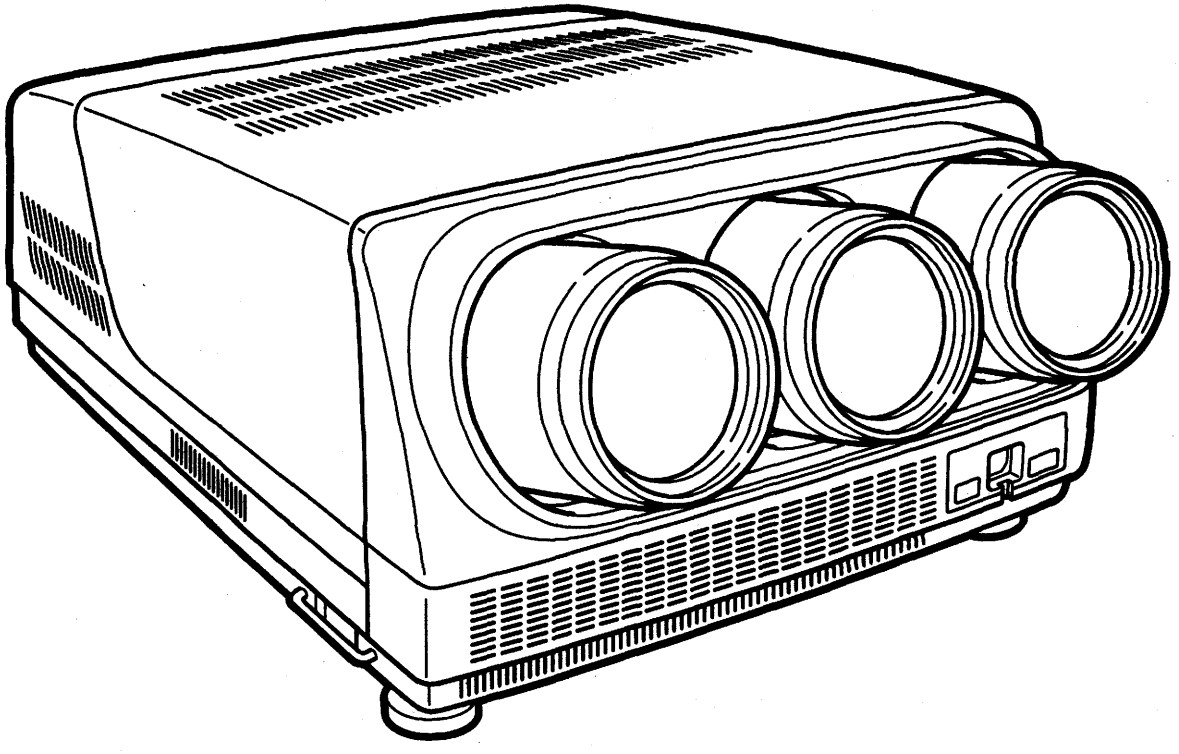
MITSUBISHI

VS-1281

Auto Scan Graphics Projector Owner's Guide



Congratulations

On your selection of a MITSUBISHI AUTO SCAN GRAPHICS PROJECTOR. You have acquired a product that will greatly enhance your video pleasure. Because of the sophistication of this advanced electronic device, we recommend that you thoroughly understand the contents of this operation and installation manual before using.

INSTALLATION

- Installation by a licensed installer is highly recommended.
- Improper installation may result injury and/or damage.
- For licensed installer : Refer page 45~49 for important information regarding installation.

FCC COMPLIANCE NOTICE

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 generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction 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.

Changes or modifications not expressly approved by Mitsubishi could void the user's authority to operate this equipment.

WARNING

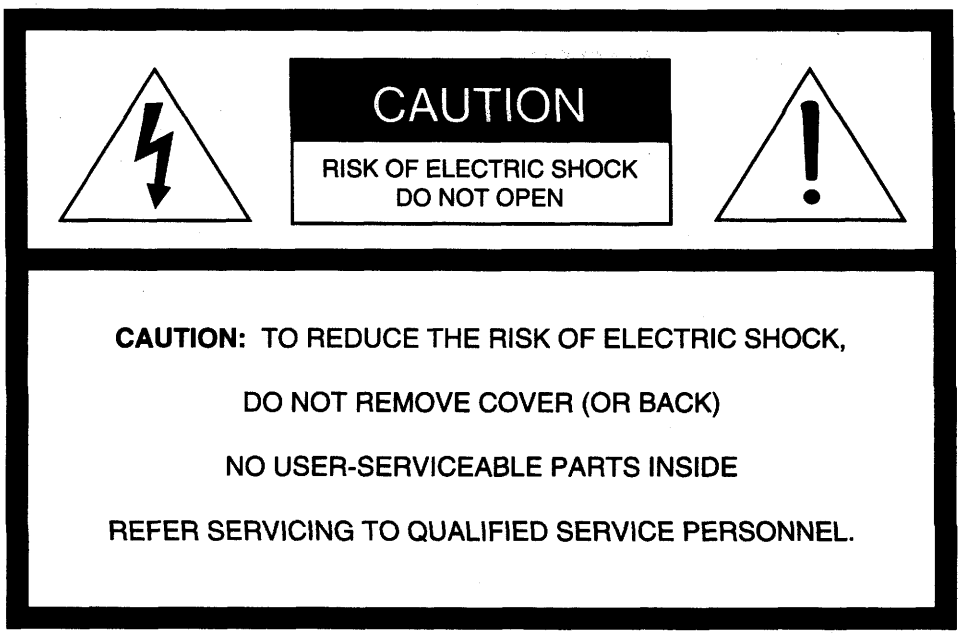
Use the attached specified shielded power supply cord. If you use other cord, it may cause interference with radio and television reception.

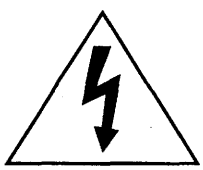
INDUSTRY CANADA COMPLIANCE NOTICE

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

INDUSTRY CANADA AVIS DE CONFORMATION

Cet appareil numérique de la classe A respecte toutes les exigences du Réglement sur le matériel brouilleur du Canada.





The lighting flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING:

TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

CAUTION:

TO PREVENT ELECTRIC SHOCK HAZARD, DO NOT USE THIS (POLARIZED) PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

NOTE TO CATV SYSTEM INSTALLER:

THIS REMINDER IS PROVIDED TO CALL THE CATV SYSTEM INSTALLER'S ATTENTION TO ARTICLE 820-40 OF THE NEC THAT PROVIDES GUIDELINES FOR PROPER GROUNDING AND, IN PARTICULAR, SPECIFIES THAT THE CABLE GROUND SHALL BE CONNECTED TO THE GROUNDING SYSTEM OF THE BUILDING, AS CLOSE TO THE POINT OF CABLE ENTRY AS PRACTICAL.

Table of Contents

IMPORTANT SAFEGUARDS

PLEASE READ ALL THESE INSTRUCTIONS REGARDING YOUR GRAPHICS PROJECTOR SET AND RETAIN FOR FUTURE REFERENCES. FOLLOW ALL WARNINGS AND INSTRUCTIONS MARKED ON THE GRAPHICS PROJECTOR.

1. Read Instructions
   All the safety and operating instructions should be read before the appliance is operated.

2. Retain Instructions
   The safety and operating instructions should be retained for future reference.

3. Heed Warnings
   All warnings on the appliance and in the operating instructions should be adhered to.

4. Follow Instructions
   All operating and use instructions should be followed.

5. Cleaning
   Unplug this Projector from the wall outlet before cleaning. Do not use liquid or aerosol cleaners. Use a damp cloth for cleaning.

6. Attachment and Equipment
   Never add any attachments and/or equipment without approval of the manufacturer as such additions may result in the risk of fire, electric shock or other personal injury.

7. Water and Moisture
   Do not use this Projector where contact with or immersion in water is a possibility. Do not use near: bath tubs, wash bowls, kitchen sinks, laundry tubs, or swimming pools, etc.

8. Accessories

Do not place this Projector on an unstable cart, stand, tripod, bracket, or table. The Projector may fall, causing serious injury to a child or adult, and serious damage to the appliance. Use only with a cart, stand, tripod bracket, or table recommended by the manufacturer, or sold with the Projector. Any mounting of the appliance should follow the manufacturer's instructions, and should use a mounting accessory recommended by the manufacturer.

An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.

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9. Ventilation

Slots and openings in the cabinet are provided for ventilation and to ensure reliable operation of the Projector and to protect it from overheating. Do not block these openings or allow them to be blocked by placing the Projector on a bed, sofa, rug, or other similar surface. Nor should it be placed over a radiator or heat register. If the Projector is to be placed in a rack or bookcase, ensure that there is adequate ventilation and that the manufacturer's instructions have been adhered to.

10. Power Sources
This Projector should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supply to your home, consult your appliance dealer or local power company.

11. Grounding or Polarization
For your safety, this Projector is equipped with a three-wire grounding type plug having a third (grounding) pin. This plug will only fit into a grounded type outlet. If you are unable to insert the plug into the outlet, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the grounding-type plug.

12. Power-Cord Protection
Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the appliance.

13. Lightning
For added protection for this Projector during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the video product due to lightning and power-line surges.

14. Overloading
Do not overload wall outlet and extension cords as this can result in a risk of fire or electric shock.

15. Object and Liquid Entry
Never push objects of any kind into this Projector through openings as they may touch dangerous voltage points or short-out parts that could result in a fire or electric shock. Never spill liquid of any kind on the Projector.

16. Servicing
Do not attempt to service this Projector yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

17. Damage Requiring Service
Unplug this Projector from the wall outlet and refer servicing to qualified service personnel under the following conditions :
(a) When the power-supply cord or plug is damaged.
(b) If liquid has been spilled, or objects have fallen into the Projector.
(c) If the Projector has been exposed to rain or water.
(d) If the Projector does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions as an improper adjustment of other controls may result in damage and will often require extensive work by a quali fied technician to restore the Projector to its normal operation.
(e) If the Projector has been dropped or the cabinet has been damaged.
(f) When the Projector exhibits a distinct change in performance - this indicates a need for service.

18. Replacement Parts
When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock or other hazards.

19. Safety Check
Upon completion of any service or repairs to this Projector ask the service technician to perform safety checks to determine that the Projector is in a safe operating condition.

20. Place of Installation
Refrain from setting the Projector at any place subjected to high temperature and high humidity.
Precision devices are incorporated. Please keep the operating temperature, humidity, and altitude specified below for safety's sake.

- Operating temperature 5°C~35°C
- Operating humidity 20%~80%
- Operating altitude 6580 ft
- Never put any heat producing device under the projector so that the Projector will not be overheated.
- For the ceiling, use fire retardant material.
- The unit weights about 168lb. For installation, please select a place which can fully withstand the weight.
- Don't attach to a place that is not stable or subject to vibration.
- Refrain from using the Projector attached in an oblique angle.
- Don't install the Projector near any equipment which produces a strong magnetic field. Also refrain from installing any cable carrying a large current near the Projector.

PRECAUTIONS

In the interest of safety, please observe the following precautions.

NEVER REMOVE THE TOP COVER

This unit contains high voltage circuitry.
An inadvertent contact may result in an electrical shock.

PROTECT THE POWER CORD

Damage to the power cord may cause fire or shock hazard.
When unplugging, hold by the plug only and remove carefully.

MAINTAIN GOOD VENTILATION

Ventilation slots and holes are provided on the top, rear sides, and bottom of this unit.
Place the unit on a hard and level surface, and locate at least 4 inches from walls to ensure proper ventilation.

NEVER INSERT ANY OBJECT INTO THE SET

Foreign objects of any kind inserted into this unit constitute a safety hazard and may cause extensive damage.

DO NOT PLACE ANYTHING ON THE PROJECTOR

Heavy objects placed on the Projector may cause damage or obstruct proper ventilation.
Do not place on this unit any receptacle such as a vase or glass which contains any liquid.
Using this unit with water or any liquid which might infiltrate into the unit may result in fire or electric shock.

DO NOT SUBJECT THE SET TO IMPACT OR MECHANICAL SHOCK

Take care not to shake or jolt the set when you carry it.

BEWARE OF MAGNETIC INFLUENCES

Do not bring any device which creates an magnetic field of magnet, speakers near to the Projector picture tube. Doing so will affect picture quality.

DO NOT USE IN THE WRONG PLACE

Please refrain from subjecting the unit to vibration and exposing to hydrogen sulfide or sulfur oxide.
Never place the Projector near or over a radiator, or in direct sunlight.

CARE OF THE CABINET

Unplug and clean with a soft cloth slightly moistened with a mild soap and water solution.
Allow to dry completely before operating.
Never use petroleum base solutions or abrasive cleaners.

DO NOT EXPOSE THE SET TO RAIN, MOISTURE OR DUST

Installing the set outside or in a humid place may cause troubles such as fire and electric shock.

REFRAIN FROM OPERATING THE SET IF ANY ABNORMALITY IS NOTED

It is dangerous to operate while the Projector is out of order ; (abnormal noise, smell, or smoking for example). When any abnormality is noted, pull out the plug from the wall outlet immediately then ask a dealer or local power company for repair.

UNPLUG THE POWER CORD DURING A LONG ABSENCE

If you leave your home for an extended period, unplug the power cord from the wall outlet.

Welcome to Mitsubishi

Congratulations on your purchase of the Mitsubishi Auto-Scan Graphics Projector. Your Projector is designed for superb viewing pleasure as well as continued reliability.

To familiarize you with your Projector and owner's guide, we suggest that you read through the preface, which provides the following important information:

- **Summary of Special Features**
- **Unpacking Your Graphics Projector**

Mitsubishi has strived to create your Projector so that it will bring you years of viewing enjoyment. Similarly, your owner's guide is designed with a "user friendly" philosophy that will help you take advantage of all of your equipment's features.

Once again, thank you for selecting our product and welcome to Mitsubishi!

◆ Summary of Special Features

Your top rated Mitsubishi Projector delivers:

- **Auto-Scan Projector** --- accepts and detects automatically the horizontal scanning frequencies between 15 kHz - 103 kHz and the vertical scanning frequencies between 40 Hz - 150 Hz. A wide range of equipment can therefore be used from household VCRs, Laser Discs to high resolution personal computers or workstations.

- **Bright image** --- provides light output of over 900 lumens. This Projector's bright image has been attained by utilizing a newly developed 7 inch impregnated cathode picture tube with an electro magnetic focusing system. Impregnated cathode picture tube's exhibit reduced emission degradation and improved longevity.

- **A high brightness, high resolution (over 1600 dots × 1200 lines) picture** --- has been achieved by the utilization of a high resolution large aperture lens (F1.1) coupled with an impregnated cathode magnetic focused picture tube. The beam spot focus characteristic for the picture tube has been improved, especially for high brightness levels. Picture definition and quality have been further improved by dividing each picture tube into 9 zones, each of which has independent digital focus circuitry.

- **Newly developed "Flexible Optical Coupling (FOC)" ---** allows you to acheive a wide range of screen sizes while maintaining the benefits of an optically coupled, liquid cooled lense CRT system. Our newly developed "Flexible Optical Coupling (FOC)" allows adjustment of screen size 70~300 inches while maintaining tremendously improved contrast performance.

- **On-Screen Displays** --- show current picture settings, caution or error messages. Follow the on-screen instructions to adjust various picture settings or confirm the current settings of a given input source.

- **The digital Convergence ---** Until now convergence circuitry has been a mix of digital and analog circuits, resulting in adjustment being difficult and time consuming as well as lower than expected picture quality. In order to solve these problems Mitsubishi developed IC's to implement Full digital convergence. "Smooth curve fitting" is applied to convergence data automatically as the user makes convergence alterations reducing picture distortion. Our "Easy Adjust Function" uses the 25 points found in a 5 x 5 cross hatch grid, adjustable by the user, to automatically calculate a further 200,000 points on that grid automatically for each of the Red, Green & Blue primary colors. This results in a clear picture free of color misalignment. Adjustment has been made so easy that the VS-1281 can be adjusted in 1/4 of the time required to adjust Mitsubishi's previous Projectors.

◆ Unpacking Your Graphics Projector

What you will find

As you unpack your new Projector, please check to be sure that along with the Projector, the following items are included:

- an owner's guide,
- a warranty,
- a remote control transmitter (for wireless or wired),
- a set of four AA size batteries for the remote control,
- a remote control cable,
- a power cord (157.5 inch),
- 6 rods for adjusting the angle of picture tube faced lens (2 for each R, G, B lens), and
- Set Up & Installation Manual.

A few suggestions

Before you hook up your new Projector, please take a few minutes to:

1. Complete the registration card. The registration card asks for the Projector's serial number, which you'll find on the back of the unit.
2. Keep the box and packing materials for future use.
3. File your sales receipt.
4. Install the Projector surely with sufficient lighting to do the hook-up.

CHAPTER 1

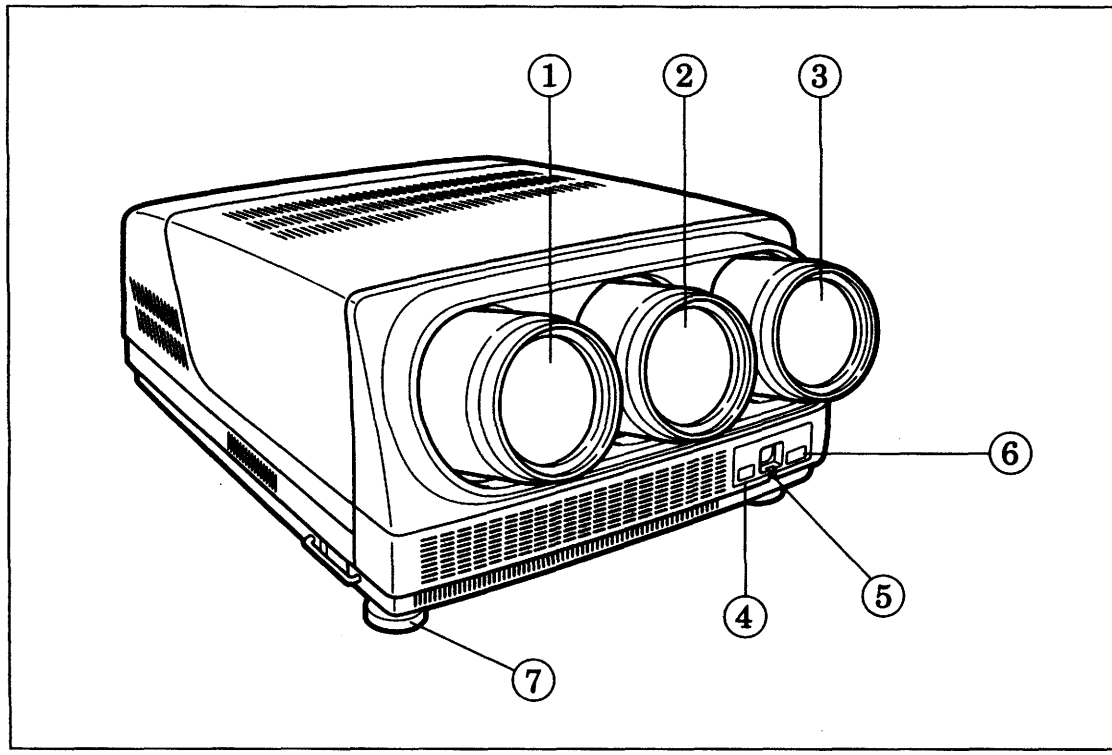
Getting to Know Your Graphics Projector

Now that you've unpacked your Projector, read through the safety information. It's time to become familiar with the buttons and controls you'll be using when you operate the Projector. This chapter will introduce the range of options available by using the Projector's remote control. It also offers some general guidelines for using the remote control.

Most functions can be controlled by using the remote control. This chapter, which will familiarize you with the full range of button functions, and contains the following sections:

- **Overview of the Graphics Projector**
- **Overview of the Remote Control**

◆ Overview of the Graphics Projector



①blue lens

②green lens

③red lens

④main power switch
Use to turn the main power on or off.

⑤AC socket
Use to connect the power plug (included with the set).

⑥remote control sensor
Point the remote control towards this sensor (for wireless control system). As the remote control signal is reflected off the screen (goes through the screen for rear projection systems), the remote control can also be pointed towards the screen to operate the Projector.

⑦foot adjustment
Use to level projector. (±0.2 inch)

Getting ready to use the remote control

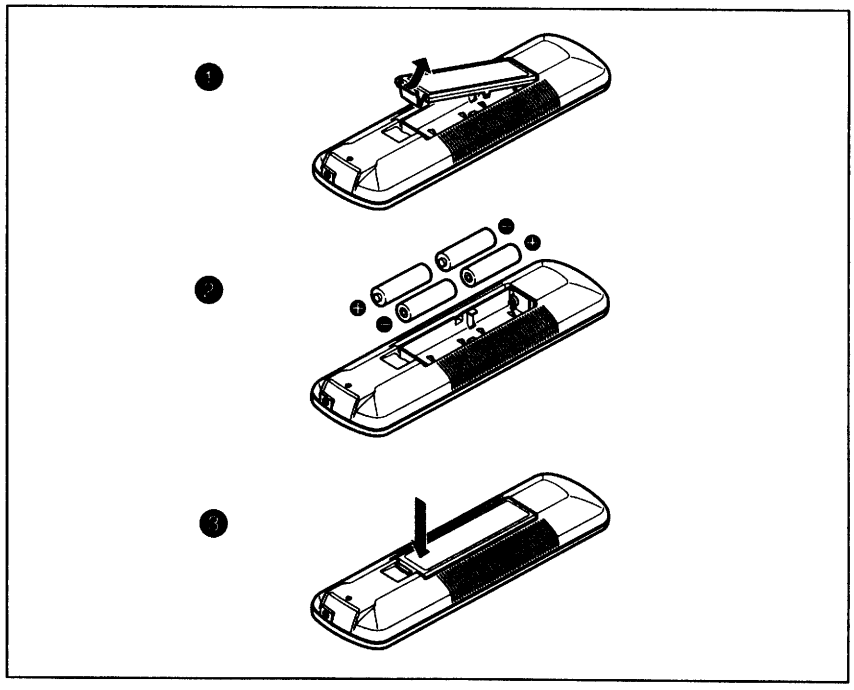
installing the batteries

❶ Remove the back cover of the remote control by pushing in the direction of the arrow.

❷ Load four AA size batteries as indicated in the illustration, making sure that they are positioned correctly (+ to +, and - to -).

❸ Replace the back cover of the remote control.

For best results, use Duracell AA (MN1500) batteries.



some dos and don'ts

To ensure that your remote control will continue working properly, follow these guidelines:

- Don't press two or more buttons at the same time.
- Don't allow the remote control to get wet or hot.
- Avoid dropping the remote control on a hard surface.
- When cleaning the remote control, don't use any harsh chemicals. Use only a soft, slightly moistened cloth.

general instructions (for wireless control system)

When using the remote control to operate the Projector, follow these procedures:

1. The operating area of the remote control is linked to distance. When close to the Projector, the effective transmit area is wider.
2. Point the top of the remote control toward the equipment.
3. Press the appropriate button or groups of buttons.

- If anything interrupts the remote control and the remote control sensor, the remote control may not work well.
- Don't leave the remote control cable connected to either the Projector or the remote control.
  If the cable is conncted to the remote contol, infra red signal is not emmited and when connected to the Projector, the remote contol sensor is disabled.

guidelines for using batteries

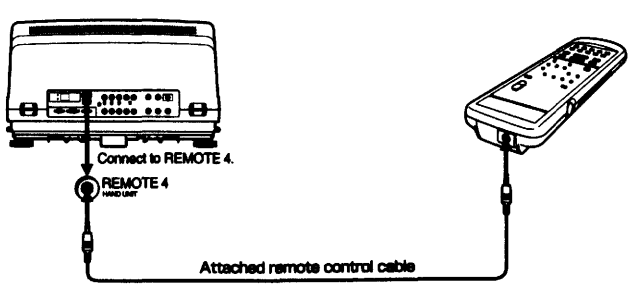
- Don't use a new battery with an old one.
- Don't heat, take apart, or throw batteries into a fire.

The following section explains more about the range of options available by using the remote control.

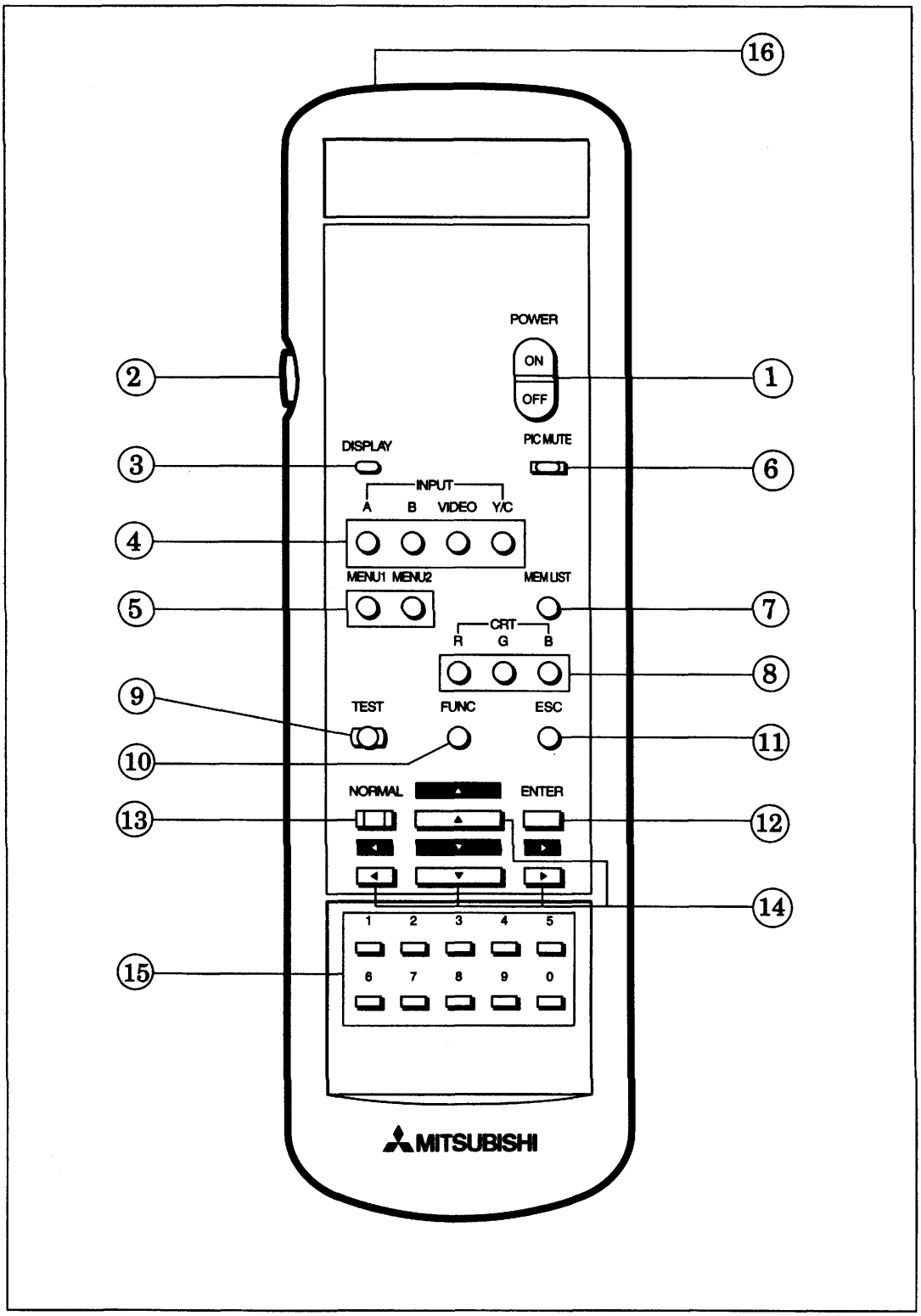
using the wired remote control

If two or more Projectors are used in close proximity, independent control of each Projector can be achieved by connecting a remote control unit to each Projector via the provided remote control cable. If use of wired remote is not covinient, control by wireless remote can still be achieved with software addressing.

connecting the remote control to the Projector



Remote control buttons and functions



Remote control buttons and function (cont.)

< Before using the remote control >
Turn the Projector's main power switch to "ON"; the stand-by indicator on the set rear lights in red.

①power button (POWER)
Press "ON" to switch the Projector from "stand-by" to "power-on." Press "OFF" to switch back to "stand-by." When the Projector is "ON," the power indicator on the set rear turns green.

②illumination button
Use to light up the remote control. If you do not operate the remote control within about 30 seconds, the remote control's illumination will automatically turn off.

③display button (DISPLAY)
Use to display the selected input source (INPUT-A, B, VIDEO, Y/C) and the memory's name on screen. The on-screen display disappears after 5 seconds.

④input buttons (INPUT)
Use to select the input source you wish to watch:
- INPUT-A / B,
- INPUT-VIDEO, or
- INPUT-Y/C.

⑤menu buttons (MENU1, MENU2)
Use to display the on-screen menu system: MENU 1, MENU 2.

⑥picture mute button (PIC MUTE)
Use to erase the picture temporarily (picture mute). With the picture mute "ON," the green power indicator on the rear of the set will flash.

⑦memory list button (MEM LIST)
If the Projector has been programed to display a number of memory data of near or same frequency, the last used memory data is selected by the projector the next time such a signal is input to the projector. If one of the other memory data is required, pressing this button will display all such names of the memory data. See page 33.

⑧CRT(R, G, B) buttons
Press once to remove a given color from each picture tube. Press again to get back the color. Also use to select the desired color when you adjust focus or convergence in MENU 2. See page 40 and 41.

⑨test button (TEST)
Use to switch between the test signals used for picture adjustment and the input source. See page 40 and 41.

⑩function button (FUNC)
Use to change the video function in MENU 1, or to move the cursor or lock/unlock the memory data in "INPUT SETTING" of MENU 2. See page 34, 35, and 37.

⑪**escape button (ESC)**
Press to return to the previous screen in an on-screen menu mode.

⑫**enter button (ENTER)**
Used to accept selection of a highlighted menu item.

⑬**normal button (NORMAL)**
Use this button to reset all of the displayed items to the standard levels in MENU 1 mode (picture adjustment) and MENU 2 mode.

⑭△ ▽ ◁ ▷ **buttons**
Use to select a menu item or adjust a setting in an on-screen menu mode.

⑮**number buttons (0-9)**
To be used for future expansion of the system.

⑯**wired remote control terminal**
Use to connect the provided remote control cable for wired control system. See page 18, "Connecting the remote control to the Projector." When you use several projectors in a multi-screen system, you can operate each projector separately if you use the wired remote control.

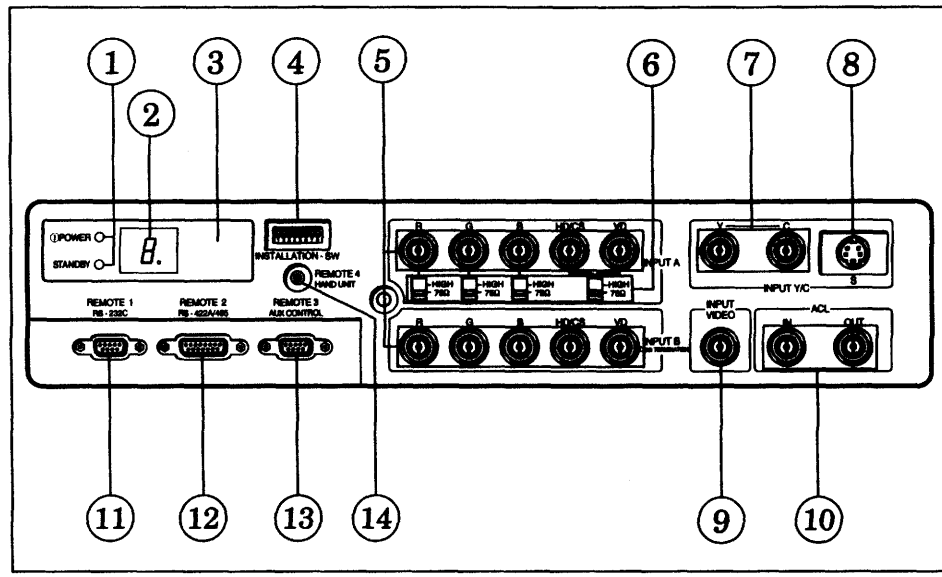
CHAPTER 2

Connecting Your Graphics Projector

This chapter offers step-by-step instructions for completing the most common hook-ups. It contains the following sections:

- **Overview of the Back Panel**
- **Basic Connections**

◆ Overview of the Back Panel



① stand-by, power indicator
When the main power switch on the set front is "ON," the red STAND-BY LED light is lit. When the remote control's "ON" button is pressed, the Projector powers up and the green POWER LED is lit.

② 7 segment LED display
Displays an error message (0~7) whenever an error occurs. If an error occurs, the Projector's power is automatically turned off. If this display appears, consult Mitsubishi Authorized Warranty service center.

③ rear remote control sensor (for wireless control system)
Point the top of the remote control toward here.

④ installation switch
Used to set initial settings when you install the Projector.

⑤ input A, B terminals
- R, G, B terminals (BNC),
  --- G terminal corresponds to GREEN ON SYNC input.
- HD/CS terminal (BNC), or
- VD terminal (BNC).

▷**Important:** Input A is available for switching between 75Ω input impedance "ON" and high impedance "OFF." Input B is fixed to 75Ω input impedance.

⑥ input A 75Ω high impedance switches
Used to switch between high impedance input ("HIGH" setting) or 75Ω impedance input ("75Ω" setting).
Normally set to "75Ω."

⑦ input Y/C terminals
Use to connect the separated "Y" and "C" video output.
- Y terminal (BNC), and
- C terminal (BNC).

⑧ S input terminal (mini DIN 4-pin)
Use to connect the Y/C video output from a VCR.

▷**Important:** The input signal connected to S input terminal has priority over the one connected to input Y/C terminals.

⑨ input VIDEO terminal (BNC)
Use to connect the video output from a VCR etc.

⑩ ACL interlock terminals (BNC)
When you interlock two Projectors in a multi screen system, connect the ACL OUT of one projector to the ACL IN of the other projector.

⑪ remote 1 terminal (9-pin)
Use to connect an RS-232 interface, allowing operation of the Projector via a personal computer.

▷**Important:** If your personal computer has 25-pin serial port, a 25 to 9 pin RS-232 cable is necessary for connection.

⑫ remote 2 terminal (15-pin)
Use to connect the personal computer using RS-422A or RS-485 interface (The service technician will adjust the setting.)

⑬ remote 3 terminal (9-pin)
Use to control the Projector when using the remote control for basic operation of the sequencer.

⑭ remote 4 terminal (3.5 Ø mini jack)
Use to connect the remote control with the attached remote control cable. Connecting the remote control cable to this terminal disables the Projector's remote control sensor, allowing one remote to control one Projector in a multi screen system.

◆ Basic Connections

This section explains:

- **Graphics Projector + equipment, and**
- **Graphics Projector + equipment + switcher.**

▷**Important:** Make sure that your equipment is turned off before connection.

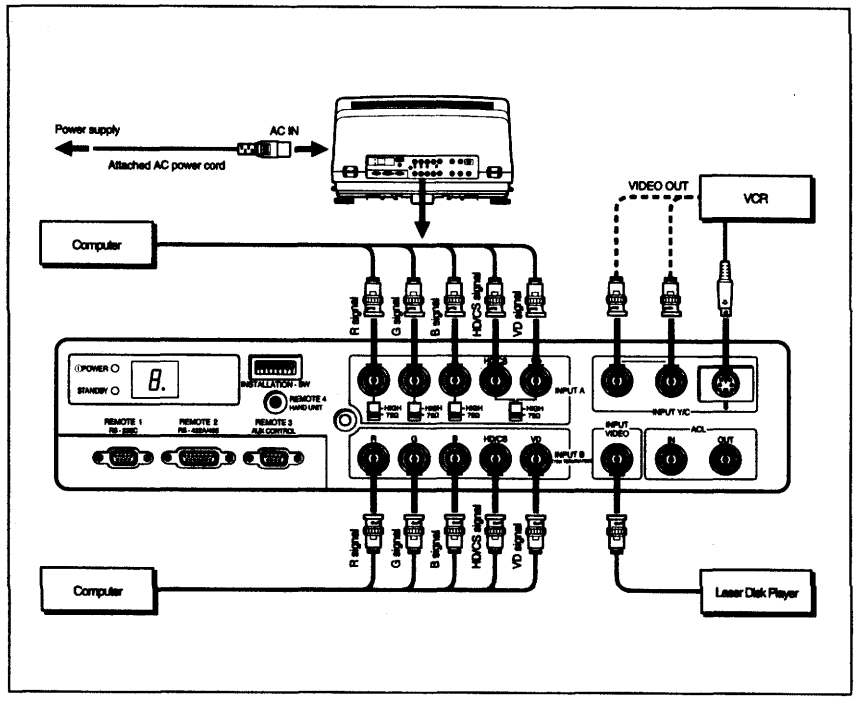
Choose the cable suitable for connection depending on the type of terminals.

Plug in firmly and unplug by holding the plug, not by pulling the cable out.

For details of connections, refer to the owner's guide of each component.

Graphics Projector + equipment

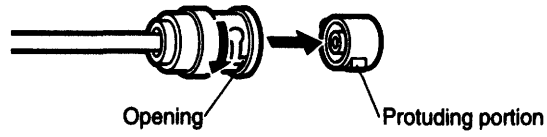
You can connect up to 4 sources to your Projector without using a switcher.



▷**Important:** If you connect the cables to both S terminal of Y/C terminal and BNC terminal, the signal from S terminal has priority over the one from BNC terminal.

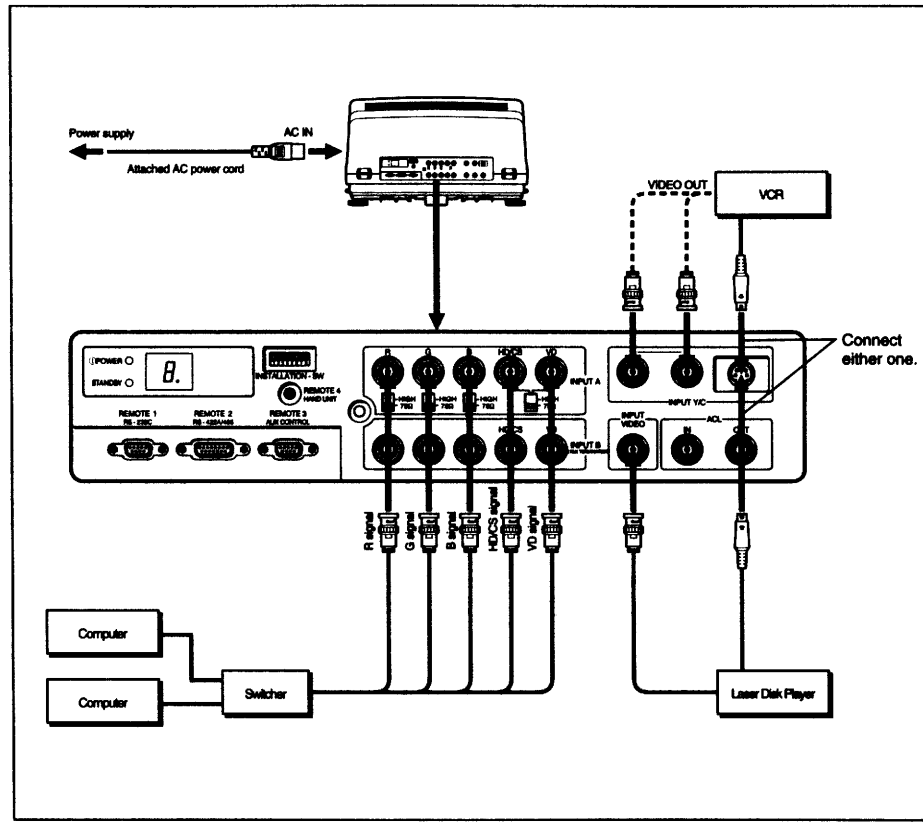
How to connect BNC connector:

1. Put the BNC connector into the terminal.
2. Turn the BNC connector clockwise.



Graphics Projector + equipment + switcher

Should it be necessary to connect more than 4 signal sources to your Projector, a switcher is used as shown below. Using a switcher your Projector can memorize settings required to display up to 30 signals.



CHAPTER 3

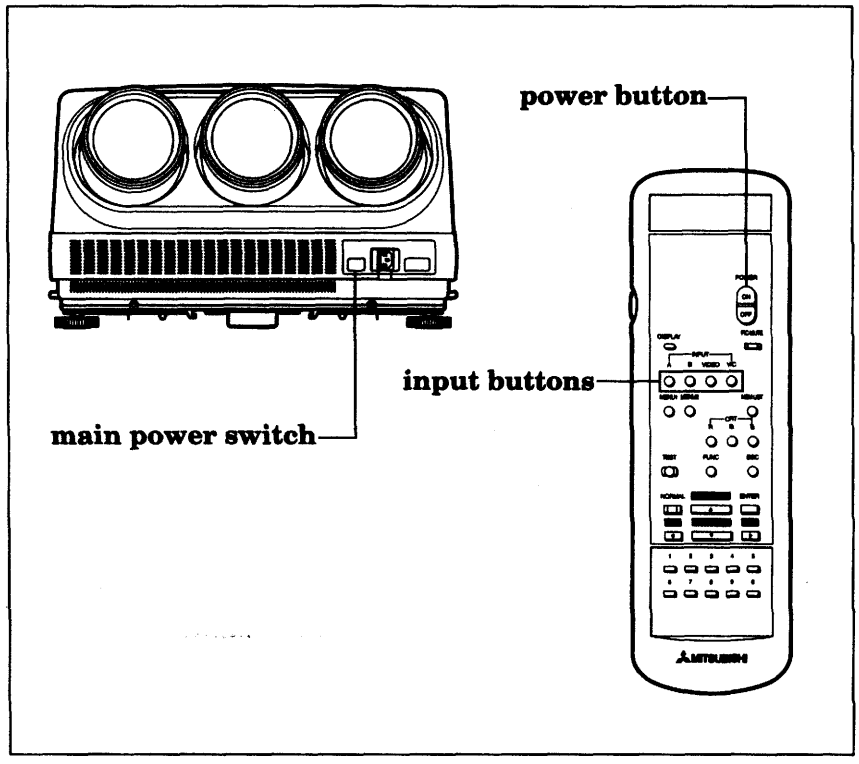
Operating Your Graphics Projector

Now that your Projector is connected to the desired sources, it's time to enjoy your equipment. This chapter will explain how to operate the Projector.

This chapter explains:

- **Projecting the image,**
- **Understanding the memory data,**
- **Displaying the memory list,**
- **Renaming the memory (INPUT SETTING),**
- **Locking the memory data (INPUT SETTING),**
- **Adjusting the image,**
- **Adjusting the picture's position (PHASE),**
- **Adjusting the focus (FOCUS),**
- **Adjusting the convergence (CONVERGENCE),**
- **Saving the data (DATA SAVE), and**
- **Resetting the data (DATA RESET).**

Projecting the image



1. Put the Projector into stand-by mode by pressing in the main power switch.
2. Turn on the equipment connected to the Projector.
3. Turn the Projector on by pressing the power button on the remote control.
4. Select the desired external input source by using the input buttons (INPUT A, B, VIDEO or Y/C) on the remote control.
5. Adjust the picture. See "Adjusting the image," page 37.

▷**Important:** When you turn off the Projector, press the "OFF" power button on the remote control and then press the main power switch to "OFF."

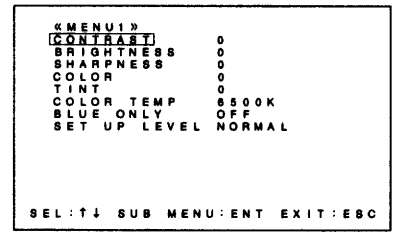
Understanding the memory data

This Projector has 30 memories. These memories can be used to store 30 signals of different frequency, or a combination of signals of different frequency and signals of same frequency. Memories of same frequency are used for different picture settings i.e. NTSC 4:3 and NTSC 16:9

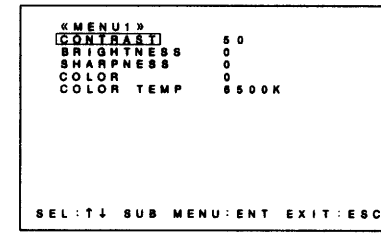
A memory contains: ①name, ②frequency (horizontal, vertical), ③adjustment of picture quality (contrast, brightness, etc.), ④adjustment of phase (horizontal, vertical), ⑤adjustment of focus, ⑥adjustment of convergence, ⑦service adjustment (for service engineer). These seven settings are hereafter referred to as a "Memory Data". The settings for each memory data can be changed at will except for the service adjustment.

<Example 1>
You can adjust the contrast for different programs to different levels in the different memory data locations.

NTSC program



VGA program



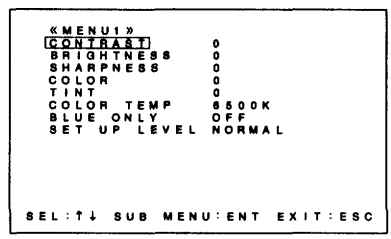
▷**Important:** This Projector distinguishes the frequency of the input sources automatically. When the input signal is changed, the Projector automatically selects the memory data appropriate to the signal input.

▷**Important:** The setting adjustment is saved for the memory data location that you are opening.

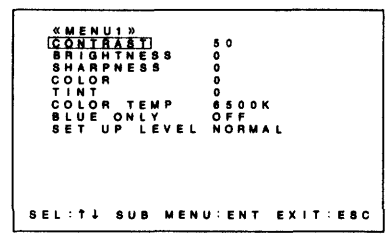
Understanding the memory data (cont.)

<Example 2>
In order to allow different settings for a given signal frequency (e.g. 2 NTSC channels), two memory data can be programmed to a given signal and then CONTRAST, BRIGHTNESS settings adjusted as required.

NTSC 1 program (VCR)



NTSC 2 program (Laser Disc)



▷**Important:** Memory data has been initially memorized. When you connect new equipment which is not included in memory data, see Set Up & Installation Manual. For the adjustment on memorization of new equipment, techninal knowledge is required so that we recommend you to consult Mitsubishi Authorized Warranty Service Center.

▷**Important:** The majority of computers today output a signal whose frequency changes according to screen resolution, e.g. a MS-DOS computer in VGA & CGA mode output different frequencies. It is thus necessary to memorize the memory data for each signal (resolution). For memorizing such memory data, consult a Mitsubishi Authorized Warranty Service Center.

Displaying the memory list

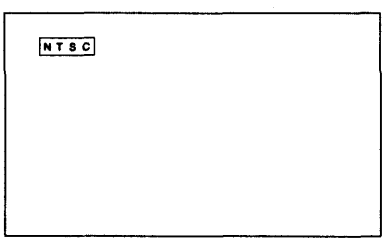
This Projector provides an on-screen list of the memory names which has the same or close frequency as the current memory data.

The memory data which is judged for the same one as the current memory data is:
(when the horizontal/vertical frequency is same or close)

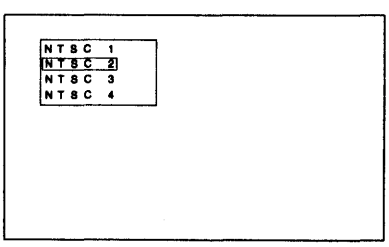
- the memory data is unlocked for the selected input terminal.
- the connection method is same.

▷**Important:** Input sources which have different connection methods are possible with INPUT A and B terminal. The connection method (three wire system, four wire system, etc.) differs depending on the connected equipment. This projector discriminates the connection method. Therefore the memory names which have the same frequency but have the different connection methods will not display in an on-screen list at the same time.

A memory data exists in the list.



Some memory data exist in the list.



1. Press the memory list button (MEM LIST) on the remote control. The memory name will appear on the screen.

   Press the escape button (ESC) or MEM LIST button to clear the display.

2. (only when the memory list has some memory data)
   Select the memory name which you want to switch using the △ ▽ buttons.

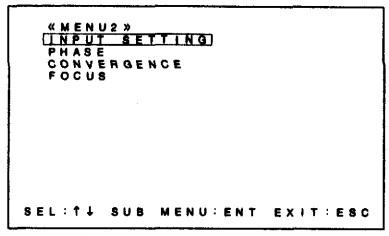
3. Press the ENTER button; then the memory data will change, and the list display will disappear.

   When the memory list has some memory data, the last data will be always selected.

▷**Important:** If you lock unnecessary memory data for each input signal, you can always have the proper memory data without switching in the list. For details, see page 35, "Locking the memory data."

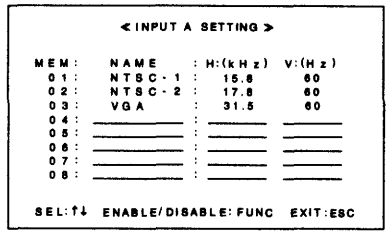
Renaming the memory

This feature allows you to rename the memory data. It is convenient that memory data has the same name as that of input signal or connected equipment.

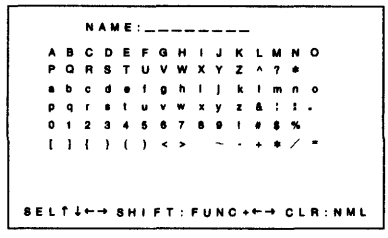


● Press the MENU 2 button on the remote control. The MENU 2 will appear on the screen.

● Select "INPUT SETTING" using the △ ▽ buttons; then press the ENTER button.



● The input setting screen will appear. The cursor is positioned at the memory's name which is selected by a current signal.



● Use the △ ▽ buttons to select which memory data you want to rename. Then press the ENTER button. The input setting screen has 30 memory data numbers (MEM 01~30). To turn the page up/down, press the △ ▽ button when the cursor is on the top/bottom of memory numbers.

● The name setting screen of the memory data will appear. Set the new name using the△ ▽ ◁ ▷buttons and the ENTER button. You can set the name in eight digits.

Cursor edit position can be changed by pressing the function button (FUNC) and the ◁ or ▷ continuously.

You can clear the settings by pressing the NORMAL button.

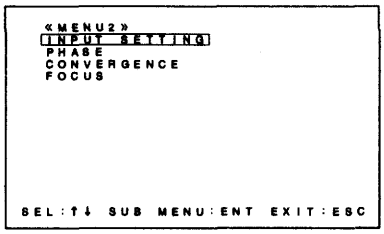
● Enter the name in eight digits or press the escape button (ESC) when you finish renaming. Then the new name of the memory data has been saved.

▷**Important:** If the same name already exists in the memory data (01~30), you will see an on-screen message and the screen will return to the name setting screen. Set the name again.

▷**Important:** Memory data has been initially memorized. When you connect new equipment which is not included in memory data, see Set Up & Installation Manual. The adjustment on memorization of new equipment can be made by a service engineer who has techninal knowledge, so that we recommend you to consult Mitsubishi Authorized Warranty Service Center.

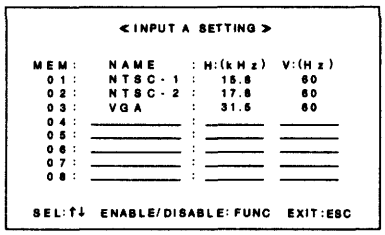
Locking the memory data

This feature allows you to lock selection of memory data previously memorized, when input A, B, VIDEO or Y/C are selected.



● Select the input terminal in which memory data you want to lock using the input buttons. You can lock only in the selected input terminal.

● Press the MENU 2 button on the remote control. The MENU 2 will appear on the screen.



● Select "INPUT SETTING" usingthe △ ▽ buttons; then press the ENTER button.

● The input setting screen will appear. The cursor is positioned at the input (A, B, VIDEO or Y/C).

● Use the △ ▽ buttons to select which memory data you want to lock selection.
The input setting screen has 30 memory data numbers (MEM 01~30). To turn the page up/down, press the△ ▽ ◁ ▷button when the cursor is on the top/bottom of memory numbers.

● Selectable memories are displayed in green. To lock a given memory data, press the function button (FUNC). On doing so, the selected memory turns red indicating that it is locked state. You can switch the cursor's color between 'green' to unlock (selectable) and 'red' to lock (not selectable) using the FUNC button.

● Press the escape button (ESC) to return to the normal picture.

▷**Important:** For VIDEO and Y/C inputs, the memory data of signals other than PAL, SECAM and NTSC are locked automatically, also it is impossible to cancel the lock.

▷**Important:** You can not lock the memory data which you are just receiving.

▷**Important:** In case that the signal that can call the locked memory data (the frequency is the same or nearly the same) is connected to the terminal, "INPUT A(or B,VIDEO,Y/C) NEW SIGNAL" will appear on the screen. You can operate in MENU 1 and MENU 2 mode but the settings cannot be saved.

▷**Important: (cont.)** Make either of the following operations (1 or 2).

1 Unlock the memory data in MENU 2 mode.

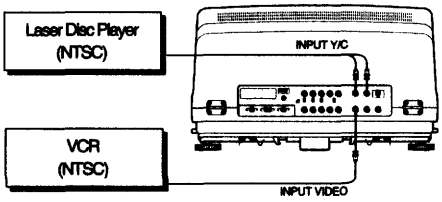
2 Connect the signal to the other terminal that the memory data isn't locked.

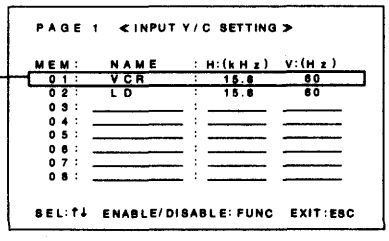
You can use this lock feature in the following case.

<Example>

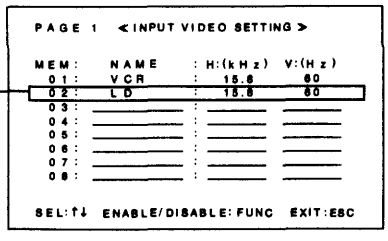
When you connect both the Laser Disc of NTSC program and VCR of NTSC program as shown below, by using the lock feature you can change the setting of picture adjustment for each input source.

- For Laser Disc, set CONTRAST to 50 level.
- For VCR, set CONTRAST to 0 level.





Position the cursor at this memory data using the △▽ buttons, and press the FUNC button.



❶ Connect the Laser Disc to the INPUT Y/C terminals.

❷ Connect the VCR to INPUT VIDEO terminal.

❸ Select Y/C input source using the INPUT Y/C button on the remote control.

❹ Lock the memory data of the VCR of NTSC program using the FUNC button.

❺ Select VIDEO input source using the INPUT VIDEO button on the remote control.

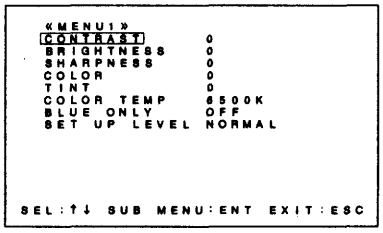
❻ Lock the memory data of the Laser Disc of NTSC program using the FUNC button.

Following this way, you can watch the Laser Disc or VCR in each setting of picture adjustment.

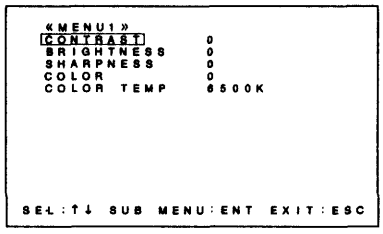
Adjusting the image

You can adjust all of your Projector's picture functions by using the on-screen menu.

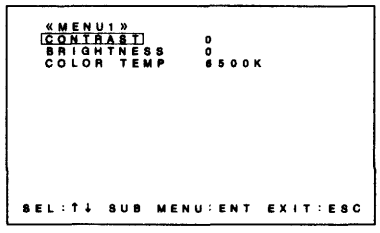
for VIDEO, Y/C input sources (NTSC program)

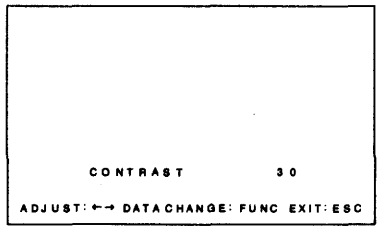


for VIDEO, Y/C input sources (PAL, SECAM program)



for INPUT A/B input sources





1. Press the MENU 1 button on the remote control. The MENU 1 will appear on the screen.

   Depending on the input source, the functions of MENU 1 screen will change.

2. Select one of the video function using the △ ▽ buttons; then press the ENTER button.

3. You will see the setting screen. Adjust the function using the ◁ ▷ buttons.

4. Press the function button (FUNC) to change the video function, and adjust it to your desired level.

5. When you finish the adjustment, press the escape button (ESC) until the DATA SAVE screen appears.

6. Save the data you have adjusted. See page 42 for data saving.

what you'll adjust:

"CONTRAST" controls the level of white-to-black in the picture.

"BRIGHTNESS" controls the light level of the image on screen.

"SHARPNESS" adjusts the detail and clarity of the picture.

"COLOR" determines the intensity of the color.

"TINT" adjusts the proportion of red to green that determines the delicate tones of color.

"COLOR TEMP(erature): 9300K/6500K/3200K/CUSTOM" is used to change the relative warmth of the picture. You can set the color temperature to your desired level in "CUSTOM" for each memory.

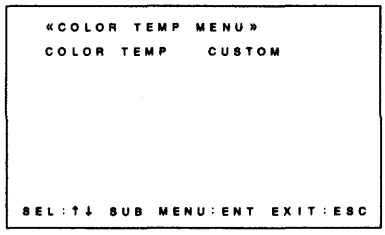
"BLUE ONLY ON/OFF" is used to adjust COLOR and TINT with the color bar video signal only for NTSC programs of VIDEO, Y/C input sources. When you set to "ON," the picture will become monochrome, and pressing the ENTER button will cause a menu screen to appear to adjust COLOR and TINT. When you quit the menu after adjustment, "BLUE ONLY" will return to "OFF" and color will return to the picture.

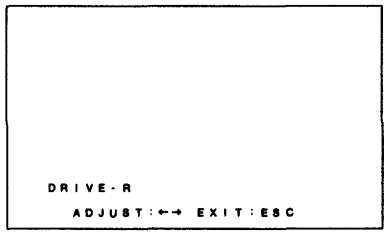
"SET UP LEVEL 0%/NORMAL/7.5%" controls the level of black color only for NTSC programs of VIDEO, Y/C input sources. Usually this function is set to "NORMAL." If black saturation appears, set to "0%"; if not so, set to "7.5%."

▷**Important:** For signals connected to INPUT A or B, the functions SHARPNESS, COLOR and TINT can not be adjusted.

▷**Important:** TINT is only available when watching NTSC programs.

<CUSTOM setting of COLOR TEMP>

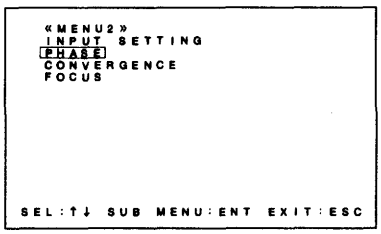




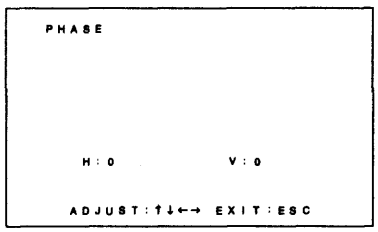
1. Set the "COLOR TEMP" to "CUSTOM" using the ◁ ▷ buttons; then press the ENTER button.
2. Select the color you will adjust using the CRT (R & B) button.
3. Adjust the Red or Blue to your desired level using the ◁ ▷ buttons.
4. When you finish the adjustment, press the escape button (ESC) until the DATA SAVE screen appears.
5. Save the data you have adjusted. See page 42 for data saving.

Adjusting the picture's position (PHASE)

You can use this feature to adjust the picture's position to the screen, if necessary.



1. Press the MENU 2 button on the remote control. The MENU 2 will appear on the screen.
2. Select "PHASE" using the △ ▽ buttons; then press the ENTER button.

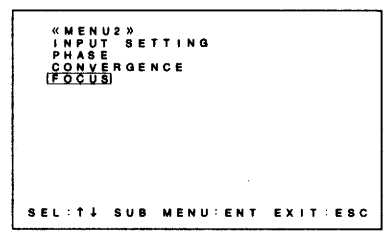


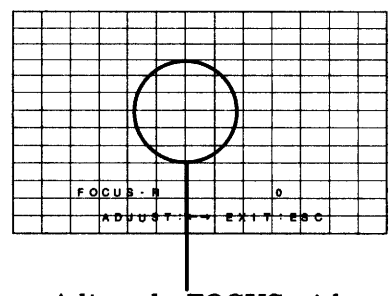
3. The screen for phase adjustment will appear. Adjust the position so that the picture fits the screen using the △ ▽ ◁ ▷ buttons.

   If the three colors (red, green, blue) do not match, fit green to the screen.
4. When you finish the adjustment, press the escape button (ESC) until the DATA SAVE screen appears.
5. Save the data you have adjusted. See page 42 for data saving.

Adjusting the focus

Normally, it is unnecessary to focus if the Projector has been correctly installed. In case that the Projector is out of focus, adjust the focus in the following way.





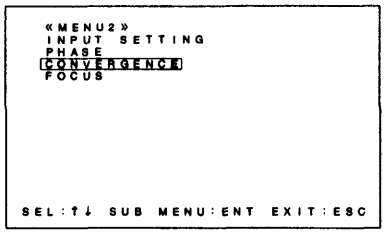
Adjust the FOCUS with attention to this.

1. Press the MENU 2 button on the remote control. The MENU 2 will appear on the screen.
2. Select "FOCUS" using the △ ▽ buttons; then press the ENTER button.
3. The test pattern for focus adjustment will appear.
   Press the CRT R button to adjust the red focus.
4. Use the ◁ ▷ buttons to adjust the focus (in the range -50~50) until the center line becomes sharp and clear.
5. Repeat adjusting the green or blue focus in the same way using the CRT (G, B) button and the ◁ ▷ buttons.
6. When you finish the adjustment, press the escape button (ESC) until the DATA SAVE screen appears.
7. Save the data you have adjusted. See page 42 for data saving.

▷**Important:** If you press the TEST button while the test pattern appears on the screen, the screen will return to the normal picture. In this case, press the TEST button again.

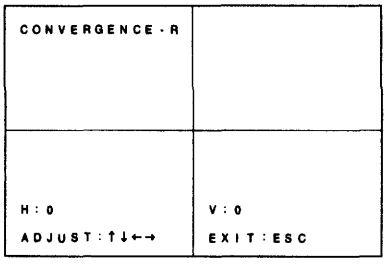
Adjusting the convergence

Your Mitsubishi Auto-Scan Graphics Projector has three picture tubes and large diameter lenses which are arranged in-line to project the light beams. Each picture tube projects only one color: red, green or blue. For the best color picture, the three colors should be converged at the center of screen. Convergence is the process of laying the red, green and blue beams on top of one another until they form a single white beam. Here is the procedure for converging the color beams:



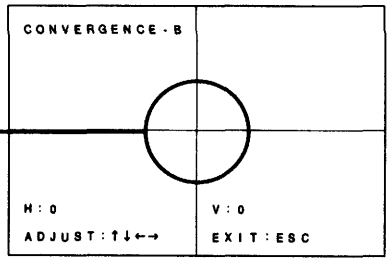
1. Press the MENU 2 button on the remote control. The MENU 2 will appear on the screen.

2. Select "CONVERGENCE" using the △ ▽ buttons; then press the ENTER button.



3. The built-in cross-hair test pattern will appear.
   Press the CRT R button to adjust the red convergence.

4. Use the △ ▽ ◁ ▷ buttons to converge the red line onto the green. Convergence has been obtained when the green line has turned yellow and no red or green edges remain.



Adjust the CONVERGENCE with attention to this.

5. Press the CRT B button to adjust the blue convergence.

6. Use the △ ▽ ◁ ▷ buttons to converge the blue line onto the green. Convergence has been obtained when the green line has turned cyan and no blue or green edges remain.

▷**Important:** If you press the CRT R button again on step 4 (also, CRT B button on step 6), you will see the white line on the test pattern.

7. When you finish the adjustment, press the escape button (ESC) until the DATA SAVE screen appears.

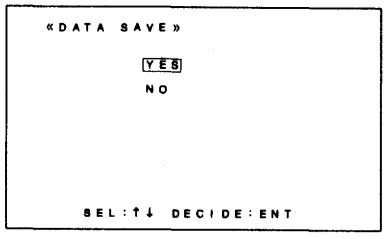
8. Save the data you have adjusted. See page 42 for data saving.

▷**Important:** If you press the TEST button while the test pattern appears on the screen, the screen will return to the normal picture. In this case, press the TEST button again.

Saving the data

After adjustment, you need to memorize the changes you have made. When you return the menu screen to the normal picture using the escape button (ESC) button, the DATA SAVE screen will appear only if a setting has been changed.

You will see the DATA SAVE screen.



To save the changes made:

- Select "YES" using the △ ▽ buttons; then press the ENTER button.

  The memory data will memorize the setting even after the Projector is turned on or off using the POWER button.

To not save the changes made:

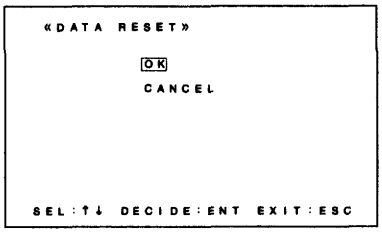
- Select "NO" using the △ ▽ buttons; then press the ENTER button.

  The memory data will not memorize the current setting.

  Note that the memory data is maintained until the Projector is turned off even if you select "NO" on data saving.

Resetting the data

You can use this feature to reset video settings to their normal level or setting. When you press the NORMAL button on the menu screen, DATA RESET screen will appear.



You will see the DATA RESET screen.

To reset the data:

- Select "OK" using the △ ▽ buttons; then press the ENTER button.

  The data will reset to the factory setting.

To not reset the data:

You can cancel the resetting in two ways.

- Select "CANCEL" using the △ ▽ buttons; then press the ENTER button.
- Press the ESC button to exit the DATA RESET screen.

The data will remain in the current setting.

CHAPTER 4

Installation Examples

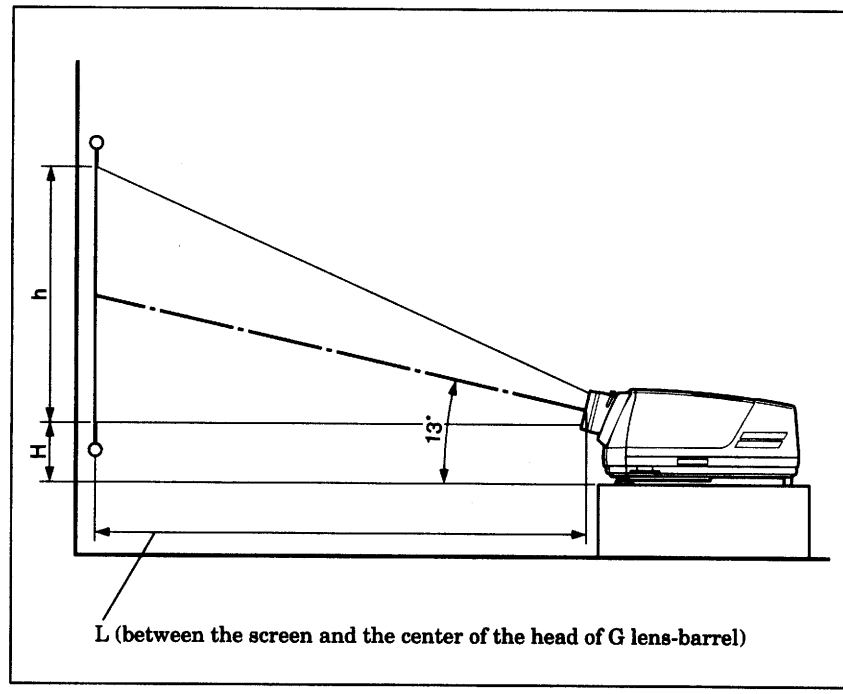
This chapter will explain some examples of standard installation. It contains the following topics:

- **Front projection (floor mount),**
- **Front projection (ceiling mount), and**
- **Rear projection.**

▷**Important:** To view a good picture, it is desirable that the room is dark.

▷**Important:** Leave the initial installation and adjustment to a licensed installer. This Projector is capable of projecting an image of 70 to 300 inches.

Front projection (floor mount)

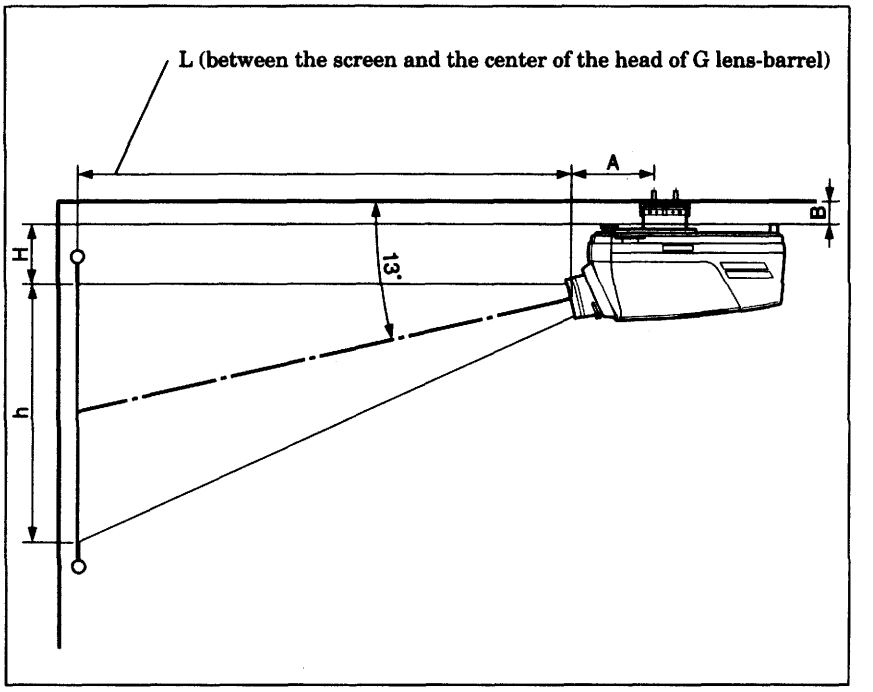


▷**Important:** When the Projector is directly placed on carpeted floor, it reduces ventilation of the fan on the bottom and might cause problems. Place a hard board or similar item under the Projector to facilitate ventilation of the unit.

Screen size	L dimension (inch)	H dimension (inch)	h dimension (inch)
70"	77.8	9.0	42.0
80"	88.3	8.4	48.0
90"	98.7	7.8	54.0
100"	109.1	7.2	60.0
110"	119.6	6.6	66.0
120"	130.2	6.1	72.0
150"	162.2	4.4	90.0
180"	193.8	2.8	108.0
200"	214.8	1.6	120.0
*250"	263.8	14.3	150.0
*300"	315.6	14.2	180.0

*When using 250" or 300" screen size, install the Projector at an angle of 16°. In this case, the base of the H dimension is set to the ground in contact with the back leg of the Projector.

Front projection (ceiling mount)



Ceiling-mount bracket	A dimension (inch)	B dimension (inch)
BR-006	14.1	0.5
BR-007	12.9	3.7
BR-008	8.7	20.6~30.0 (1 pitch: 0.8)

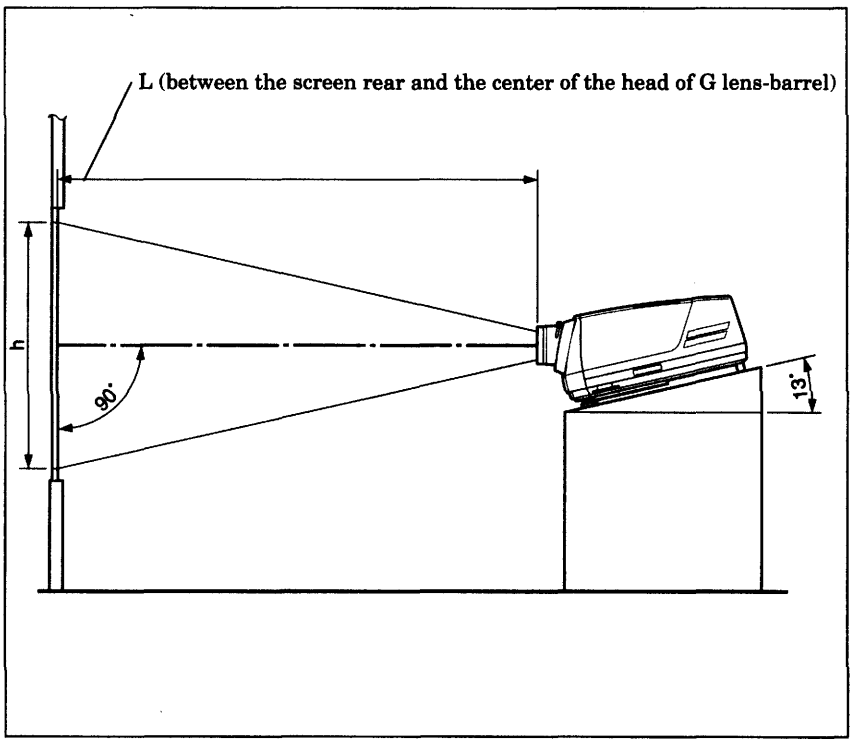
( ) = when using 250" or 300" screen size

Screen size	L dimension (inch)	H dimension (inch)	h dimension (inch)
70"	77.8	9.0	42.0
80"	88.3	8.4	48.0
90"	98.7	7.8	54.0
100"	109.1	7.2	60.0
110"	119.6	6.6	66.0
120"	130.2	6.1	72.0
150"	162.2	4.4	90.0
180"	193.8	2.8	108.0
200"	214.8	1.6	120.0
*250"	263.8	14.3	150.0
*300"	315.6	14.2	180.0

*When using 250" or 300" screen size, install the Projector at an angle of 16°, setting the axis of the ceiling-mount bracket as a center. In this case, the base of the H dimension is set to the back end of the back leg of the Projector.

Rear projection

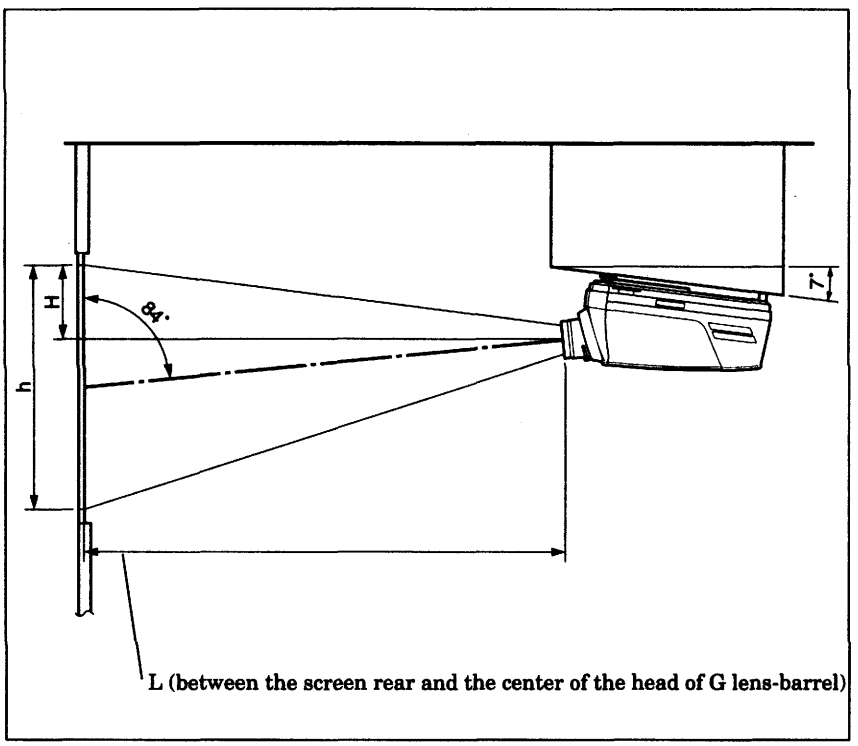
< type 1 >



Screen size	L dimension (inch)	h dimension (inch)
70"	79.8	42.0
80"	90.6	48.0
90"	101.3	54.0
100"	111.9	60.0
110"	122.8	66.0
120"	133.7	72.0
150"	166.5	90.0
180"	198.9	108.0
200"	220.5	120.0

▷**Important:** The attached parts for adjusting the angle of the picture tube faced lens are necessary for rear projecting. The adjustment by a licensed installer is required before rear projecting.

< type 2 >



Screen size	L dimension (inch)	H dimension (inch)	h dimension (inch)
70"	79.4	12.6	42.0
80"	90.1	14.5	48.0
90"	100.7	16.4	54.0
100"	111.3	18.3	60.0
110"	122.1	20.2	66.0
120"	132.9	22.0	72.0

▷**Important:** The attached parts for adjusting the angle of the picture tube faced lens are necessary for rear projecting. The adjustment by a licensed installer is required before rear projecting.

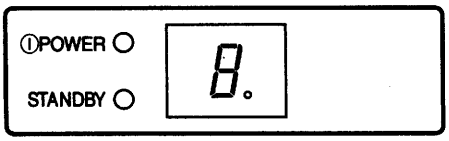
CHAPTER 5

Troubleshooting

Even though you're now familiar with the operations of the Projector, you may run into trouble from time to time as you become accustomed to the Projector. This chapter offers solutions to some of the common problems you may encounter. We suggest that you consult this chart before contacting a Mitsubishi service representative.

Troubleshooting (cont.)

Problems	Possible Solutions
• No picture appears on the screen.	• Check that the AC power cord is plugged into power inlet. • Check that you're selecting the input source correctly which the terminal is connected. • Check that the cables connected to the terminal haven't come off. • Check that the external equipment is turned on. • Check that the picture isn't being muted. (The indicator is blinking in green.)
• The Projector crackles when the power is turned on.	• Crackling is caused by static electricity and does not indicate any problem with the set.
• You can't get a good color balance.	• Check that the external equipment is properly connected to the Projector.
• The remote control doesn't work.	• Check that the batteries are installed correctly. • Be sure that you are pointing the top of the remote control toward the screen from a distance of no more than 20 feet. (when using the wireless remote control.) • Be sure that the remote control cable is connected to both the REMOTE 4 terminal and the wired remote control terminal of the remote control when using the wired remote control. • Press FUNC, 0, 0 in succession to cancel the remote ID function. • Check that the SWITCH 2 of INSTALLATION SWITCH isn't set to ON.

Problems	Possible Solutions
• The cabinet makes a creaking sound.	• The sound is caused by the expansion and contraction of the cabinet when the temperature changes. This has no bad influence upon the performance.
• The picture is unclear.	• Check that the Projector is installed properly.
• The number 0~7 is displayed in red in the 7 segment LED display, and then the Projector is automatically turned off. 	• This means the Projector has detected a fault in itself. Consult your MITSUBISHI Authorized Warranty Service Center.

▶Warning: Don't leave stationary images from a video disk or personal computer, on screen for more than 1 hour. Still patterns can damage the Projector causing permanent damage to the picture tube.
Should you need to project stationary images for a long time, set "CONTRAST" to the lower position for protecting the picture tube.
If the picture tube is damaged, and it becomes necessary to exchange it for a new one, payment is required even in the period of guarantee.
Consult your MITSUBISHI dealer or MITSUBISHI Authorized Warranty Service Center about exchanging picture tubes.

▷Important: For maximum enjoyment and safe operation of your MITSUBISHI Auto Scan Graphics Projector, please read the "IMPORTANT SAFEGUARDS" carefully and apply them properly.

List of messages

This Projector has 4 on-screen messages for informing you of that any trouble occurs.

Messages	Check the followings:
"INPUT A* NO SIGNAL"	• You are selecting the input source correctly. • The equipment connected to the Projector is turned on. • The cables haven't come off.
"INPUT VIDEO* NEW SIGNAL"	• Memory data isn't locked in the input terminal. • Memory data has been initially memorized. When you connect new equipment which is not included in memory data, see Set Up & Installation Manual. The adjustment on memorization of new equipment can be made by a service engineer who has techninal knowledge, so that we recommend you to consult Mitsubishi Authorized Warranty Service Center.
"THIS SIGNAL CAN'T BE ENABLED ! NTSC, PAL OR SECAM INPUT ONLY"	• The memory data except NTSC, PAL and SECAM of the INPUT VIDEO or the Y/C input signal is automatically locked. See page 35, "Locking the memory data."
"NAME ALREADY IN USE, PLEASE ENTER A DIFFERENT NAME"	• You can't use the name which is already entered for other memory.

**The underlined can be INPUT A, INPUT B, INPUT VIDEO, or INPUT Y/C on the selected input signal.*

Specifications

These specifications are subject to change without notice.

Optical

Projection system:	3 picture tubes, 3 lenses, Horizontal inline system
Picture tube:	The impregnated cathode picture tube with an electro magnetic focusing system
Projection lens:	F 1.1, 8 lenses, hybrid lens, multi-coating
Projected image:	70~300 inches measured diagonally
Light output:	900 lumen (white peak)

General (Electric)

Color system:	NTSC, PAL, and SECAM systems, switched automatically
Resolution:	1600 dots × 1200 lines
RGB inputs:	Horizontal frequency 15kHz~103kHz
	Vertical frequency 40Hz~150Hz
Test signal:	Built-in test pattern

Inputs:

VIDEO IN

INPUT Y/C

Y: BNC connector
1.0Vp-p±20% synchronous negative 75Ω terminated

C: BNC connector
0.286 Vp-p±20% synchronous negative 75Ω terminated (NTSC)
0.3Vp-p±20% synchronous negative 75Ω terminated (PAL)

Y/C: 4-pin DIN connector
Y (luminance) signal:
1.0Vp-p±20% synchronous negative 75Ω terminated
C (chrominance) signal:
0.286Vp-p±20% 75Ω terminated (NTSC)
0.3Vp-p±20% 75Ω terminated (PAL)

INPUT VIDEO

VIDEO: BNC connector
1.0Vp-p±20% synchronous negative 75Ω terminated

Specifications (cont.)

RGB IN

R:	BNC connector 0.7Vp-p±20%, 75Ω terminated, positive
G:	BNC connector 0.7Vp-p±20%, 75Ω terminated, positive synchronizing signal input 1.0Vp-p±20%, 75Ω terminated, positive
B:	BNC connector 0.7Vp-p±20%, 75Ω terminated, positive
HD/CS:	BNC connector composite synchronous input, 0.3~5.0Vp-p, 75Ω terminated, positive / negative Horizontal synchronous input, 0.3~5.0Vp-p, 75Ω terminated, positive / negative
VD:	BNC connector Vertical synchronous input 0.3~5.0Vp-p, 75Ω terminated, positive / negative

REMOTE

REMOTE 1:	9-pin connector (see page 57, "Pin assignment")
REMOTE 2:	15-pin connector (see page 57, "Pin assignment")
REMOTE 3:	9-pin connector (see page 57, "Pin assignment")
REMOTE 4:	Ø3.5 jack

ACL IN/OUT

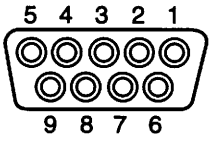
ACL IN:	BNC connector
ACL OUT:	BNC connector

General

Power requirements:	AC120V, 50/60Hz
Power consumption:	500W
Temperature (performance guarantee):	5°C~35°C (Humidity 20~80%)
Temperature (preservable):	-20°C~60°C (Humidity 10~90%)
Outside dimensions:	25.08 × 15.12 × 34.41 (width × height × depth) inch
Weight:	167.8 lb.
Option:	Connecting cable, JC-BNC15D

Pin assignment

REMOTE 1:



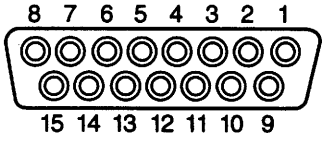
- Before using this terminal, please consult your Mitsubishi dealer or Mitsubishi Authorized Warranty Service Center.

RS-232C [D-SUB-9PIN]

You can control the Projector from your personal computer by connecting an RS-232C cable to the Projector.
This Projector's REMOTE 1 terminal is configured as a DTE (Data Terminal Equipment) device.
Use a cross cable (on sale) to directly connect your personal computer to the Projector.
This Projector's RS-232C connector conforms to the"Pin assignment" of an IBM compatible PC.

PIN NO.	CODE	NAME	I/O	REMARKS
1	CD	Carrier Detect	Input	(N.C.) Not connected
2	RD	Receive Data	Input	
3	SD	Send Data	Output	
4	ER	Equipment Ready	Output	Internal connecting to PIN 6
5	SG	Signal Ground		
6	DR	Data Set Ready	Input	Internal connecting to PIN 4
7	RS	Request to Send	Output	Internal connecting to PIN 8
8	CS	Clear to Send	Input	Internal connecting to PIN 7
9	CI	Ring Indicator	Input	(N.C.) Not connected

REMOTE 2:



- Before using this terminal, please consult your Mitsubishi dealer or Mitsubishi Authorized Warranty Service Center.

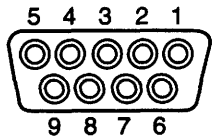
RS-422A/485 [D-SUB-15PIN]

- Communication by RS-422A format
- Communication by RS-485 format

NO.	SIGNAL	I/O	LOGIC	422A	485	I/F-SW
*1	TXA/TRA	OUTPUT /INPUT OUTPUT	POS.	○	○	○
2	RXA	INPUT	POS.	○		○
3	GND			○	○	○
4	VD	OUTPUT				
5	IFCLKB	OUTPUT	NEG.			○
6	IFDOB	OUTPUT	NEG.			○
7	IFCSB	OUTPUT	NEG.			○
8	IFDIB	INPUT	NEG.			○
*9	TXB/TRB	OUTPUT /INPUT OUTPUT	NEG.	○	○	○
10	RXB	INPUT	NEG.	○		○
11	RC	INPUT				○
12	IFCLKA	OUTPUT	POS.			○
13	IFDOA	OUTPUT	POS.			○
14	IFCSA	OUTPUT	POS.			○
15	IFDIA	INPUT	POS.			○

Note: *PIN No.1,9
For RS-422A transmission, TXA and TXB (transmit A and B) output.
For RS-485 transmission, TRA and TRB (transmit-receive A and B) input-output.

REMOTE 3:



- Before using this terminal, please consult your Mitsubishi dealer or Mitsubishi Authorized Warranty Service Center.

AUX CONTROL [D-SUB-9-PIN]

Available when using the remote control for basic operation of the sequencer (contact relay).

PIN NO.	SIGNAL	SEQUENCER	SC
1	GND	O	O (PIN 1)
2	$\overline{\text{WIRED}}$	O	–
3	$\overline{\text{W.-POWER}}$	O	–
4	$\overline{\text{W.-INPUT1}}$	O	–
5	$\overline{\text{W.-INPUT2}}$	O	–
6	$\overline{\text{W.-PIC MUTE}}$	O	–
7	SC power control output	–	O (PIN 7)
8	Remote control signal output	–	O (PIN 9)
9	Remote control signal input	–	O (PIN 2)

Note: Disconnect (open) the terminals which are marked with a hyphen (-).

Control via the sequencer

1 When $\overline{\text{WIRED}}$ connects to GND, wired control of the Projector will be enabled. (You can also set the SWITCH 2 to ON with the service DIP-SW of the Projector.)
In this condition, you can control the functions (a~c) below only via the sequencer, and not with the remote control or personal computer.

a. Power on/off

b. Input Switch

c. Picture Mute

Functions other than a~c are still operable with the remote control or personal computer.

2

CONTROL SIGNAL				OPERATING CONDITION		
$\overline{\text{W.-POWER}}$	$\overline{\text{W.-INPUT1}}$	$\overline{\text{W.-INPUT2}}$	$\overline{\text{W.-PIC MUTE}}$	POWER	INPUT	PIC MUTE
OPEN	*	*	*	OFF	–	–
GND	OPEN	OPEN	OPEN	ON	INPUT A	OFF
GND	OPEN	GND	OPEN	ON	INPUT B	OFF
GND	GND	OPEN	OPEN	ON	VIDEO	OFF
GND	GND	GND	OPEN	ON	Y/C	OFF
GND	OPEN	OPEN	GND	ON	INPUT A	ON
GND	OPEN	GND	GND	ON	INPUT B	ON
GND	GND	OPEN	GND	ON	VIDEO	ON
GND	GND	GND	GND	ON	Y/C	ON

Note: Items marked (*) can be set to GND or OPEN.
$\overline{\text{W-POWER}}$, $\overline{\text{W-INPUT 1}}$ and $\overline{\text{W-INPUT 2}}$ can also be set with the Installation Switch of the Projector.

REMOTE 4:

HAND UNIT [Ø3.5 jack]

REMOTE 4 is the terminal for connecting the remote control and the Projector with a control cable. When the plug is inserted into the terminal of the Projector, this Projector can't receive the infrared signal from the remote control. Also, when the plug is inserted into the remote control, the infrared signal is not emitted from the remote control.

INSTALLATION SWITCH:

- Before using this switch, please consult your Mitsubishi dealer or Mitsubishi Authorized Warranty Service Center.

[DIP SWITCH]

When installing this Projector, it can be initialized to a predefined state by means of the INSTALLATION SWITCH.

SWITCH NO.	NAME (abbreviated)	FUNCTIONS	INITIAL SETTING
1	IN-DISP	Input display ON/OFF	ON
2	WIRED	Forced wired control ON/OFF	OFF
3	W.-POWER	Controling power ON/OFF when the forced wired "ON"	OFF
4	W.-INPUT1	Switching input sources when the forced wired "ON"	OFF
5	W.-INPUT2		OFF
6	(N.C.)	(empty)	OFF
7	GASR	ON/OFF when selecting Grouping ASR mode	OFF
8	485-TERM	Termination resistance ON/OFF when connecting RS-485 Set to "OFF" when connecting RS-422A	OFF

- SWITCH 2~5 are connected in parallel to pins 2~5 of the terminal REMOTE 3. Switch ON is GND, and Switch OFF is OPEN (resistance pull-up 5V). ON is prior to OFF.

Explanation of SW

SW1: By turning ON, input terminals selected in POWER ON and INPUT SWITCH and the called memory data name are displayed.

SW2: By turning ON, forced wired control turns ON and DIP SW 3~5 (REMOTE 3 PIN No. 3~6) functions operate.
Also by turning ON, POWER of the remote controller, the input switch and PICMUTE do not operate.

SW3: By turning ON when SW2 is ON, power turns ON immediately when turning ON MAIN SW.

SW4,5: When SW2 is ON, input can be switched by combining SW 4, 5 ON/OFF.

SW6: Unused SW (Usually OFF).

SW7: Turn ON when grouping ASR mode is used.

SW8: Turn ON only when RS-485 (REMOTE 2) is used and finish end is necessary.

Operation state		Installation SW setting		
In MAIN SW ON	INPUT	SW3(W.-POWER)	SW4(W.-INPUT 1)	SW4(W.-INPUT 2)
STAND-BY	—	OFF	*	*
POWER ON	INPUT A	ON	OFF	OFF
POWER ON	INPUT B	ON	OFF	ON
POWER ON	VIDEO	ON	ON	OFF
POWER ON	Y/C	ON	ON	ON

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