Select your desired time between 30 minutes and 2 hours in 30 minutes.
2. Select Set and press the ENTER button on the remote control.
3. The remaining time starts counting down.
4. The projector will turn off after the countdown is complete.

Menu

Allows you to set preferences for the on-screen menu.

Language:
You can choose one of seven languages for on-screen instructions. The options are: English, German, French, Italian, Spanish, Swedish and Japanese.

Menu Display Time:
Auto: The on-screen menu display appears when the buttons on the remote control, or the controls on the rear panel are pressed. The on-screen display will turn off at a preselected time. The turn-off time is specified in seconds up to a maximum of 30 seconds. Select your desired time (3-30 seconds) from the menu.

Manual: The on-screen menu display appears when the buttons on the remote control, or the controls on the rear panel are pressed. The display will be turned on and off whenever the MUTE OSD button is pressed. If no button operation is made for 20 minutes or more, the on-screen message will automatically turn off.

Date Format:
Eight display formats can be selected. This date format sets the current date that appears on the upper left corner of the screen.

Date, Time Preset:
Setting the Current Date and Time
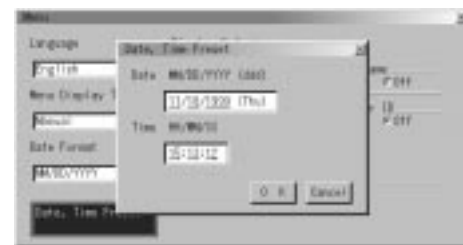
You can set the current time, month, date, and year.

1. Type in date.
   Enter month, date and year in this order using INPUT buttons on the remote control.
   Month and date must be entered in two digits. For example, to display "February", press "0" and "2".
2. Type in time.
   Time is expressed in the 24-hour format. For example, 6:00 p.m. is entered as 18:00.
3. Select "OK" and press ENTER.
   Closing the window allows the clock to start.

   The current year, month, date and time are displayed on the top of the screen.

NOTE: The projector has a built-in clock. The clock will keep working for about 3 days after the main power is turned off.
If the main power is off for 3 days or more, the built-in clock will be reset. If the built-in clock is reset, set the date and time again.
The built-in clock will not reset while in the standby condition.

Display Select:
You can choose the desired status information to be displayed on the screen. The desired status information will be displayed each time you switch between sources.

Setup
Enables you to set operating options.
Select "OK" to save your changes for all the features of Page1, Page2, Page3 and Page 4.

<Page 1>
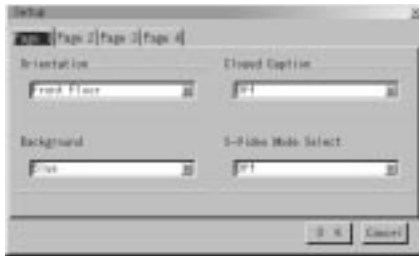
Orientation:
This orients the screen image to match the physical orientation of the projector.
The options are:front floor projection, rear ceiling projection, rear floor projection, and front ceiling projection.

Background:
Use this feature to display a black, blue screen or logo when no signal is available.

Closed Caption:
This feature displays a list of nine selectable text and captioning options. Select the best option to match the captioning format you are using.
The closed caption feature works with NTSC3.58 source only.

S-Video Mode Select:
This feature is used to select the S-Video signal detection mode. This allows identifying of the S-Video signals with different aspect ratio (Zoom signal 16:9, Wide Zoom signal 4:3).
S1:   Identifies a Zoom signal only.
S2:   Identifies Zoom or Wide Zoom signal.
OFF: Does not identify any S-video signal.

<Page 2>
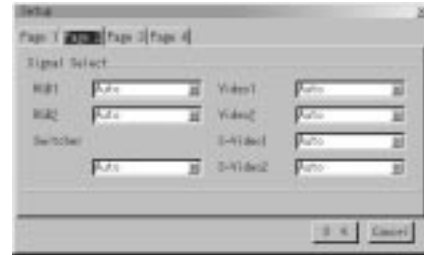
Signal Select:
RGB 1/2:   Allows you to choose "RGB" for an RGB source such as a computer, or "Component" for a component video source such as a DVD player. Normally select "Auto" and the projector automatically detects a component signal. However there may be some component signals that the projector is unable to detect. If this is the case, select "Component".

<Video 1/2 and S-Video System 1/2, Switcher>
This feature enables you to select composite video standards manually. Normally select "Auto".
This must be done for Video, S-Video and switcher respectively.
"Switcher" is setting for Video and S-Video in SW 1 Level or 2 mode.

<Page 3>

Power Management:
When this option is on and there is no RGB input for five minutes or more, the projector will automatically turn itself off. Power Management is not active for Video signals.

Power Off Confirmation:
This option determines whether a confirmation dialog for turning off the projector will appear or not.

Keystone Save:
This option enables you to save your current keystone settings. Keystone Save affects all sources globally. The changes are saved when you turn off the projector.

User Name:

   Type in your desired name using the INPUT keys on the remote control.

   Select one character at a time with the INPUT buttons 1 through 10(0) and by moving the cursor with the CURSOR button. The user name must be 18 characters or less.

   Only after completely finishing the selection of the characters, press ENTER.

Sync Termination (RGB1/2):

   This functions is used to select the impedance of the sync signal. Select " 75 Ω" or "Hi-Z".

NOTE: The default setting is "75 Ω". This should be "75 Ω" for normal use. Select the "Hi-Z" when inputting a TTL signal.

Projector ID:

   Each projector needs its own unique address when used in serial communication mode. You can choose one of 64 unique address using the spin box. First turn on Enable. Keep ressing ▶ increases the number.

   To make your setting available, select OK.

<Page 4 Expert mode only>

Communication/Port:

   Not used.

Speed:

   This feature sets baud rate of the OPTION IN (D-Sub 9 pin) connector from 4800 to 38400 bps.

   The default is 38400 bps. Select the appropriate baud rate for your equipment to be connected.

Default Source Select: Last/Select:

   You can set the projector to default to any one of its inputs each time the projector is turned on.

   Last: Sets the projector to default to the previous or last active input each time the projector is turned on.

   Select: Displays the selected source input every time the projector is started up.

Link Mode (Expert mode only):

This feature is used for multiple projector connection using RGB Digital Input/Output connectors.

The master projector is set to Master.

The other slave projectors are set to Slave.

When not using Link mode, set to Standalone.

See page E-20 for setting up for double or stacking in link mode.

Switcher Control (Expert mode only):

This feature sets the projector in communication with the NEC ISS-6020 Switchers.

Stand Alone: Use the projector in stand alone operation.
SW 1 Level: Use the projector with one Switcher.
SW 2 Level: Use the projector with two or more Switchers.

When changing this setting, the confirmation message will appear.

If you want to restart your projector, select Yes; if not, select No.

NOTE: This setting becomes effective only after the projector is restarted.

Passcode (Expert mode only):
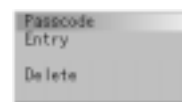
To prevent any unauthorized operation or mis-adjustment, the projector is equipped with a passcode option. If your passcode has not been entered correctly, the Expert item will not be available. Press and hold CTL, then press TEST on the remote control to display Passcode window.

 Entry: Registeres new passcode.

To register a new passcode:
1) Select Entry to open the Entry window.
2) Enter a four digit passcode using the "1" through "10" buttons. Each time you press the INPUT button, an asterisk will appear next to the "Enter the Passcode" message.

NOTE: "0000" and "9999" cannot be used as a passcode.

3) Once you have finished entering your FOUR DIGIT passcode, press ENTER to store the passcode. You will return to the passcode menu.

NOTE:
   1. If you have made an error, press CTL + ◀ to delete the asterisk "*". Then re-enter the correct passcode.
   2. If the passcode has been entered correctly, the "Confirm Passcode..." window will be displayed.
   3. If the passcode is not entered correctly, the "Warning Passcode!!" message will be displayed. You will be required to enter the passcode correctly. While pressing and holding CTL, then pressing TEST displays the Passcode Entry window. Type in your registered passcode.

Delete: Deletes the registered passcode.
Select OK in the Delete Passcode window.

PC Card Files
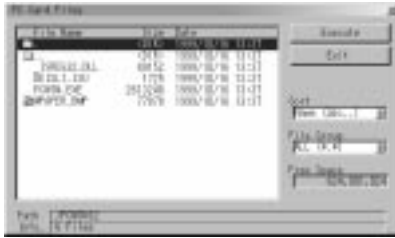
Displays a list of all the files stored in the PC card so that you can select a file you want to display. You can also sort files by file name or date, or display the file.

Although a list of all the files in the PC card is displayed, you can view files in text, HTML, JPEG and BMP format only.

Selecting "Execute" displays the file you selected.

Help

Contents

Provides online help menus. An undelined link means that you can move to an adjustment item di-rectly.

Selecting the underlined link and pressing ENTER moves to the corresponding adjustment item.

Source Information
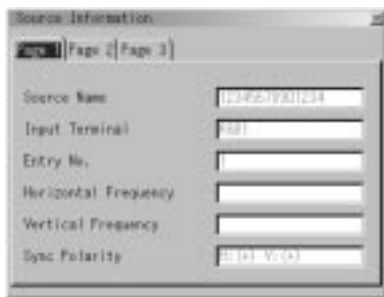
Displays the status of the current signal. This dialog box has three pages.

Projector Information
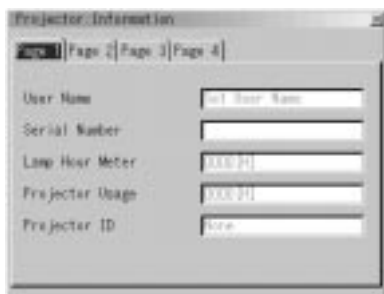
Displays the information for your projector such as lamp usage, serial number and version number and others.

Displaying Current Status of Link Mode

When selecting the tab "Page 4 ", you will get the following dialog box.
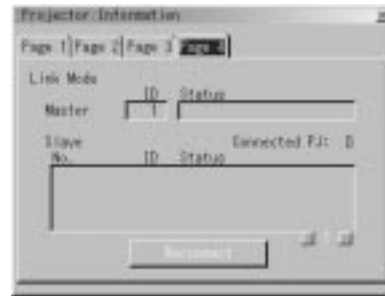
Master ID	:	Indicates the Master projector
Status	:	Indicates the status of the master projector
Connected PJ	:	Indicates number of connected slave projectors
Slave No.	:	Indicates serial number of the slave projector
ID	:	Indicates ID of a slave projector
Status	:	Indicates the status of the slave projector
Page buttons ◄►	:	Turns pages. One screen displays information of 3 projectors only. Information of a maximum of 16 projectors can be displayed using these page buttons.
Reconnect button	:	Confirms connection of all linked projectors

Status items

Running	:	The projector is now working
Cooling Lamp	:	The fan is now cooling the lamp
Standby	:	The projector is in stand-by
Communication Error	:	A communication error has occurred
Connecting...	:	The projector is now verifying for connection
Error Standby	:	An error caused the projector to enter the stand-by mode

Test Pattern

Nine test patterns can be selected. You can turn on or off red, green, or blue respectively.

5. Specifications

Optical

Panel *[1]   DMD™ .9" x 3
                 1024 x 768 native resolution up to 1280 x 1024 with advanced AccuBlend™ Technology

Lamp   1.0kW Bubble Type Short Arc Xenon
                 Built in: Overheat Protection
                         Lamp Over-Usage Protection

Light Output   4500 ANSI Lumens (High Bright mode)
                 4000 ANSI Lumens (Normal mode)
                 Full Light Output at 200- 240V

Brightness Uniformity   >80% edge to center

Contrast Ratio   400 : 1 Full On/Off
                 250 : 1 ANSI

Lens Movement   Motorized Horizontal and Vertical Lens Shift
                 Built in Lens Shutter

Lens Options*[2]   TL-08SF   0.84 (Short focal lens)
                 TL-1Z   1.5 - 2.5 : 1 (Zoom lens)
                 TL-2Z   2.5 - 4.0 : 1 (Zoom lens)
                 TL-4Z   4.0 - 7.0 : 1 (Zoom lens)

Image Size   80 - 500" diagonal at 4:3

Electrical

Scan Rate   Horizontal: 15 - 83.5 kHz
                 Vertical :   50 - 85 Hz
                 Pixel Clock   100MHz

Inputs   RGB / YCr/Pr,Cb/Pb (2) BNC
                 RGB H (HV) V   (1) D-dub 15 pin
                 YPbPr / YCrCb   (1) RCA
                 Video   (1) BNC   (1) RCA
            S-Video   (1) S-Video Terminal
                 Y/C   (1) BNC
                 Digital I/O
                 RGB DIGITAL   (1) MDR 20pin
                     DFP Specification (Max resolutions : XGA)
                                 (1) Process Out MDR 20 pin
                 SDI(Option)   (1) BNC
                     SMPTE 259M Level C, 4:2:2 525/625 Component
                                 (1) BNC Through out
                 PC Card   (1) PCMCIA Data Back-up

Input Compatibility   NTSC, PAL, SECAM, HDTV (1080I, 720p, 480p), VGA, SVGA, XGA, SXGA, MAC

Video   3D Y/C Separation
                 Telecine Detect: 3:2 pull down correction

Acceptable Sync Sys	Separate Sync/Composite Sync/ Sync on Green
Memory	100 individual memory locations
Menu System	Pull down multilingual on-screen display English/German/French/Italian/Spanish/ Swedish/Japanese
Keystone Correction	Digital through Advanced AccuBlend Technology Range 0 - ±30˚
External Control	RS232C (1) D-sub 9 pin Contact Closure Switcher (2) D-sub 15 pin In/Out Addressable Remote Control (wired / wireless)
Power Requirement	100-120 / 200-240 VAC, 50/60Hz
Input Current	11 / 7.3 A
Power Consumption	1.0 / 1.5 kW

Mechanical

Installation	Orientation: Floor/Front, Floor/Rear, Ceiling/Front, Ceiling/Rear Stacking: Up to 3 projectors can be gravity stacked
Dimensions	22.0" (W) x 26.9" (D) x 12.2" (H) with foot (not including lens) 560 mm (W) x 682 mm (D) x 308 mm (H) with foot (not including lens)
Net Weight	94.8 lbs (43Kg)
Environment	Operational Temperature 40˚ to 95˚F / 5˚ to 35˚C, Humidity: 20-80% non-condensing Storage: 14˚ to 122˚F / -10˚ to 50˚C
Regulations	USA UL 1950 FCC Class A Canada CSA950 (C-UL) Europe EN60950 EN55022 Class A EN55024 EN61000-3-2 EN61000-3-3 Japan MITI VCCI I EN60950 2nd edition Oceania EN60950 AS/NZS3548 Class A Asia EN60850 CISPR22

*1: Permissible deviation for RGB convergence (Pixel deviation) is 1/2 pixel or less at center; 1 pixel or less around the perimeter (when projection upward angle is 0˚).

*2: When using the zoom lens, it is recommended that the projector is positioned at an angle of from -15 to +15 degrees from the horizontal.

Specifications are subject to change without notice.

6. Optional Accessories

Lens	TL-08SF (Short Focal Lens 0.84) TL-1Z (Zoom Lens 1.5 - 2.5:1) TL-2Z (Zoom Lens 2.5 - 4.0:1) TL-4Z (Zoom Lens 4.0 - 7.0:1)
Cable	XT D-CABLE 5M (DFP cable)
Interface Board	XT SDI BOARD
Ceiling Mount Kit	XT CMKIT
Switcher	ISS-6020 Video/RGB Switcher

7. Link Mode: Compatible Input Signal List
(Expert mode only)

NOTE: Signals other than specified here are not available in the digital link mode.
If you want to input them, use a commercially available distribution amplifier to connect the terminals of each projector.

Signal Type		Standard		Resolution	Sync Frequency H(kHz)	Sync Frequency V(Hz)	Pixel (MHz)	Note
Analog Signal	Analog RGB	VESA	XGA@70Hz	1024 x 768	56.5kHz	70Hz	75.0MHz	*1
		VESA	XGA@75Hz	1024 x 768	60.0kHz	75Hz	78.8MHz	*1
		VESA	VGA@72Hz	640 x 480	37.9kHz	72Hz	31.5MHz	*1, 2
		VESA	VGA@75Hz	640 x 480	37.5kHz	75Hz	31.5MHz	*1, 2
		VESA	VGA@85Hz	640 x 480	43.3kHz	85Hz	36.0MHz	*1, 2
		VESA	SVGA@56Hz	800 x 600	35.1kHz	56Hz	36.0MHz	*1, 2
		VESA	SVGA@60Hz	800 x 600	37.9kHz	60Hz	40.0MHz	*1, 2
		VESA	SVGA@85Hz	800 x 600	53.7kHz	85Hz	56.3MHz	*1
		VESA	XGA@60Hz	1024 x 768	48.4kHz	60Hz	65.0MHz	*1
		VESA	XGA@70Hz	1024 x 768	56.5kHz	70Hz	75.0MHz	*1
		VESA	XGA@75Hz	1024 x 768	60.0kHz	75Hz	78.8MHz	*1
		APPLE	MAC13"@67Hz	640 x 480	35.0kHz	67Hz	30.2MHz	*1, 2
		APPLE	MAC16"@75Hz	832 x 624	49.7kHz	75Hz	57.3MHz	*1
		IBM	VGA-400@70Hz	720 x 400	31.5kHz	70Hz	28.3MHz	*1, 2
		IBM	XGA2-768@72Hz	1024 x 768	58.1kHz	72Hz	79.0MHz	*1
	Video Signal	3.58NTSC		–	–	–	–	
		BW@60		–	–	–	–	
		PAL		–	–	–	–	
		SECAM		–	–	–	–	
		BW@50		–	–	–	–	
Digital Signal	Digital RGB	VESA	VGA@60Hz	640 x 480	31.5kHz	60Hz	31.5MHz	
		VESA	SVGA@60Hz	800 x 600	37.9kHz	60Hz	40.0MHz	
		VESA	XGA@60Hz	1024 x 768	48.4kHz	60Hz	65.0MHz	
	Digital Serial	SDI 525		–	–	–	–	
		SDI 625		–	–	–	–	

*1 In Link Mode the Pixel Clock adjustment range of the slave projector is narrow. You can only adjust the pixel clock within this range.

*2 Please adjust Pixel Phase so that the slave projector is in phase with the master projector.

Note that Link mode and Switcher Control mode are not available at the same time.

8. List of Menu Items Available on Link Mode (Expert Mode)

Menu (Expert mode)			Digital Link	Analog Link
Source Select			L	L
Adjustments	Picture (all items)		L	L
	Blanking		L	L
	Image	Auto Adjust	N	M
		Position	L	L
		Pixel Adjust	L	M
		Resolution	L	L
		Video Filter	L	L
	Color Temperature		L	L
	White Balance		L	L
	Switcher		N	N
	Keystone		L	L
	Ref. White Balance		N	N
	Lamp		N	N
	Factory Default		N	N
Image Options	Image Mode	Aspect Ratio	L	L
		VD Delay	N	N
		Clamp Timing	N	N
	Video Mode	Gamma	L	L
		Noise Reduction	L	N
		Color Matrix	L	N
		Y/C Delay	L	N
		Motion Select	L	N
		Motion Level	L	N
		YTR Adjustment	L	N
		CTR Adjustment	L	N
		Telecine	L	N
	Signal Level	White	L	L
		RGB Gain	L	L
		Y/Cb/Cr Gain	L	L
		Y/Pb/Pr Gain	L	L
Projector Options	Timer		L	L
	Menu		M	M
	Setup		N	N
	Link Mode		M	M
	Switcher Control		N	N
	Passcode		M	M
PC Card Files			N	N
Help			M	M
Test Pattern			N	N
Direct Key	LENS SHIFT		I	I
	FOCUS		I	I
	ZOOM		I	I
	MENU		L	L
	POWER		I	I
	INPUT		M	L
	MUTE (PICTURE/SHUTTER/OSD)		L	L

Each letter used in the above note means the following

Letter	Master projector	Slave projector (s)
L	valid	linked
N	invalid	invalid
M	valid	invalid
I	independently adjustable	independently adjustable

Appendix

Dimensions

682 (26.85)

54 (2.13)

506 (19.92)

35.5 (1.40)

30 (1.18)

308 (12.13)

326 (12.83)

The drawings do not include the lens part.

174 (6.85)

Unit: mm (inch)