## Trinitron® Color TV

# KV-19TS20 KV-19TR10 KV-19TS10 KV-2037RS KV-19TR20 KV-2027R

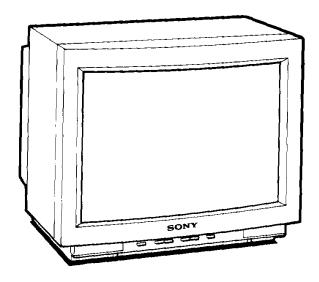
## **Operating Instructions**

Before operating the unit, 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 unit. Record these numbers in the spaces provided below. Refer to them whenever you call upon your Sony dealer regarding this product.

Model No.	Serial No.



PROPERTY OF THE NATIONAL TECHNICAL DEPT.

FILE EDEX

Do not remove

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# **WARNING**

To prevent fire or shock hazard, do not expose the unit 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 in the U.S.A.

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.

# **Identify Your TV Before Use**

In this manual, the instructions are given using the model with maximum functions. Please disregard information in the manual which contradicts with your TV.

## First of all, please check the model number of your TV set

This manual applies to several models and there are slight differences among them. Please check the table below to see what is equipped with your TV before you begin the operation.

Table for each model	YES: equipped	NO: not equipped	
		<del>-</del>	

Models Major features	19TS20	19TS10	19TR20	19TR10	2037RS	2027R	
Stereo reception	YES	YES	NO	NO	YES	NO	
MTS decoder	YES	YES	NO	NO	YES	NO	
VIDEO INPUT jacks	YES (3 phono jacks)	NO	YES (2 phono jacks)	NO	NO	NO	
AUDIO OUTPUT jacks	YES (VARIABLE)	NO	NO	NO	NO	NO	
SPEAKER switch on the rear panel	YES	NO	NO	NO	NO	NO	
Supplied Remote Commander	RM-783	RM-782	RM-781	RM-780	RM-782	RM-780	
Telescopic dipole antenna	NO	NO	YES*	YES*	NO	YES	
Model destination	U.S.A.	U.S.A.	U.S.A./Canada	U.S.A./Canada	Central and South America, and other areas	Central and South America and other area	

KV-2037RS and KV-2027R are for the customers in the countries other than the U.S.A. and Canada.

<sup>\*</sup>Supplied only for U.S.A. models.

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## Features

Color monitor featuring a Mirrorblack™ Trinitron picture tube for high resolution, high contrast picture.

- Multi-band 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 enables reception of stereo programs and Second Audio Program (SAP) broadcasts. (Only for KV-19TS20, KV-19TS10, KV-2037BS)
- Built-in video input jacks for better quality picture of the connected VCR or other equipment. (Only for KV-19TS20, KV-19TR20)
- Variable audio output jacks reproduce TV or video sound through an audio system. (Only for KV-19TS20)
- On-screen displays

Supplied Remote Commander provides you many other convenient features.

- Timer/Block for automatic program starting and channel blocking.
- Sleep timer automatically turns off the TV after approximately one hour.
- Automatic programming to preset all receivable channels instantly.
- Jump button to switch quickly between two channels.

And other features for high quality picture.....

- Dynamic color™ system for superior color reproduction with natural facial color tones and dazzling whites.
- Dynamic picture<sup>™</sup> system adjusts picture contrast automatically to produce more detail in both bright and dark areas of every scene.

## Precautions 4 4 1

#### Safety

- Operate the unit only on 120 V AC.
- One blade of the plug is wider than the other for the purpose of safety and will fit into the power outlet only one way. If you are unable to insert the plug fully into the outlet, contact your dealer.
- Should any liquid or solid object fall into the cabinet, unplug the unit and have it checked by qualified personnel before operating it any further.
- Unplug the unit from the wall outlet if it is not going to be used 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 unit in a hot or humid place or in a place subject to excessive dust or mechanical vibration.

## Cleaning

Clean the unit with a slightly damp soft cloth. Use a mild household detergent. Never use strong solvents such as thinner or benzine as they might damage the finish of the cabinet.

## Repacking

Retain the original carton and packing materials for safe transport of this unit in the future.

Use of this television receiver for other than private viewing of programs broadcast on UHF or VHF or transmitted by cable companies for the use of the general public may require authorization from the broadcaster/cable company and/or program owner.

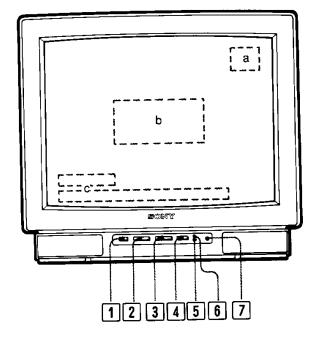
If you have any questions or problems concerning your unit, please contact your nearest Sony dealer.

For details safety precautions, see the leaflet "IMPORTANT SAFEGUARDS".

# **Location of Controls**

Refer to the pages indicated in ● for details.

Front



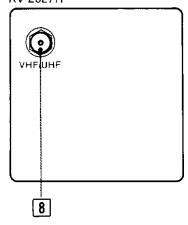
## On-screen displays

- a) Channel numbers
  - MTS mode indication
  - "MUTING", "SLEEP" or "VIDEO" indication
- b) "AUTO PROGRAM", "TIMER" or "TIMER BLOCK" indication
- c) Bar display for volume or picture adjustment
  - Current time for Timer/Block

- 1 TV/VIDEO button @ @ (Only for KV-19TS20, KV-19TR20)
  - MTS button (a) (Only for KV-19TS10, KV-2037RS)
- 2 VOLUME +/- buttons (3 (6)
- 3 CHANNEL +/- buttons @ @
- 4 POWER switch 19 16
- 5 TIMER lamp @
- 6 STEREO lamp (8 (Only for KV-19TS20, KV-19TS10, KV-2037RS)
- 7 Remote control detector

## Rear

KV-19TS10 KV-19TR10 KV-2037RS KV-2027R



- VHFAUHF

  VIDEO INPUT

  O VIDEO

  AUDIO
- SPEAKER
  ON
  OFF
  VIDEO INPUT AUDIO OUTPUT
  (MONO)
  AUDIO
  R

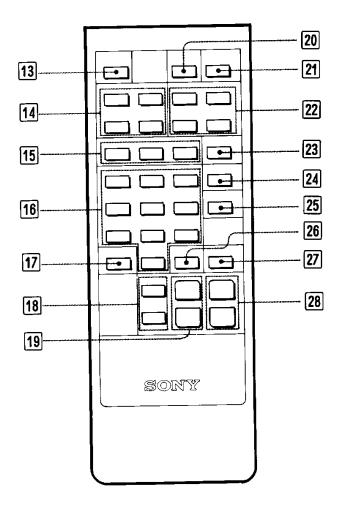
  10 11 12

- 8 VHF/UHF antenna terminal 9
- 9 VIDEO INPUT jacks 12 (VIDEO/AUDIO)

- 10 VIDEO INPUT jacks (2) (VIDEO/AUDIO L, R)
- 11 AUDIO OUTPUT (VARIABLE) jacks 19
- 12 SPEAKER ON/OFF switch ®

## **Location of Contents**

## Remote Commander RM-780/781/782/783



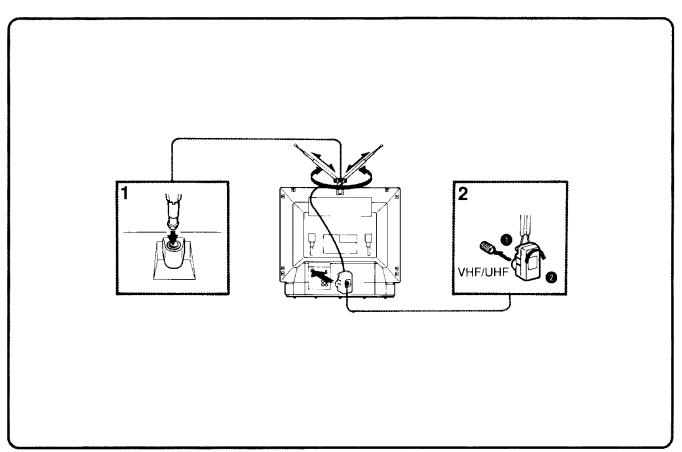
- 13 MUTING button ®
- 14 TIMER/BLOCK setting buttons (TIMER/BLOCK, CLEAR, AM/PM, OFF/REPEAT)
- 15 Channel presetting buttons (AUTO PGM, ADD, ERASE)
- 16 Channel number buttons 6 @
- 17 DISPLAY button (8)
- 18 PICTURE +/- buttons 17
- 19 \*VOL (volume) +/- buttons ® 6
- 20 SLEEP button (8)
- 21 \*POWER switch @ 6
- 22 Picture adjusting buttons (SELECT, RESET, LEVEL +/-)
- 23 CABLE button 19 16
- 24 \*TV/VIDEO button @ @ (Only for RM-781, RM-783)
- 25 \*MTS button (3) (Only for RM-782, RM-783)
- 26 ENTER button 6 @
- 27 JUMP button (B)
- 28 \*CH (channel) +/- buttons @ 6
- The functions of these buttons are also available on the TV.

# 1 Open the lid. Insert two size AA(R6) batteries with correct polarity. In normal operation, batteries will last up to half a year. If the Commander does not operate properly, the batteries might be exhausted. Replace them with new ones. To avoid damage from possible battery leakage, remove the batteries when the Commander will not be used for a long time. If a Remote Commander that is not recommended is used to operate this TV, or if the supplied Remote Commander is used to operate another TV, the TV may not operate properly.

# **Connecting TV Antenna/Cable**

## Indoor Antenna Adjustment\*

For VHF/UHF reception, use the supplied telescopic dipole antenna. Adjust the length, direction and angle of both elements symmetrically until the picture is clear.



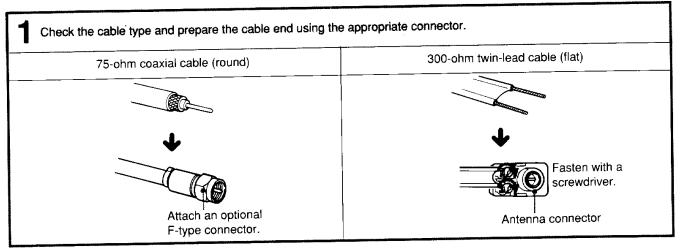
\* The telescopic dipole antenna is supplied only to KV-19TR10/20 (USA models) and KV-2027R.

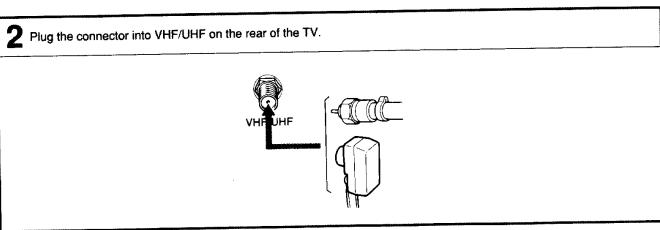
# Connecting TV Antenna/Cable

## **Outdoor Antenna Connection**

If you cannot obtain satisfactory reception with an indoor antenna, use an outdoor antenna. Cable TV reception is only possible by connecting a cable supplied by your local cable operator.

## To connect a VHF, UHF, or VHF/UHF combination antenna\* or CATV cable



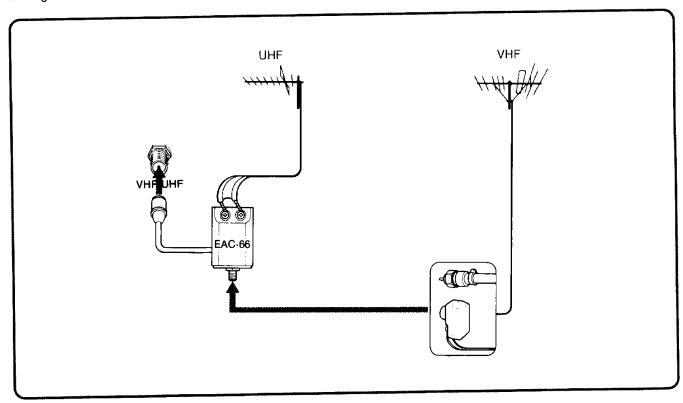


* Most combination antennas are equipped with a signal splitter. Remove the splitter and attach the appropriate connector.	How	to attach an F-type connector to the 75-ohm coaxial cable
	1	
	2	7mm (¼ inch) 10mm (³/s inch) F-type connector 3mm (¹/s inch)
	3	
	4	

## When you connect both VHF and UHF antennas

Use the optional EAC-66 U/V mixer.

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

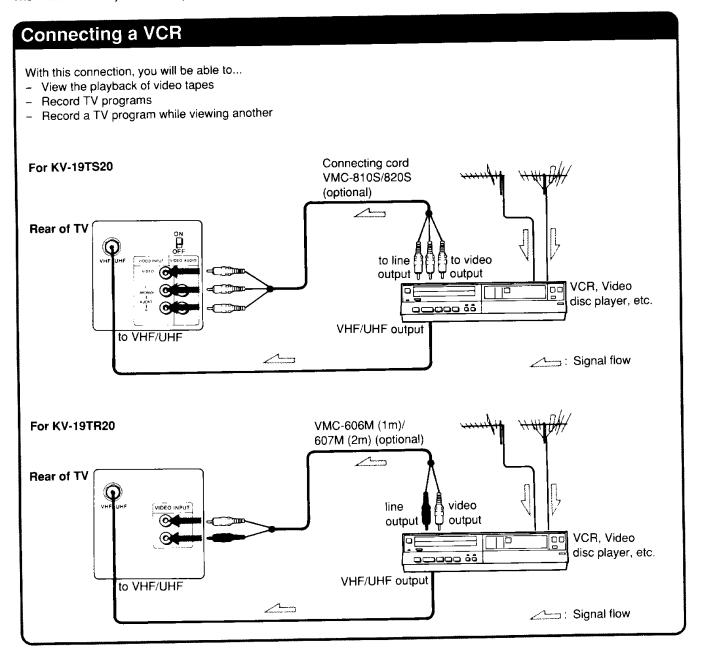


## When the U/V mixer is used

Snow and noise may appear in the pictures of the cable TV channels over  $37 \; (W+1)$ .

# Connecting Other Optional Equipment

The VIDEO INPUT jacks are only equipped for KV-19TS20 and KV-19TR20.



## To watch the VCR picture

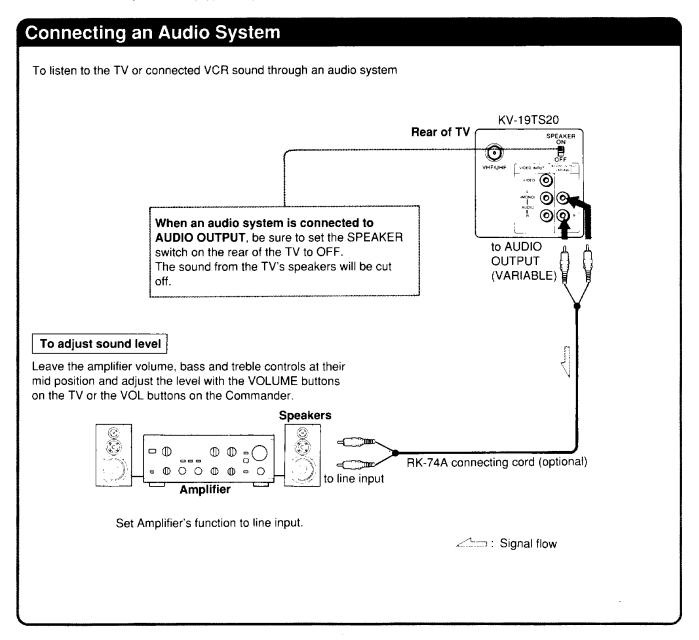
- 1 Turn on the TV.
- 2 Press the TV/VIDEO button so that the "VIDEO" indication appears on the screen.
- 3 Set the VCR in playback mode.

## To return to the TV mode

Press the TV/VIDEO button until a channel number appears on the screen.

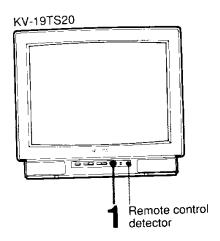
- If you connect a monaural VCR, connect the audio output of the VCR to the L jack of the TV. The monaural sound is heard from both speakers.
- For operation, refer to the instruction manual furnished with the VCR.
- Keep the VCR away from the TV, if the picture or sound is affected.
- When no signal is fed through the VIDEO INPUT jacks even though the TV is in the video mode, "VIDEO" indication will appear on the screen.

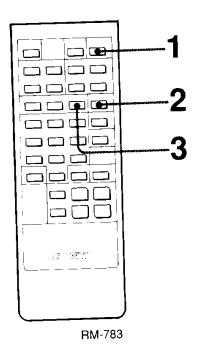
The AUDIO OUTPUT jacks are equipped only for KV-19TS20.

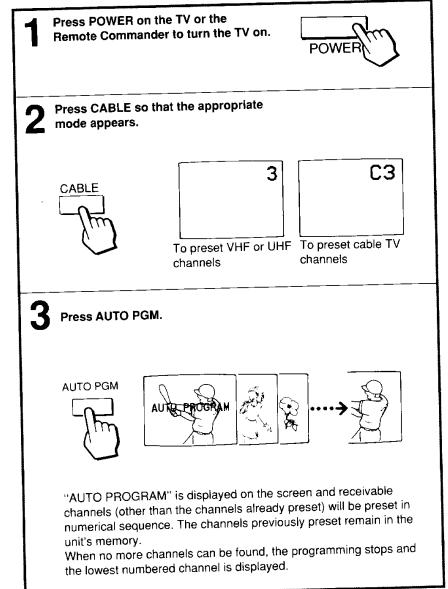


# Presetting TV Channels

## To Preset All Receivable Channels Automatically







Receivable channles of this TV are:

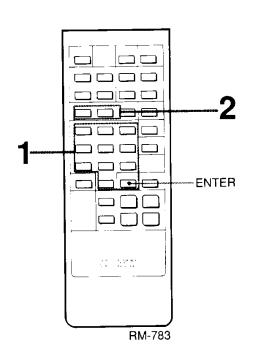
VHF: 2-13 UHF: 14-69 Cable: 1-125

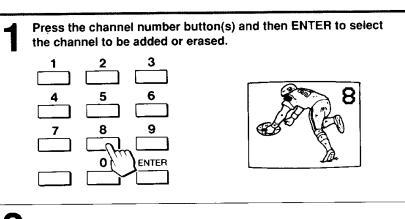
To add the channels that could not be preset with automatic programming because their signal strength was too weak, or to erase unnecessary channels, follow the steps in "To preset only the desired channels" on the next page.

To check preset channels Press CH +/-.

Only for KV-19TS20, KV-19TR20
If the "VIDEO" indication is displayed on the screen
Press the TV/VIDEO button on the TV or on the Remote
Commander so that a channel number appears.

## To Preset Only the Desired Channel or to Erase Unnecessary Channels





2 To add channels - Press ADD.





A "+" appears for a moment.

This channel has now been added to the channel scan memory.

To erase channels - Press ERASE.





A "-" appears for a moment.

This channel has now been erased from the channel scan memory. The next time the CH +/- button is pressed, this channel will be skipped.

Repeat steps 1 and 2 for other channels to be added or erased.

#### 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.

Numb	er on	this T	v			1	5	6	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Corre				hanne	<u> </u>	A-8	A-7	A-6	Α	В	С	D	E	F	G	Н	T.	J	K	L	М	N	0	Р	Q
31	32	33	34	35	36	37	38	39 .			93	94	95	96	97	98	99	100	101	102			123	124	125
B	S		П	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

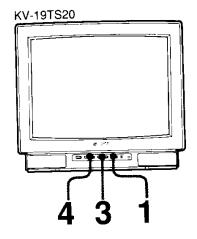
Check with your local cable TV company for more complete information on the available channels.

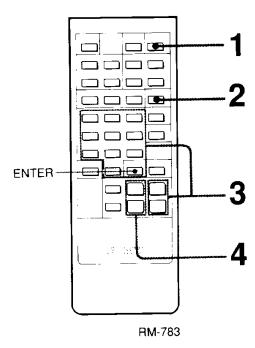
\* The designation of the cable TV channels conforms to the EIA/NCTA recommendation.

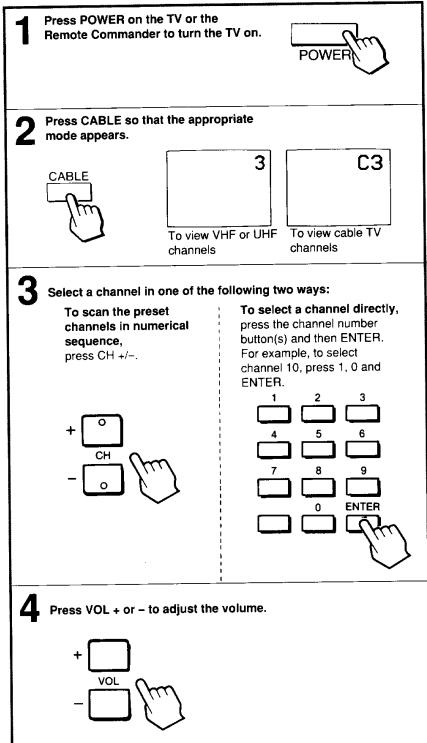
#### Note

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

# **Watching TV Programs**







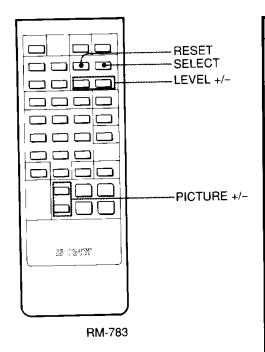
Note

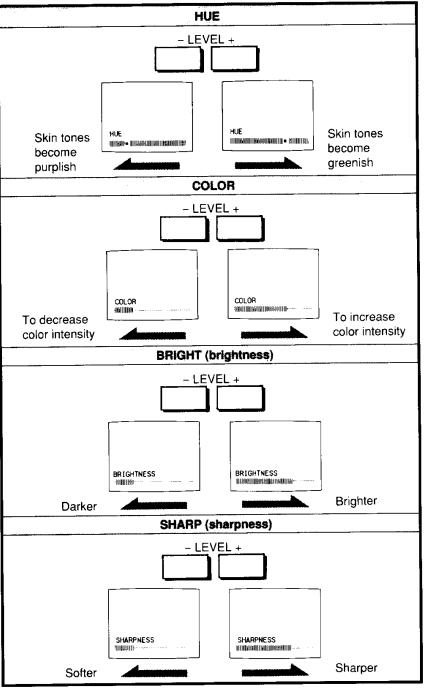
To turn off the TV

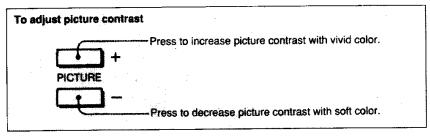
Press POWER on the TV or the Remote Commander again.

# **Adjusting the Picture**

Press SELECT repeatedly until the on-screen display of the item to be adjusted appears, then press LEVEL +/-.

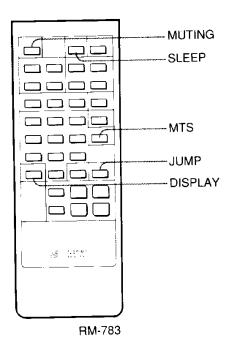






To clear the adjustment levels and restore the factory preset levels at once, press **RESET**.

# **Enjoying the Convenient Features**



#### Muting the sound

#### Press MUTING.

The "MUTING" indication will appear on the screen. To restore the sound, press MUTING again or VOL +.

## Using the SLEEP timer

#### Press SLEEP.

The TV will be turned off automatically after about one hour. The green "SLEEP ON" indication will appear on the screen for a few seconds when SLEEP is pressed and the red "SLEEP" indication will appear one minute before the TV is turned off.

To cancel the SLEEP timer, press SLEEP again, or turn off the TV. The "SLEEP OFF" indication will appear when SLEEP is pressed again.

# Receiving a Multichannel TV Sound program (Only for KV-19TS20, KV-19TS10, KV-2037RS)

Each time MTS is pressed, MAIN, SAP (Second Audio Program), or MONO are selected in sequence. To listen to stereo sound, select the MAIN mode so that the on-screen MAIN indication appears. The STEREO indicator on the TV lights up whenever a stereo broadcast is received.

There may be cases of stereo broadcasts where excessive noise will be heard due to a weak incoming signal. You may be able to eliminate this noise by selecting the MONO mode.

## Switching quickly between two channels

## Press JUMP.

Each time JUMP is pressed, the channel which appeared on the screen directly before is recalled. This button enables you to keep track of two programs alternately.

## Keeping the channel displayed

#### Press DISPLAY.

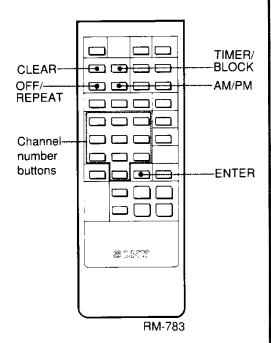
To make the channel display disappear, press DISPLAY again.

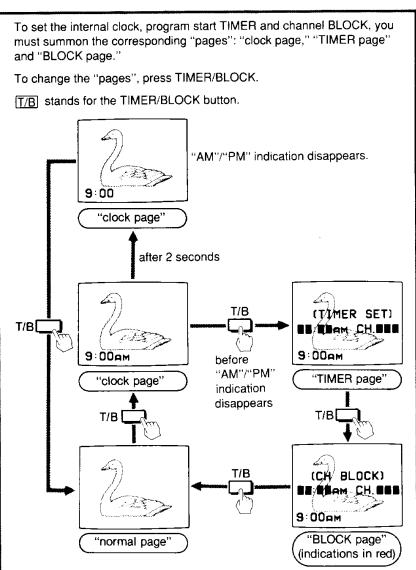
# Timer/Block

## **Available Functions**

Internal clock	Once the internal clock is set, the current time will appear on the screen.  It is necessary to 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.

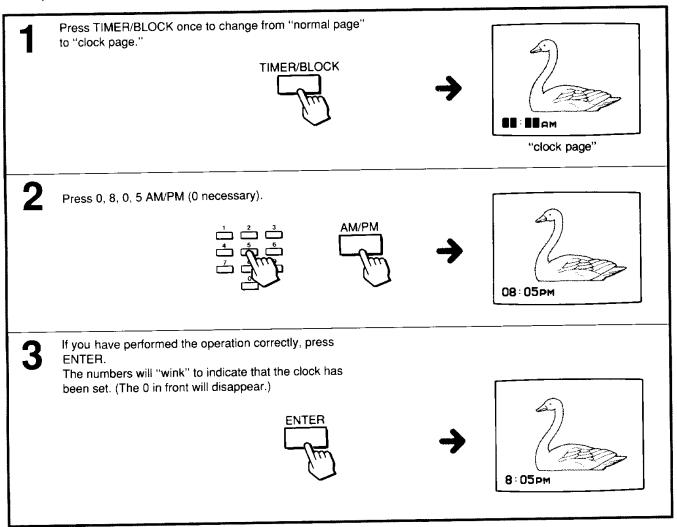




- All settings will be erased from the unit's memory if the unit is unplugged, or if a
  power failure occurs.
- The TIMER and BLOCK will operate only if the clock is set correctly.
- If the TIMER and BLOCK are set for overlapping times on the same channel, the blocked channel will appear on the screen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

## How to Set the Internal Clock

## Example: To set the clock to 8:05 PM



If you have made a mistake, press CLEAR and return to step 2. The "AM/PM" indication will disappear after 2 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.

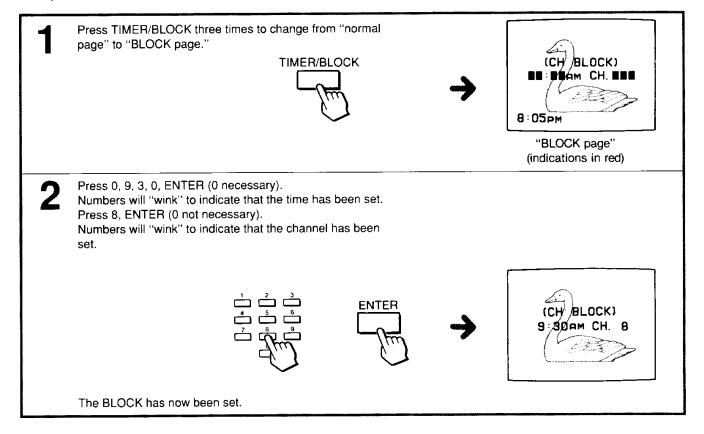
**To reset the clock**, summon "clock page" and press CLEAR before the "AM"/"PM" indication disappears. Then follow the steps above from step 2.

12:00 AM stands for midnight. 12:00 PM stands for noon.

## **How to Set the Channel BLOCK**

Make sure that the clock has been set correctly before setting the channel BLOCK.

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



If you have made a mistake, press CLEAR and return to step 2.

At the preset time, the picture of the selected channel will be blocked from view and the sound will be muted.

A red "BLOCKED" indication will appear on the screen while to

A red "BLOCKED" indication will appear on the screen while the channel is blocked.

Normal reception will be resumed after 12 hours.

To return to 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 everyday.

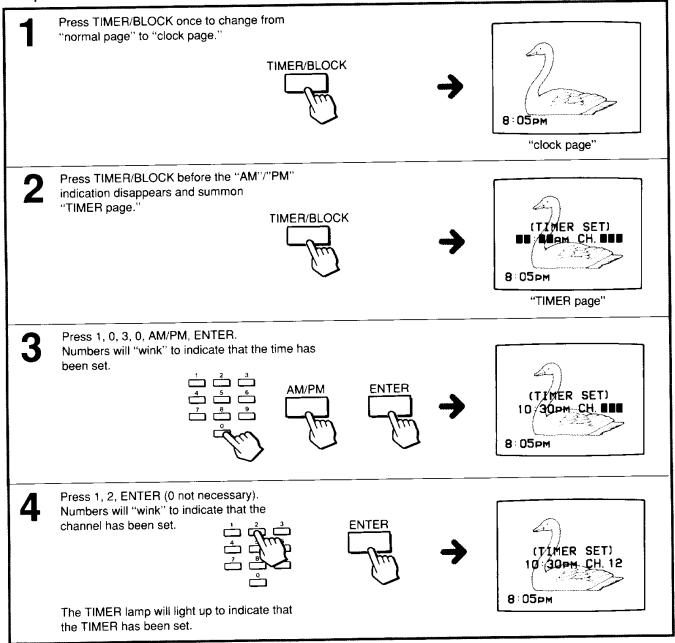
To clear BLOCK setting, summon "BLOCK page" and press CLEAR

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

## How to Set the Program Start TIMER

Make sure that the clock has been set correctly before setting the program start TIMER.

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



If you have made a mistake, press CLEAR and return to 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 you have turned off the TV.

If no button is pressed within 2 hours after the preset time, an "OFF" indication will appear on the screen for 1 minute. If a button is still not touched during the 1 minute, the TV will turn off If you want to deactivate the TIMER, press OFF/REPEAT again so that the TIMER lamp goes out. It is not necessary to summon "TIMER page" to use the OFF/REPEAT button. Furthermore, this button is effective even if the TV has been turned off.

indicate that the TIMER has been reactivated.

The TIMER operates only once, but the time and the channel will

If you want to preset the same channel at the same time for a

future date, press OFF/REPEAT. The TIMER lamp will light up to

remain in the unit's memory.

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

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

automatically as a safety precaution.

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# **Specifications**

Television system Channel coverage American TV standards

VHF: 2 - 13 UHF: 14 - 69

Picture tube

Cable TV: 1 - 125 Mirrorblack Trinitron tube

19-inch picture measured

diagonally

20-inch picture tube measured

diagonally

**Antenna** 75-ohm external antenna terminal

for VHF/UHF

Input VIDEO INPUT (phono jacks) (Only for KV-19TS20/19TR20)

Video: 1 Vp-p, 75-ohms unbalanced, sync negative

Audio: 500 mVrms (100% modulation) Impedance: 10 kilohms

AUDIO OUTPUT (VARIABLE)

(Only for KV-19TS20)

Output

(phono jacks) More than 408 mVrms at the

maximum volume setting (variable) (100% modulation)

Power requirements Power consumption

120 V AC, 60 Hz 120 W (Max.)

5 W (in standby condition)

#### Accessories supplied

	Remote Commander							
19TS20	RM-783 (1)							
19TS10	RM-782 (1)							
19TR20	RM-781 (1)	with 2 size AA(R6)						
19TR10	RM-780 (1)	batteries						
2037RS	RM-782 (1)							
2027R	RM-780 (1)							

	VHF/UHF telescopic dipole antenna (1)	Antenna connector (1)
19TS20	NO	YES
19TS10	NO	YES
19TR20	YES*	YES
19TR10	YES*	YES
2037RS	NO	YES
2027R	YES	YES

<sup>\*</sup> Only for USA models.

Optional accessories

U/V mixer EAC-66 Connecting cable VMC-606/607M VMC-810/820S RK-74A

Designs 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 below.

	AV445-7-4-4	ALIFAL AND AD HIS				
	SYMPTOM	CHECK AND ADJUST				
	Poor or no picture (screen not lit), good sound	Adjust PICTURE.     Adjust BRIGHT.     Check antenna/cable connections.				
	Good picture, no sound	Press VOLUME +. Release MUTING on the Remote Commander. Check that the MTS button is set correctly. Check that the TV/VIDEO button is set correctly. Set the SPEAKER switch to ON.				
:AL	No picture (screen not lit), no sound	Is POWER switched on?     Power in outlet?     Check that the TV/     VIDEO button is set correctly.				
GENERA	No color	<ul><li>Is it a color program?</li><li>Adjust COLOR.</li></ul>				
5	Snow and noise only	<ul> <li>Is it an active or the correct channel?</li> <li>Check the CABLE selector setting.</li> <li>Check antenna/cable connections.</li> </ul>				
	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.				
	Try another channel. It	could be station trouble.				
TIMER/BLOCK	Program start TIMER and/or channel BLOCK does not operate properly.	<ul> <li>Is the clock set correctly?</li> <li>Is the setting correct?</li> <li>Have you unplugged the unit?</li> <li>Has a power failure occurred?</li> <li>If so, the settings have been erased.</li> </ul>				

If the problem persists, contact your nearest service facility.