

SONY

3-752-931-21(1)

Color Rear Video Projector

KPR-53EX30 KPR-46EX30 KPR-46EX32

Operating Instructions

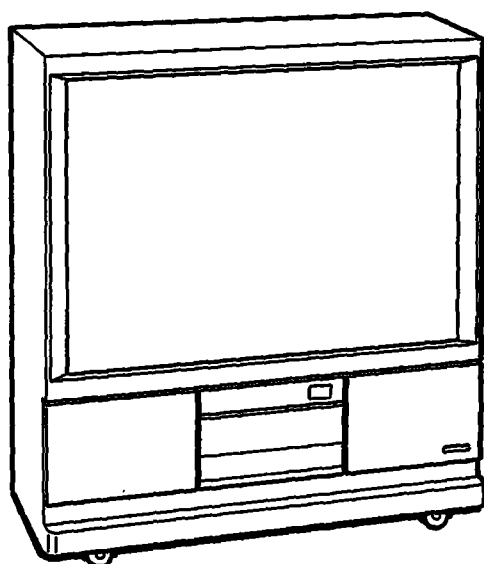
Before operating your projection TV, please read this manual thoroughly and retain it for future reference.

Owner's Record

The model and serial numbers are located at the rear of the projection TV. Record these numbers in the spaces provided below. Refer to them whenever you call upon your Sony dealer regarding this product.

Model No. KPR-

Serial No. _____



Contents

Preface

This section tells you about special features, safety information, and preparatory information for using this manual.

Chapter 1 : Set up

This section shows you the steps for installing and presetting your projection TV.

Chapter 2 : Basic Operation

This section gives you basic information about using your projection TV.

Chapter 3 : Advanced Operation

This section shows you how to use TIMER/BLOCK and other useful features, as well as the Remote Commander.

Chapter 4 : Other Connections

This section shows you how to connect optional video and audio equipment to your projection TV.

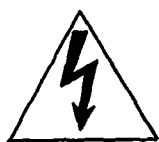
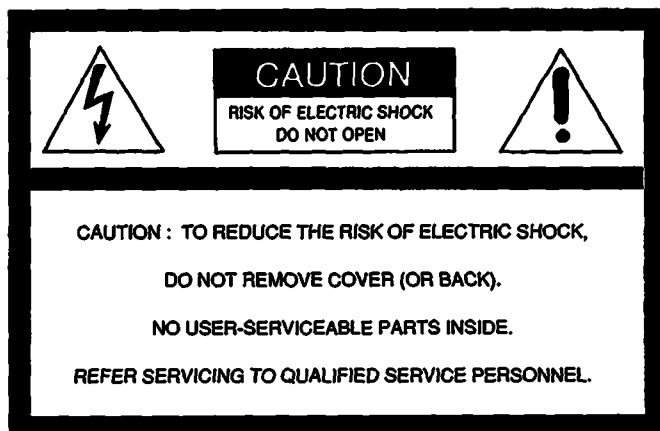
Appendix

This section gives you the viewing area, specifications and troubleshooting information.

● For a detailed table of contents, see page 3.

WARNING

To prevent fire or shock hazard, do not expose the projector to rain or moisture.



This symbol 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 to persons.



This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

CAUTION:

TO PREVENT ELECTRIC SHOCK, DO NOT USE THIS POLARIZED AC 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 820-22 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.

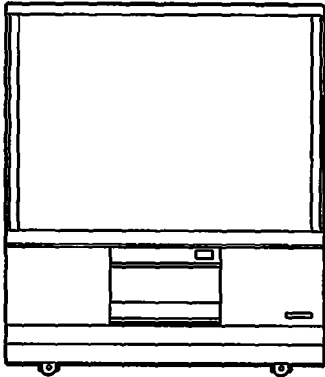
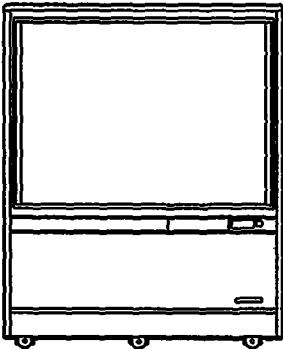
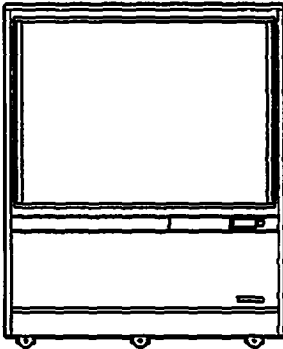
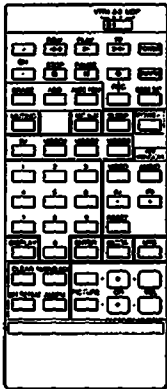
Use of this color rear video projector for other than private performance of programs broadcast for the use of the general public may require authorization from the transmitter and/or owner of such programs. Use with cable television transmission may require authorization from the cable system transmitter and/or program owner.

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Introducing the Sony 46/53 KPR Series

This manual covers three models, KPR-53EX30, KPR-46EX30 and KPR-46EX32. The only differences among them are screen size, and cabinet design and dimension. All the functions are exactly the same. The illustrations in this manual are based on model KPR-53EX30.

Model Number	KPR-53EX30	KPR-46EX30	KPR-46EX32
Design			
Supplied Remote Commander	 RM-Y109		

Features

- **Multiband VHF/UHF/CATV tuner** receives up to 125 cable channels for a total of 181 possible off-air and cable channels.
- **Built-in MTS (Multichannel TV Sound) decoder** lets you receive stereo programs and Second Audio Program (SAP) broadcasts.
- **S VIDEO INPUT jack**, when connected to the S video output jack on the VCR, allows superior quality pictures from the VCR to be displayed on the screen.
- **Built-in video and L/R audio line output jacks** provide selected output from the TV tuner or any equipment connected to the audio/video line inputs.
- **On-screen displays** clearly show the current operating modes and adjustments being made.

And other features for a high quality picture...

- **New Dynamic picture™ system** automatically adjusts picture contrast to produce more detail in both bright and dark areas of every scene.
- **VM (Velocity Modulation) circuit** produces clean, sharp black and white contrasts.
- **Dynamic Focus™ circuit** automatically focuses the scanning electron beam for enhanced sharpness over the entire picture, especially in the corners.
- **Liquid cooled optically coupled picture tubes** with new coolant formulation and pressure release diaphragm generate super-bright images without heat build-up.
- **Shading compensation circuit** assures proper color balance across the entire screen.
- **High voltage regulator** maintains consistent image size and prevents "zooming" in and out of focus during sudden changes between dark and light scenes.
- **Hybrid lenses:** a multi-element combination of top-quality coated glass lenses and spherical acrylic lenses for the best light-transiting and focusing characteristics of both materials.
- **Multi-layer lens coating** increases brightness and improves contrast ratio by reflecting light beams forward again and again.

- Improved blue phosphor helps maintain long-lasting pure, clean whites.
- Improved green phosphor minimizes "burn-in" effect of still images on your VideoScope screen, doubling the long-term luminescence of your system.

The supplied remote commander provides you with the following and other convenient features.

- **With the remote commander**, you can operate video and multi disc player equipment made by Sony or other manufacturers, as well as the projection TV.
 - **TIMER/BLOCK feature** lets you set times for automatic program starting and channel blocking.
 - **Sound Retrieval System (SRS®)*** enhances both stereo and monaural sound.
 - **Sleep timer** automatically turns off the projection TV after approximately one hour.
 - **Automatic programming** presets all receivable channels instantly.
 - **ANT/AUX button** controls one-touch selection of pay cable TV when a converter is connected.
- * *Sound Retrieval System (SRS®) reproduces the ambiance and dynamics of a live performance, creating the sense of being present at the concert hall or recording studio. SRS lets you enjoy optimum sound from anywhere in the room.*

(●) SOUND RETRIEVAL SYSTEM

The (●) Sound Retrieval System is manufactured by Sony Corporation under license from the Hughes Aircraft Company, a subsidiary of GM Hughes Electronics. It is covered by U.S. Patent No. 4,748,669. Other U.S. and foreign patents pending.

(●), Sound Retrieval System and SRS® are trademarks of the Hughes Aircraft Company, a subsidiary of GM Hughes Electronics.

Precautions

Safety

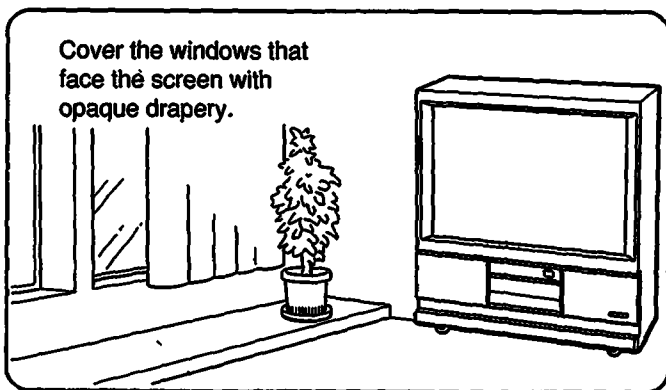
- Operate the projection TV only on 120 V AC.
- Should any liquid or solid object fall into the cabinet, unplug the projection TV and have it checked by qualified personnel before operating it any further.
- Unplug the projection TV from the wall outlet if you are not going to use it for several days or more. To disconnect the cord, pull it out by the plug. Never pull the cord itself.

Installation

- To prevent internal heat build-up, do not block the ventilation openings.
- Do not install the projection TV in a hot or humid place, or in a place subject to direct sunlight, excessive dust or mechanical vibration.
- Avoid operating the projection TV at temperatures below 41°F (5°C).
- After transporting the projection TV directly from a cold to a warm location, or if the room temperature has changed suddenly, pictures may be blurred or show poor color over portions of the picture. This is because moisture has condensed on the mirrors or lenses inside the projection TV. Let the moisture evaporate before using the projection TV.
- Avoid placing the projection TV on a slanted or uneven floor.

Illumination

To obtain a clear picture, the screen should not be directly exposed to illumination or sunlight. If possible, use spot lighting directed down from the ceiling.



The floor and walls should not be of a light-reflecting material. If necessary, cover them with dark carpeting or wallpaper.

Maintenance

- Save the original shipping carton and packing material to use if you ever have to ship your projection TV. For maximum protection, repack your projection TV as it was originally packed at the factory.
- To keep the cabinet looking brand-new, periodically clean it with a soft cloth. Stubborn stains may be removed with a cloth slightly dampened with a mild detergent solution. Never use strong solvents such as thinner or benzine, or abrasive cleansers since these will damage the cabinet. As a safety precaution, unplug the projection TV before cleaning it.
- To remove dust from the front of the screen, unplug the projection TV and wipe it gently with a soft cloth slightly dampened with water or a mild detergent solution, using vertical strokes only. Then wipe it again with a dry, soft cloth. Never use solvents or thinners for cleaning purposes.
- If the picture turns dark after the projection TV has been in use for a long period of time, it may be necessary to clean the inside of the projection TV. Consult qualified service personnel for this.

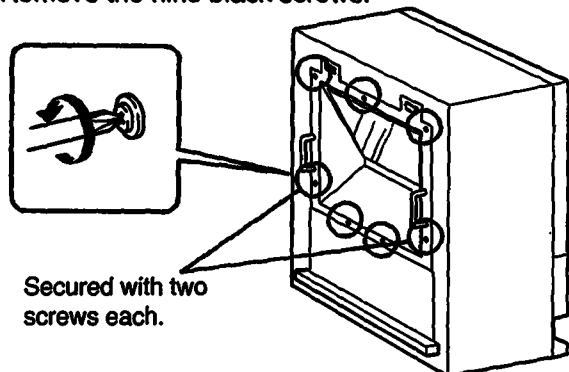
Mounting the Mirror Cover (KPR-53EX30 only)

The mirror cover is turned over and installed inside the cabinet for transporting. If you have model KPR-53EX30, please remount the mirror cover as follows.

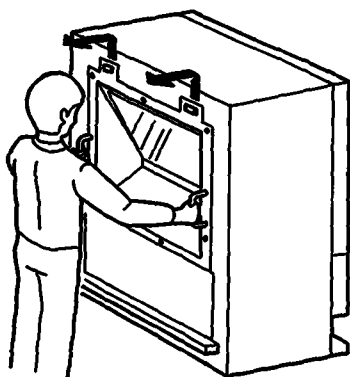
Notes

- Before mounting, turn off the power and unplug the power cord from the AC wall outlet.
- Handle the mirror cover with care as the mirror is mounted inside.
- Do not touch the mirror surface or any parts inside the cabinet.
- Do not use the handles to carry or transport the set. The handles are designed only for turning the mirror cover over.

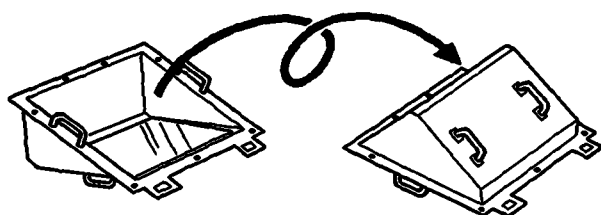
1 Remove the nine black screws.



2 Slide the mirror cover up and out from the latches.

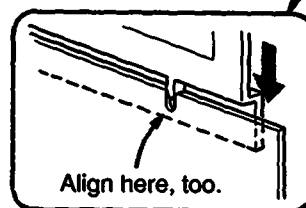
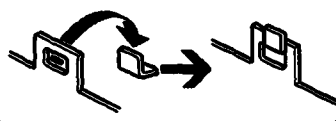


3 Turn the mirror cover over.



4 Hold the mirror cover by its handles and remount it.

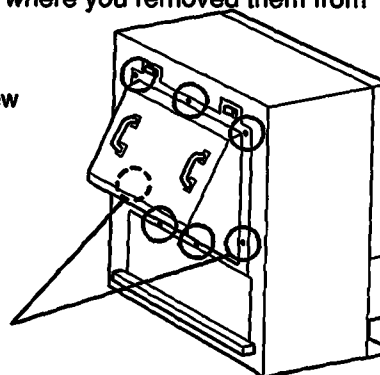
Be sure to hook the mirror cover on both latches.



5 Secure the mirror cover by replacing the nine black screws to where you removed them from in step 1.

Use either screw hole.

Secure with two screws each.



Precautions
Mounting the Mirror Cover

Location of Controls

For details, refer to the pages indicated by the numbered black circles ●.

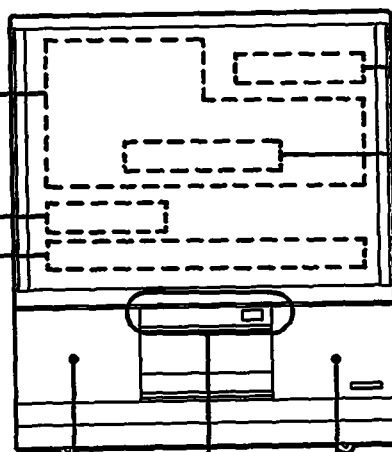
Front

Displays for Picture/Sound Quality adjustment feature 18 19

- **Current level/Item selection display**
Displays the qualities (COLOR, HUE, TREBLE, BASS, etc.) for selection, and their current settings.
- **Item display**
Displays the quality selected for adjustment with the A/V WINDOW buttons, and RESET indication.
- **Adjustment level display**
Displays the level as you make the adjustment.

Sound Retrieval System display 21
(●) SRS (STEREO)/(MONO)/OFF

Current time for TIME/BLOCK 24 - 27



Speaker

Speaker

Display for:

- Channel numbers/Cable "C" display
- MTS mode (MAIN, SAP or BOTH)
- Selected input sources (VIDEO 1, VIDEO 2 or VIDEO 3)
- AUX, MUTING or SLEEP indication

AUTO PROGRAM display 11
Timer or Timer Block Display
24 - 27

CABLE selector 14 16

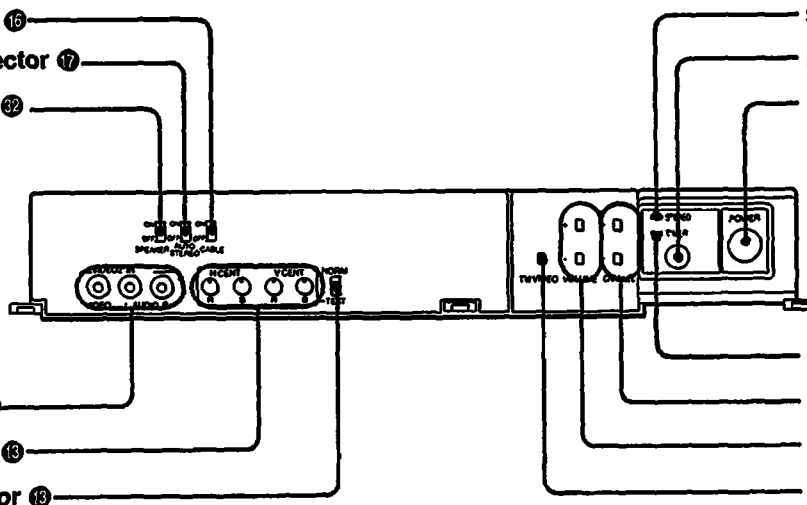
AUTO STEREO selector 17

SPEAKER selector 22

VIDEO 2 IN jacks 23

Centering controls 28

NORM/TEST selector 18



STEREO lamp 2

Remote control detector

POWER button

TIMER lamp 11

CHANNEL +/- scan buttons

VOLUME +/- BUTTONS

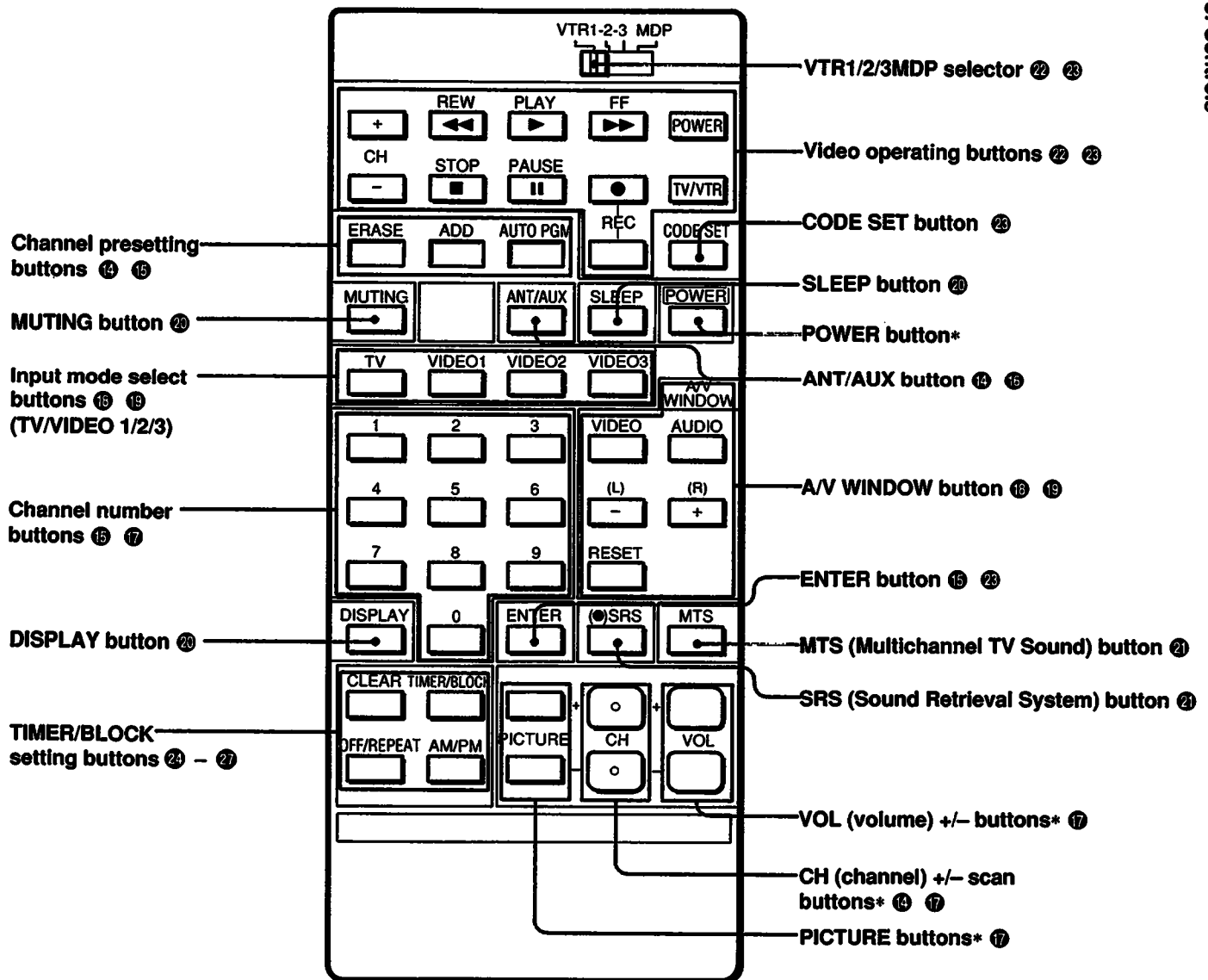
TV/VIDEO button 14 15

Remote Commander RM-Y109

Note

Most of the functions require the Remote Commander.
Please do not lose it.

* The same function buttons are also located on the projector (p. 8).

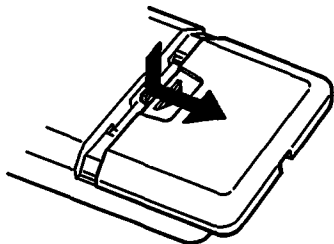


Preparing the Remote Commander

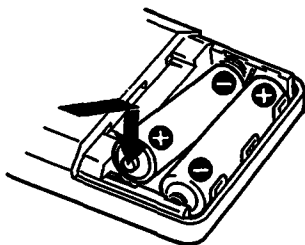
Battery Installation

Remote Commander RM-Y109

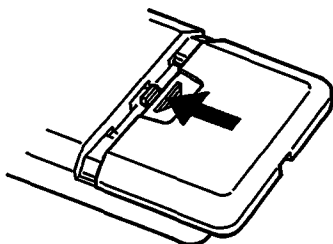
- 1** Push to open the lid (rear of the commander).



- 2** Install two size AA (R6) batteries in correct polarity.



- 3** Replace the lid.



Notes

- With normal operation, batteries will last up to half a year. If the commander does not operate properly, the batteries might be exhausted. Replace all with new ones.
- To avoid damage from possible battery leakage, remove the batteries for extended unused periods.
- Be sure that there are no obstructions between the remote commander and the projection TV.
- Operable range is limited to a 23.5 ft. (7 meter) distance and a 30° angle in each direction.
- If a remote commander that is not recommended is used to operate this projection TV, or if the supplied remote commander is used to operate other equipment, the equipment may not operate properly.

WARNING

Batteries may explode if mistreated. Do not recharge, disassemble or dispose of in fire.

Connecting TV Antenna/Cable



You can use either an indoor or outdoor antenna with your projection TV. We recommend using an outdoor antenna for better picture quality.

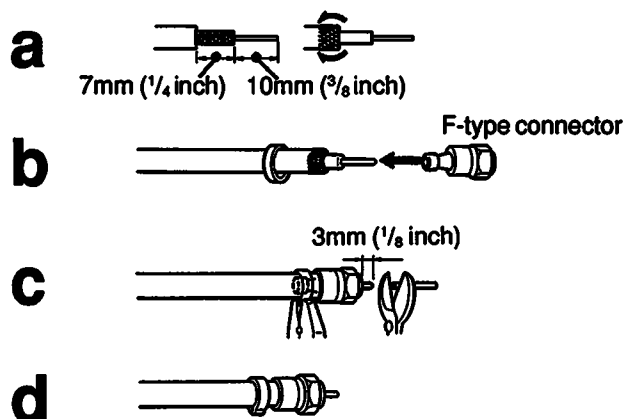
You can receive cable TV by connecting a cable supplied by your local cable company.

To Connect VHF, UHF or VHF/UHF Combination Antenna*, or CATV Cable

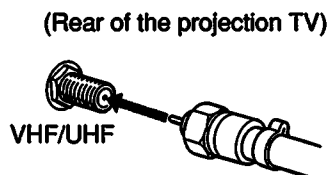
75-ohm coaxial cable (round)

- 1 Check your antenna cable type and prepare the end of the cable using the F-type connector.

Attach an F-type connector (not supplied).



- 2 Plug the connector into the VHF/UHF terminal at the rear of the projection TV.

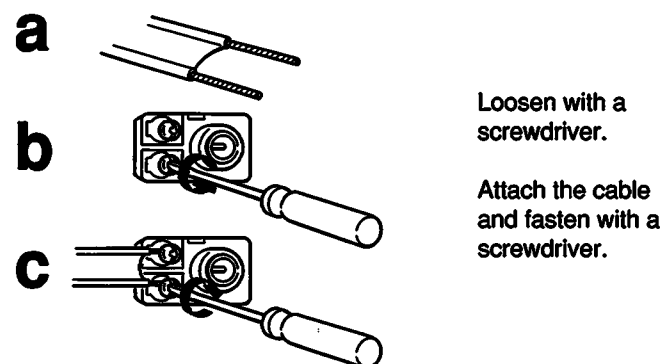


* Most combination antennas are equipped with a signal splitter. Remove the splitter and attach the appropriate connector.

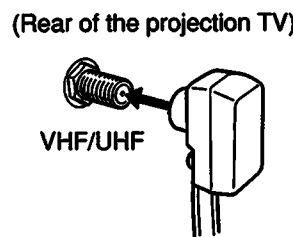
300-ohm twin-lead cable (flat)

- 1 Check your antenna cable type and prepare the end of the cable using the supplied antenna connector.

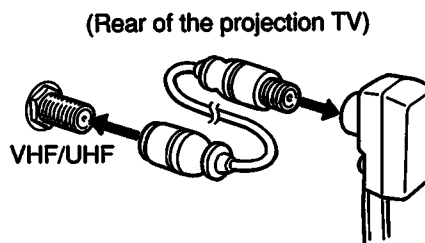
Attach the supplied antenna connector.



- 2 Plug the connector into the VHF/UHF terminal at the rear of the projection TV.



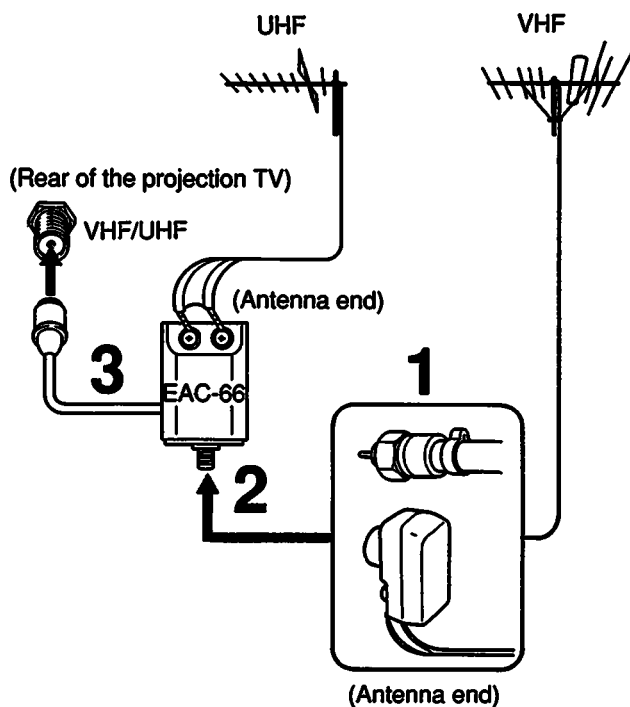
For better picture quality, connect optional antenna cable so that the 300-ohm twin-lead cable can be separated a distance from the projection TV.



To connect both VHF and UHF antennas

Use the supplied EAC-66 U/V mixer.

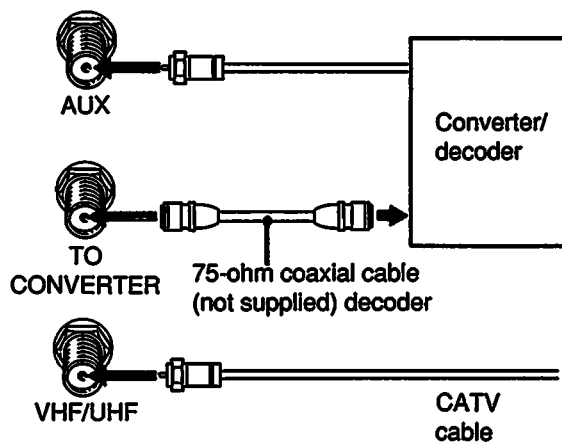
- 1** Prepare the VHF antenna end using the appropriate connector.
- 2** Connect the cables to the mixer.
- 3** Attach the mixer to the VHF/UHF terminal.



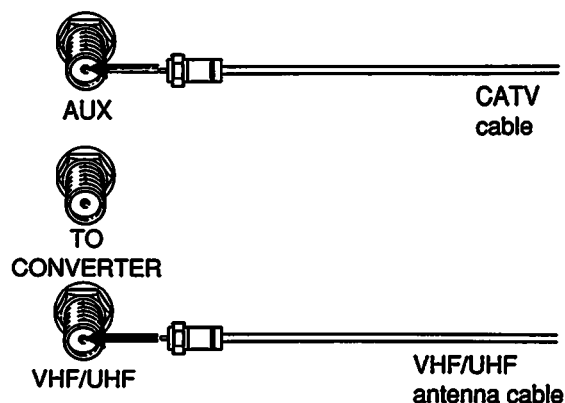
When the U/V mixer is used
Snow and noise (interference) may appear in images of cable TV channels over 37 (W+1).

To connect a cable with a special converter/decoder* for pay cable TV systems

Pay cable TV systems use scrambled or encoded signals and require a special converter (decoder) in addition to the normal cable connection.



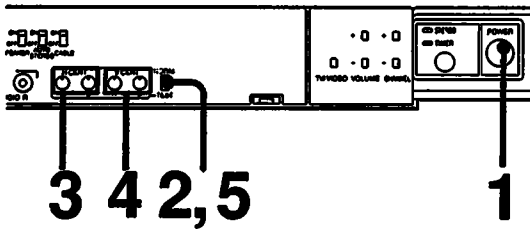
To connect both VHF/UHF antenna and CATV cables



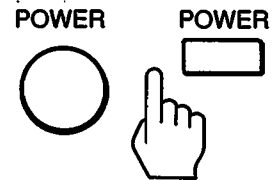
Note
Do not connect anything to the TO CONVERTER terminal in this case.

* The special converter/decoder will be supplied by the cable company.

Adjusting Color Registration

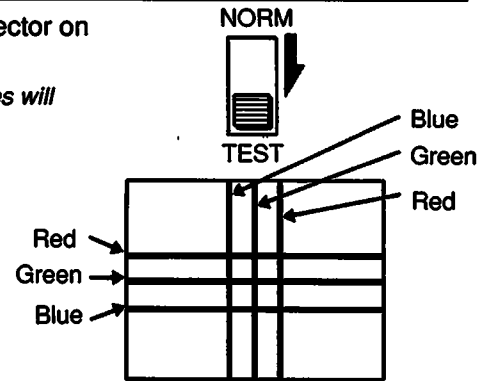


- 1 Press POWER on the projection TV or commander to turn on the projection TV.



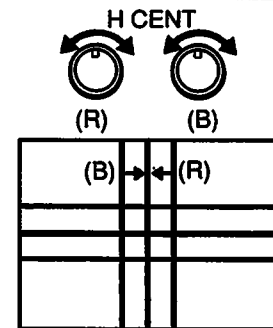
- 2 Set the NORM/TEST selector on the front panel to TEST.

A test pattern of colored lines will appear.



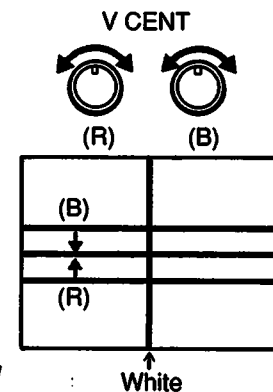
The position of the colored lines will depend on where your projection TV's registration happens to be set.

- 3 Adjust the H CENT (R) and (B) controls so that the red and blue vertical lines converge with the center green line. Turn the knobs clockwise to move right, and counterclockwise to move left.



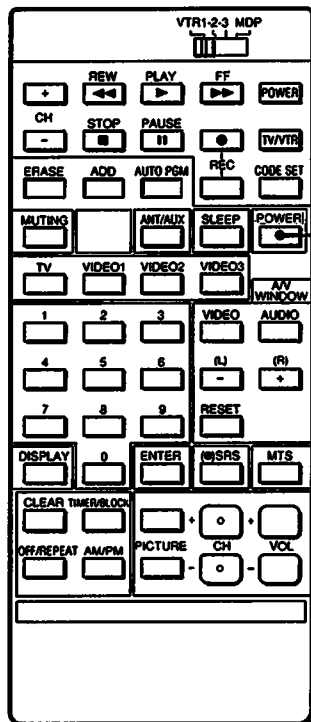
(R) = Red (B) = Blue

- 4 Adjust the V CENT (R) and (B) controls so that the red and blue horizontal lines converge with the center green line. Turn the knobs clockwise to move up, and counterclockwise to move down.



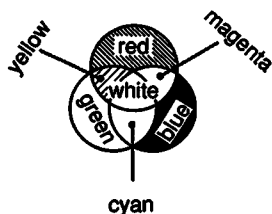
Repeat steps 3 and 4 to adjust the lines until the cross appears white.
(Step back from the projection TV to see the effect.)

- 5 After completing the adjustment, set the NORM/TEST selector to NORM.



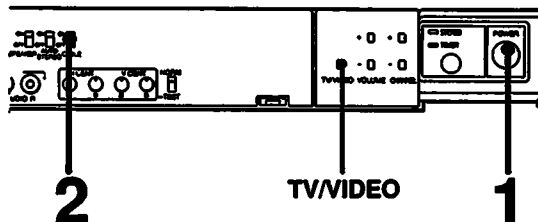
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Mixture of Primary Colors

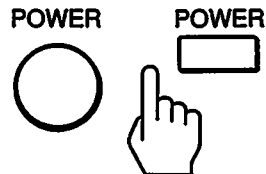


Presetting TV Channels

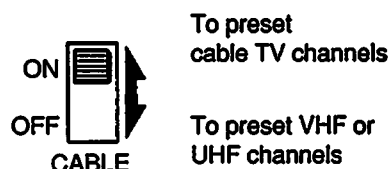
To Preset All Receivable Channels Automatically



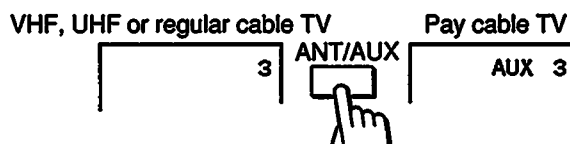
- 1 Press power on the projection TV or commander to turn on the projection TV.



- 2 Set CABLE selector (projection TV) to the appropriate position.



- 3 Press ANT/AUX button (commander) to select the channel mode you want to preset.



If "VIDEO 1," "VIDEO 2" or "VIDEO 3" is displayed on the screen, press TV on the commander or TV/VIDEO on the projection TV so that a channel number appears.

- 4 Press AUTO PGM button (commander).



"AUTO PROGRAM" is displayed on the screen and receivable channels (other than the channels already preset) will be preset in numerical sequence. The channels previously preset remain in the projection TV's memory.*
When no more channels can be found, the programming stops and the lowest numbered channel is displayed.



- 5 Press CH +/- to check or view preset channels.



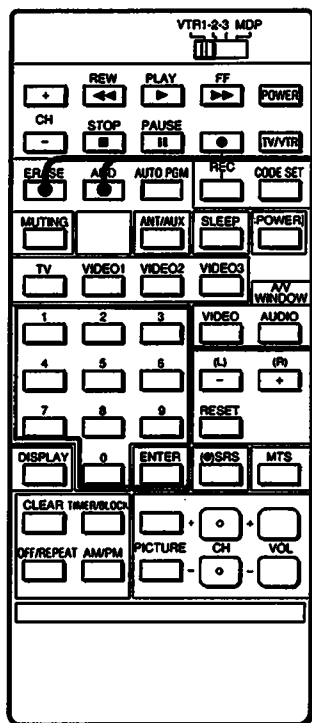
Channels that can be received on this projection TV:

VHF: 2-13
UHF: 14-69
Cable: 1-125

To add channels that could not be preset automatically because their signal strength was too weak, or to erase unnecessary channels, follow the steps in "To Preset Only Desired Channels or to Erase Unnecessary Channels" on the next page.

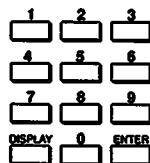
To Preset Only Desired Channels or to Erase Unnecessary Channels

All necessary controls are on the commander.

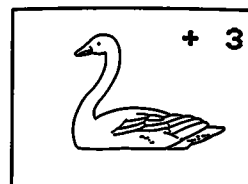


RM-Y109

- 1 Press the channel number button(s) and then ENTER to select the channel you want to add or erase.



- 2 To add channels Press ADD.



A "+" appears before the channel number for a moment. This channel has now been added to the channel scan memory.

- To erase channels Press ERASE.



A "-" appears before the channel number for a moment. This channel has now been erased from the channel scan memory.

Repeat steps 1 and 2 to add or erase other channels.

Tip: Erase non-receiving channels so that when you scan channels, only receiving channels will be displayed.

CAUTION

When a VHF or UHF channel is erased

The cable TV channel with the same number is also erased, and vice versa.

Cable TV channel chart*

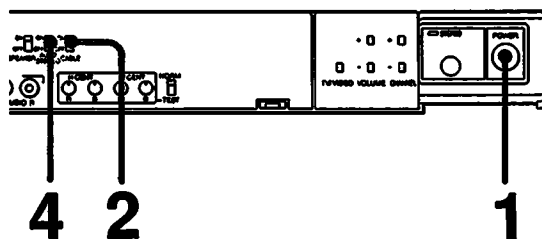
Cable TV systems use letters or numbers to designate channels. To tune in a channel, refer to the chart below.

Number on this TV	1	5	6	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Corresponding CATV channel	A-8	A-7	A-6	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
31 32 33 34 35 36 37 38 39.....93 94 95 96 97 98 99 100 101 102.....123 124 125																				
R S T U V W W+1 W+2 W+3.....W+57 W+58 A-5 A-4 A-3 A-2 A-1 W+59 W+60 W+61.....W+82 W+83 W+84																				

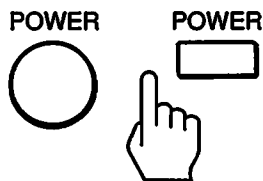
Check with your local cable TV company for more complete information on the available channels.

*This designation of cable TV channels conforms to the EIA/NCTA recommendation.

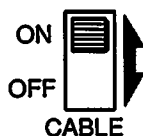
Watching TV Programs



- 1 Press POWER on the projection TV or commander to turn on the projection TV.

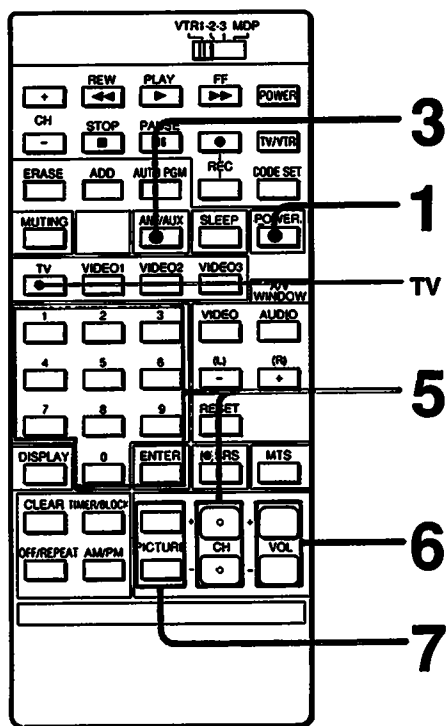


- 2 Set CABLE selector (projection TV) to the appropriate position.



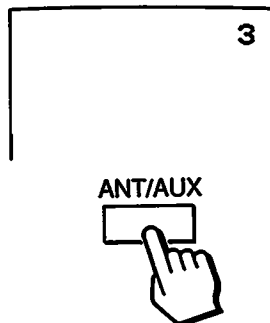
To watch cable TV channels

To watch VHF or UHF channels

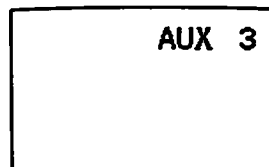


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- 3 Press ANT/AUX (commander) to select the channel mode you want to watch.



To watch VHF, UHF or regular cable TV channels



To watch pay cable TV channels

If "VIDEO 1," "VIDEO 2" or "VIDEO 3" is displayed on the screen, press TV on the commander or TV/VIDEO on the projection TV so that a channel number appears.

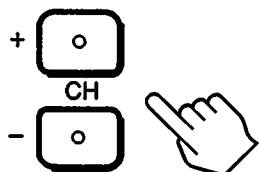
To turn off the projection TV
Press POWER again.

4 Set AUTO STEREO selector (projection TV) to ON.



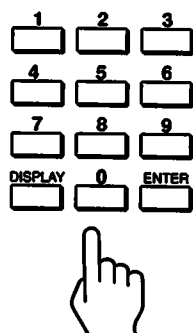
5 Select a channel in one of the following ways (controls on commander):

To scan the preset channels in numerical sequence
Press CH +/-.

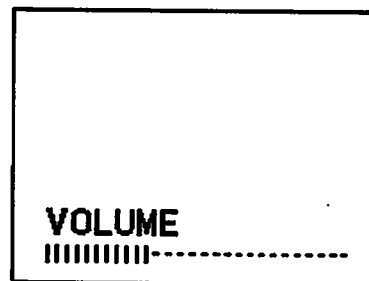
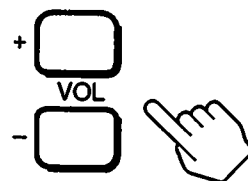


To select a channel directly

Press the channel number button(s) and then ENTER.
For example, to select channel 10, press 1, 0 and ENTER.

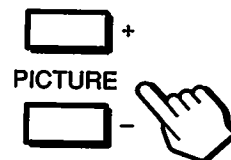


6 Press VOL + or - (commander) to adjust the volume.

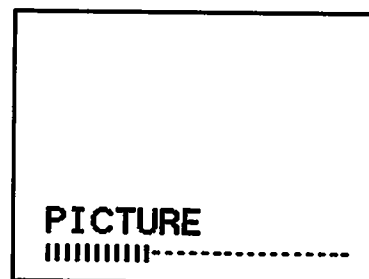


7 Press PICTURE + or - (commander) to adjust the picture.

To increase picture contrast with vivid color.



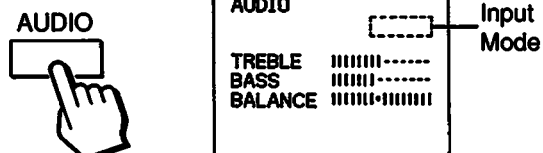
To decrease picture contrast with soft color.



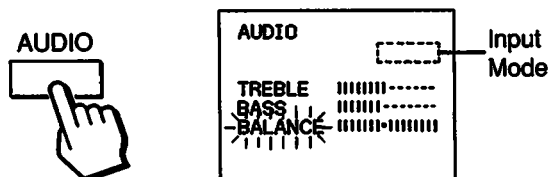
Adjusting the Sound

- 1 Select the input mode you want to adjust with the TV/VIDEO 1/2/3 buttons.

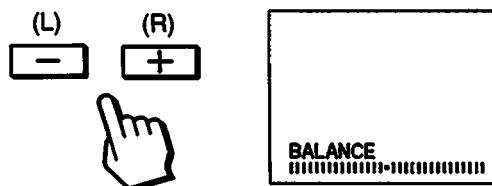
- 2 Press AUDIO.



- 3 Press AUDIO repeatedly until the quality you want to adjust blinks.



- 4 Press (R) or (L) to make the adjustment.

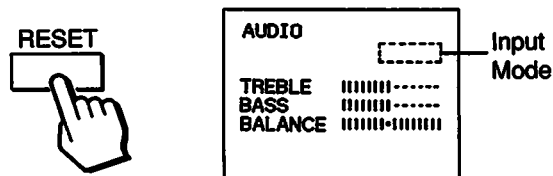


Sound quality	Press -(L) button	Press +(R) button
TREBLE	To decrease treble response	To increase treble response
BASS	To decrease bass response	To increase bass response
BALANCE	To emphasize the left speaker's volume	To emphasize the right speaker's volume

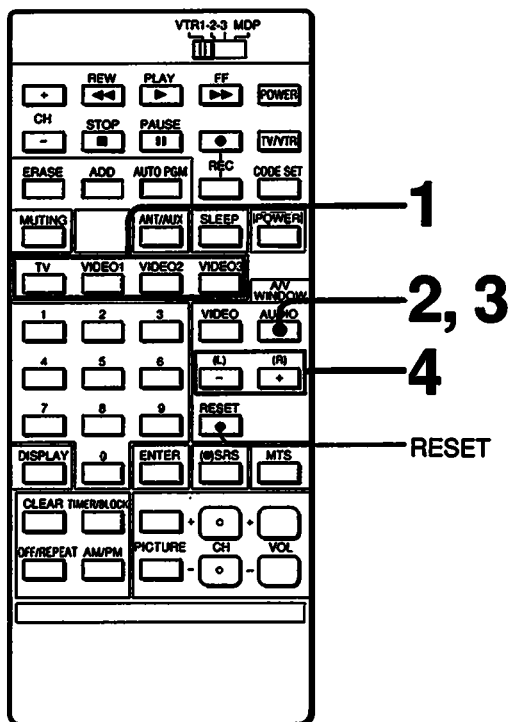
The display will disappear automatically after a few seconds.

To restore the factory (mid-level) settings

Press RESET.

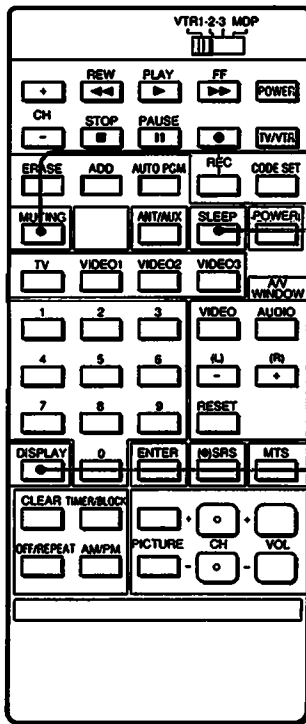


The display will disappear after a few seconds.



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Enjoying Useful Features

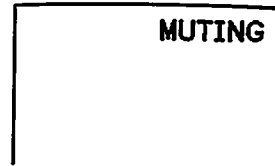


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Muting the sound – MUTING

Press MUTING.

The display "MUTING" will appear on the screen.



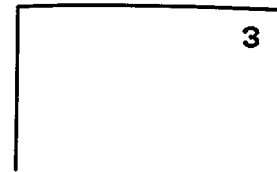
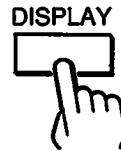
To restore the sound

Press MUTING again, or press VOL +.

Keeping the channel displayed – DISPLAY

Press DISPLAY.

All the current displays will appear for a few seconds, then disappear. The channel display will remain on the screen.



To cancel the display

Press DISPLAY again.

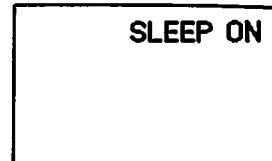
The channel display will disappear.

Using the sleep timer – SLEEP

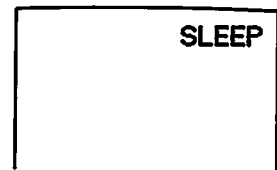
Turns the TV off automatically about 1 hour after setting.

Press SLEEP.

A green "SLEEP ON" display will appear for a few seconds.



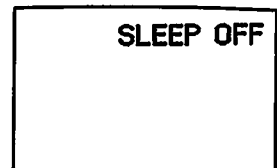
A red "SLEEP" display will appear 1 minute before the TV shuts off.



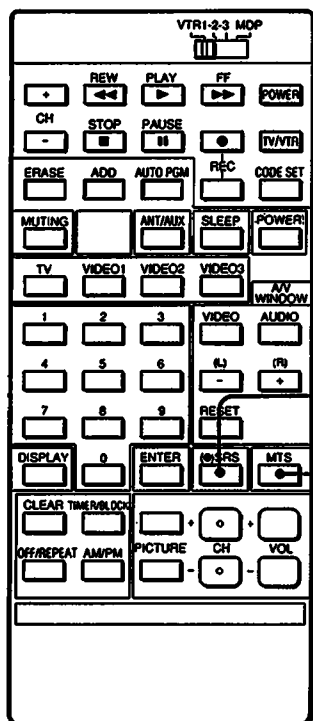
To cancel

Press SLEEP again.

A green "SLEEP OFF" display will appear for a few seconds.



The sleep timer setting is also cancelled when you turn the TV off.



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(●) SRS

MTS

For more natural sound reproduction - (●) SRS

To reproduce the dynamics of a live performance - Sound Retrieval System.

Press SRS.

(●) SRS



Each time you press SRS, the SRS (STEREO), SRS (MONO) and SRS OFF modes are selected in sequence.

The display (in green) for each mode will appear on the screen for a few seconds.



In SRS (STEREO) mode, stereo sound is enhanced.

In SRS (MONO) mode, the natural sound of a monaural source is enhanced.

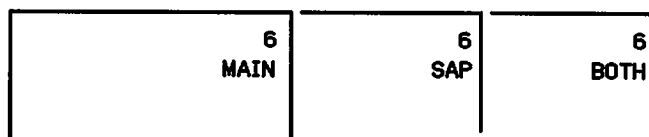
To cancel SRS

Select SRS OFF.

Receiving a Multichannel TV Sound program - MTS

Each time you press MTS, the MAIN, SAP (SECOND AUDIO PROGRAM) and BOTH modes are selected in sequence.

The display (in green) for each mode will appear below the channel number for a few seconds.

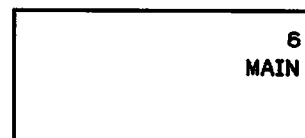


Note

During SAP mode, the sound of non-SAP programs will be muted.

To listen to stereo sound, press MTS to select the MAIN mode.

The MAIN display will appear for a few seconds.

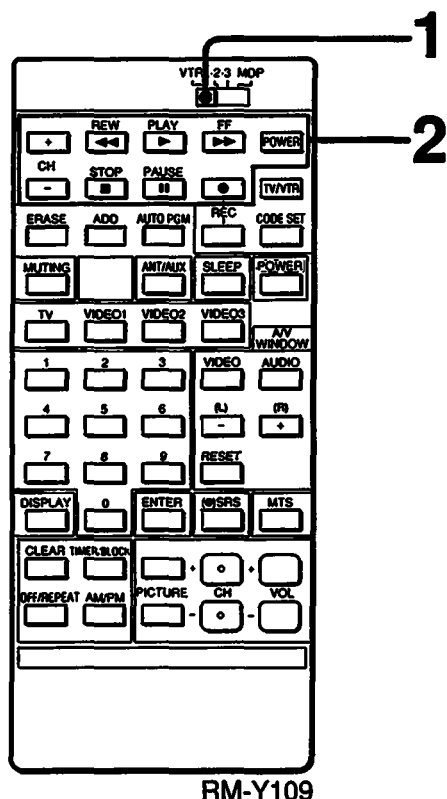


The STEREO indicator lamp on the projection TV will light up whenever a stereo broadcast is received.

Using the Remote Commander

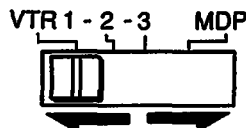
You can operate other video equipment that have an infrared remote detector with the supplied RM-Y110 remote commander.

Operating Sony Video Equipment



With the supplied remote commander, you can operate Sony video cassette recorders (Beta, 8mm, VHS) and multi disc players by following the steps below.

- 1 Set the VTR 1/2/3/MDP selector according to the video equipment you want to operate.



If you want to operate a:	set to:
Beta, ED Beta VCR	VTR 1
8mm VCR	VTR 2
VHS VCR	VTR 3
Video disc player	MDP

- 2 Use the video operating buttons to operate video equipment.

Operating a Video Cassette Recorder

To record	Press ●.
To play	Press ►.
To stop	Press ■.
To fast forward	Press ►►.
To rewind the tape	Press ◄◄.
To freeze a picture	Press ■■.

To resume normal playback, press again.

To search the picture forward and backward

Keep pressing ►► or ◄◄ during playback.
To resume normal playback, release the button.

Operating a Video Disc Player

To play	Press ►.
To stop	Press ■.
To freeze a picture	Press ■■.

To resume normal playback, press again.

*This function is effective only for CAV (standard-play disc). With CLV (extended-play disc), the projection TV will go into the standby mode if ■■ is pressed.

To search the picture forward and backward

Keep pressing ►► or ◄◄ during playback.
To resume normal playback, release the button.

Caution

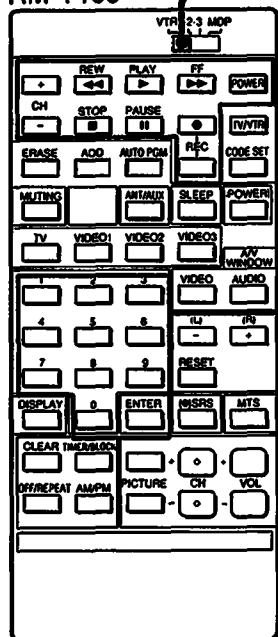
When you replace the batteries, do it within approximately 30 minutes. Otherwise, Sony settings and all of the settings you made under the Pre-Programmed function may be erased.

Notes

- If you use only Sony video equipment with your projection TV, you can operate that equipment following the steps on this page only. However, if you use other makers' video equipment as well as Sony's, please follow the steps on p. 23 instead (Pre-Programmed function).
- If the video equipment does not have a certain function, the corresponding button on this remote commander will not operate.

Operating Non-Sony or Sony Video Equipment (Pre-Programmed Function)

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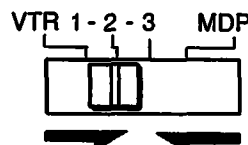
Manufacturers and Code Numbers (VCR)

MANUFACTURER	CODE
SONY	01, 02, 03, 04
EMERSON	22, 33, 30
SHARP	13, 14
RCA	07, 08
HITACHI	07
FUNAI	29
MAGNAVOX	05, 06, 09
mitsubishi	18, 19, 26, 27
PANASONIC	05
GENERAL ELECTRIC	05
JVC	16
GOLDSTAR	25
TOSHIBA	20, 21
SYLVANIA	05, 06, 09
ZENITH	17
SANYO	11, 15
QUASAR	05
NEC	16, 23, 31
PHILIPS	05, 06, 09
TOTE VISION	25
SAMSUNG	24, 32
SYMPHONIC	29
FISHER	10, 11, 12
TEKNIKA	28, 29
CANON	05
PHILCO	05, 06
SCOTT	21
MULTITECH	29
SHINTOM	34

With the supplied remote commander, you can operate non-Sony or Sony video equipment as shown below.

Example: To operate an RCA video cassette recorder when you set the VTR 1/2/3/MDP selector to VTR 2.

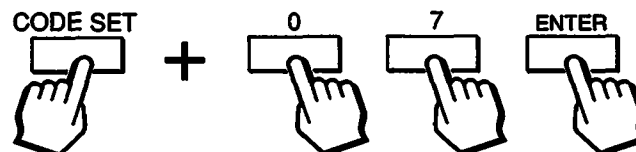
- 1 Set the VTR 1/2/3/MDP selector to VTR 2.



By employing the VTR 1/2/3 settings, you can use your remote commander to operate up to 3 pieces of equipment. (The MDP position is for Sony multi disc players—p. 22.)

Note: If you also use Sony video equipment, set other makers' equipment to a position not being used for your Sony video equipment.

- 2 While pressing CODE SET, press the number buttons for your manufacturer's code number (see chart). For RCA, press 0, 7 and ENTER.



Now you can operate the video equipment with the supplied remote commander.

Notes

- If more than one code number is listed, try entering them one by one, until you come to the correct code for your equipment.
- If you enter a new code number, the code number previously entered at that setting will be erased.

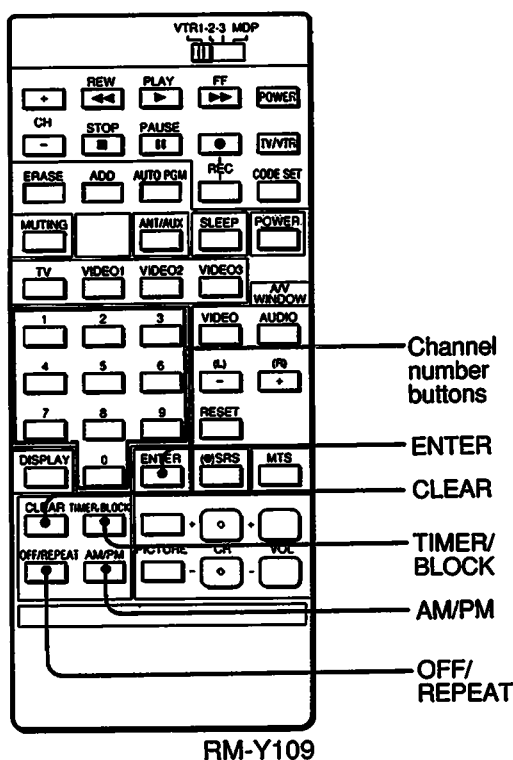
- 3 Use the video operating buttons to operate video equipment (see the chart on p. 22).

Using the TIMER/BLOCK Functions

Available Functions

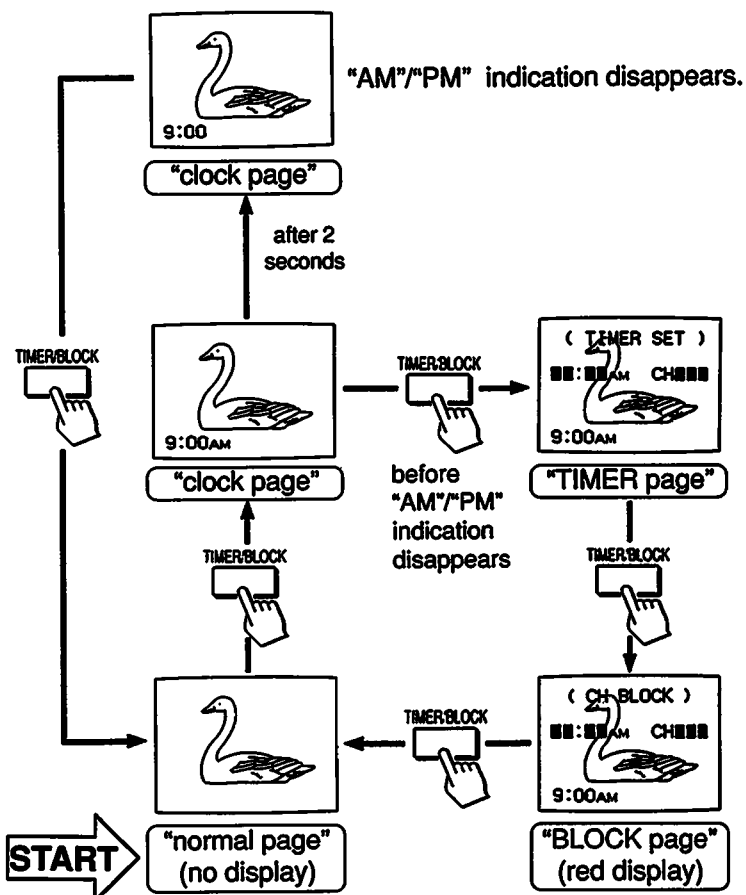
Internal clock	Once the internal clock is set, the current time will be displayed on the screen. You must set the clock correctly to activate the program start TIMER and channel Block.
Program start TIMER	Makes a program of your choice appear on the screen automatically at the desired time.
Channel BLOCK	Blocks a channel from appearing on the screen for 12 hours. Use channel BLOCK to prevent children from watching undesirable programs.

The buttons used for the above functions are located on the Remote Commander.



To set the internal clock, program start TIMER and channel BLOCK, you need to go into the corresponding "pages": "clock page," "TIMER page" and "BLOCK page."

To change the "pages," press TIMER/BLOCK.



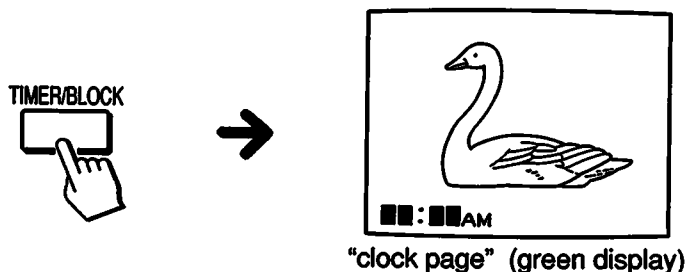
CAUTION

- All settings will be erased from the projection TV's memory if the projection TV is unplugged, or if a power failure occurs.
- The TIMER and BLOCK functions will operate only if the clock is set correctly.
- If the TIMER and BLOCK are set for overlapping times on the same channel, the blocked channel will appear on the screen at the time set on the TIMER.

Setting the Internal Clock

EXAMPLE: To set the clock to 8:05 PM

- 1 From "normal page" (no display), press TIMER/BLOCK once to change to "clock page".



If you make a mistake, press CLEAR and proceed from step 2.

The "AM"/"PM" indication will disappear after a few seconds.

To summon "TIMER page," press TIMER/BLOCK before the "AM"/"PM" indication disappears.

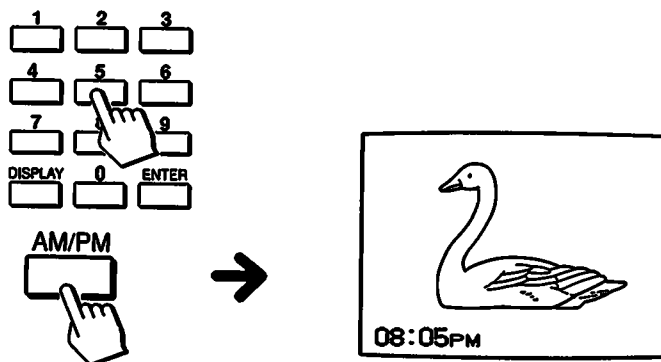
To return to "normal page," press TIMER/BLOCK after the "AM"/"PM" indication has disappeared.

To reset the clock, summon "clock page" and press CLEAR before the "AM"/"PM" indication disappears. Then follow the steps above from step 2.

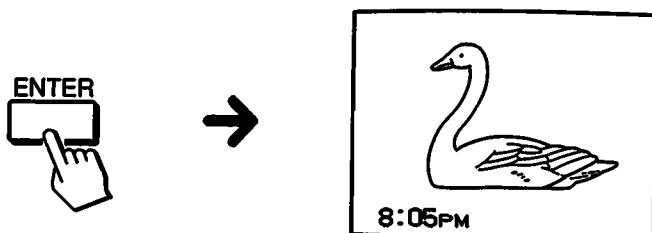
12:00 AM stands for midnight.

12:00 PM stands for noon.

- 2 Press 0, 8, 0, 5, AM/PM. (You must press the 0's)



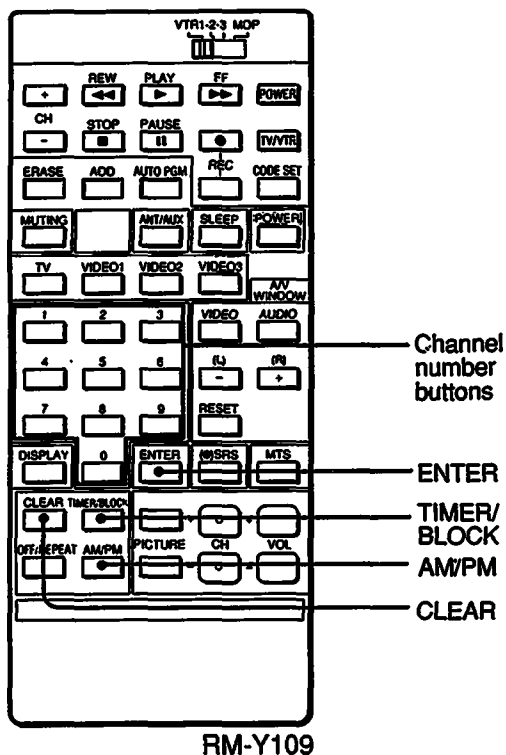
- 3 If you have performed the operation correctly, press ENTER. The screen display will blink once, indicating that the clock has been set. (The 0 in front will disappear.)



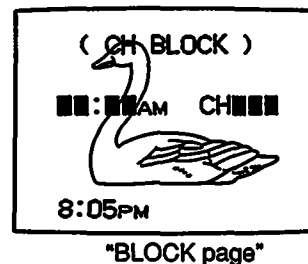
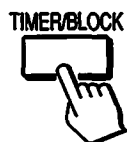
Setting Channel BLOCK

Make sure that the clock has been set correctly before setting channel BLOCK. (p.17)

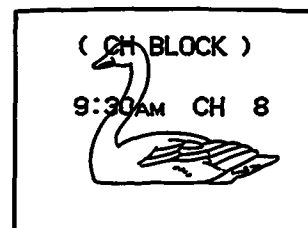
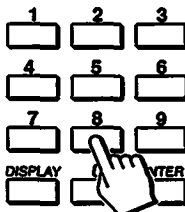
EXAMPLE: To set a BLOCK for a program which begins at 9:30 AM on channel 8



- 1 To change from "normal page" to "BLOCK page," press TIMER/BLOCK three times.



- 2 Press 0, 9, 3, 0, ENTER (you must press the 0's). The screen display will blink once, indicating that the time has been set. Press 8, ENTER (0 not necessary). The numbers will blink, indicating that the channel has been set.



The display BLOCKED will appear for a few seconds, then (CH BLOCK). The Channel BLOCK has now been set.

If you make a mistake, press CLEAR and proceed from step 2.

At the preset time, the picture of the selected channel will be blocked from view and the sound will be muted. The display "BLOCKED" will appear for a few seconds, then (CH BLOCK) which will remain on the screen during the time the channel is blocked. (Both displays in red)

Normal reception will resume automatically after 12 hours.

To restore normal reception while the channel is blocked, recall "BLOCK page" and press CLEAR.

The BLOCK setting blocks a specified channel for the same 12-hour period every day.

To clear the BLOCK setting, summon "BLOCK page" and press CLEAR.

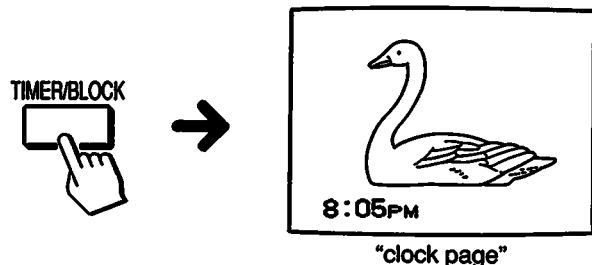
To reset, clear the setting and follow the steps above from step 2.

Setting the Program Start TIMER

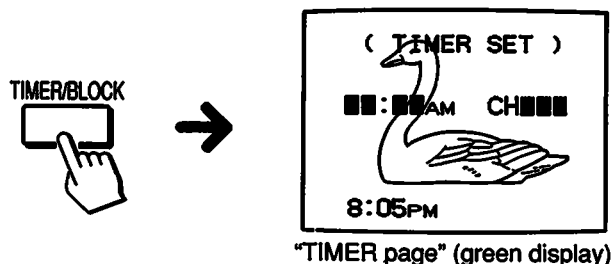
Make sure that the clock has been set correctly before setting the program start TIMER. (p.25)

EXAMPLE: To set the TIMER for a program which begins at 10:30 PM on channel 12

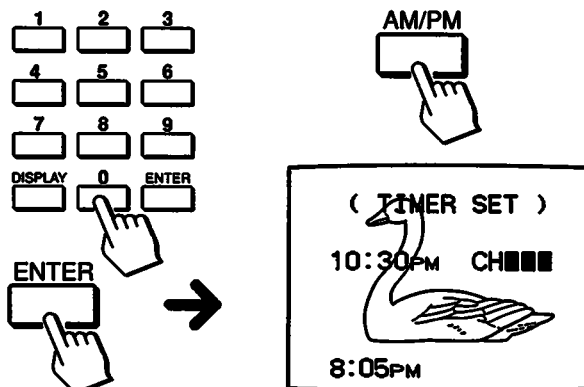
- 1 From "NORMAL page," (no display) press TIMER/BLOCK once to change to "clock page."



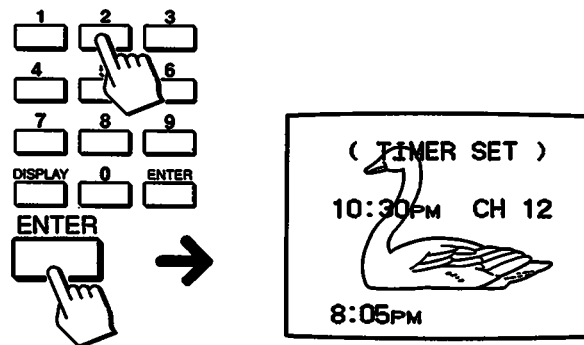
- 2 Press TIMER/BLOCK again before the "AM"/"PM" indication disappears to summon "TIMER page."



- 3 Press 1, 0, 3, 0, AM/PM, ENTER. The screen display will blink once, indicating that the time has been set.



- 4 Press 1, 2, ENTER (0 not necessary). The screen display will blink once, indicating that the channel has been set.



If you make a mistake, press CLEAR and proceed from step 3.

At the preset time, the selected channel will appear on the screen and the TIMER lamp will go out. The TIMER will operate whether you are watching a TV program or a VCR playback, or even if the TV is turned off.

If no button is pressed within 2 hours after the preset time, an "OFF" display will appear on the screen for 1 minute. If a button is still not touched during that minute, the projection TV will turn off automatically as a safety precaution.

The TIMER operates only once, but the time and the channel will remain in the TV's memory.

To preset the same channel at the same time for a future date, press OFF/REPEAT. The TIMER lamp will light up, indicating that the TIMER has been reactivated.

To deactivate the TIMER, press OFF/REPEAT again so that the TIMER lamp goes out. It is not necessary to summon "TIMER page" before using the OFF/REPEAT button. Furthermore, this button is effective even if the TV is turned off.

To clear the TIMER setting, summon "TIMER page" and press CLEAR.

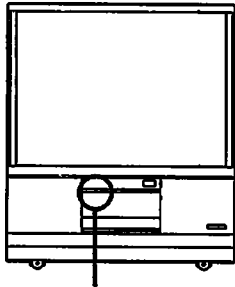
To reset, clear the setting and follow the steps from step 3.

Using Optional Equipment

This projection TV is equipped with various input/output jacks and terminals for connecting optional equipment.

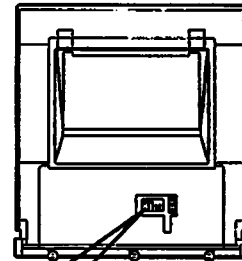
For further details, refer to the page number next to each item.

Front



VIDEO 2 IN (input) jacks (phono type) ⑧
Connect to a VCR or microcomputer.

Rear



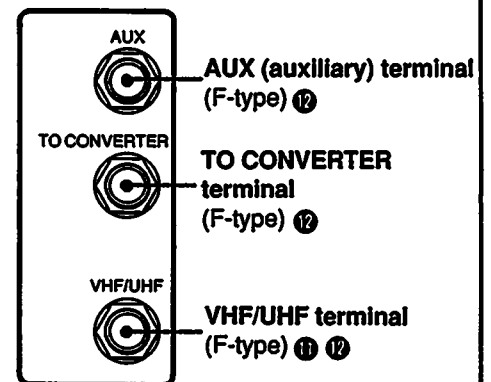
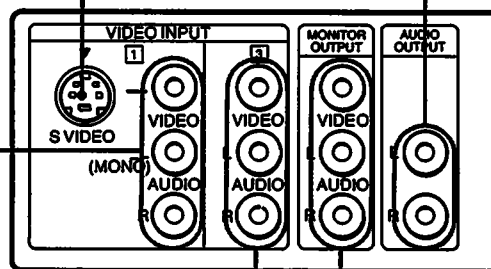
VIDEO 1 S VIDEO jack
(4-pin mini DIN type) ⑩
Connect to a VCR equipped with the S video output jack. When this jack is connected, even if the "VIDEO" jack (phono type) of the VIDEO 1 INPUT is connected, the picture to be monitored is switched automatically to the signal from this jack.

VIDEO 1 INPUT jacks
(phono type) ②③④
Connect to a VCR*, video disc player, etc.

VIDEO 3 INPUT jacks (phono type) ⑥
Connect to a VCR, video disc player or audio equipment, etc.

* You will achieve better picture and sound quality by connecting through VIDEO INPUT than by connecting the VCR only to the antenna terminals.

AUDIO OUTPUT jacks (phono type) ⑫
Connect to the audio input jacks of audio equipment. The audio signal of either the TV or VCR, as selected by the TV/VIDEO button, is supplied. The volume of the equipment connected to these jacks can be adjusted by the VOLUME +/- button on the projection TV, or the VOL +/- button on the remote commander.



MONITOR OUTPUT jacks
(phono type) ⑤
Connect to a VCR or color monitor. Either the TV or VCR signal selected by the TV/VIDEO button or the input mode select buttons is supplied.

Notes on connection

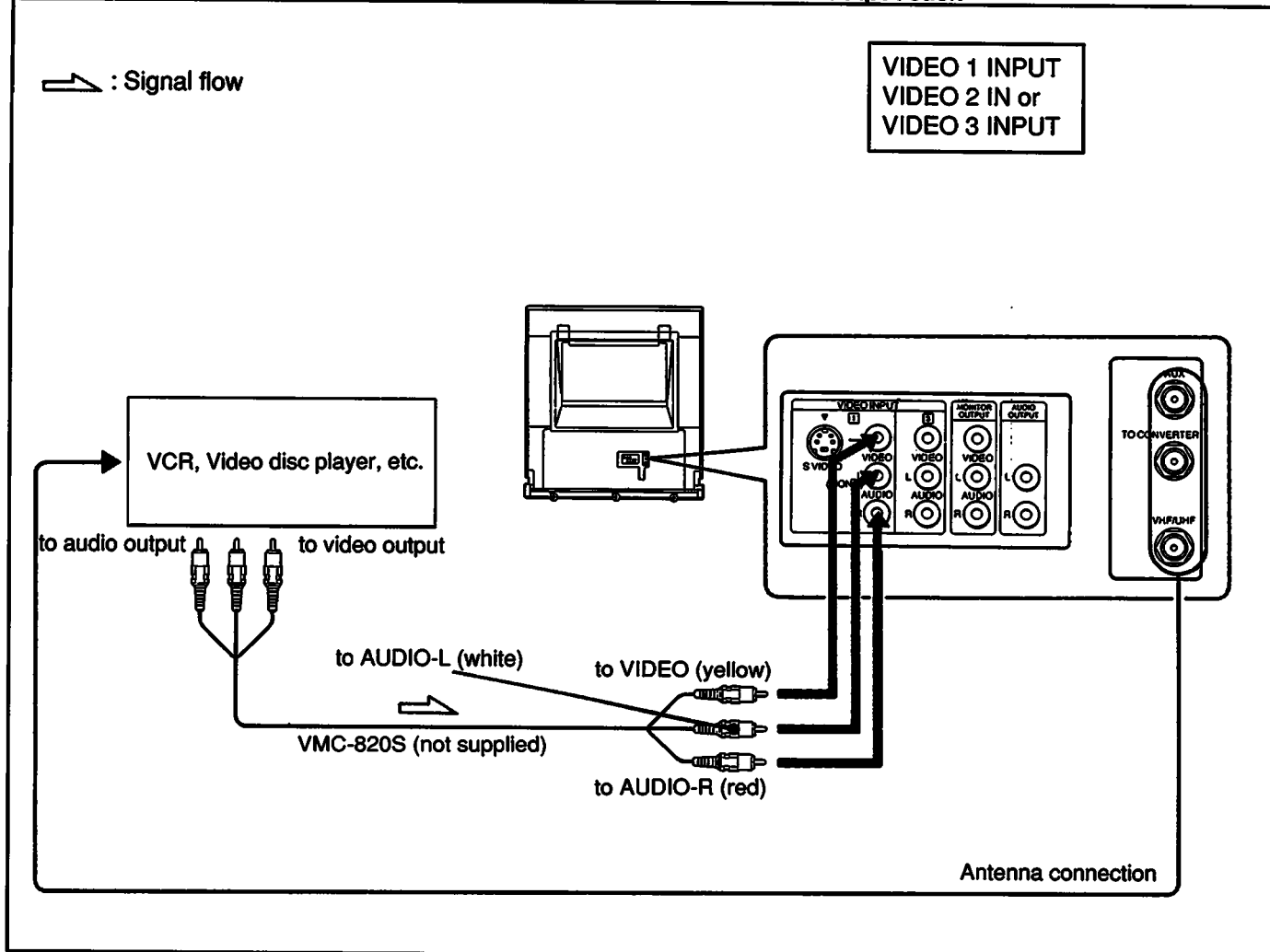
- Before connecting, make sure you turn off the power on all equipment.

- The plugs should be fully inserted into the jacks. A loose connection may cause hum and noise.
- Match colors when connecting the plugs to the jacks.



Connecting Video Equipment

Connecting VCRs/Video Disc Players Not Equipped with the S Video Output Jack



After connecting, you will be able to

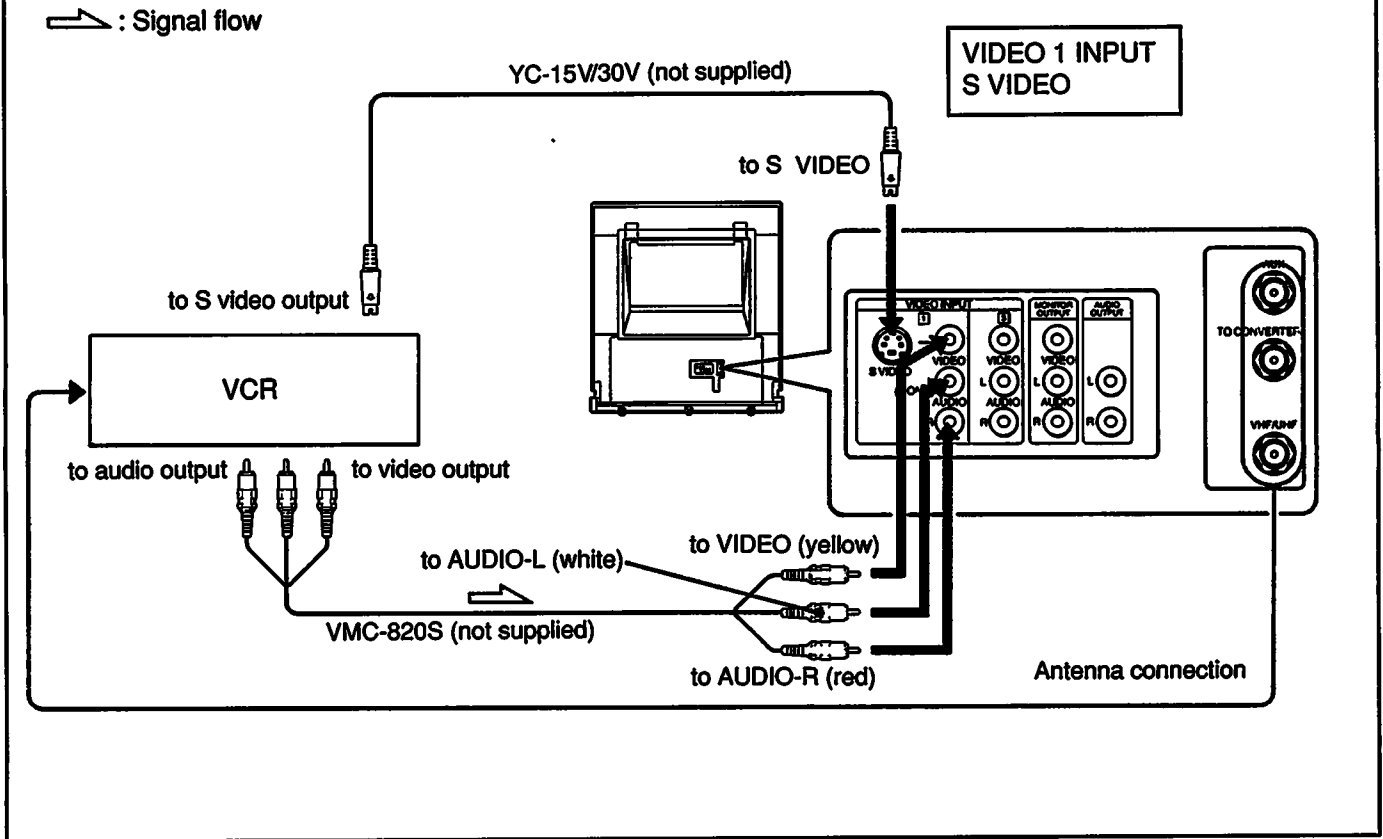
- Play video tapes
- Record TV programs
- Record one TV program while watching another

Caution

Television programs, films, video tapes and other materials may be copyrighted. Unauthorized recording of such material may be contrary to the provisions of the copyright laws.

Connecting Video Equipment

Connecting VCRs Equipped with the S Video Output Jack



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- Play video tapes
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Note

In order to display a video image in a window picture of the Picture-in-Picture feature whether or not it is equipped with an S VIDEO OUTPUT jack, it is necessary to connect input signals through the VIDEO jack of the VIDEO INPUT 1 jacks as well.

About S Video Input

Video input and output signals may be separated into Y (luminance or brightness) and C (chroma or color) signals. Usually these two signals are combined in a VCR and sent as one signal to a projector. Separation of the Y and C signals prevents them from interfering with one another, thereby improving picture (especially in color) quality. This projection TV is equipped with an S video input jack through which these separated signals can be input directly.

To play back recorded tapes



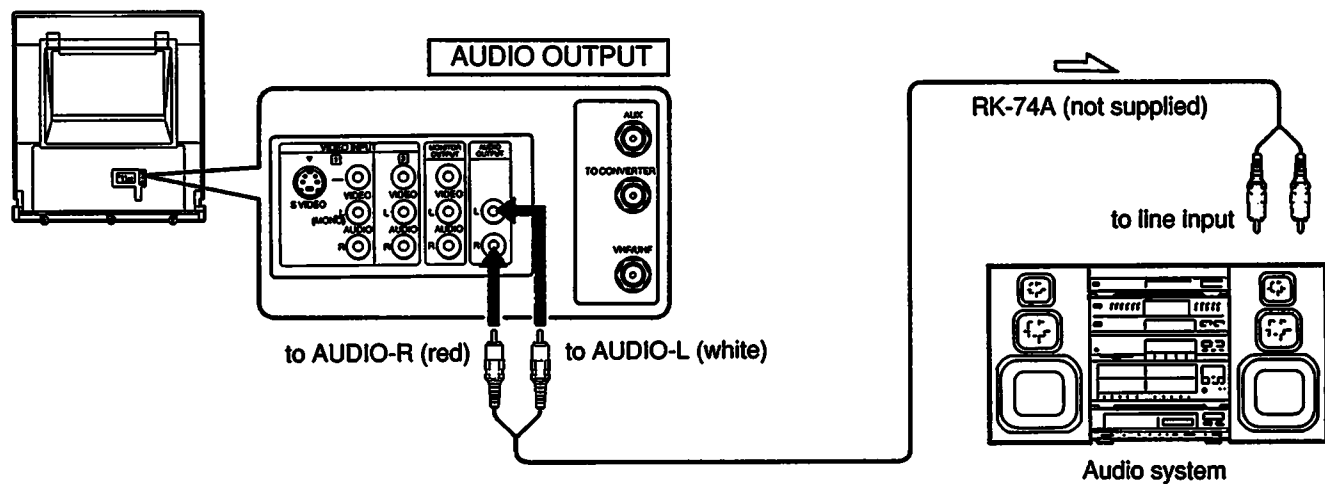
- Every time you press the TV/VIDEO button, the display will change as follows:**

The channel number buttons on the remote commander and the CHANNEL scan buttons will not function while the VIDEO lamp is lit.

Connecting Audio Equipment

To Monitor TV Sound with a Stereo System

➡ : Signal flow

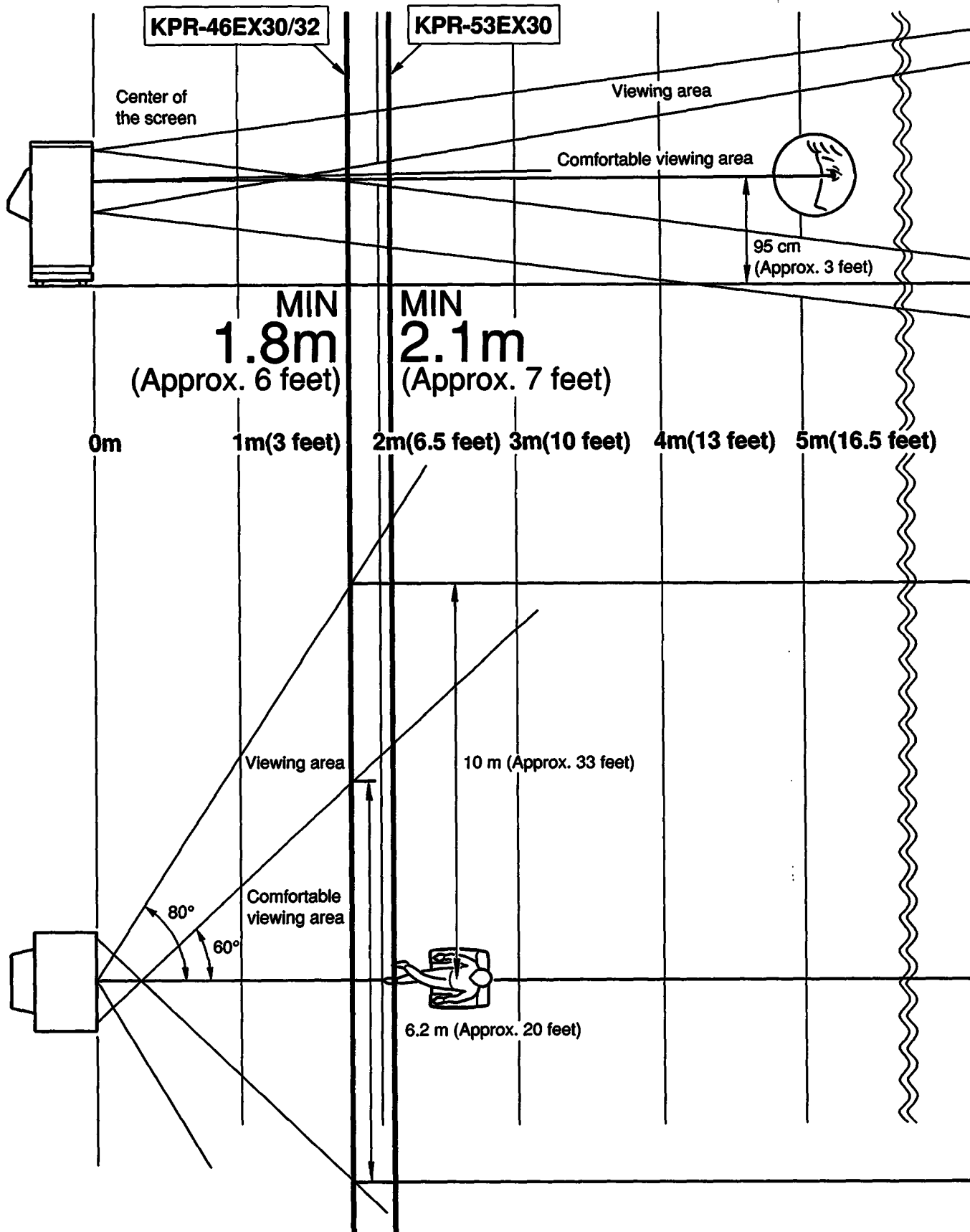


After connecting, you will be able to adjust sound volume from the stereo speakers with the volume buttons on the projection TV or remote commander.

To monitor TV sound only from a stereo system, set the **SPEAKER** selector on the front panel to **OFF**.

When the **SPEAKER** selector is set to **ON**, adjust the volume from the speakers with the stereo amplifier.

Viewing Area



Specifications

Structure	Screen and projector, rear projection type
Projection system	3 picture tubes, 3 lenses, horizontal in-line system
Picture tube	5.5 inch high-brightness monochrome tubes, with optical coupling and cooling system
Projection lenses	High performance, large-diameter hybrid lens F 1.0
Screen material	Acrylic plastic lenticular, Polycarbonate plastic Fresnel
Resolution	700 lines
Optimal viewing area	Within approx. 80 degrees from center
Projected picture size (measured diagonally)	

	Picture size (in inches)
KPR-53EX30	53
KPR-46EX30	46
KPR-46EX32	46

Screen brightness

	foot-Lamberts
KPR-53EX30	370
KPR-46EX30	450
KPR-46EX32	450

Television system	American TV standards
Channel coverage	VHF: 2 – 13 UHF: 14 – 69 CATV: 1 – 125
Antenna	75-ohm external antenna terminal for VHF/UHF/CATV
Inputs	VIDEO 1, 2, 3 INPUT (phono jacks) Video: 1Vp-p, 75 ohms unbalanced, sync negative Audio: 460 mVrms (100% modulation, 47 kilohms) VIDEO 1 S VIDEO INPUT (4-pin mini DIN) Y: 1 Vp-p, 75 ohms unbalanced, sync negative C: 0.286 Vp-p (Burst signal), 75 ohms 75-ohm external antenna terminal for VHF/UHF/CATV AUX 75-ohm auxiliary antenna terminal

Outputs	MONITOR OUTPUT (phono jacks) Video: 1 Vp-p, 75 ohms unbalanced, sync negative Audio: 460 mVrms (100% modulation, 1 kilohm) AUDIO OUTPUT (phono jacks) 460 mVrms (variable) (100% modulation, 1 kilohm) TO CONVERTER terminal
Speaker	Two-way coaxial speaker system Woofer 20 cm (8 inches) dia. Tweeter 7.6 cm (3 inches) dia.
Power requirements	120 V AC, 60 Hz

Power consumption

	max.	avg.	standby mode
KPR-53EX30	290 W	175 W	3 W
KPR-46EX30	290 W	175 W	3 W
KPR-46EX32	290 W	175 W	3 W

	Dimensions (w/h/d)	Weight
KPR-53EX30	1166 x 1370 x 882* mm (46 x 54 x 34 3/4* in.)	135 kg (297 lbs 10 oz)
KPR-46EX30	1056 x 1307 x 744 mm (41 1/2 x 51 1/2 x 29 1/2 in.)	113 kg (249 lbs 2 oz)
KPR-46EX32	1056 x 1307 x 744 mm (41 1/2 x 51 1/2 x 29 1/2 in.)	115 kg (253 lbs 9 oz)

* 670 mm (26 3/8 in.) when the mirror cover is installed inside the cabinet (see p. 7).



Supplied accessories	Remote Commander RM-Y109 (1) with 2 size AA EVEREADY batteries. Antenna connector (1)
Optional accessories	U/V mixer EAC-66 Connecting cable VMC-810/820S YC-15V/30V

Design and specifications are subject to change without notice.

Troubleshooting

Disturbances in picture and sound can often be eliminated by checking the symptoms and following the suggestions listed here.

GENERAL	SYMPTOM	CHECK AND ADJUST
	Poor or no picture (screen not lit), good sound	<ul style="list-style-type: none"> • Adjust PICTURE. • Adjust BRIGHT. • Check antenna/cable connections. • Adjust the registration (see page 13).
	Good picture, no sound	<ul style="list-style-type: none"> • Press VOLUME +. • Release MUTING on the remote commander. • Check that the MTS button is set correctly. • Check that the TV/VIDEO or input select button is set correctly. • Set the SPEAKER switch to ON.
	No picture (screen not lit), no sound	<ul style="list-style-type: none"> • Is POWER switched on? • Plug the projection TV into a wall outlet. • Check that the TV/VIDEO button is set correctly.
	No color	<ul style="list-style-type: none"> • Is it a color program? • Adjust COLOR.
	Snow and noise only	<ul style="list-style-type: none"> • Is it an active or correct channel? • Check the CABLE selector setting. • Check the ANT/AUX button setting. • Check antenna/cable connections.
	Learning function on the remote commander does not work.	<ul style="list-style-type: none"> • Check the USE/LEARN selector setting. • Check that the remote commanders are positioned properly. • Check whether the batteries are exhausted. • If there is fluorescent lighting nearby, move the remote commanders away from it.

GENERAL	SYMPTOM	CHECK AND ADJUST
	 Dotted lines or stripes	This is often caused by local interference. (e.g. cars, neon signs, hairdryers etc.) Adjust antenna for minimum interference.
	 Double images or ghosts	Reflections from nearby mountains or buildings often cause this problem. A highly directional outdoor antenna or a CATV cable may improve the picture.
	Remote control does not operate.	• Check the battery in the remote commander.
CONNECTED EQUIPMENT	Try another channel. It could be station trouble.	
	No picture and/or sound for the connected equipment.	<ul style="list-style-type: none"> • Check that the TV/VIDEO button is set correctly. • Are the connections made firmly? • Is the power of the connected equipment turned on? • Is the connected equipment set correctly?

If the problem persists, contact your nearest service facility.