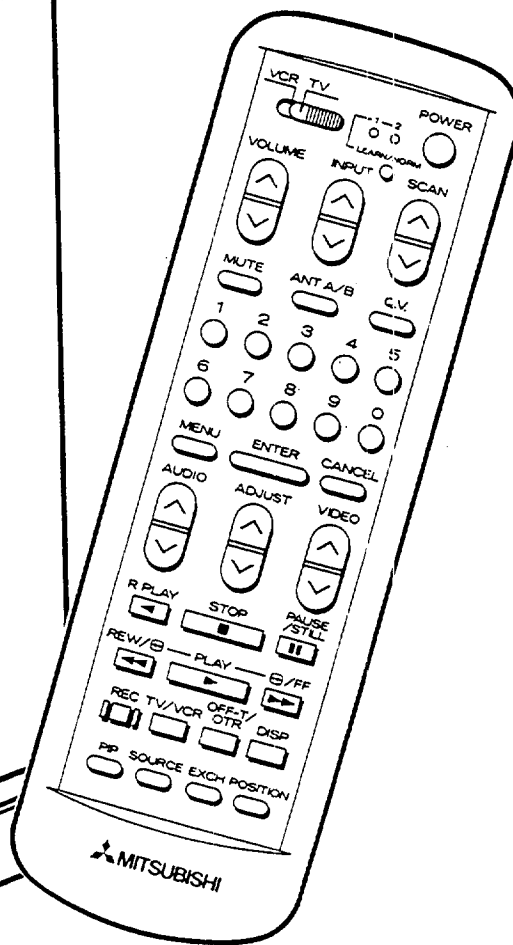
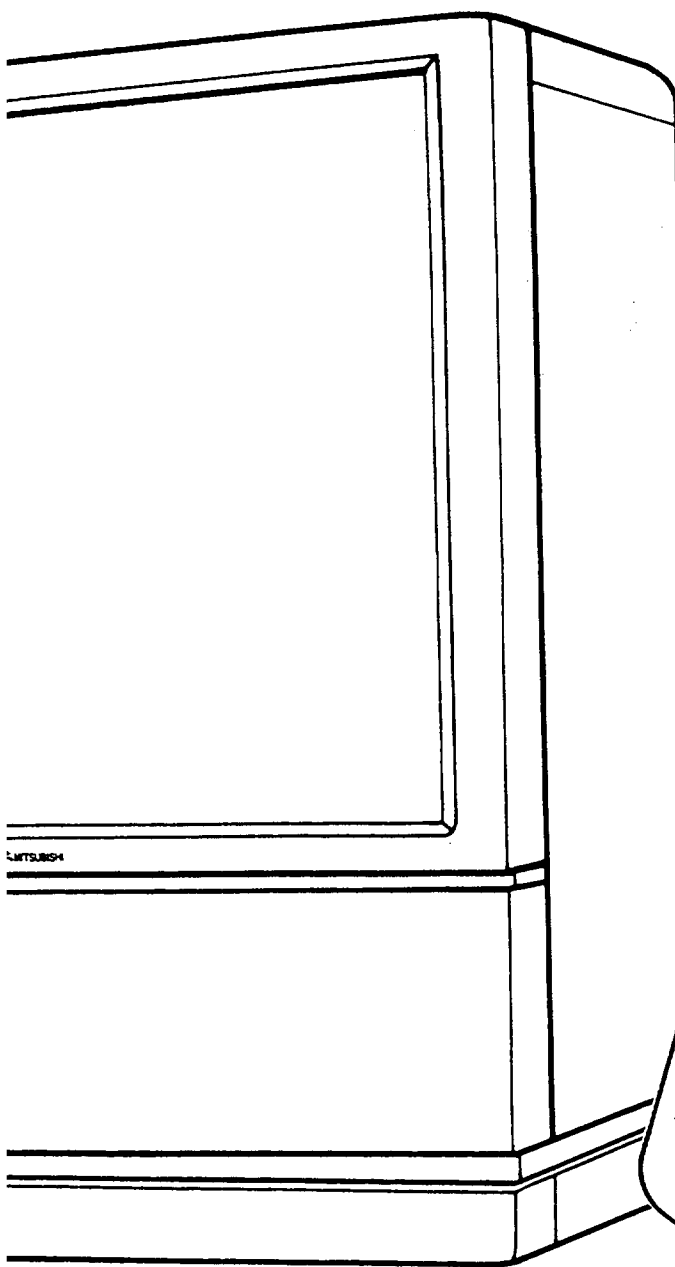
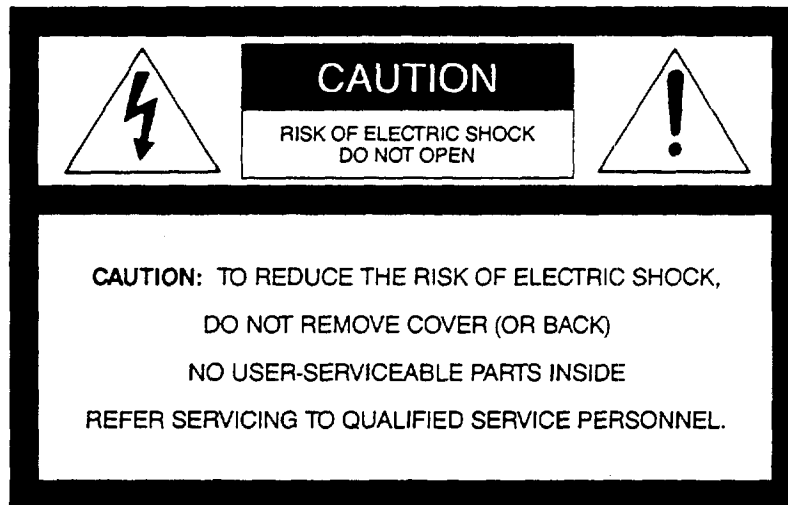


 MITSUBISHI

VS-45VA1
VS-45VA2
VS-50VA1
VS-50VA2
VS-60VA2

Projection TV Owner's Guide





The lightning 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 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.



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IMPORTANT SAFEGUARDS

PLEASE READ ALL THESE INSTRUCTIONS REGARDING YOUR TELEVISION SET AND RETAIN FOR FUTURE REFERENCES. FOLLOW ALL WARNINGS AND INSTRUCTIONS MARKED ON THE TV RECEIVER.

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 Projection TV 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 Projection TV 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 Projection TV on an unstable cart, stand, tripod, bracket, or table. The Projection TV 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 Projection TV. 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.



S3126A

9. Ventilation

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

10. Power Sources

This Projection TV 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 Projection TV is equipped with a polarized alternating current line plug having one blade wider than the other. This plug will fit into the power outlet only one way. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug should still fail to fit, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the polarized 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 Projection TV 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. Power Lines

An outside antenna system should not be located in the vicinity of overhead power lines or other electric light or power circuits, or where it can fall into such power lines or circuits. When installing an outside antenna system, extreme care should be taken to keep from touching such power lines or circuits as contact with them might be fatal.

15. Overloading

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

16. Object and Liquid Entry

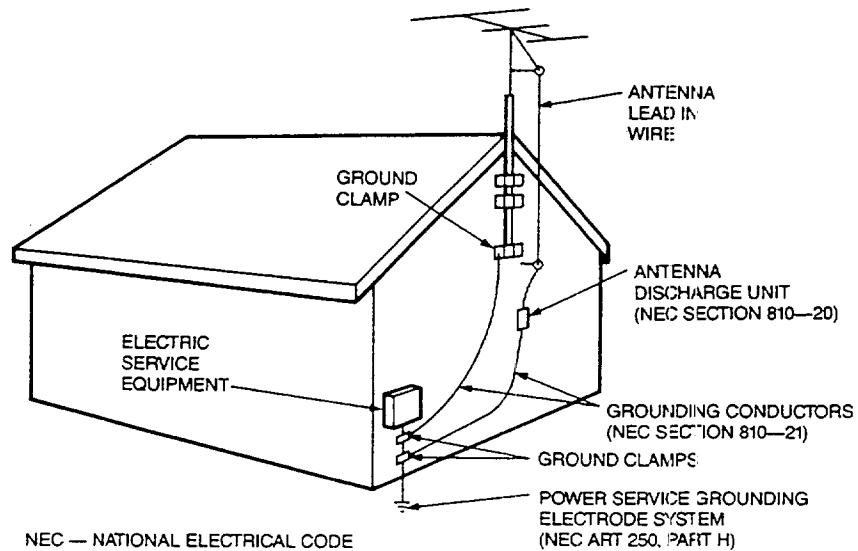
Never push objects of any kind into this Projection TV through openings as they may touch dangerous voltage points or short-out parts that could result in a fire or electric shock. Never spill liquid of any kind on the Projection TV.

17. Outdoor Antenna Grounding

If an outside antenna or cable system is connected to the Projection TV be sure the antenna or cable system is grounded so as to provide some protection against voltage surges and built-up static charges.

Section 810 of the National Electrical Code, ANSI/NFPA No. 70-1984, provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna-discharge unit, connection to grounding electrodes, and requirements for the grounding electrode.

EXAMPLE OF ANTENNA GROUNDING
AS PER NATIONAL ELECTRICAL CODE



NEC — NATIONAL ELECTRICAL CODE

18. Servicing

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

19. Damage Requiring Service

Unplug this Projection TV 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 Projection TV.
- (c) If the Projection TV has been exposed to rain or water.
- (d) If the Projection TV 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 qualified technician to restore the Projection TV to its normal operation.
- (e) If the Projection TV has been dropped or the cabinet has been damaged.
- (f) When the Projection TV exhibits a distinct change in performance — this indicates a need for service.

20. 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.

21. Safety Check

Upon completion of any service or repairs to this Projection TV ask the service technician to perform safety checks to determine that the Projection TV is in a safe operating conditions.



Welcome to Mitsubishi

Congratulations on your purchase of the Mitsubishi Projection TV. Your Projection TV is designed for superb viewing pleasure as well as continued reliability.

To familiarize you with your new Projection TV and owner's guide, we suggest that you read through the preface, which provides the following important information.

- ◆ **Summary of Special Features**
- ◆ **Unpacking Your Projection TV**
- ◆ **What's in Each Chapter**
- ◆ **Some Conventions Used in This Guide**

Mitsubishi has strived to create your Projection TV 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 Projection TV delivers:

- **181-Channel Capacity**---programs up to 181 channels, ensuring your continued viewing pleasure as cable services continue to expand.
- **Two-Speaker Sound System**---a special speaker system produces clear, stereo sound.
- **Expanded Sound Capability**---allows you to connect the Projection TV to an external audio system for enhanced listening pleasure.

In addition to the standard features found on most advanced Projection TVs, Mitsubishi is proud to offer the following distinctive features:

- **Remote Control with VCR/TV Function**---uses a single remote control transmitter for the television and select Mitsubishi VCRs.
- **Learning Remote Control Unit**---can learn the functions of other remote control unit.
- **On-Screen Displays**---indicates the status of various functions and appears whenever a function is adjusted.
- **Picture-in-Picture Mode**---allows you to view two different sources at the same time.

Each of these features will be explained in more detail in Chapter 3, "Operating Your Projection TV."

◆ Unpacking Your Projection TV

What you will find

As you unpack your new Mitsubishi Projection TV, please check to be sure that the following items are included:

- an owner's guide,
- a remote control transmitter,
- a set of two size AAA batteries for the remote control and,
- a belt for VCR (VS-45VA1, VS-45VA2, VS-50VA1 and VS-50VA2 only).

A few suggestions

Before you hook up your new Projection TV please take a few minutes to:

- ① Complete the registration card. The registration card asks for the Projection TV'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 and warranty card.
- ④ Place the Projection TV on a stable surface with sufficient lighting to do the hook-up.

◆ What's in Each Chapter

Here's what you will find in this owner's guide:

Chapter 1, "Getting to Know Your Projection TV", introduces you to the location and functions of the buttons, controls and terminals of your Projection TV.

Chapter 2, "Connecting Your Projection TV", explains how to connect a VCR, antenna, decoder and other equipment to your Projection TV.

Chapter 3, "Operating Your Projection TV", provides the step-by-step instructions you need in order to use your Projection TV.

Chapter 4, "Using the Special Features", explains how to use some of your Projection TV's special features.

Chapter 5, "Troubleshooting", summarizes the problems you may have along with the suggestions for remedying these problems.

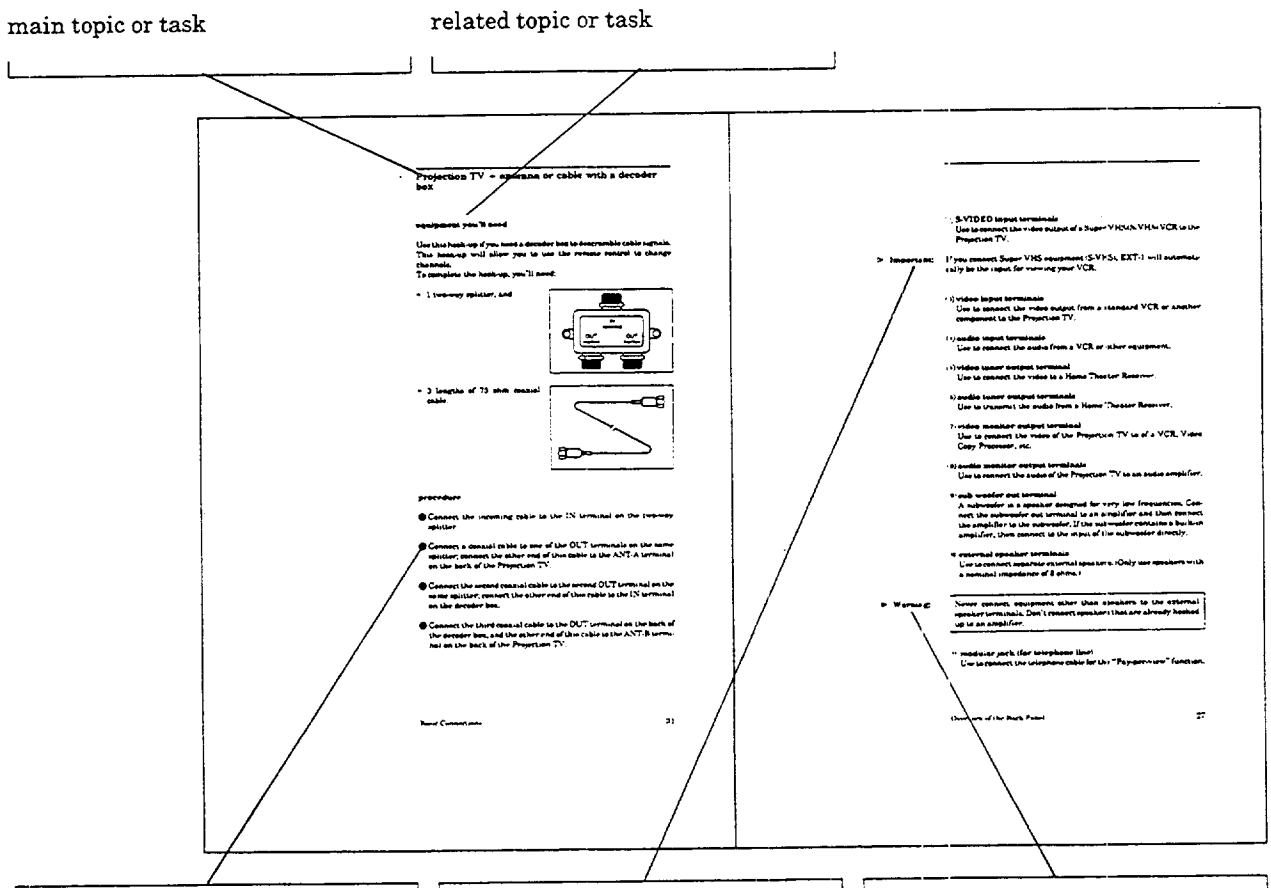
The appendix explains an automatic procedure for the channel lock.

You'll also find a detailed index at the back of the book.

Some Conventions Used in this Guide

Mitsubishi has gone to great effort to provide users with an easy-to-follow, useful owner's guide. Different types of information is treated in different ways.

Users should read information labeled **important** and information which is boxed and labeled **warning**. The owner's guide uses these terms sparingly, and all information highlighted in this manner should be read carefully.



1, 2, etc.

Procedures, the step-by-step instructions on how to accomplish a particular task, are signalled by white numbers set in a black background.

▶ Important:

This cue indicates information critical to the operation of your new Projection TV.

▶ Warning

This cue alerts you to information describing dangerous situations which could ruin your equipment or cause electrical shock.



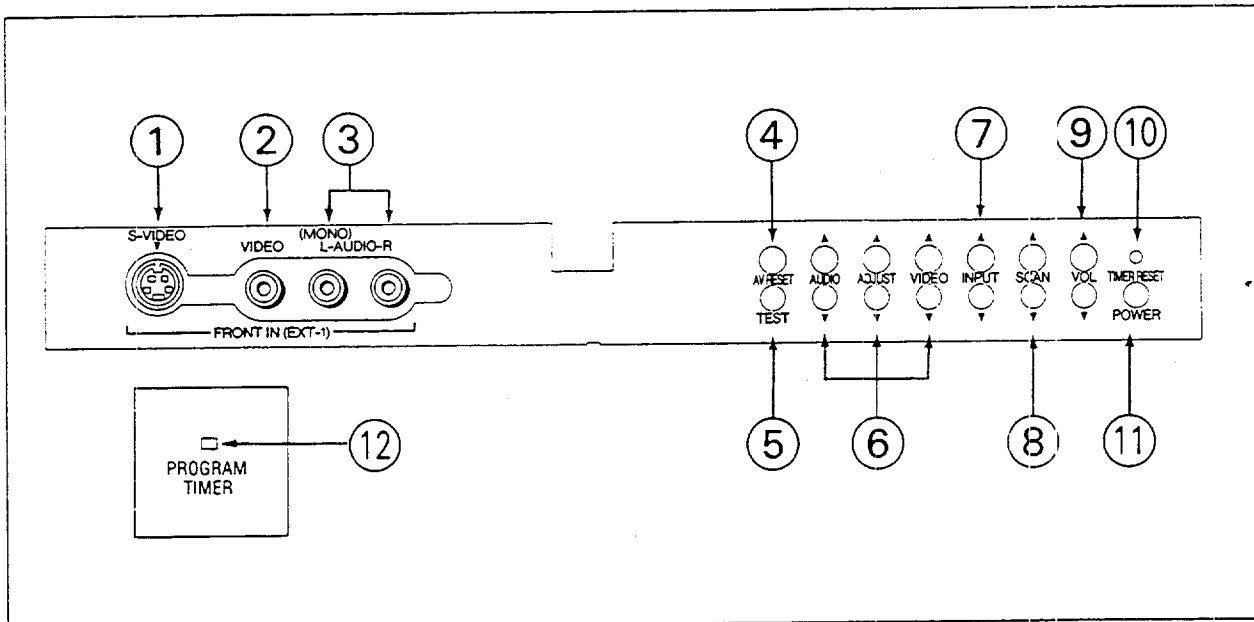
Getting to Know Your Projection TV

Now that you've unpacked your Projection TV, read through the safety information, and glanced at the overview explaining how this owner's guide is organized, it's time to become familiar with the buttons and controls you'll be using when you operate the TV. This chapter will introduce the range of options available by using the buttons on the front panel of the TV or the remote control. It also offers some general guidelines for using the remote control.

Most functions can be controlled by using either the front panel or the remote control, but certain specialized functions require the use of one or the other. This chapter, which will familiarize you with the full range of button functions, contains the following sections:

- ◆ **Overview of the Front Panel**
- ◆ **Overview of the Remote Control**

Overview of the Front Panel



① S-VIDEO input terminal

Use to connect the video output of a Super VHS (S-VHS) VCR to the Projection TV.

▷ **Important:** If you connect Super VHS equipment (S-VHS), EXT-1 will automatically be the input for viewing S-VHS VCR.

② video input terminals

Use to connect the video output from a VCR or another video component.

③ audio input terminals

Use to connect the audio output from a VCR or other equipment.

④ AV reset button

Press to reset all audio and video functions except volume, reception mode (Stereo/SAP/Mono) and Projection TV Speaker (Internal/External) to their normal level or setting.

⑤ test button (TEST)

This button is used to adjust optimum convergence.

⑥ audio and video controls

These buttons are used in pairs to adjust features of the image or sound (other than volume) with a two-step process: using one of the audio or video buttons to select a function, and then using the adjust buttons.

-
- **audio function buttons (AUDIO)** — Use either the ▲ button or the ▼ button to select one of the following audio functions:
 - listen to stereo/sap/mono,
 - monitor out variable/fixed,
 - extra bass,
 - speaker internal/external,
 - audio expansion on/off,
 - balance,
 - treble, or
 - bass.
 - **video function buttons (VIDEO)** — Use either button to select one of the following video functions:
 - tint,
 - color,
 - contrast,
 - brightness,
 - sharpness,
 - video noise reduction on/off,
 - notch filter,
 - color temperature, or
 - color bias.
 - **adjust buttons (ADJUST)** — After selecting the audio or video function, use either the ▲ button or the ▼ button to adjust the function you've selected. The adjust buttons can be used to:
 - turn the function on or off (e.g., expansion),
 - increase or decrease the function (e.g., color),
 - shift from one end of a scale to the other (e.g., balance), or
 - select a position (e.g., stereo).
- ⑦ **input buttons (INPUT)**
Use either button to select the input source to view:
- Antenna A,
 - Antenna B, or
 - External 1 or 2.
- ⑧ **channel controls (SCAN)**
Use the ▲ button to switch to a channel with a higher number and the ▼ button to switch to a channel with a lower number.
- ⑨ **volume controls (VOL)**
Press the ▲ button to turn up the volume and the ▼ button to turn down the volume.
- ⑩ **timer reset button**
Use to change all the settings to the initial factory set-up. Any programs in memory and the clock-time are erased.
- ⑪ **power button (POWER)**
Use to turn the Projection TV on or off.
- ⑫ **program timer indicator (PROGRAM-TIMER)**
Lights up when the Projection TV is programmed to turn on at a particular time.

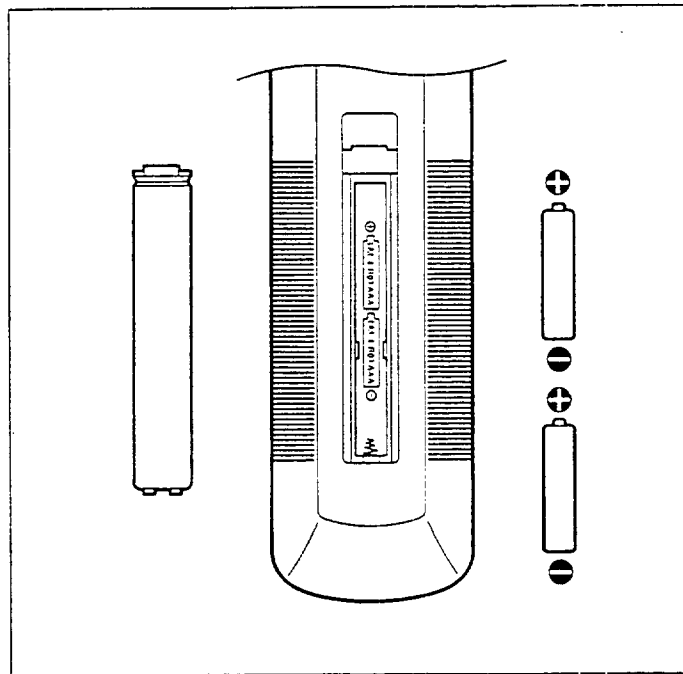
◆ Overview of the Remote Control

Getting ready to use the remote control

This section explains general information about using the remote control.

installing the batteries

- ❶ Take the box containing two size AAA batteries from the packing bag.
- ❷ Remove the back cover of the remote control.
- ❸ Load the batteries as indicated in the illustration, making sure that they are positioned correctly (+ to +, and - to -).
- ❹ Replace the back cover of the remote control.



For best results, use Duracell AAA (MN2400) 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 become heated.
- 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.

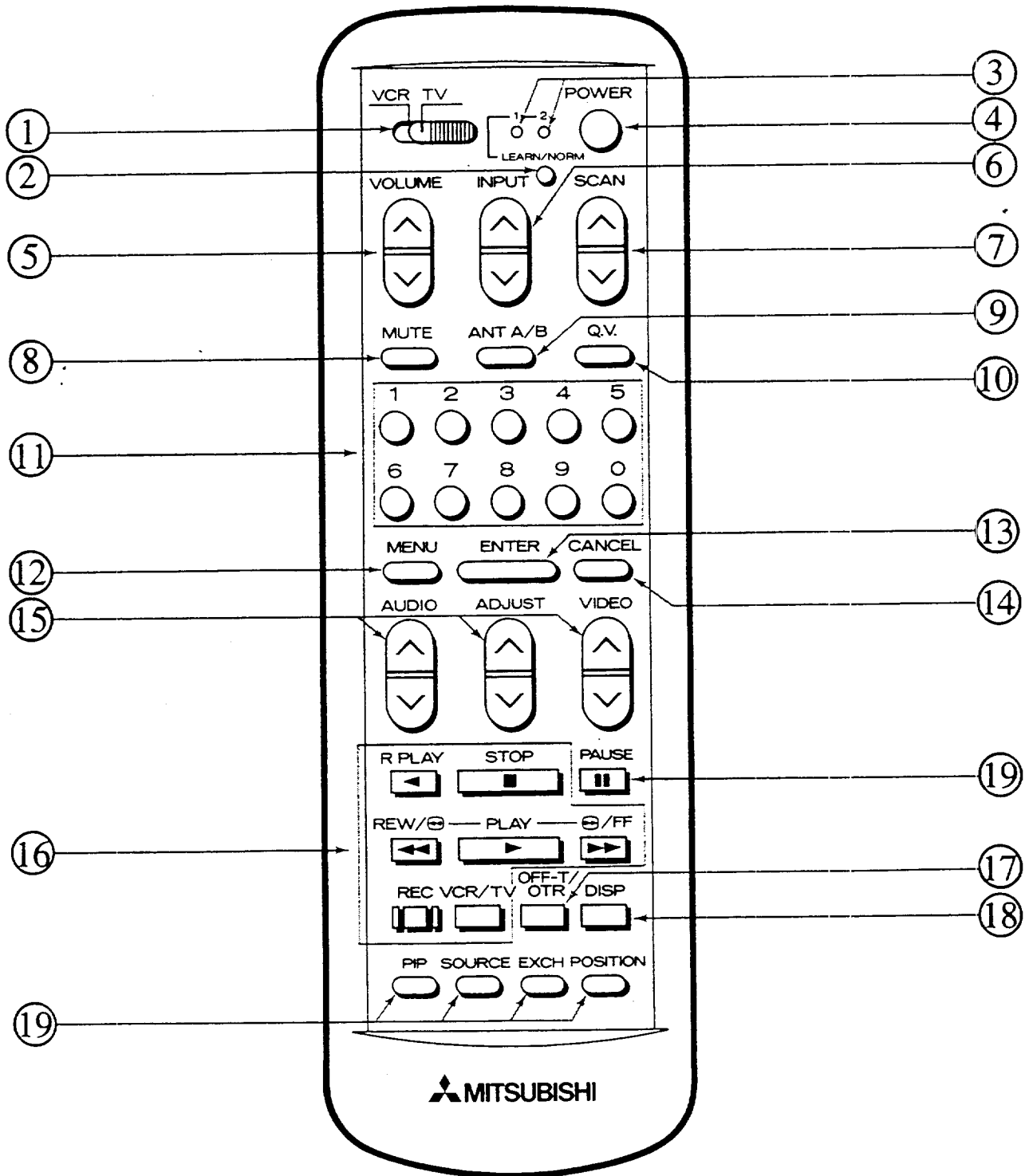
general instructions

When using the remote control to operate the Projection TV or VCR, follow these procedures:

- ① Be within 20 feet of the Projection TV.
- ② Point the top of the remote control toward the Projection TV.
- ③ Press the appropriate button or groups of buttons.

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

Remote control buttons and functions



-
- ① **VCR/TV control (VCR/TV)**
Set to "VCR" to operate the VCR and "TV" to operate the Projection TV.
 - ② **learn button (LEARN/NORM)**
Use to program the remote control. See "Programming the remote control," page 49.
 - ③ **learning indicators**
See "Programming the remote control," page 49.
 - ④ **power button (POWER)**
Use to turn the Projection TV on or off.
 - ⑤ **volume control (VOL)**
Press the top part of the button to turn up the volume; press the lower part of the button to reduce the volume. This button works for the Projection TV even if the VCR/TV control is set to "VCR".
 - ⑥ **input button (INPUT)**
Use to select the input source to be monitored:
 - TV, or
 - External 1 or 2.
 - ⑦ **channel control (SCAN)**
Press the top part of the button to change to a channel with a higher number; press the bottom part to change to a channel with a lower number.
 - ⑧ **mute control (MUTE)**
Use to turn the sound off completely or restore it to its original volume. This button works for the Projection TV even if the VCR/TV control is set to "VCR".
 - ⑨ **antenna button (ANT A/B)**
Press to switch antenna between A and B.
 - ⑩ **quick view (Q.V.)**
Press to switch between the current channel and the last one viewed. When the super-quick-view tuning is set, it is used to view selected channels programmed into super quick view memory.
 - ⑪ **number buttons (0-9)**
Use to select a channel number, and to enter the parental lock code.
 - ⑫ **menu button (MENU)**
Projects an on-screen menu with additional instructions for special functions.
 - ⑬ **enter button (ENTER)**
May be used after selecting a channel number, an item from the on-screen menu, parental lock code, or for entering the desired channel number into super quick view memory.

Remote control buttons and functions (cont.)

- ⑭ **cancel button (CANCEL)**
This button is used to cancel the entered channel number within three seconds, to erase the parental lock code during the parental lock sequence, and to clear the channel programmed into super quick view memory.
- ⑮ **audio and video controls**
These buttons are used in pairs to adjust features of the image or sound (other than volume) with a two-step process: using one of the audio or video buttons to select a function, and then using the adjust buttons.
- **audio function buttons (AUDIO)**---Use either the top or the bottom part of the button to select one of the following audio functions:
 - listen to stereo/SAP/mono,
 - monitor out variable/fixed,
 - extra bass,
 - speaker internal/external,
 - audio expansion on/off,
 - balance,
 - treble, or
 - bass.
 - **video function buttons (VIDEO)**---Use to select one of the following video functions:
 - tint,
 - color,
 - contrast,
 - brightness
 - sharpness,
 - video noise reduction on/off,
 - notch filter on/off,
 - color temperature high/mid/low, or
 - color bias.
 - **adjust buttons (ADJUST)**---After selecting an audio or video function, use either the ▲ button or the ▼ button to adjust the function you've selected. The adjust button can be used to:
 - turn the function on or off (e.g., expansion),
 - increase or decrease the function (e.g., color),
 - shift from one end of a scale to the other (e.g., balance), or
 - select a position (e.g., stereo).These are also used to select an item from the on-screen menu.
- ⑯ **VCR buttons**
Can be used to control most Mitsubishi VCRs (See your VCR's owner's guide for additional information). These buttons work with the VCR even if the VCR/TV control is set to "TV".
- ⑰ **off-timer button (OFF-T/OTR)**
Use to program the TV to turn off automatically at a later time.
- ⑱ **display button (DISP)**
Use to view an on-screen summary of the current settings for Projection TV or cable functions.

① **picture-in-picture controls**

Use to control the special picture-in-picture (PIP) function.

- **PIP button (PIP)**--Press to see the reduced PIP image or cancel it.
- **pause button (PAUSE)**--Press to freeze the reduced PIP image or cancel the image freezing.
- **source button (SOURCE)**--Press repeatedly to switch the source of the reduced PIP image between the TV and the external inputs.
- **exchange button (EXCH)**--Press to switch back and forth between the reduced PIP image and the main image.
- **position button (POSITION)**--Press to move the position of the reduced PIP image.



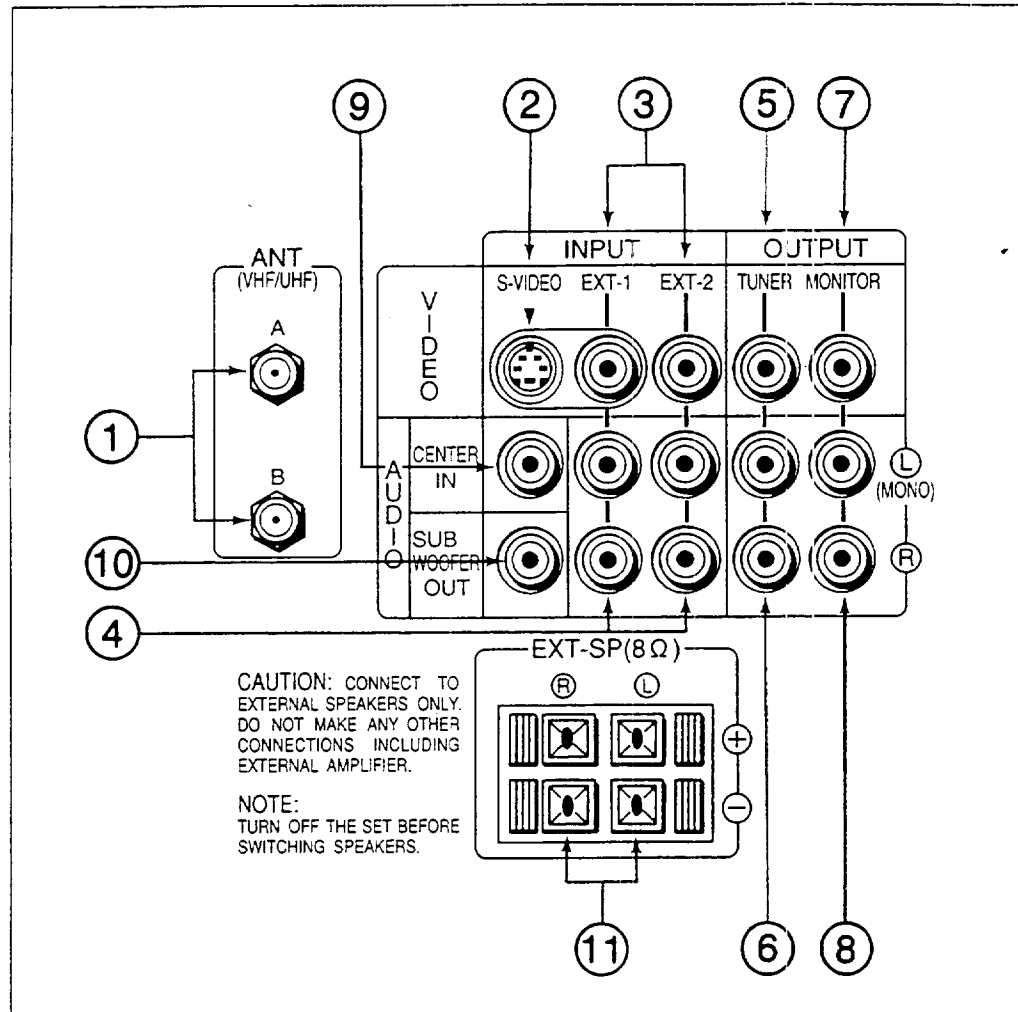


Connecting Your Projection TV

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 **antenna terminals (ANT-A, ANT-B)**

Use to connect VHF/UHF antennas.

② **S-VIDEO input terminal**

Use to connect the video output of a Super VHS (S-VHS) VCR to the Projection TV.

▷ **Important:** If you connect Super VHS equipment (S-VHS), EXT-1 will automatically be the input for viewing your VCR.

-
- ③ **video input terminals**
Use to connect the video output from a standard VCR or another component to the Projection TV.
 - ④ **audio input terminals**
Use to connect the audio from a VCR or other equipment.
 - ⑤ **video tuner output terminal**
Use to connect the video to a Home Theater Receiver.
 - ⑥ **audio tuner output terminals**
Use to transmit the audio to a Home Theater Receiver.
 - ⑦ **video monitor output terminal**
Use to connect the video of the Projection TV to a VCR, Video Copy Processor, etc.
 - ⑧ **audio monitor output terminals**
Use to connect the audio of the Projection TV to an audio amplifier.
 - ⑨ **center channel input terminal (VS-50VA1, VS-50VA2 and VS-60VA2 only)**
Use to connect the central channel output from an amplifier that delivers surround sound, such as an HTS-100. If you make this connection, your television's speakers will play only the center channel signal from your amplifier.
 - ⑩ **subwoofer out terminal**
A subwoofer is a speaker designed for very low frequencies. Connect the subwoofer out terminal to an amplifier and then connect the amplifier to the subwoofer. If the subwoofer contains a built-in amplifier, then connect to the input of the subwoofer directly.
 - ⑪ **external speaker terminals**
Use to connect separate external speakers. (Only use speakers with a nominal impedance of 8 ohms.)

► **Warning:**

Never connect equipment other than speakers to the external speaker terminals. Don't connect speakers that are already hooked up to an amplifier.

◆ Basic Connections

This section explains the basic connections you will need to make between your Projection TV, antennas, and VCR. You will see there are different connections shown depending upon whether you have a decoder box and the type of antenna you are using. Choose the type of connection for the type of equipment you have.

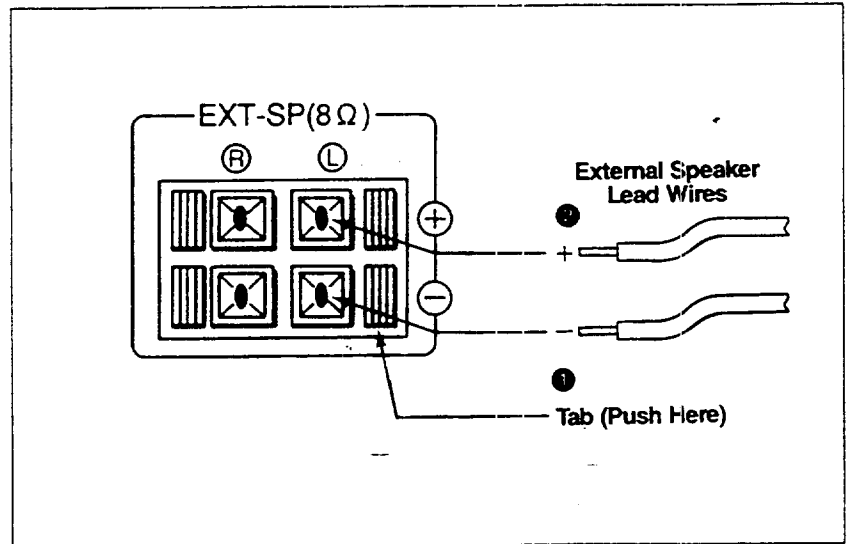
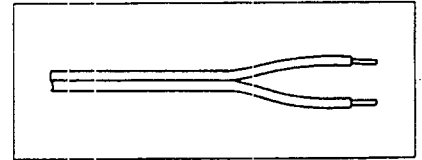
- **Projection TV + external speakers,**
- **Projection TV + antenna or cable without a decoder box,**
- **Projection TV + antenna or cable with a decoder box,**
- **Projection TV + separate UHF and VHF antennas,**
- **Projection TV + VCR + antenna or cable without a decoder box,**
- **Projection TV + VCR + antenna or cable with a decoder box,**
- **Projection TV + home theater receiver (A/V receiver),**
- **Projection TV + audio system,**
- **Projection TV + external speaker with subwoofer out terminal, and**
- **Projection TV + an amplifier that has a center channel OUT terminal (VS-50VA1, VS-50VA2, and VS-60VA2 only).**

Projection TV + external speakers

equipment you'll need

To complete this hook-up, you'll need:

- 1 set of speaker lead wires

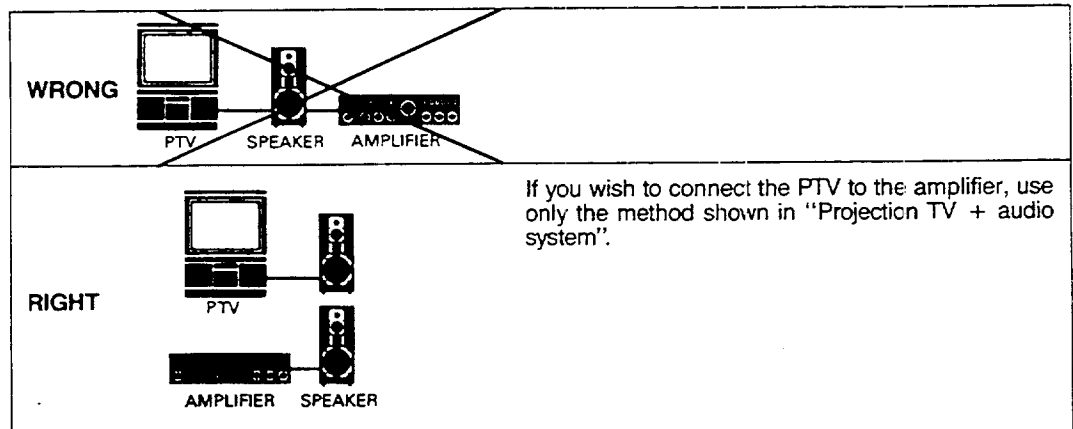


procedure

- ➊ Push down on the tab of the external speaker (EXT-SP) terminal on the back panel of the Projection TV.
- ➋ Insert the appropriate speaker lead into the terminal. Be sure that the + and - leads from the speakers are connected to the corresponding + (red) and - (black) external speaker terminals.
- ➌ To listen to external speakers, set the speaker to "External" using the audio and adjust buttons.

► Warning:

Never connect equipment other than speakers to the external speaker terminals.

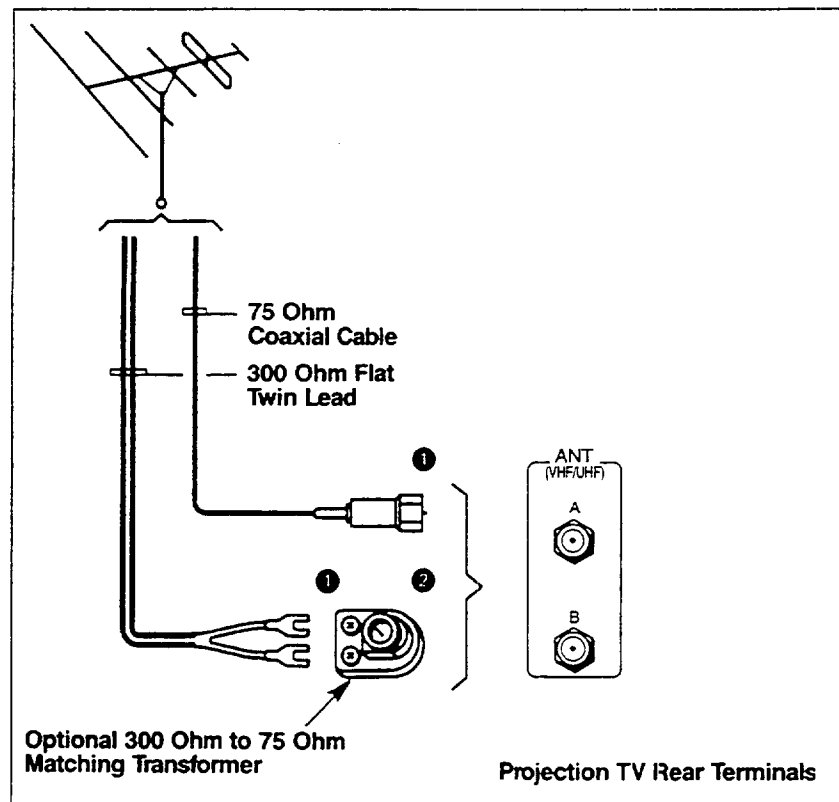
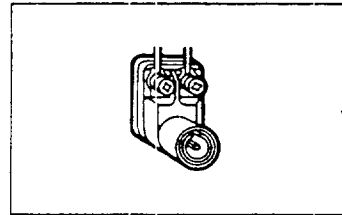


Projection TV + antenna or cable without a decoder box

equipment you will need

If you have a standard 75-ohm coaxial cable, you will not need additional equipment. If your antenna has two leads (called flat twin leads), you'll need:

- 1 75-300 ohm transformer.



connecting a cable

- 1 Push or screw the end of the cable onto the ANT-A terminal on the Projection TV.

connecting an antenna with flat twin leads

- 2 Use a screwdriver to connect the leads to the transformer.
- 2 Push or screw the transformer onto the ANT-A terminal on the Projection TV.

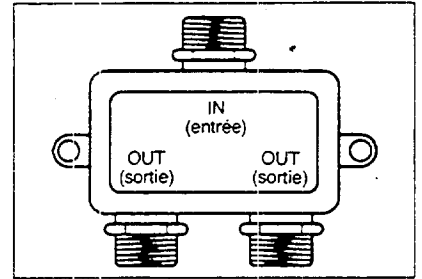
Projection TV + antenna or cable with a decoder box

equipment you'll need

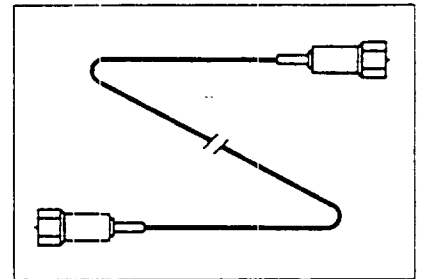
Use this hook-up if you need a decoder box to descramble cable signals. This hook-up will allow you to use the remote control to change channels.

To complete the hook-up, you'll need:

- 1 two-way splitter, and



- 3 lengths of 75 ohm coaxial cable.

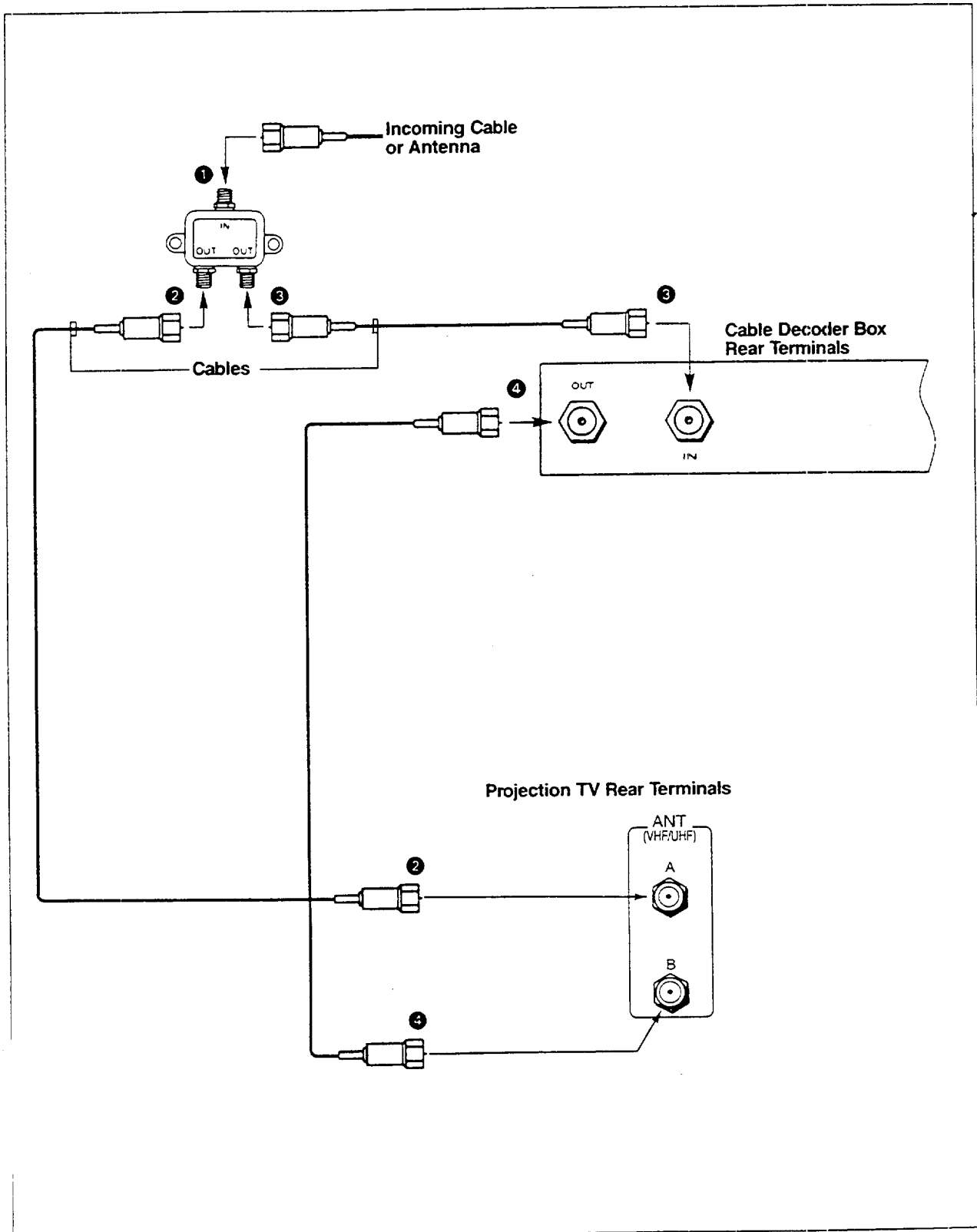


procedure

(See illustration on the following page.)

- ① Connect the incoming cable to the IN terminal on the two-way splitter.
- ② Connect a coaxial cable to one of the OUT terminals on the same splitter; connect the other end of this cable to the ANT-A terminal on the back of the Projection TV.
- ③ Connect the second coaxial cable to the second OUT terminal on the same splitter; connect the other end of this cable to the IN terminal on the decoder box.
- ④ Connect the third coaxial cable to the OUT terminal on the back of the decoder box, and the other end of this cable to the ANT-B terminal on the back of the Projection TV.

Projection TV + antenna or cable with a decoder box (continued)

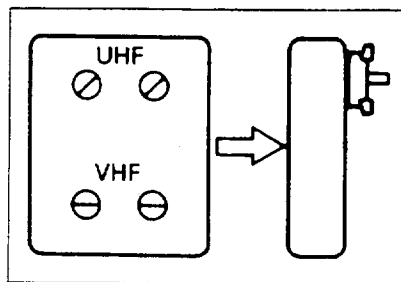


Projection TV + separate UHF and VHF antennas

equipment you will need

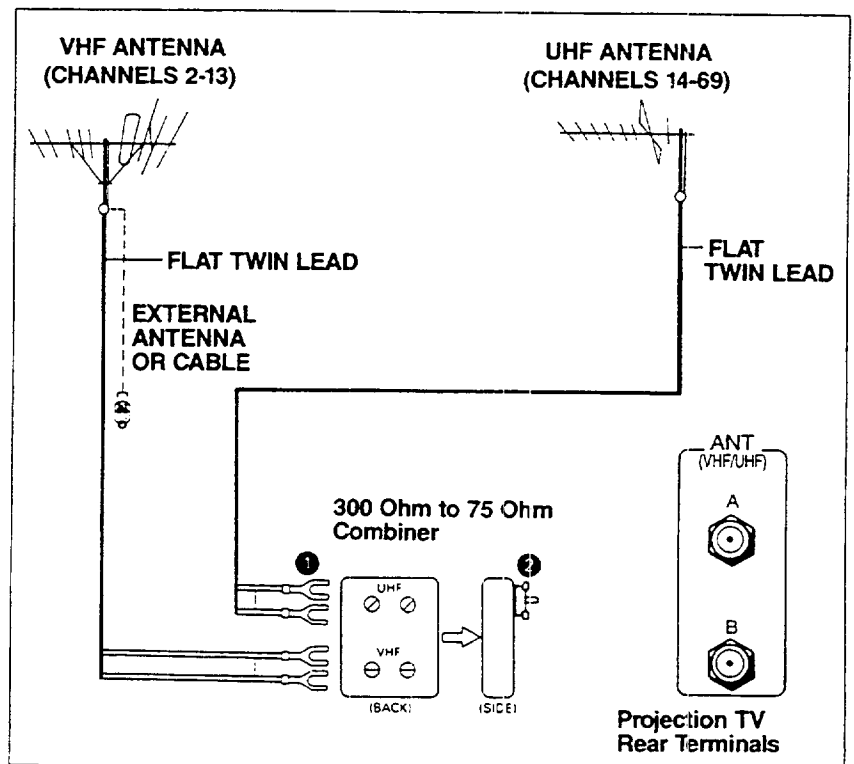
If UHF and VHF signals are brought into your home with two separate antennas, you'll need to combine the antennas into a single wire to connect them to the Projection TV. To do this you will need a UHF/VHF combiner. (There are different combiners for different kinds of leads. Check with your local electronics store for the kind of combiner you need.)

Pictured below is a standard combiner.



To connect separate UHF and VHF antennas to your Projection TV.

- 1 Connect the antenna leads to the UHF/VHF combiner.
- 2 Press the combiner onto the ANT-A terminal on the Projection TV.

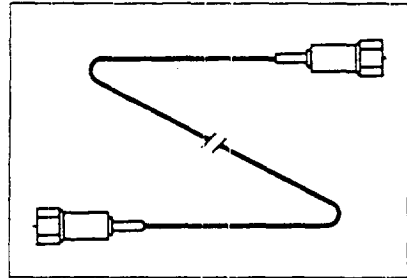


Projection TV + VCR + antenna or cable without a decoder box

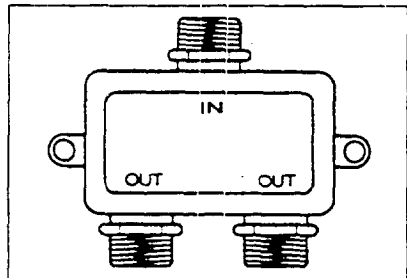
equipment you will need

You may want to connect a VCR along with your antennas or cable. To complete this hook-up, you may need the following equipment.

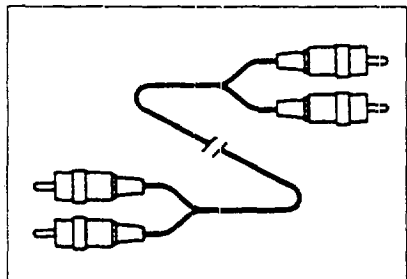
- 2 lengths of coaxial cable,



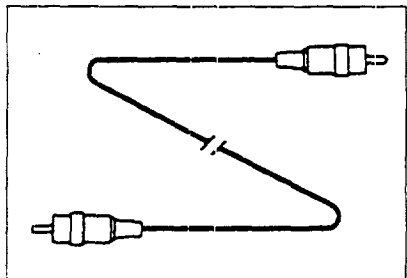
- 1 two-way splitter,



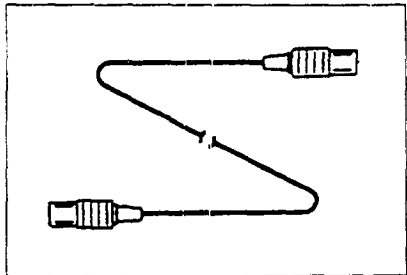
- 1 set of RCA pin-type audio cables,



- 1 RCA pin type video cable, (if connecting a standard VCR),
or



- 1 Super Video cable (S-VHS)
for Super VHS VCRs.



procedure

(See illustration on the following page.)

- ① Connect the incoming antenna to the IN terminal on the two-way splitter.
- ② Connect a coaxial cable to one of the OUT terminals on the two-way splitter; connect the other end of this cable to the ANT-A terminal on the back of the television.
- ③ Connect a second coaxial cable to the other OUT terminal on the two-way splitter. Connect the other end of this cable to the VHF-IN terminal on the back of the VCR.
- ④ Connect an RCA pin type video cable to the VIDEO OUT terminal on the back of the VCR. Connect the other end of this cable to the VIDEO INPUT terminal on the back of the television.

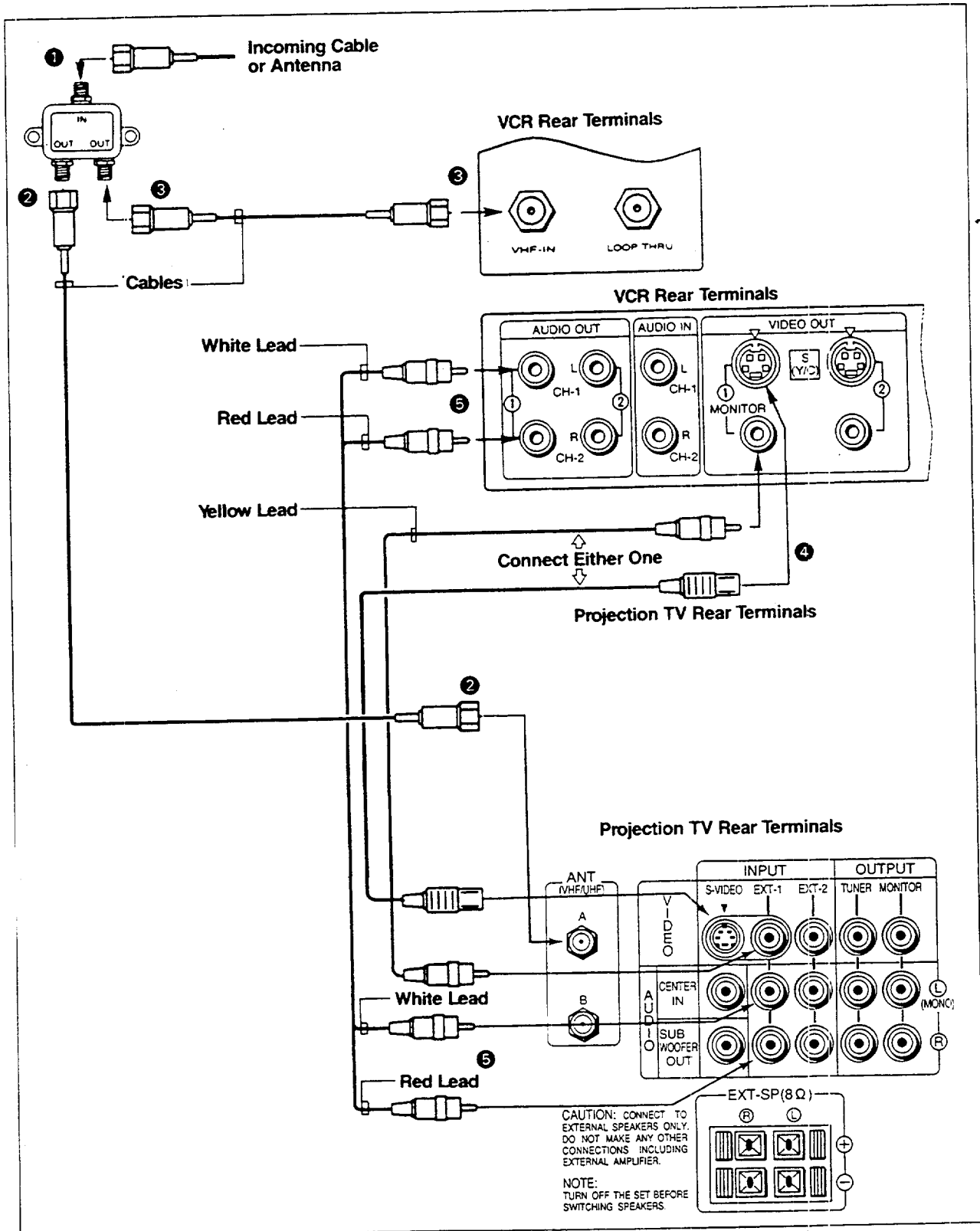
▷ **Important:** If you are connecting a Super VHS (S-VHS) VCR, use a Super Video cable instead of an RCA pin type video cable. Connect a Super Video cable to the S-VIDEO OUT terminal on the VCR. Connect the other end of this cable to the S-VIDEO INPUT terminal on the back of the Projection TV.

- ⑤ Connect a set of RCA pin type audio cables to the AUDIO OUTPUT terminals on the back of the VCR. Use the red cable to connect the right (R) channel and the white cable for connecting the left (L) channel.
- ⑥ Connect the other ends of this cable to the AUDIO INPUT terminals on the back of the Projection TV.

▷ **Important:** If your VCR is monaural (non-stereo), you will only connect a single RCA pin type audio cable. Connect the cable to the VCR, then connect the other end to the L (LEFT) audio input on the back of the Projection TV.

- ⑦ Set the VCR to the playback mode.
- ⑧ Select the desired external input source on the TV (1 or 2) by using the INPUT buttons on the front panel or remote control.

Projection TV + VCR + antenna or cable without a decoder box (continued)



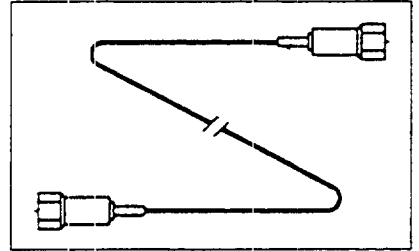
Projection TV + VCR + antenna or cable with a decoder box

equipment you'll need

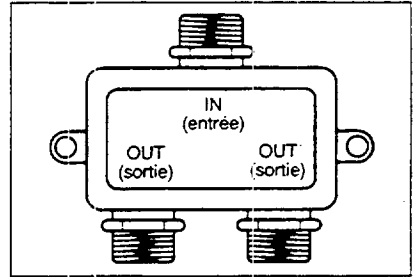
This hook-up will allow you to record scrambled cable channels while viewing another channel.

To complete the hook-up, you'll need:

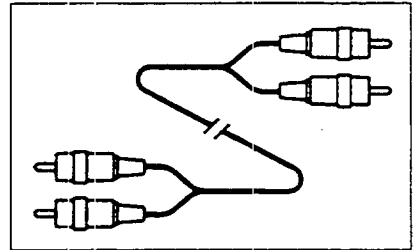
- 5 lengths of coaxial cables,



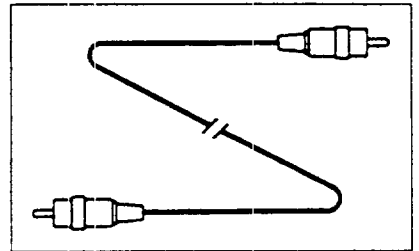
- 2 two-way splitter,



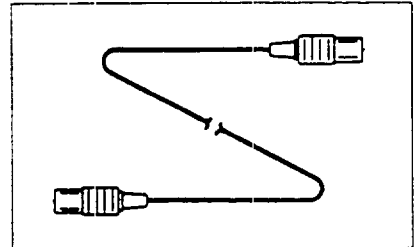
- 1 set of RCA pin type audio cables,



- 1 RCA pin type video cable (if connecting a standard VCR),
or



- 1 Super Video cable (S-VHS)
for Super VHS VCRs.

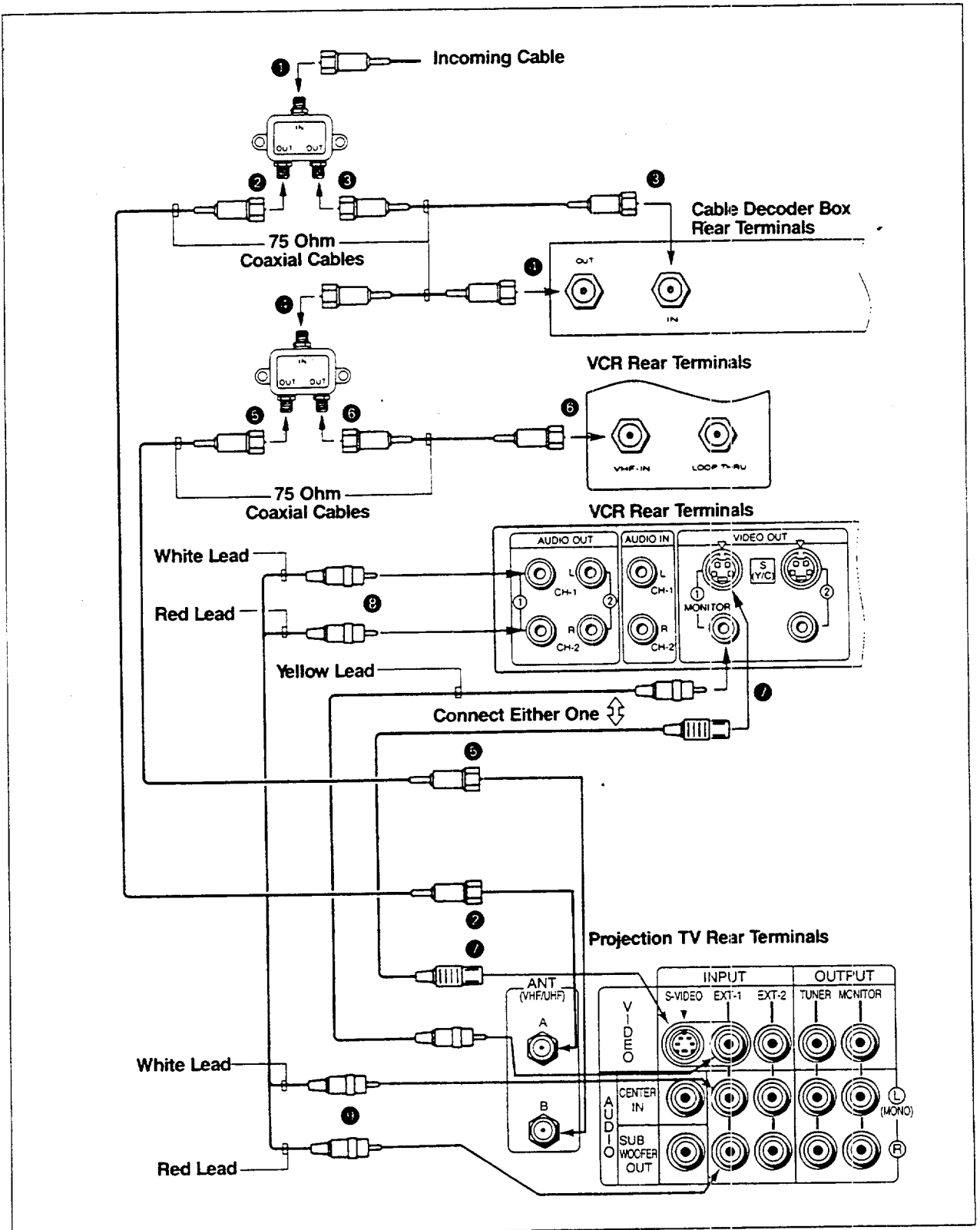


Projection TV + VCR + antenna or cable with a decoder box (continued)

procedure

(See illustration on the following page.)

- ➊ Connect the incoming cable to the IN terminal on the first two-way splitter.
 - ➋ Connect a coaxial cable to one of the OUT terminals on the same splitter; connect the other end of this cable to the ANT-A terminal on the back of the Projection TV.
 - ➌ Connect a second coaxial cable to the other OUT terminal on the same splitter; connect the other end of this cable to the IN terminal on the decoder box.
 - ➍ Connect the third coaxial cable to the OUT terminal on the back of the decoder box; connect the other end of this cable to the IN terminal on the second two-way splitter.
 - ➎ Connect the fourth coaxial cable to one of the OUT terminals on the second two-way splitter. Connect the other end of this cable to the ANT-B terminal on the back of the Projection TV.
 - ➏ Connect the fifth coaxial cable to the other OUT terminal on the same splitter. Connect the other end of this cable to the VHF-IN terminal on the back of the VCR.
 - ➐ Connect an RCA pin type video cable to the VIDEO OUT terminal on the back of the VCR. Connect the other end of this cable to the VIDEO INPUT terminal on the back of the Projection TV.
- ▷ **Important:** If you are connecting a Super VHS (S-VHS) VCR, use a Super Video cable instead of an RCA pin type video cable. Connect a Super Video cable to the S-VIDEO OUT terminal on the VCR. Connect the other end of this cable to the S-VIDEO INPUT terminal on the back of the Projection TV.
- ➑ Connect a set of RCA pin type audio cables to the AUDIO OUTPUT terminals on the back of the VCR. Use the red cable to connect the right (R) channel and the white cable for connecting the left (L) channel.
 - ➒ Connect the other ends of this cable to the AUDIO INPUT terminals on the back of the Projection TV.
- ▷ **Important:** If your VCR is monaural (non-stereo), you will only connect a single RCA pin type audio cable. Connect the cable to the VCR, then connect the other end to the L (LEFT) audio input on the back of the Projection TV.
- ➓ Set the VCR to the playback mode.
 - ⓫ Select the desired external input source on the TV (1 or 2) by using the INPUT buttons on the control panel or remote control.



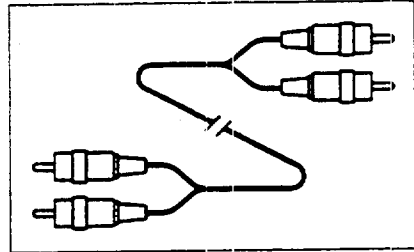
Basic Connections

Projection TV + home theater receiver (A/V receiver)

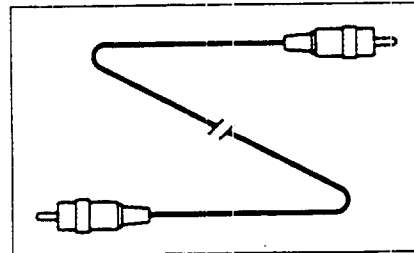
equipment you will need

To hook-up a home theater receiver, you will need:

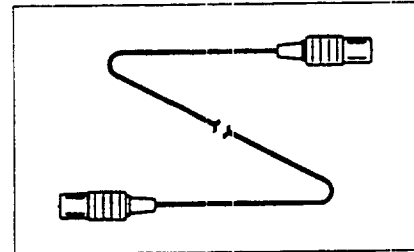
- 1 set of RCA pin-type audio cables,



- 2 RCA pin-type video cables, (if connecting a standard VCR), or



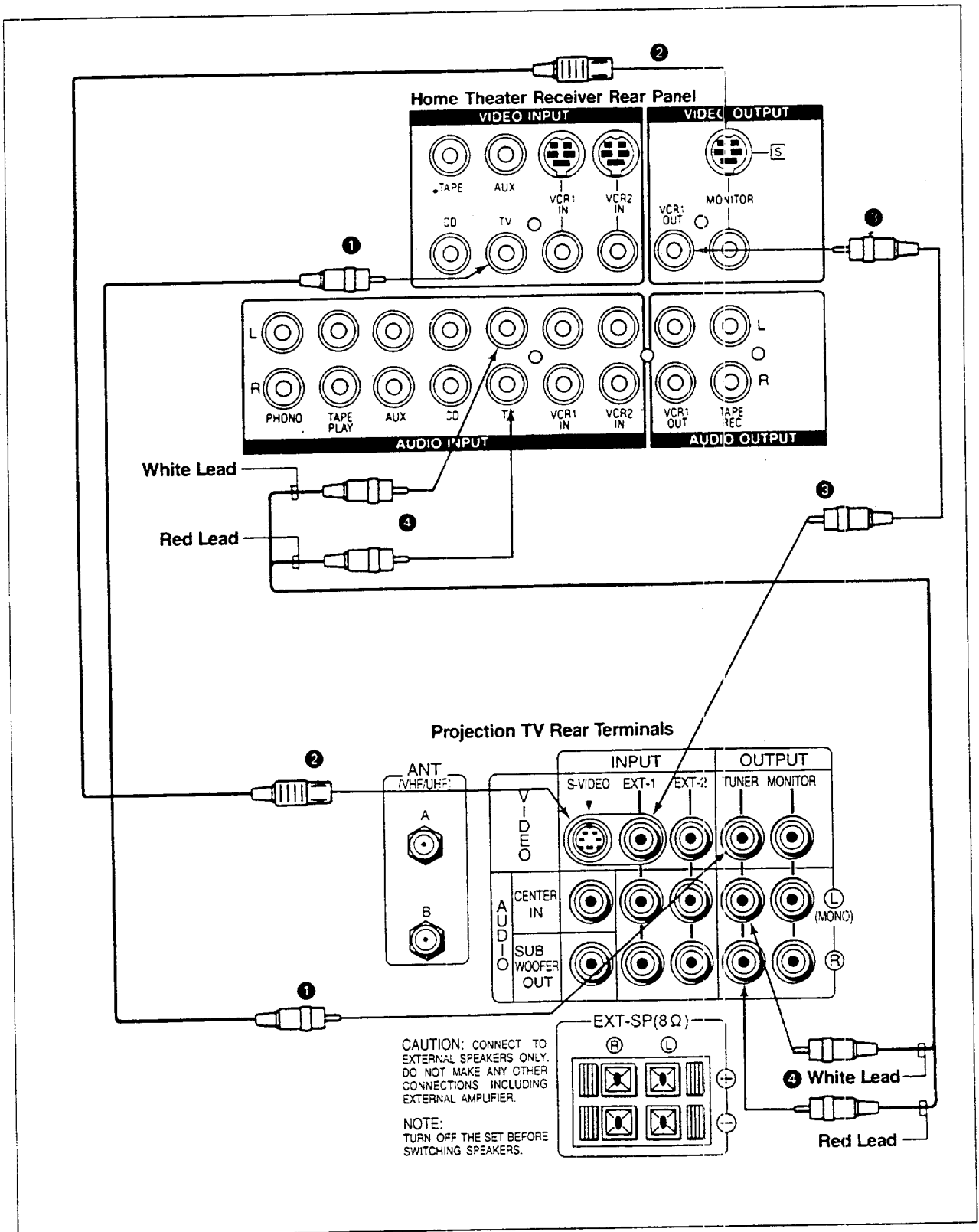
- 1 Super Video cable (S-VHS) for a Super VHS home theater receiver.



procedure

(See illustration on the following page.)

- 1 Connect one end of an RCA pin-type video cable to the Projection TV VIDEO INPUT terminal of the home theater receiver. Connect the other end of this cable to the VIDEO TUNER OUTPUT terminal on the back of the Projection TV.
- 2 Connect a Super Video cable to the S-VIDEO OUTPUT terminal of the home theater receiver. Connect the other end of this cable to the EXT-1 S-VIDEO INPUT terminal on the back of the Projection TV.
- 3 Connect one end of an RCA pin-type video cable to the VIDEO OUTPUT terminal of the home theater receiver. Connect the other end of this cable to the EXT-1 VIDEO INPUT terminal on the back of the Projection TV.
- 4 Connect a set of RCA pin-type audio cables to the Projection TV AUDIO INPUT terminal of the home theater receiver. Use the red cable to connect the right (R) channel and the white cable for connecting the left (L) channel.
- 5 Connect the other ends of this cable to the left and right AUDIO TUNER OUTPUT terminals on the back of the Projection TV.



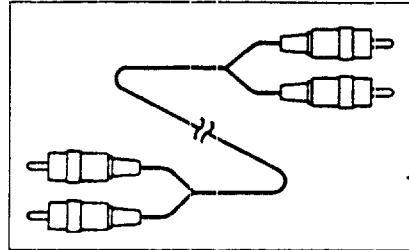
Basic Connections

Projection TV + audio system

equipment you will need

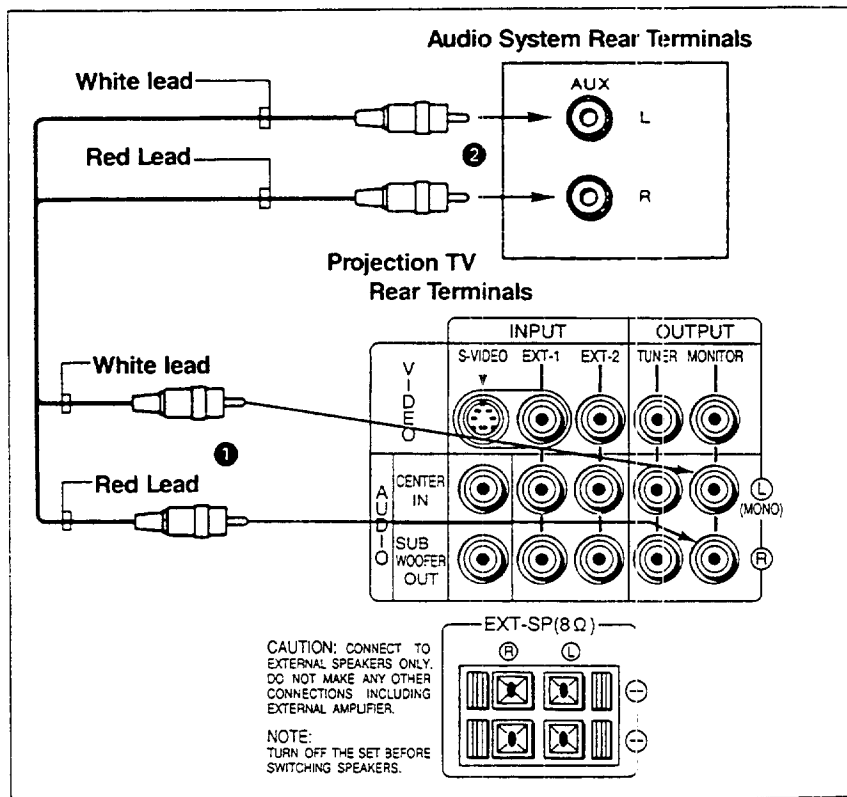
To hook-up an audio system you will need:

- 1 set of RCA pin type audio cables.



procedure

- 1 Connect one end of the RCA pin type audio cables to the AUDIO MONITOR OUTPUT terminals on the back of the Projection TV. Use the red cable to connect the right (R) channel and the white cable to connect the left (L) channel.
- 2 Connect the other ends of this cable to the AUX IN terminals on the back of the audio system.
- 3 Turn off the Projection TV's speakers. To do this, press the AUDIO function buttons on the front panel or remote control until you see the SPEAKER display. Set the speakers to "External" by pressing the ADJUST button.
- 4 Set the audio system's input to the AUX position.

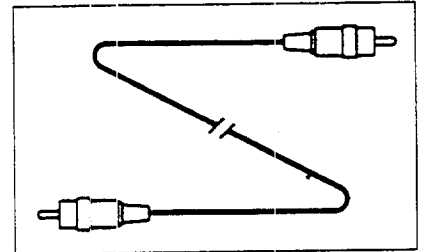


Projection TV + external speaker with sub woofer out terminal

equipment you will need

To hook-up an external speaker, you will need:

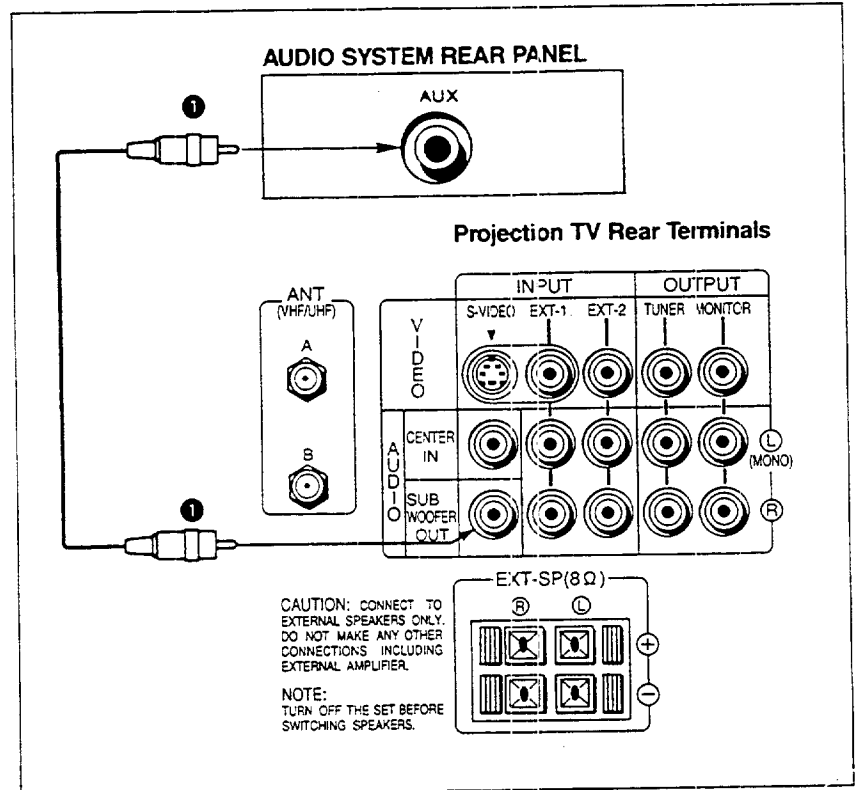
- 1 RCA pin type audio cable.



Procedure

- 1 Connect an RCA pin type audio cable to the SUB WOOFER OUT (MONO) terminal on the back of the television. Connect the other end of this cable to the AUX IN terminal on the back of the audio system.
- 2 Set the audio system input to the AUX position.
- 3 Adjust the volume of the sound of the television through the audio system.

▷ **Important:** If a powered subwoofer is used, connect this terminal to the input of the subwoofer directly.



Projection TV + an amplifier that has a center channel out terminal (VS-50VA1, VS-50VA2 and VS-60VA2 only)

equipment you'll need

- 1 RCA pin type audio cable

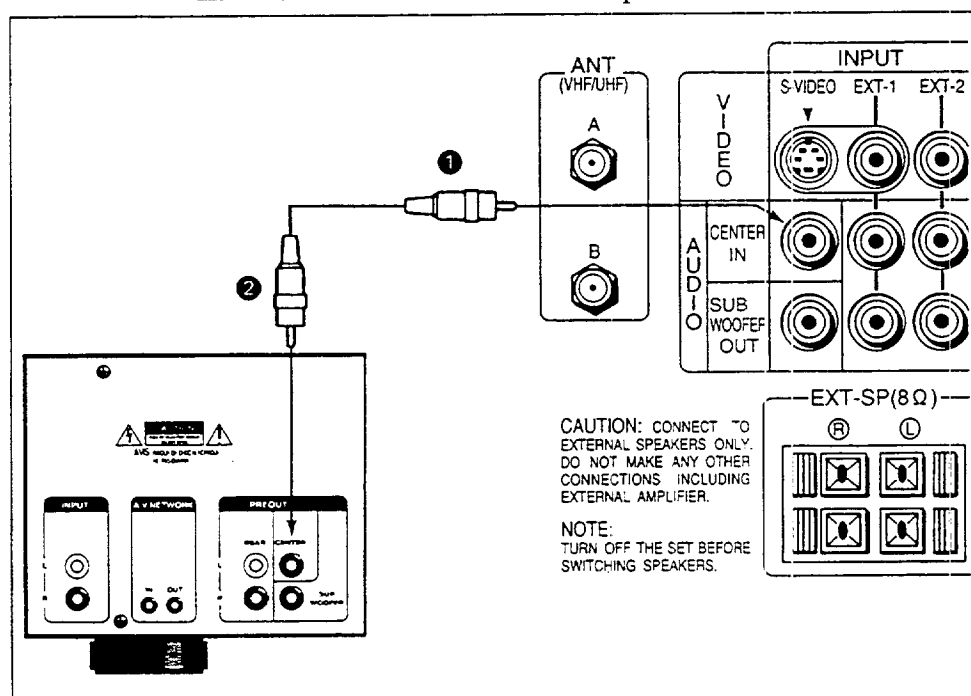
Using the PTV speakers as center channels speakers


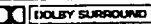
If you are using a system that delivers Dolby Pro-Logic* surround sound, such as the HTS-100, you will probably want to use the PTV speakers as center channel speakers. A center channel speaker adds to the realism of surround sound systems such as Dolby Pro-Logic. It does this by allowing certain sounds, such as voice, to be directed to the center channel. In this way, the voices appear to be coming directly from the screen, in the exact location you would hear them in a movie theater.

- ▷ **Important:** If you make this connection, the volume for your speakers will be controlled by the amplifier. If you are using an "invisible" system, such as an HTS-100, this will not change the way you operate your TV. If you are using another system, it may change the way you raise and lower the volume.

Procedure:

- 1 Connect the end of an RCA pin type cable to the CENTER IN terminal on the back of the Projection TV.
- 2 Connect the other end of this cable to the center channel OUT terminal on the back of the audio amplifier.



**"Dolby," the double-D symbol  and "Dolby Surround,"  "Dolby Pro-Logic," are trademarks of Dolby Laboratories Licensing Corporation.



Operating Your Projection TV

Now that your TV is connected to the cable, antennas, or external components, it's time to enjoy your equipment. This chapter will explain how to operate the TV, first focusing on functions that are basic and easy and then explaining some advanced features.

This chapter explains:

- ◆ **Getting Started**
- ◆ **Using the Advanced Features**

This section is designed to get you started enjoying your new Projection TV. If you follow these procedures one by one, you will soon have a picture and can begin discovering everything your Projection TV can do.

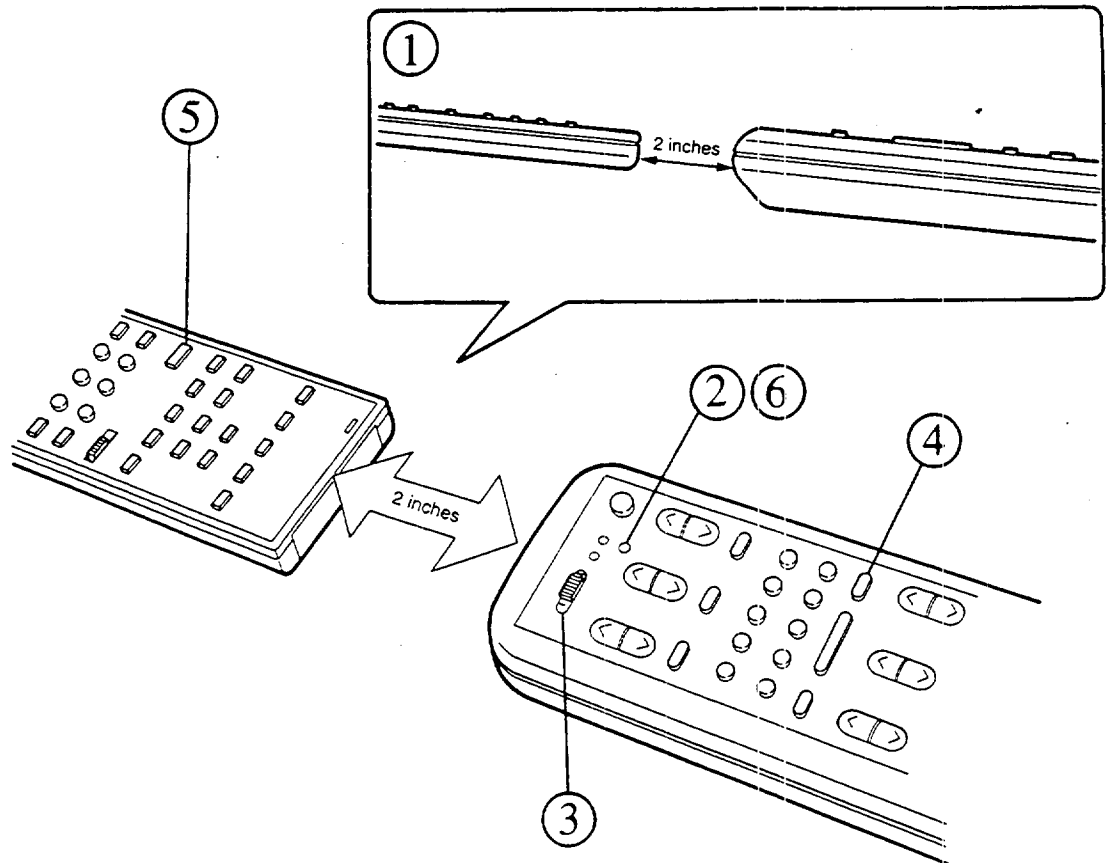
You will find information on:

- **Programming the remote control,**
- **Turning the Projection TV on/off,**
- **Selecting the input source,**
- **Changing channels,**
- **Setting the clock,**
- **Memorizing channels,**
- **Adding/deleting channels,**
- **Using home theater**
- **Renaming the inputs,**
- **Adjusting the color alignment**
- **Adjusting the sound, and**
- **Adjusting the picture**

Programming the remote control

The remote control unit is capable of learning the functions of other remote controls you may have. This feature allows operation of other components with this remote control unit. For learning to take place, the other remote control unit must be of the infra-red type.

how to learn another unit's remote functions



- 1 Place the two remote control units head to head about 2 inches apart.
- 2 Press the learn button (LEARN/NOFM) using a pen. The learning indicators "1" and "2" will light up, and the remote control will enter the learning mode.
- 3 Set the VCR/TV control to "VCR" or "TV" position that the other remote controls.
- 4 Press the desired button to learn on this Projection TV's remote control unit. The learning indicator "1" will light up.

Programming the remote control (cont.)

- ⑤ Press and hold the corresponding button on the other remote control unit until the learning indicator “1” turns off. When the button is released, the learning indicator “2” will light up.

Repeat steps ③ — ⑤ for learning other functions.

- ⑥ Press the learn button again. The learning indicators “1” and “2” will turn off.
- Depending on the unit, some commands may not be learned by steps ① to ⑤. In this case, try steps ① — ⑤ once again, and press and hold the same button again until both learning indicators “1” and “2” light up.
- If the distance between two remote control units in step ① is too short or too long, the learning process may not be completed. In this case, change the distance between the two remote control units a little and then repeat steps ② — ⑤ once again.
- The buttons can re-learn new commands by following the steps ① — ⑥ again.

canceling the learned functions

To erase the learned function of each button:

- ① Press the learn button (LEARN/NORM) using a pen. The learning indicators “1” and “2” will light up.
- ② Press the button whose learned function is to be erased. Press the learn button again.

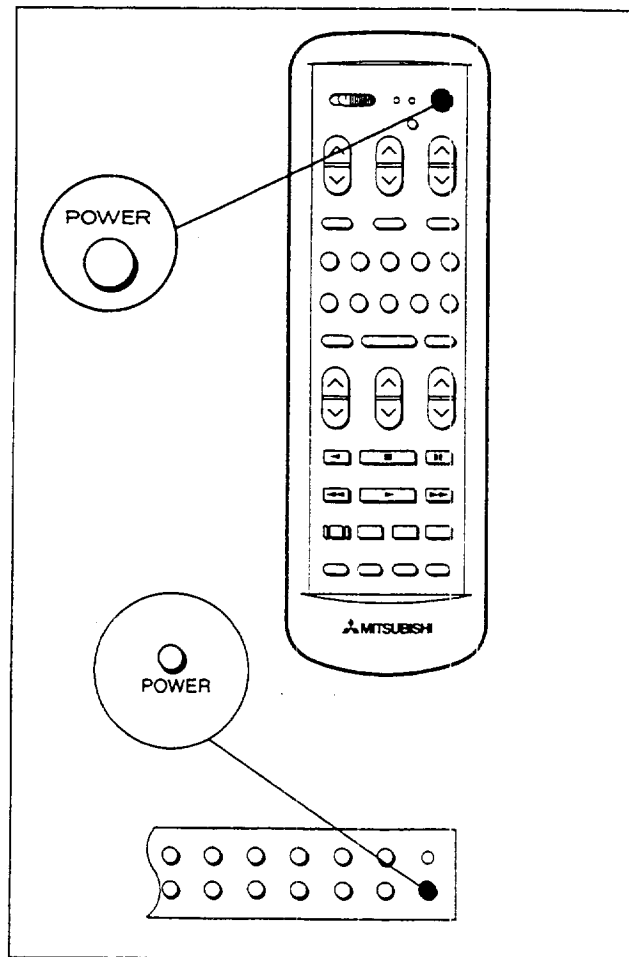
-
- ▷ **Important:**
- ① Change the batteries regularly. If you don't, you may lose the learned memory. We suggest you change the batteries after about 10 months of use (though their life is approximately one year).
 - ② The learning in step ⑤ may not be completed when the learning indicators "1" and "2" flash under the following conditions:
 - If the batteries of the remote control unit whose commands are to be learned have run low
 - Replace with new fresh batteries.
 - If all or some commands cannot be learned by the remote control unit.
 - If the command is difficult to learn or the memory capacity of the unit has been exceeded (that is, if the learned command code is complex, the learnable number of commands may become less than the learnable number of buttons).
 - Erase all the commands that have already been learned, and start over again. (It is recommended that the most frequently used commands be learned first.)
 - If the units are far apart or too close, the unit may misread the light from the other and fill its memory capacity with meaningless commands.
 - Erase all learned commands, change slightly the distance between the units and start over again.
 - ③ Similar problems can also arise when the sensor is exposed to strong light from fluorescent fixtures and other powerful sources.

Turning the Projection TV on/off

- ▷ **Important:** Before using the remote control to operate the Projection TV, press the TV select button.

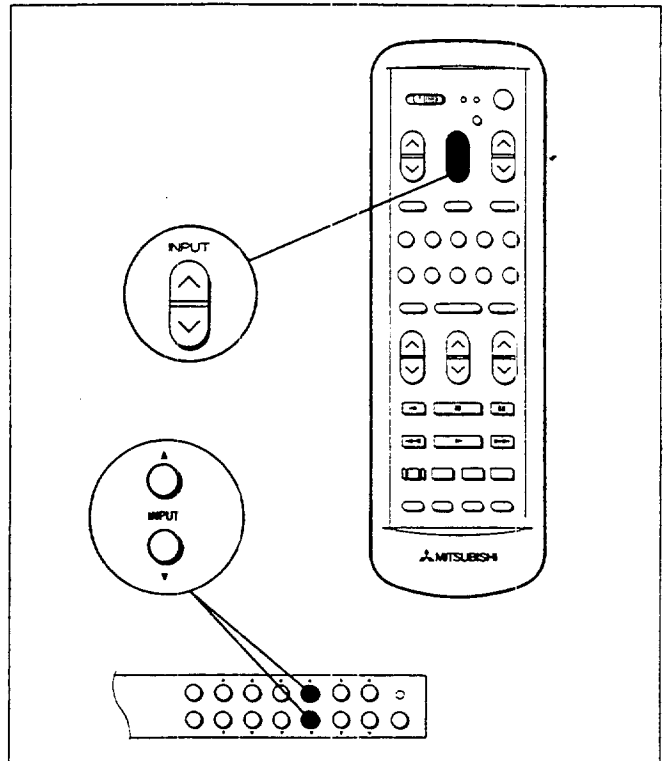
Use the POWER button on either the front panel or the remote control to turn the Projection TV on and off.

- ▷ **Important:** Even with the power turned off, there is a small current that continues to flow into the Projection TV. This maintains any changes to the setting as well as operates the built-in clock and timing functions. Unplugging the set will erase these settings requiring that you set them again. Unplug the Projection TV only when it won't be used for a long time.



Selecting the input source

Press the input button (INPUT) on the front panel or on the remote control to select the input source: ANT-A or ANT-B, EXT-1 or EXT-2.



Changing channels

Your Mitsubishi Projection TV offers you three ways of changing channels once their numbers have been programmed into channel memory:

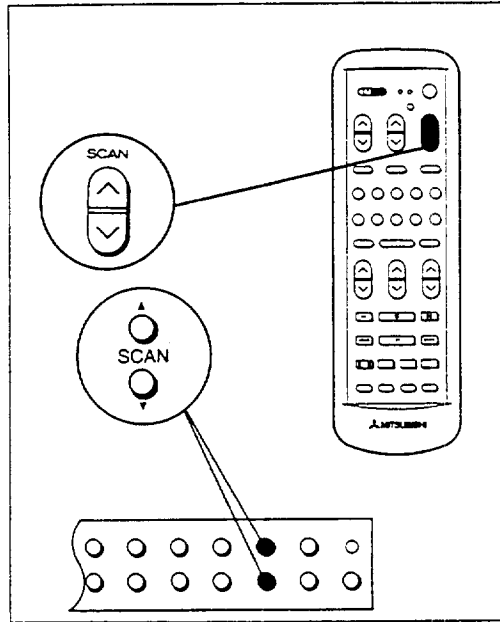
- selecting a channel using the automatic channel scan feature,
- directly accessing a channel by pressing the number buttons,
- using the special quick view option to alternate between the current channel and the last channel viewed, and
- using the super quick view function to alternate between special channels programmed for quick viewing.

- ▷ **Important:** To change channels faster, use either of the following procedures:
- Enter three digits for every channel number, using zeros where needed. (For example, enter “004” to view channel 4 and “028” to view channel 28.)
 - Press the ENTER button after selecting the number of the channel. (For example, press “4” and “ENTER” to view channel 4.)
- ▷ **Important:** Cable stations (CATV) channel numbers 0 and greater than 126 are unassigned. TV stations (TV) 0, 1 and 70 through 999 are unassigned. If these channel numbers are pressed, the channel remains unchanged.

changing channels automatically

To change channels:

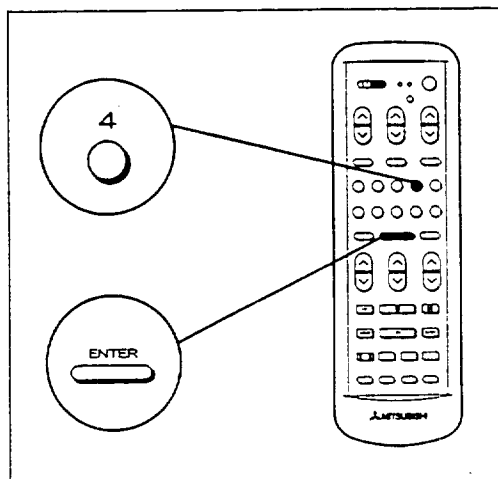
- 1 Press one of the channel controls (SCAN) on the front panel or on the remote control. The Projection TV automatically goes to the next broadcasting station.



changing channels directly

To move directly to a particular channel without going through the programmed channels:

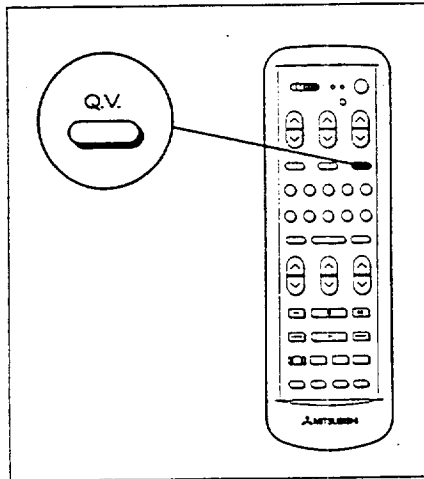
- 1 Use the remote control to select the number of the channel you want to view.
- 2 Press the ENTER button.



using the quick view option

To alternate between the current channel and the last one viewed:

- 1 Press the quick view (Q.V.) button on the remote control.
- 2 Press the Q.V. button again to view the original channel.

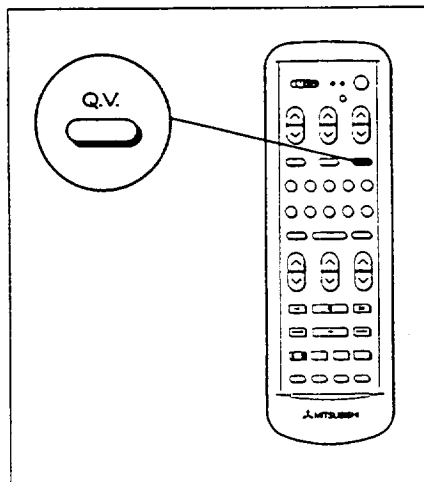


▷ **Important:** Quick view (Q.V.) is not available when you operate the Super Quick View (SQV).

using the super quick view option

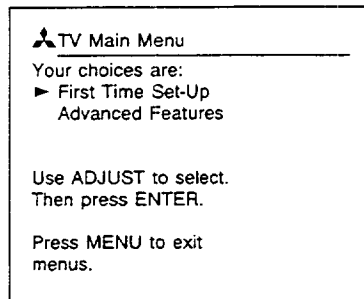
To view selected channels programmed into super quick view memory:

- 1 Enter the desired channel into super quick view memory. (See "Super quick view tuning", page 70.)
- 2 Press Q.V. button to view the desired channels in sequence.



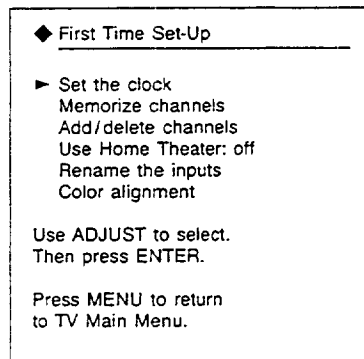
Setting the clock

Your Mitsubishi Projection TV contains an on-screen clock to indicate the current time. To set the clock:

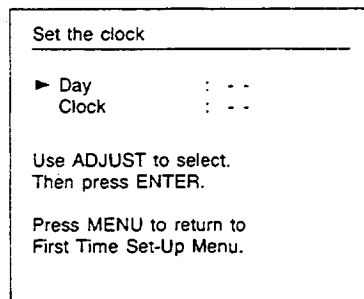


① Press the MENU button on the remote control. The TV menu will appear on the screen.

② Select "First Time Set-Up" using the ADJUST button; then press the ENTER button.



③ You will see the "First Time Set-Up" screen. Select "Set the clock" using the ADJUST button; then press the ENTER button.



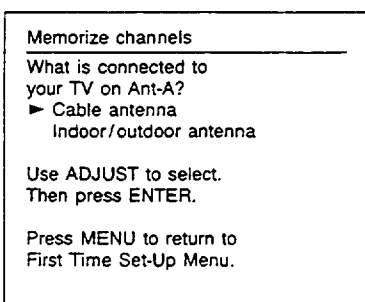
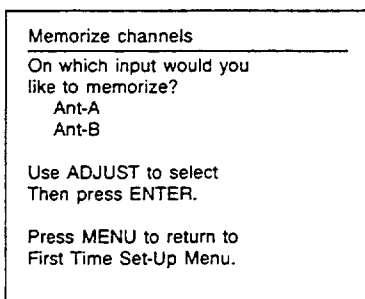
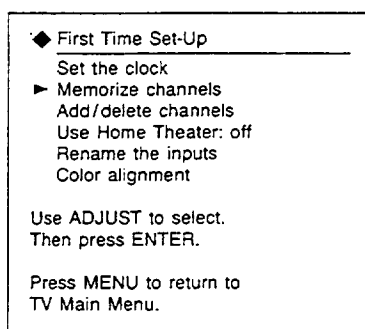
④ Follow the additional on-screen instructions.

⑤ To view the time, press the display (DISP) button on the remote control.

▷ **Important:** After setting Day & Clock, press the ENTER button when the precise minute arrives to start clock.

Memorizing channels

Your Projection TV automatically memorizes the channels you can receive. Once channels are memorized, you can scan through them using the channel control on the remote control and front panel. To memorize channels:



- 1 Press the MENU button on the remote control. The TV menu will appear on the screen.
- 2 Select "First Time Set-Up" using the ADJUST button; then press the ENTER button.
- 3 Select "Memorize channels" using the ADJUST button; then press the ENTER button.
- 4 The instructions for starting the channel memory will appear.

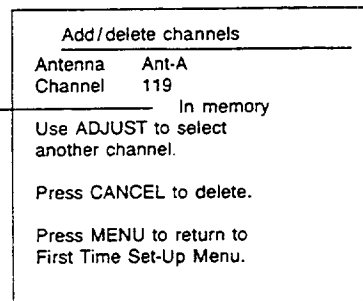
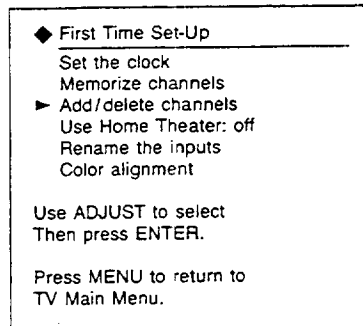
Choosing either antenna A (Ant-A) or antenna B (Ant-B) to memorize channels. Choose whichever input you connected your antenna or cable to. If you connected an antenna to each input, then you should memorize the channels for the other input later.

- 5 Use the ADJUST button to choose the type of antenna you connected: cable antenna or indoor/outdoor antenna. Then press the ENTER button.
- 6 You will see a message that states that channel memorization is in progress. The channel in memorization will appear in the bottom right corner of the screen. You may stop channel memorization at any time by pressing the CANCEL button.

- ▷ **Important:** The channel controls (SCAN) will work only after channels have been programmed into memory. After memorizing, use the channel controls (SCAN) on the front panel or on the remote control to automatically advance to the next memorized channel. Use the NUMBER buttons to select individual channels.

Adding and deleting channels

After all available channels have been programmed automatically, channels with weaker signals can be added or deleted by using the following procedure.



Either "In memory" or
"Not in memory" will
appear.

- 1 Press the MENU button on the remote control. The TV menu will appear on the screen.
- 2 Select "First Time Set-Up" using the ADJUST button; then press the ENTER button.
- 3 Select "Add/delete channels" using the ADJUST button; then press the ENTER button.
- 4 The "Add/delete channels" screen will appear. Channels that are in memory have the word "In memory" under the channel number; channels not in memory say "Not in memory".
- 5 Following the additional on-screen instructions, add a channel into channel memory or delete a channel from channel memory.

- ▷ **Important:** The (SCAN) ▲ button changes to a channel with a higher number one by one; the SCAN ▼ button changes to a channel with a lower number one by one.
- ▷ **Important:** You may switch between the antennas (Ant-A and Ant-B) by pressing the input button (INPUT) or antenna button (ANT A/B).

Using home theater

Use this feature if you connected a Home Theater Receiver. It will fix your Projection TV to external 1 (EXT-1)

◆ **First Time Set-Up**
Set the clock
Memorize channels
Add/delete channels
▶ Use Home Theater: off
Rename the inputs
Color alignment

Use ADJUST to select.
Then press ENTER.

Press MENU to return to
TV Main Menu.

Use home theater
This feature lets you
control all input
switching from
a Home Theater Receiver.

Press ENTER to continue.

Press MENU to return to
First Time Set-Up Menu.

Use home theater
Before using this mode,
make sure you have
a Home Theater Receiver
connected.

Press ENTER to confirm
or press MENU for
First Time Set-Up.

Press MENU to return to
First Time Set-Up Menu.

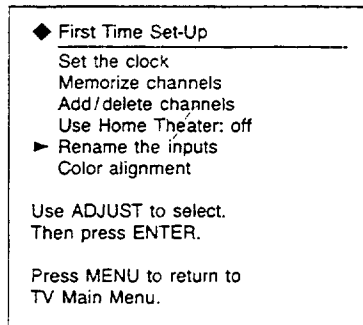
- ① Press the MENU button on the remote control. The TV menu will appear on the screen.
- ② Select "First Time Set-Up" using the ADJUST button; then press the ENTER button.
- ③ Press the ADJUST button to select "Use home theater". Then press the ENTER button.
- ④ The message that confirms whether you wish to use this feature appears. Press the ENTER button to continue.
- ⑤ Press the ENTER button to turn home theater ON.

The screen will return to the "First Time Set-Up" menu.

- ▷ **Important:** When you set this feature to "on",
- the input source will be fixed to external 1 (Ext-1).
 - the input button (INPUT) will switch between antennas A and B (Ant-A/B), and
 - all input switching is controlled by a Home Theater Receiver. (See your Home Theater Receiver's owner's guide for more information.)

Renaming the inputs

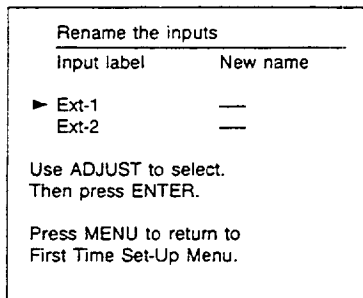
This feature allows you to rename the external inputs. After renaming, the new name will appear on the screen display.



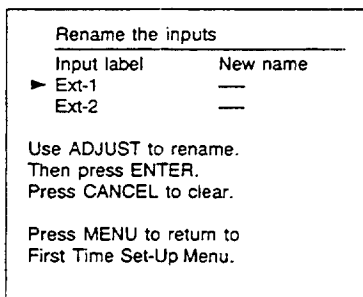
① Press the MENU button on the remote control. The TV menu will appear on the screen.

② Select: "First Time Set-Up" using the ADJUST button; then press the ENTER button.

③ Select: "Rename the inputs" using the ADJUST button; then press the ENTER button.



④ Use the ADJUST button to select either Ext-1 or Ext-2 to rename. Then press the ENTER button.

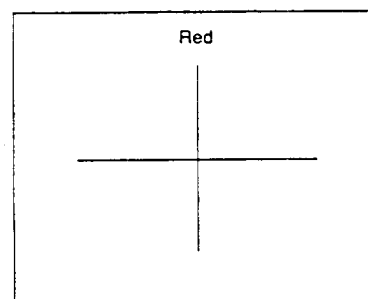
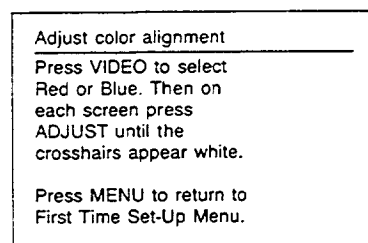
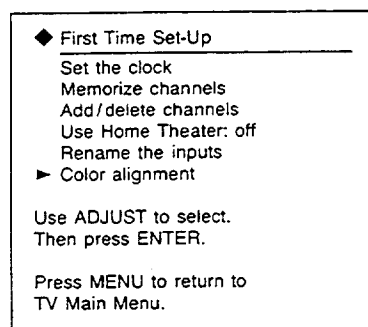


⑤ Set the new name using the ADJUST button. Follow the additional on-screen instructions.

▷ **Important:** You can rename the inputs using letters (A-Z), numbers (0-9), or symbols (colon, slash, period, comma, parentheses, blank and hyphen).

Adjusting the color alignment

Your Mitsubishi Projection TV 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. Here is the procedure for converging the color beams:



with remote control:

- 1 Press the MENU button. The TV menu will appear on the screen.
- 2 Select "First Time Set-Up" using the ADJUST button. Then press the ENTER button.
- 3 Select "Color alignment" using the ADJUST button. Then press the ENTER button.
- 4 The "Color alignment" screen will appear.
- 5 Select Red or Blue using VIDEO button, then cover the red and blue lines onto the green until the green line will turn white.

with control buttons on the front panel:

- 1 Press the test button.
- 2 Following the additional on-screen instructions, adjust the color alignment.

- ▷ **Important:** The cross-bar pattern is intended for use only as a converge aid. It should not be left on for a long period of time, since damage to the picture tubes could occur.
- ▷ **Important:** Convergence of the light beams can be affected by external factors over time and convergence readjustment may become necessary. If a change in the color quality of the picture becomes noticeable, check the convergence adjustment with the test pattern and readjust as required.

Adjusting the sound

You can adjust all of your Projection TV's sound functions by using a pair of buttons: select a function with the AUDIO button and adjust the function with the ADJUST button. You use the ADJUST button to:

- select a position (e.g., stereo),
- increase or decrease the function (e.g., bass),
- shift from one end of a scale to the other (e.g., balance), or
- turn the function on or off (e.g., expansion).

After adjusting the sound, an on-screen display will indicate the function and level you've selected.

what you will adjust

“Listen to: stereo/SAP/mono” allows you to change the audio reception mode to stereo, separate audio programming (SAP), or monaural (mono), depending on the type of broadcast you are receiving. As you select the reception mode, remember the following:

- The “Stereo” setting allows you to receive both mono and stereo broadcasts.
- The separate audio programming (“SAP”) setting offers you the option of listening to either of two separate audio programs. For example, a combination television/radio station may broadcast through the Projection TV.
- The “Mono” setting reduces unwanted background noise when a stereo broadcast is coming in weak. When you use the “Mono” setting, you will hear the broadcast in monaural even when the broadcast signal is in stereo.

▷ **Important:** An on-screen display appears when programs are broadcast in stereo or when separate audio programming (SAP) is available.

“Bass” controls the volume of low-frequency sound.

“Treble” controls the volume of high-frequency sound.

“Balance” adjusts the level of sound between the left and right speakers.

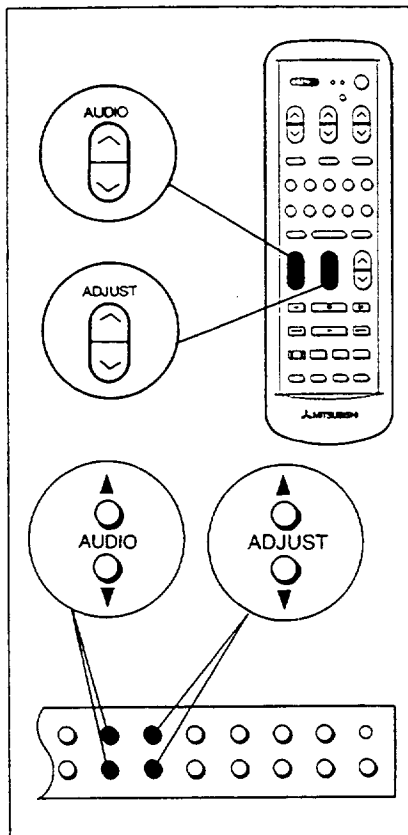
“Audio Expansion: On/Off” creates a stereo effect with non-stereo stations.

“Speaker: Internal/External” controls which speaker (built-in or external) is available. Set to “Internal” for normal operation using output from the speaker system. When connected to an external audio system, the speakers can be turned off by setting this function to “External”.

“Extra Base” controls the volume of very low frequency sounds. These sounds are lower than those controlled by “Bass”.

“Monitor out: Variable/Fixed” lets you set-up the Projection TV for use with a home theater receiver or audio system. Choose “Variable” when you wish to use the television remote control for such functions as volume and mute. Choose “Fixed” if you connected a home theater receiver or audio system. This lets you control functions such as volume and mute through the receiver or audio system.

adjusting the audio functions



- 1 Use either the AUDIO buttons on the front panel or on the remote control to select one of the functions.
- 2 Use either the ADJUST buttons on the front panel or on the remote control to adjust the function.

Adjusting the picture

You can adjust all of your Projection TV's video functions by using a pair of buttons: select a function with the VIDEO button and adjust the function with the ADJUST button. You use the ADJUST button to:

- shift from one end of a scale to the other (e.g., tint),
- increase or decrease the function (e.g., color),
- turn the function on or off (e.g., video noise reduction), or
- select a position (e.g., color temperature).

what you will adjust

“Tint” adjusts the proportion of red to green that determines the delicate tones of color.

“Color” determines the intensity of the color.

“Contrast” controls the level of white-to-black in the picture.

“Bright(ness)” controls the light level of the image on screen.

“Sharpness” adjusts the detail and clarity of the picture.

“Video N(oise) R(eduction): on/off” is used to reduce background noise that can occur with weak signals. Usually this function is set to “off”.

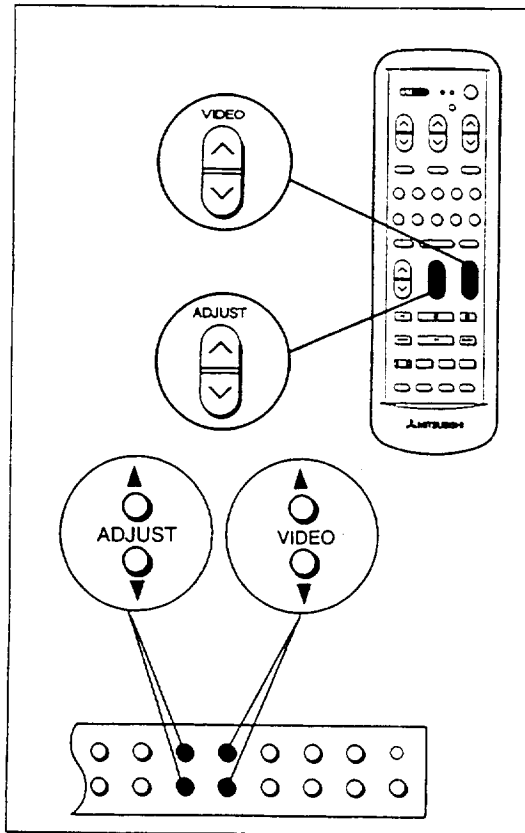
“Notch filter:on/off” is used in special cases to stabilize the color of striped or checked patterns.

“Color temp.(erature): High/Middle/Low” is used to change the relative warmth of the picture.

“Color bias: Average/Skin-tone/Accurate” is used to improve the color reproduction depending to the input source.

- ▷ **Important:** “Video NR” and “Color Bias” are automatically set to “off” or “Average” when turning the Projection TV off, or changing a channel or an input source.

adjusting the video functions



- 1 Use either the VIDEO buttons on the front panel or on the remote control to select one of the functions.
- 2 Use either the ADJUST buttons on the front panel or on the remote control to adjust the function.

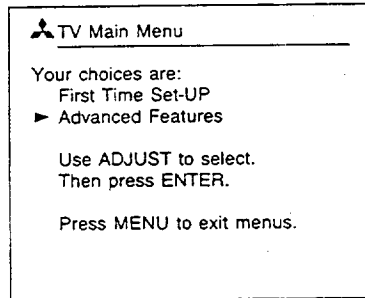
◆ Using the Advanced Features

This section explains how to use some of the more advanced functions. You will learn:

- setting the timer,
- using the parental lock,
- using the super-quick-view tuning,
- using Video Mute, and
- using the power restore feature.

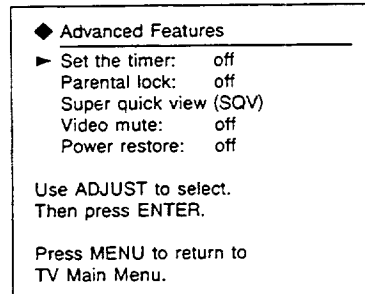
Setting the timer

This special feature allows you to program your Mitsubishi Projection TV to turn on automatically at a preset time. To set the timer:

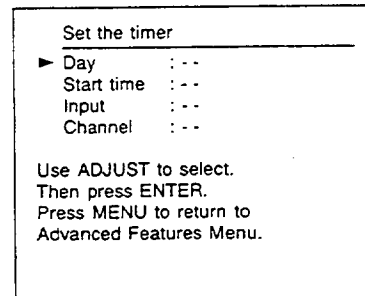


① Press the MENU button on the remote control. The TV menu will appear on the screen.

② Select "Advanced Features" using the ADJUST button; then press the ENTER button.



③ Select "Set the timer" using the ADJUST button; then press the ENTER button.



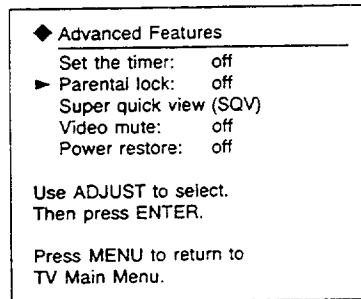
④ Following the additional on-screen instructions, set Day, Start time, Input and Channel using the ADJUST button.

After setting the timer, confirm the program timer indicator lights up.

- ▷ **Important:** When the timer turns the Projection TV on, the display will flash as a warning. If you do not press a TV function button for about 5 minutes, the Projection TV will automatically turn off. Pressing a TV function button (ex. display button) causes the Projection TV to remain on and the display to stop flashing.

Using the parental lock

This special feature locks the entire TV to prevent others from watching it.

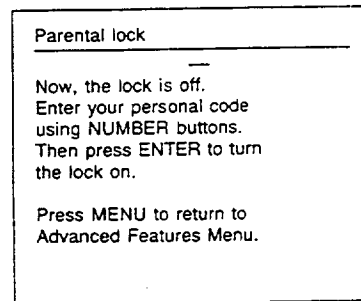


❶ Press the MENU button on the remote control. The TV menu will appear on the screen.

❷ Select “Advanced Features” using the ADJUST button; then press the ENTER button.

❸ Select “parental lock” using the ADJUST button; then press the ENTER button.

❹ The message for setting the parental lock will appear.

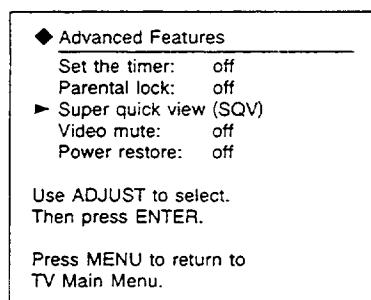


Following the additional on-screen instructions

- ▷ **Important:** You must first unlock the Projection TV before you can use it with the timer.
- ▷ **Important:** When you set the parental lock “on,” you will see a lock message when you next try to turn the Projection TV on. The only button you can operate is the POWER button. The Projection TV will automatically turn off again if you do not operate the Projection TV in 5 minutes.

Using the super quick view tuning

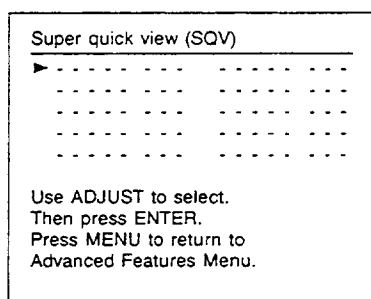
You can set the Super-Quick-View from the menus of by using the ENTER and CANCEL buttons. See “using the quick view option” page 56.



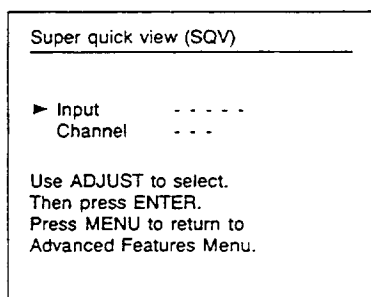
① Press the MENU button on the remote control. The TV menu will appear on the screen.

② Select “Advanced Features” using the ADJUST button; then press the ENTER button.

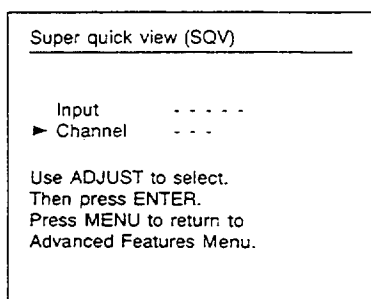
③ Select “Super quick view (SQV)” using the ADJUST button; then press the ENTER button.



④ The instructions for setting Super quick view will appear. Use the ADJUST buttons to select a position to store a TV channel, then press the ENTER button.



⑤ Set the input source by using the ADJUST button, then press the ENTER button.



⑥ Select the channel number to program into Super quick view memory using the ADJUST button. Follow the additional on-screen instructions.

Using the super quick view tuning (continued)

using the enter/cancel button

< setting the super quick view tuning >

- ❶ Select your desired channel with channel control (SCAN).
- ❷ While the channel number is still displayed on the screen, press ENTER. The letters "SQV" will appear under the channel number. If "SQV" does not appear, press ENTER until it does.
- ❸ Repeat steps ❶ - ❷ until all desired channels are memorized.
- ❹ Press the quick view (Q.V.) button to cycle through the channels you have selected.

- ▷ **Important:** Up to ten channels can be memorized in Super Quick View. If you try to memorize more than ten channels, the letters "SQV" will flash telling you that the memory is full. You must delete a channel from memory before adding a new one.

< cancelling the super quick view tuning >

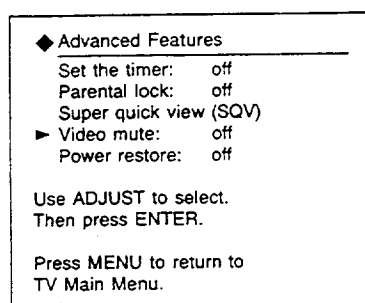
- ❶ Select the channel you wish to delete from Super Quick View memory by pressing the channel control (SCAN) or the quick view (Q.V.) button.
- ❷ While the channel number is still displayed on the screen, press the CANCEL button. The letters "SQV" will disappear from under the channel number, and the channel will be deleted from the Super Quick View memory.

- ▷ **Important:** When there are channels in the super quick view (SQV) memory, quick view (Q.V.) is not available.

- ▷ **Important:** If the channel number is not displayed on the screen, or if it disappears before you press the ENTER or CANCEL button, press the DISPLAY button.

Using Video Mute

With video mute on, any blank section of video tape or any station with a weak signal is replaced by a blue screen. The sound is also turned off. If there is a case where you might wish to try tuning in a station that would otherwise be mute, you can turn the video mute off.



- 1 Press the MENU button on the remote control. The TV menu will appear on the screen.
- 2 Select "Advanced Features" using the ADJUST button; then press the ENTER button.
- 3 Select "Video Mute" using the ADJUST button.
- 4 Press the ADJUST button to select "Video Mute: on".

Follow the additional on-screen instructions.

Using the power restore feature

When this feature is used, the Projection TV will automatically turn on when electric current is supplied. This feature is useful when, for example, your Projection TV is plugged into an outlet that you control with a wall switch.

To use the power restore feature:

◆ Advanced Feature	
Set the timer:	off
Parental lock:	off
Super quick view (SQV)	off
Video mute:	off
▶ Power restore:	off
Use ADJUST to select. Then press ENTER.	
Press MENU to return to TV Main Menu.	

- 1 Press the MENU button on the remote control. The TV menu will appear on the screen.
- 2 Select "Advanced Feature" using the ADJUST button; then press the ENTER button.
- 3 Select "Power restore" using the ADJUST button.
- 4 Use the ENTER button to switch to on.

Press MENU to turn to TV Main Menu.

▷ **Important:** In order for this feature to work, you must leave the Projection TV turned on when you turn off the electric current.



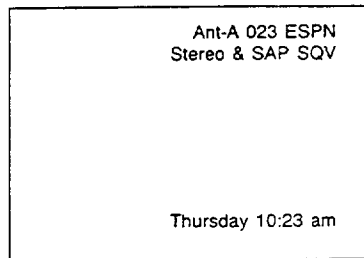
Using the Special Features

In addition to the basic and advanced functions explained in the previous chapter, your Mitsubishi Projection TV offers you several special features not generally available on other brand Projection TVs. This chapter will explain how to use these distinctive features. It contains the following topics:

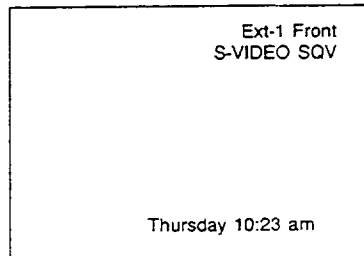
- ◆ **Understanding the On-Screen Displays**
- ◆ **Using the Off-Timer**
- ◆ **Using the Picture-in-Picture (PIP) Mode**

Understanding the On-Screen Displays

Your Mitsubishi Projection TV provides an on-screen summary of the current settings for the Projection TV or cable channels. This on-screen display can also be used to check the status of various functions without adjusting them. To check a function, press the display button (DISP) on the remote control. This section describes the displays in the order that they occur.

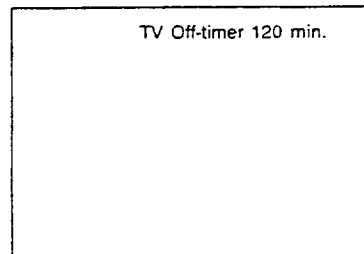


- ❶ This setting indicates the following:
- input source (antenna and channel number, and channel name)
 - stereo and/or SAP are available for reception on this channel,
 - this channel is programmed into super quick view memory,
 - current day of the week, and
 - time.

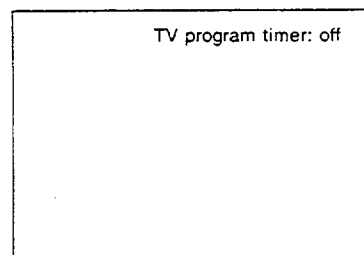


This setting indicates the following:

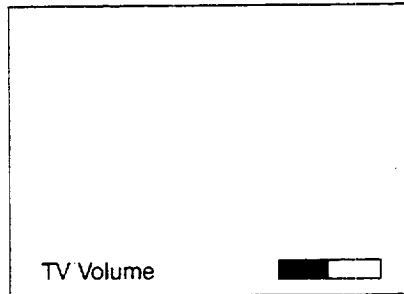
- input source (external source, and input name),
- S-VHS cable has been connected to Projection TV,
- this channel is programmed into super quick view memory,
- current day of the week, and
- time.



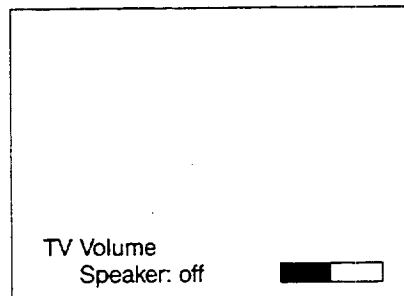
- ❷ This setting indicates the status of the off-timer function.



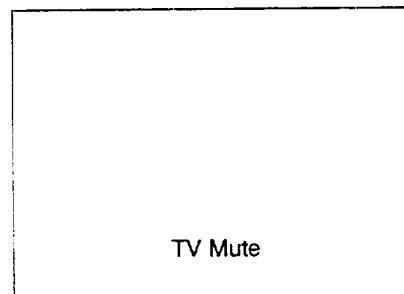
- ❸ This setting indicates the status of the timer, which can be used to program the TV to turn on automatically.



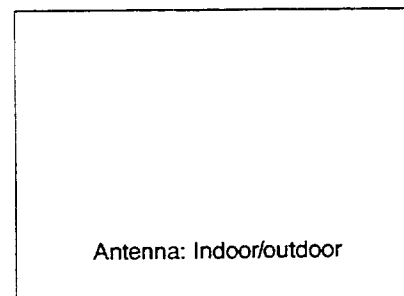
- ④ This setting indicates the current volume setting of the Projection TV.



This setting indicates that the Projection TV speaker system has been turned off.



This setting indicates that Projection TV volume has been muted.



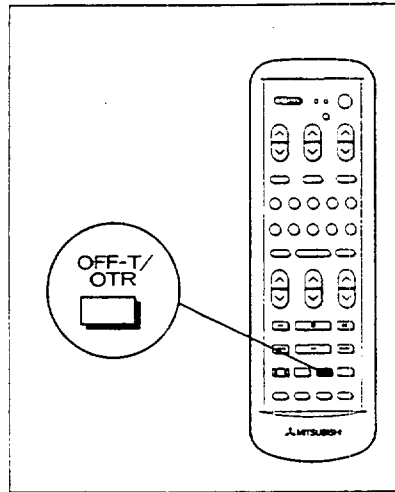
- ⑤ This setting indicates the current reception mode (Cable or Indoor/outdoor).

◆ Using the Off-Timer

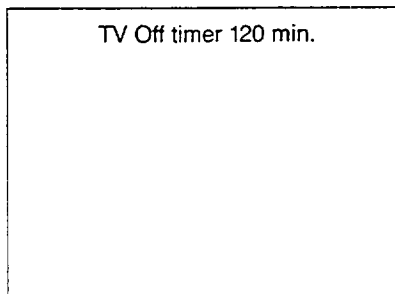
This special function allows you to set the Projection TV to turn off automatically. You can set the Projection TV to turn off from 10 to 120 minutes (2 hours). In this section you'll learn:

- **setting the off-timer, and**
- **changing or canceling the off-timer.**

Setting the off-timer



- 1 Press the off-timer button (OFF-T) on the remote control.

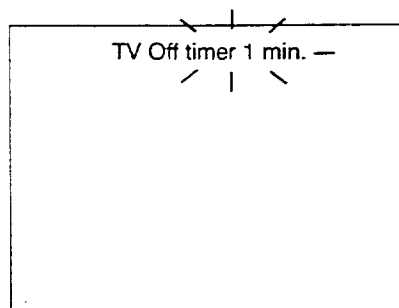


- 2 Select how long you want the Projection TV to stay on by repeatedly pressing the off-timer button (OFF-T). The time will decrease in 10 minute intervals each time you press the button.

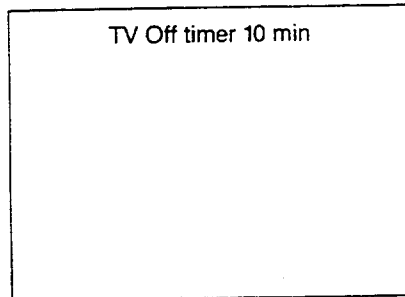
- 3 To view the amount of time:

- press the off-timer button (OFF-T) once, or
- press the display button (DISP) on the remote control until the on-screen display indicates "Off timer" and shows the amount of time remaining.

▷ **Important:** During the last minute before the Projection TV is set to turn off, "Off timer 1 min." will flash in red to remind you that the off-timer is set.



Changing or canceling the off-timer



① Press the off timer button (OFF-T) on the remote control. An on-screen display will indicate the amount of time remaining until the Projection TV will turn off.

② Continue pressing the off timer button (OFF-T) repeatedly to change the remaining time or to cancel the off-timer. The off-timer is canceled when “---” appears instead of the remaining time.

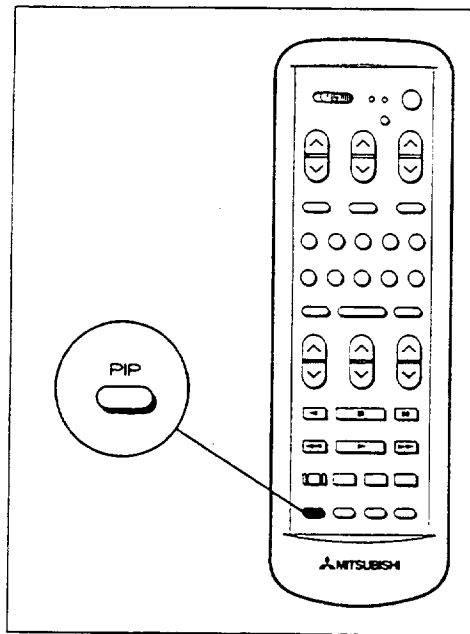
◆ Using the Picture-in-Picture (PIP) Mode

One of the special features of your Mitsubishi Projection TV is the picture-in-picture (PIP) mode, which allows you to view two different sources at the same time. In this section you'll learn:

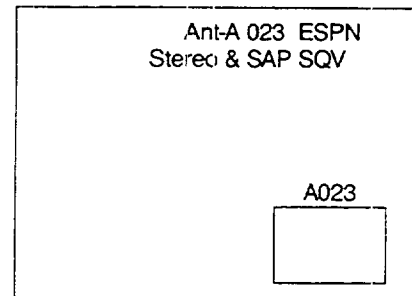
- selecting the PIP image,
- selecting the source,
- exchanging the PIP image,
- freezing the PIP image, and
- moving the PIP image.

▷ **Important:** You must have a VCR connected to the Projection TV to see two different live action pictures when using PIP.

Selecting the PIP image

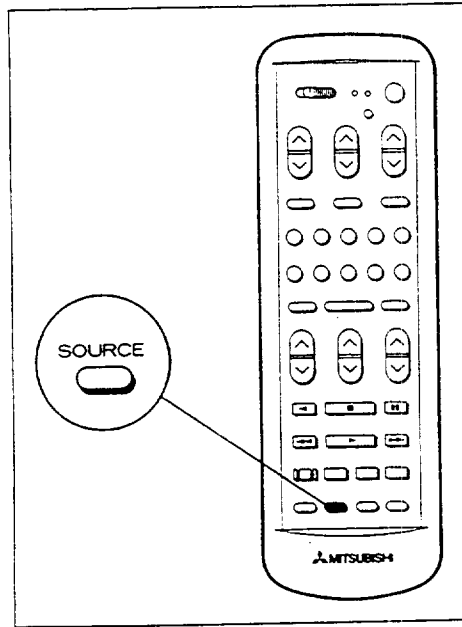


- 1 Select the number of the TV channel you want to view by using the channel control (SCAN).
- 2 Press the PIP button. A reduced image will appear in the bottom right corner of the screen.

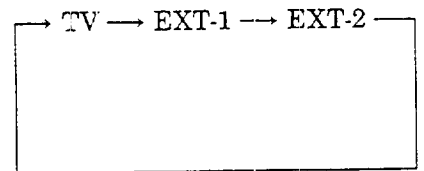


- ▷ **Important:** When the main image is monochrome (black and white), the PIP image will also appear in monochrome even if the PIP source is in color.

Selecting the source

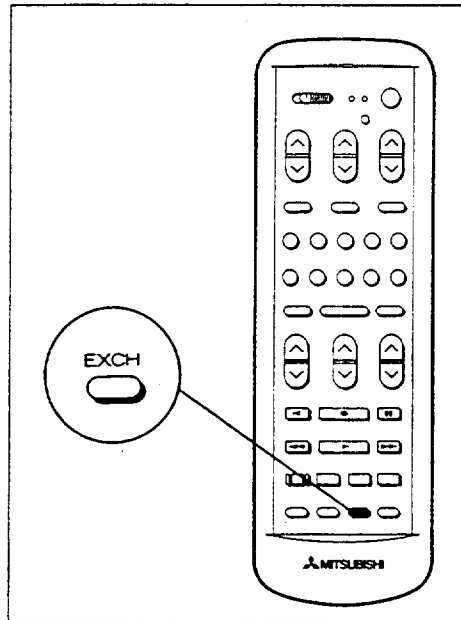


- 1 Turn your VCR on and select a channel on the VCR that is different than the channel you see on your Projection TV screen.
- 2 Press the source button (SOURCE) on the remote control repeatedly to select the source of the PIP image: TV, EXT-1, or EXT-2.
- 3 The PIP image will change as follows.

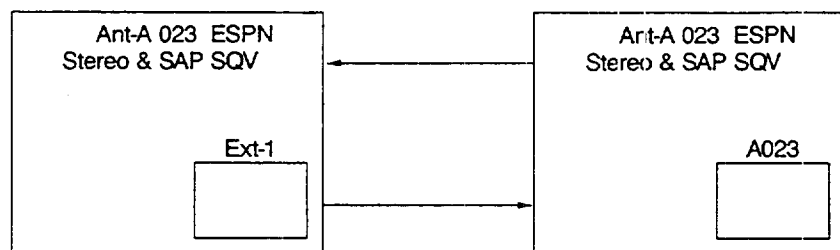


- ▷ **Important:** To change the background image in PIP mode, press the input button (INPUT) on the front panel or on the remote control.

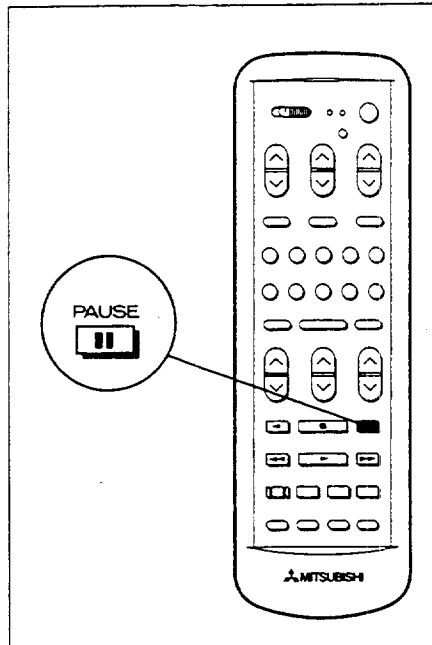
Exchanging the PIP image



Press the exchange button (EXCH) on the remote control to exchange the positions of the background image and the reduced image.

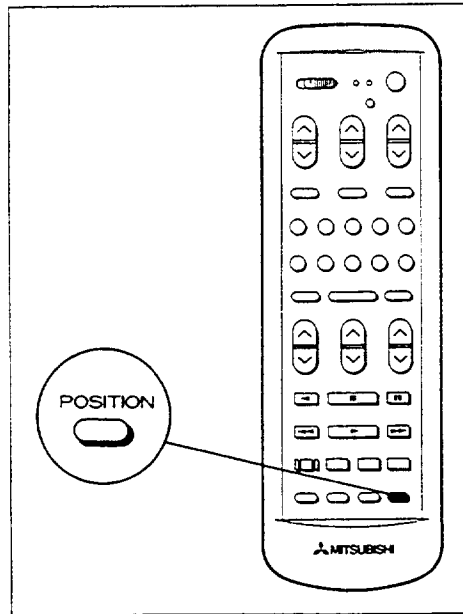


Freezing the PIP image

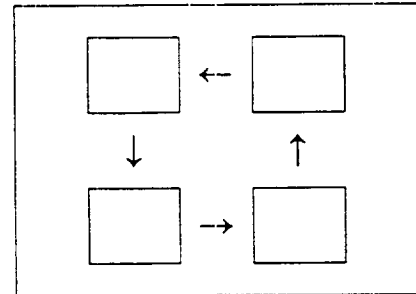
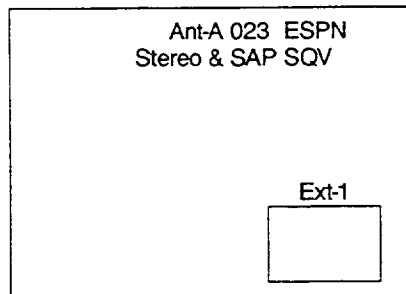


- 1 Press the pause button (PAUSE) to freeze the reduced image on the screen.
- 2 Press again to cancel the image freezing.

Moving the PIP image



Press the position button (POSITION) repeatedly. The position of the reduced image will change in each corner of the screen in a counterclockwise fashion.





Troubleshooting

Even though you're now familiar with the basic and advanced operations of your Mitsubishi Projection TV, you may run into trouble from time to time as you become accustomed to the many features. 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 (continued)

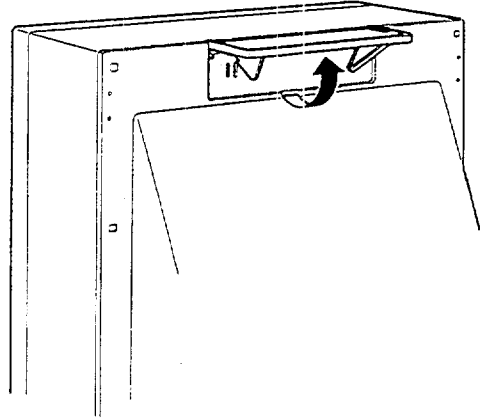
Problems	Possible Solutions	For More Information
<ul style="list-style-type: none">• The remote control doesn't work.	<ul style="list-style-type: none">• Check that the batteries are installed correctly.• Check that the select button is set to TV.• Be sure that you are pointing the top of the remote control toward the Projection TV from a distance of no more than 20 feet.	<ul style="list-style-type: none">• See "Getting ready to use the remote control" in Chapter 1 for an explanation of how to install batteries in the remote control.• See "Remote control buttons and functions" in Chapter 1, which explains where the select button is located.• See "Getting ready to use the remote control" in Chapter 1, which contains pointers for using the remote control.
<ul style="list-style-type: none">• The Projection TV takes several seconds to respond to button commands.	<ul style="list-style-type: none">• Use the ENTER key to avoid delays.	<ul style="list-style-type: none">• See "Changing channels" in Chapter 3, which explains the function of the ENTER key.
<ul style="list-style-type: none">• You can't access a channel.	<ul style="list-style-type: none">• Be sure that the channel you want to view is programmed into memory.• Check that the Projection TV is tuned to the correct input source (antenna) for that channel.	<ul style="list-style-type: none">• See "Memorizing channels" in Chapter 3, which explains how to program channels into the Projection TV's memory.• See "Selecting the Input source" in Chapter 3, which explains how to change the input source.

Problems	Possible Solutions	For More Information
<ul style="list-style-type: none"> On-screen displays appear each time you adjust a function. 	<ul style="list-style-type: none"> This is part of the normal operation of the Projection TV. 	<ul style="list-style-type: none"> See “Understanding the On-Screen displays” in Chapter 4 for a full explanation of the on-screen displays.
<ul style="list-style-type: none"> There’s no sound even when the volume is turned up. 	<ul style="list-style-type: none"> Check that the MUTE button isn’t on. Check the setting of the “Speaker Internal/External” function. 	<ul style="list-style-type: none"> See “Remote control buttons and functions” in Chapter 1, which explains the location and function of the MUTE button. See “Adjusting the sound” in Chapter 3, which explains how to set the speaker to Internal or External.
<ul style="list-style-type: none"> You forget the code you used to set the parental lock. 	<ul style="list-style-type: none"> Use the alternate procedure that doesn’t require the use of the code. 	<ul style="list-style-type: none"> See the Appendix “Automatic Procedure for the Parental Lock.”
<ul style="list-style-type: none"> You can’t program the TV to turn on automatically. 	<ul style="list-style-type: none"> The Projection TV may be locked. 	<ul style="list-style-type: none"> See “Using the parental lock” of “Advanced Features” in Chapter 3.
<ul style="list-style-type: none"> The sound doesn’t match the image on screen. 	<ul style="list-style-type: none"> The Projection TV’s reception mode may be set to “separate audio program (SAP).” 	<ul style="list-style-type: none"> See “Adjusting the sound” in Chapter 3, which explains how to select the appropriate reception mode.

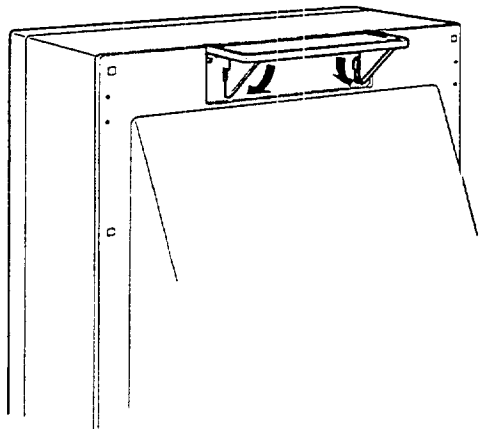
Using the VCR tray (VS-45VA1, VS-45VA2, VS-50VA1 and VS-50VA2 only)

Your Mitsubishi Projection TV has a built-in VCR tray for your convenience. To use the tray:

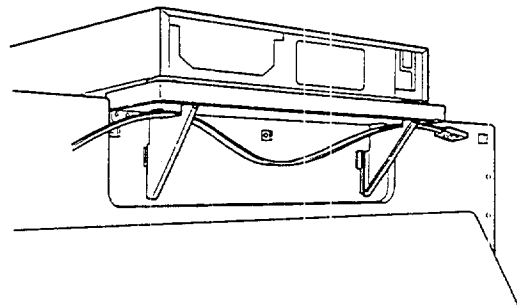
- 1 Pull the VCR tray in an upright position.



- 2 Open the legs on both sides of the tray and place them into the ribs.

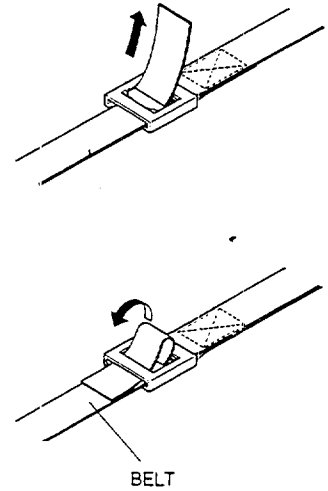


- 3 Fix the VCR to the tray by passing the band through the hole on the upper side of both legs.

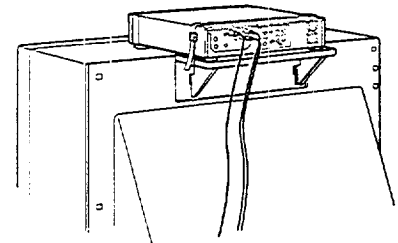


- **Warning:** To make sure the VCR is stable at all times, fix it to the Projection TV as shown in the illustration.

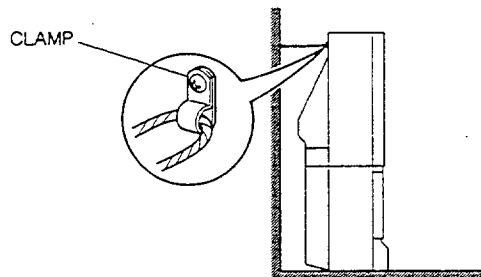
- 4 Join the band together as shown.



- ▷ **Important:** To make sure the VCR is stable at all times, fix it to the Projection TV as shown in the illustration.



- ▶ **Warning:**
- Do not place a VCR over 16kg [35 lb] on the tray.
 - Do not place more than one VCR on the tray.
 - Take the VCR off the tray before moving the Projection TV.
 - For keeping set from toppling under the influence of earthquake or the other emergency, fix the set using the clamp attached on the set back as shown.



Caution and care

▶ **Warning:**

Don't leave stationary images, such as those generated from stock market reports or video games, on screen for more than 10 minutes. Still patterns can scar the Projection TV causing permanent damage to the picture tube.

▷ **Important:**

If you plan to place speakers next to the Projection TV, make sure they are magnetically shielded. Ordinary speakers will cause distortion in the picture due to their strong magnets. This distortion, however, will not harm the picture tube.

For maximum enjoyment and safe operation of your MITSUBISHI Projection TV, please read the "IMPORTANT SAFEGUARDS" section carefully and apply them properly.

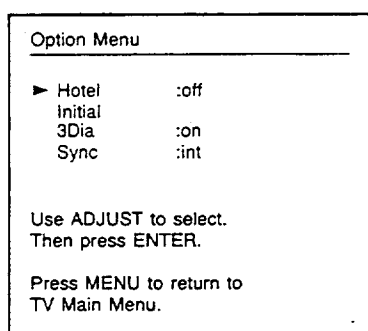
Calling for service

If you are unable to correct the problem, consult your MITSUBISHI dealer or MITSUBISHI Authorized Warranty Service Center.

Do not adjust any controls not described in this owner's guide.


Do not remove the protective back cover of this unit.

If you see the following display on you screen, you should not change any settings. This is a special display used by the factory.



If this display appears, make sure that all of the on/off settings are the same as the illustration above and then turn the Projection TV off. If any of the settings are different than the illustration above, turn the Projection TV off and consult your MITSUBISHI dealer or MITSUBISHI Authorized Warranty Service Center.



Cut along dotted line and file after reading 

You will need to enter the code when:

- ① viewing the locked TV, or
- ② canceling the lock.

If you forget the code, you can change, cancel, or view the locked channels without entering the code. To do this, simply press the buttons labeled “Q.V.” and “9” at the same time.

- ▷ **Important:** Unlocking made in this procedure is only temporary. After finishing the procedure, follow the instructions shown in “Using the parental lock” in Chapter 3 to cancel or view the locked TV.

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