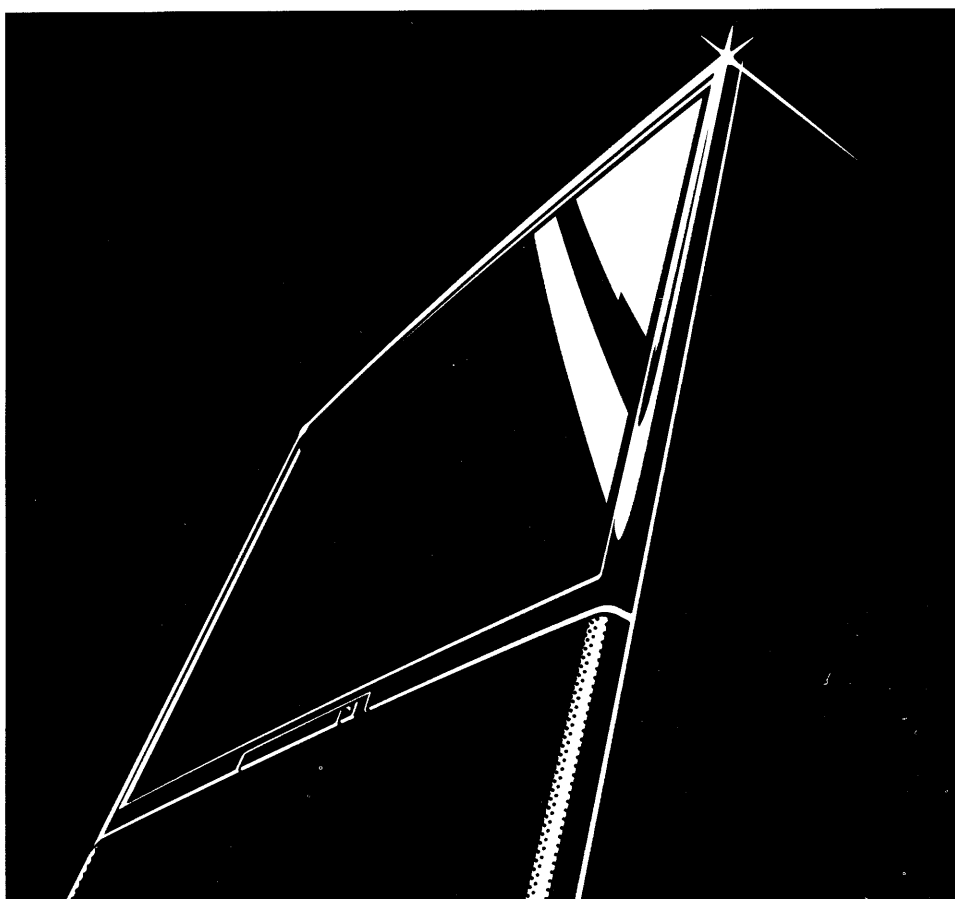


TOSHIBA

Projection Television OWNER'S MANUAL

TP50H15



Dear Customer

Welcome to the high quality picture world created by the TOSHIBA Projection Color Television.

This manual will help you use the TV's many exciting and useful features.

Before operating the TV, please read all the safety and operating instructions in this manual thoroughly, and keep the manual for future reference.

Customer's Record

You will find the model number and serial number on the back of the TV.

Record these numbers in the spaces provided below.

Refer to them whenever you call upon your TOSHIBA dealer regarding this product.

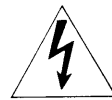
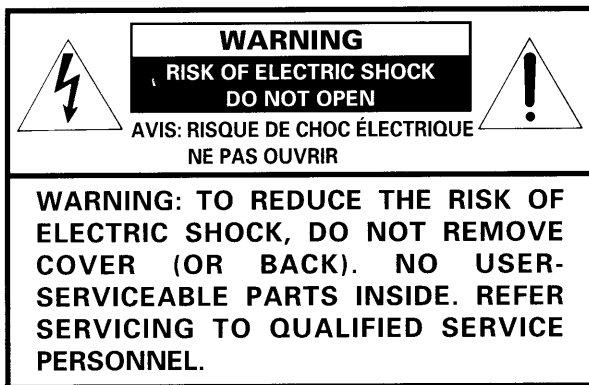
Model Number _____

Serial Number _____

Safety Precautions

WARNING:

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.



The lightning symbol in the triangle tells you that the voltage inside this product may be strong enough to cause an electric shock. DO NOT TRY TO SERVICE THIS PRODUCT YOURSELF.



The exclamation point in the triangle tells you that important operating and maintenance instructions follow this symbol.

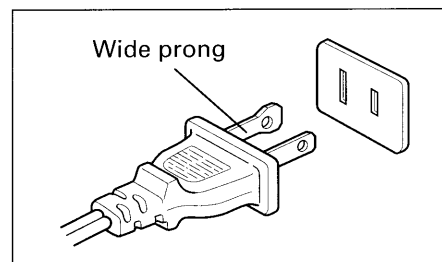
CAUTION:

As a safety feature, the AC plug has one prong wider than the other. It will fit only one way into a standard electrical outlet.

If the plug will not fit into the outlet, try turning it around.

If the plug will not fit either way, the outlet is probably old and non-standard. You will need to have a new outlet installed by an electrician.

DO NOT CHANGE THE SAFETY FEATURE OF THE PLUG.



CAUTION:

TO PREVENT ELECTRIC SHOCK, DO NOT USE THIS POLARIZED PLUG WITH AN EXTENSION CORD RECEPTACLE OR OTHER OUTLET UNLESS THE PRONGS CAN BE FULLY INSERTED INTO THE OUTLET TO PREVENT ANY EXPOSURE OF THE PRONGS OF THE POLARIZED PLUG.

NOTE TO CATV SYSTEM INSTALLERS IN THE USA:

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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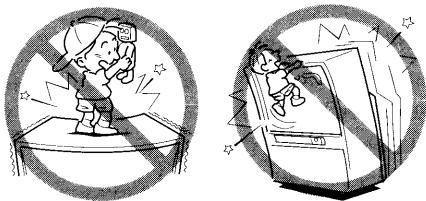
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Care and Cleaning



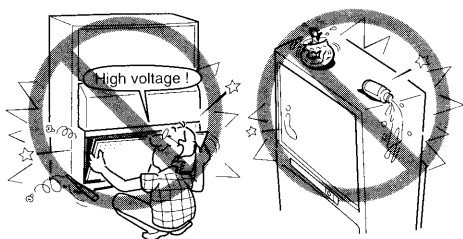
Care

Do not stand or climb on the TV.

- The TV is dangerous if broken or if it has fallen over.
- Be careful when children are present.

Do not remove the back cover and never remodel the cabinet or components.

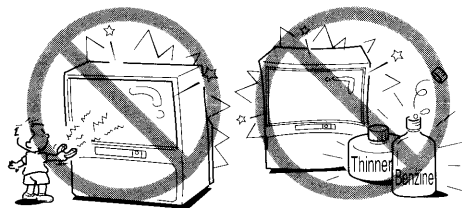
- Let only qualified technicians check and adjust your TV.



Do not place containers with liquids such as drinks or cosmetics on the TV.

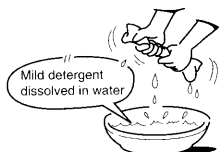
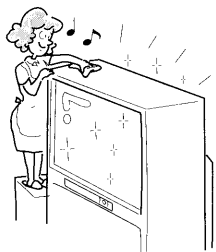
If any foreign material or water leaks into the TV, unplug the AC cord and contact your dealer.

Keep magnets, toys with magnets, electric clocks, speakers, etc. away from the TV.



If an empty channel is selected, or the TV broadcast for the day is finished, the TV will automatically turn off after about 15 minutes. This **Auto-Power-Off** feature does not operate in the VIDEO mode.

If the power supply is cut off while you are watching the TV, the **Last Mode Memory** feature automatically turns on the TV when the power is restored. If you know the power is going to be cut off, or you are leaving home for a long time, remove the power plug from the wall outlet to prevent the TV from turning on in your absence.



Cleaning

Do not use solvents such as benzine or thinner to clean the TV.

- These solvents may distort the cabinet or damage its finish.
- If rubber or vinyl products remain in contact with the TV for a long time, a stain may result.

When the cabinet becomes dirty, clean it with a soft, dry cloth.

When the cabinet is very dirty,

- ① Use a damp cloth to wipe the cabinet clean.
- ② Finish with a dry cloth.



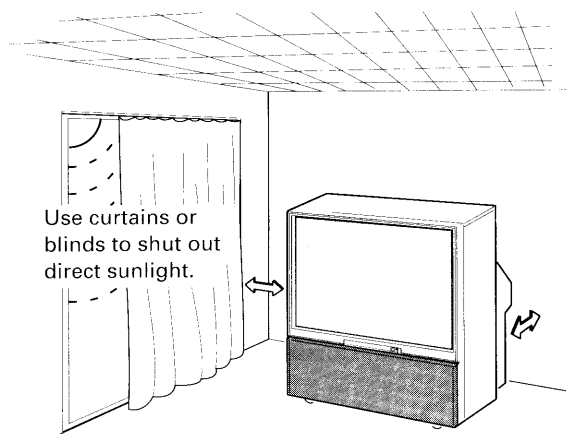
When cleaning the screen:

- ① Turn off the TV.
- ② Clean the screen with a soft, dry cloth.

Installation

To install the TV

Downward spot lights or fluorescent lights in an overhead "Honeycomb" prevent direct illumination of the screen.



Cover shiny surfaces (floor and walls) with non-reflective materials (carpet, rugs, wallpaper, etc.).

Where to install

Place the TV on the floor or on a sturdy platform. The mounting surface should be flat and steady. If you install the TV on a soft floor, make sure that the floor is not damaged by the weight of the TV.

Air Circulation

Place the TV far enough away from the walls to allow proper ventilation. This will prevent the TV from overheating and avoid possible damage to the TV. Avoid dusty places too.

Heat Damage

Damage may occur if you leave the TV in direct sunlight or near a heater. Avoid places subject to extremely high temperatures or humidity, and temperatures of 41°F (5°C) or lower.

Power Supply

Plug the TV into an electrical outlet with standard household power (120 volt AC, 60 Hz). Do not change the plug's safety prong.

See page 2.

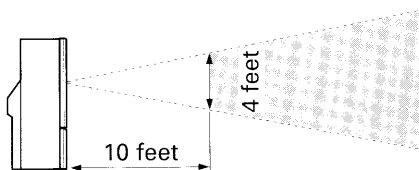
Moisture Condensation

If the room temperature suddenly rises (or if the TV is moved from a cool place to a hot place), condensation may occur on the lenses resulting in picture distortion or color fading. In such a case, simply wait a while (with the power on) and the condensation will evaporate.

Best Viewing

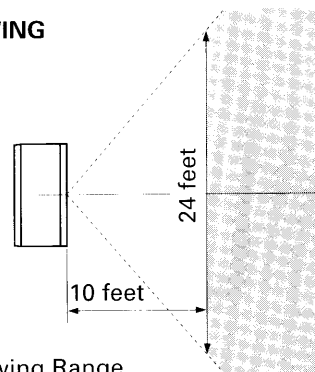
Sit approximately 10-25 feet away from the TV. Sitting too far to the left or right of the screen will cause the picture to appear dull as will direct sunlight and room lights. Turn the TV off to check for reflections on the screen. Then remove the source of any reflections while viewing.

VERTICAL VIEWING ANGLE [SIDE VIEW]



Viewing Range

HORIZONTAL VIEWING ANGLE [TOP VIEW]



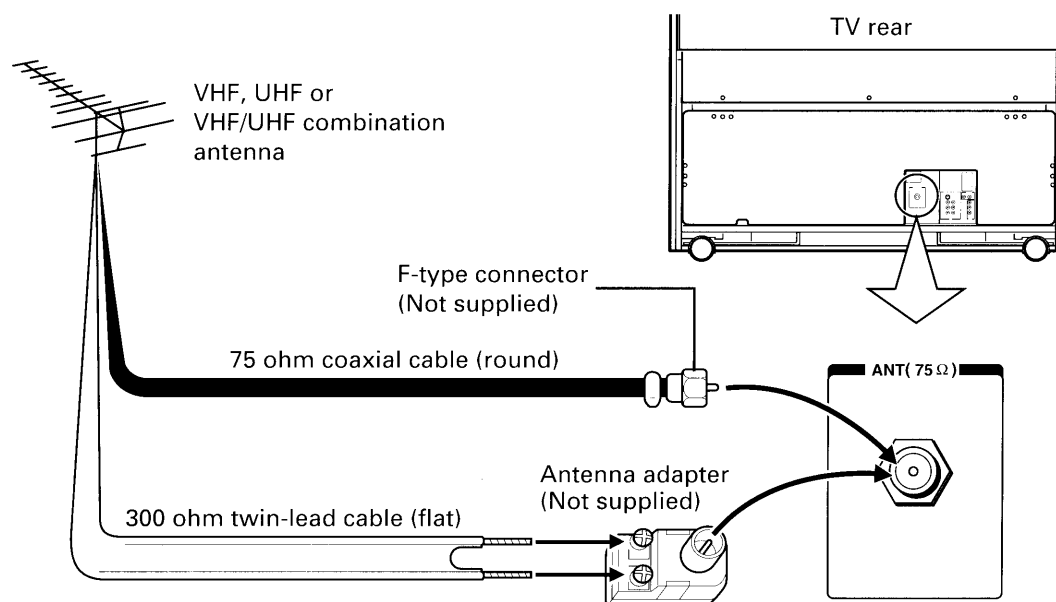
Viewing Range

Antenna/Cable TV Connections

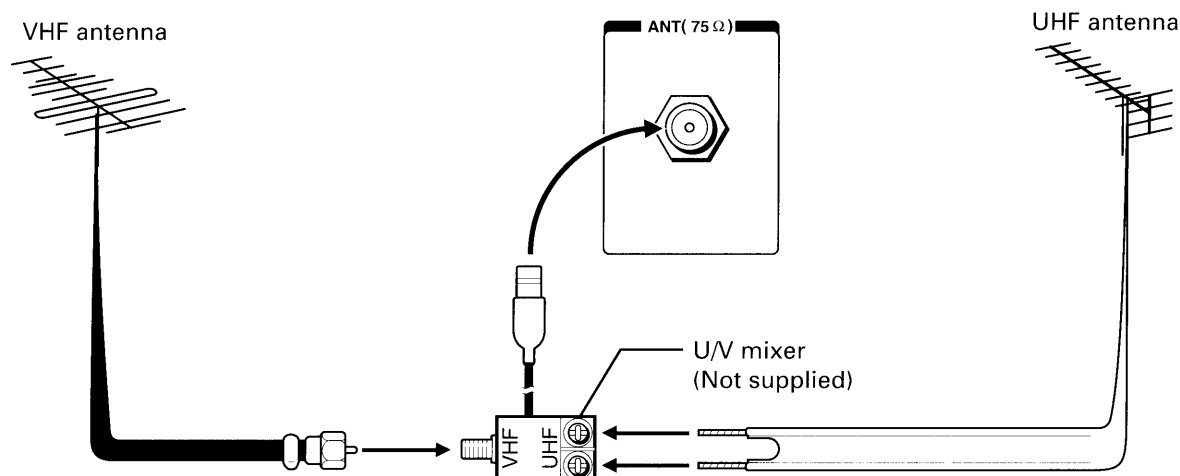
- You can use either an indoor or outdoor antenna to receive VHF and/or UHF channels.
- Channels 2-13 are VHF channels, and channels 14-69 are UHF channels.
- We recommend using an outdoor antenna for better picture quality.
- You can receive Cable TV by connecting the cable supplied by your local cable company.

To connect a home antenna

Single lead-in cable



Both VHF and UHF lead-in cables



To connect Cable TV

Generally, the lead-in cable for a cable TV system can be connected directly to the TV antenna terminal just like a home antenna. **(A-1)**

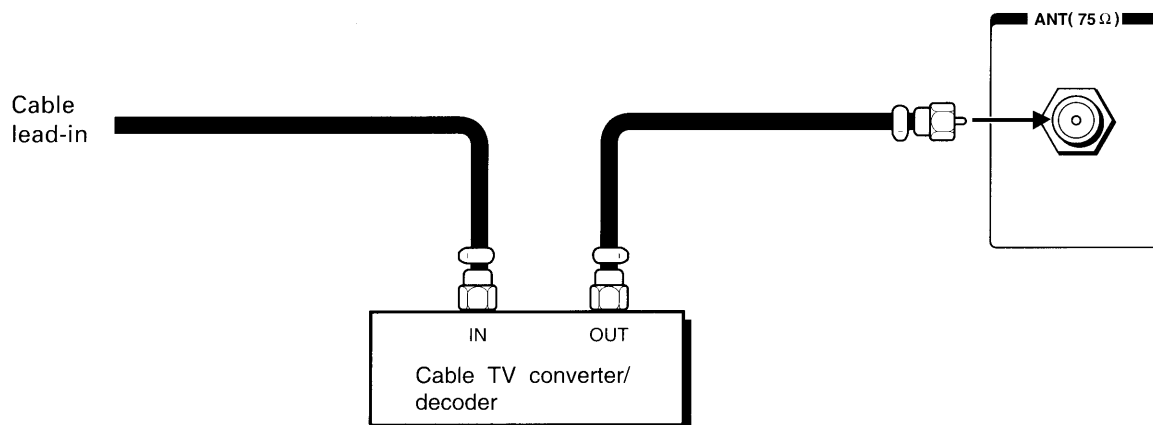
Some cable companies, however, offer "premium pay channels". Since premium pay channel signals are scrambled, a cable TV converter/decoder is generally provided to the subscribers by the cable TV company. This decoder box is necessary for normal viewing of the scrambled channels. We recommend that you consult your cable TV company for more specific instructions on installing cable TV. **(A-2)**

(A-1) Cable without a decoder box (Unscrambled channels)



(A-2) Cable with a decoder box (Unscrambled and Scrambled channels)

You can select unscrambled and scrambled channels via the converter/decoder box using the converter's channel keys. Set the TV on channel 3 or 4 to match the converter's output channel.



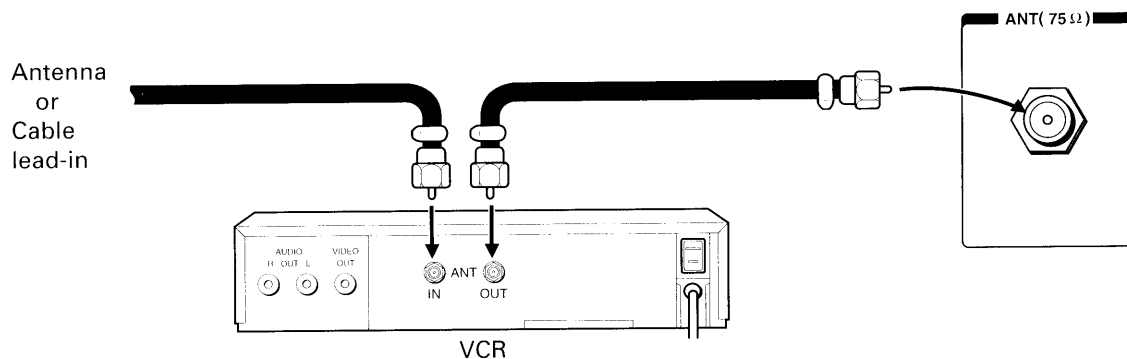
Note: The decoding device may or may not be a part of the cable converter.

Antenna/Cable TV Connections (continued)

- After antenna cable connections are made, you are still required to connect the VCR using AUDIO/VIDEO connecting cables for (stereo tape) playback of good quality from the VCR. See page 47.

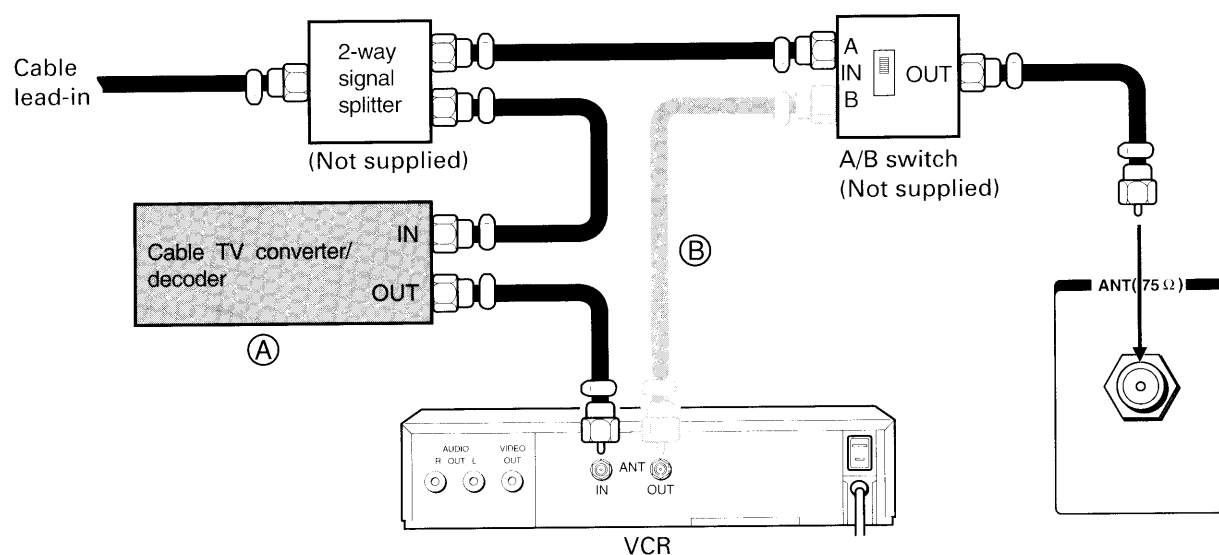
To connect an Antenna/Cable TV and VCR

Antenna/Cable TV connection via VCR (Simplified method)



Note: Tape playback may often cause the VCR to interrupt the antenna signal to the TV. If you cannot select a certain channel, try pressing the TV/VCR button on the Remote Control.

Cable with a decoder box



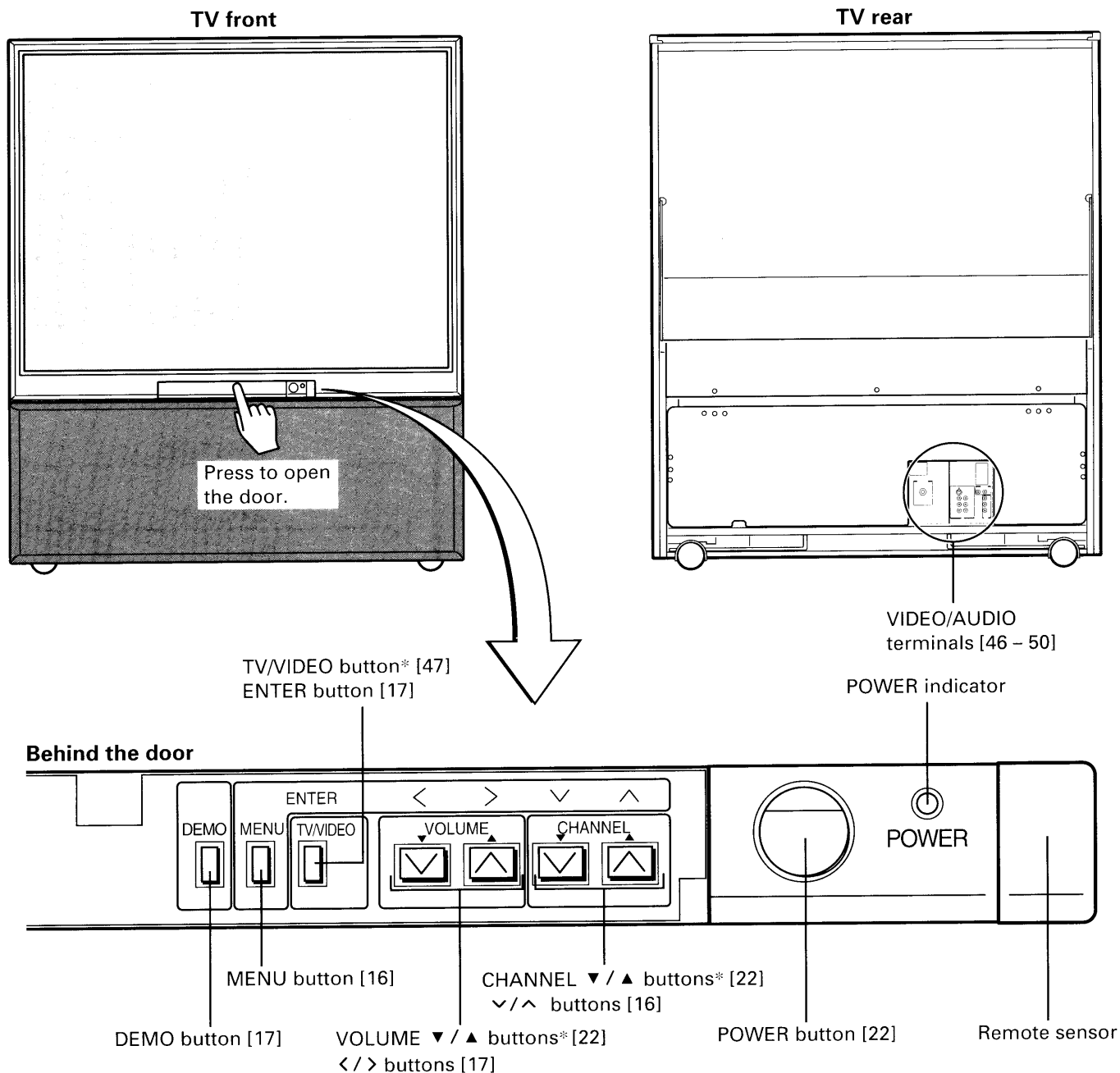
Notes:

- When connecting a cable TV converter/decoder (A):
 - The "A" position on the A/B switch allows you to select unscrambled channels using the TV's channel keys.
 - The "B" position on the A/B switch allows you to select unscrambled and scrambled channels via the cable TV converter/decoder box using the converter's channel keys. Set the TV and VCR on channel 3 or 4 to match the converter's output channel.
- The cable (B) connection is necessary only when the cable TV converter/decoder (A) is connected.

Location of Controls

- The following describes the functions of each part of the TV and the Remote Control. For the use of each control, refer to the pages in brackets.

Front and Rear control views



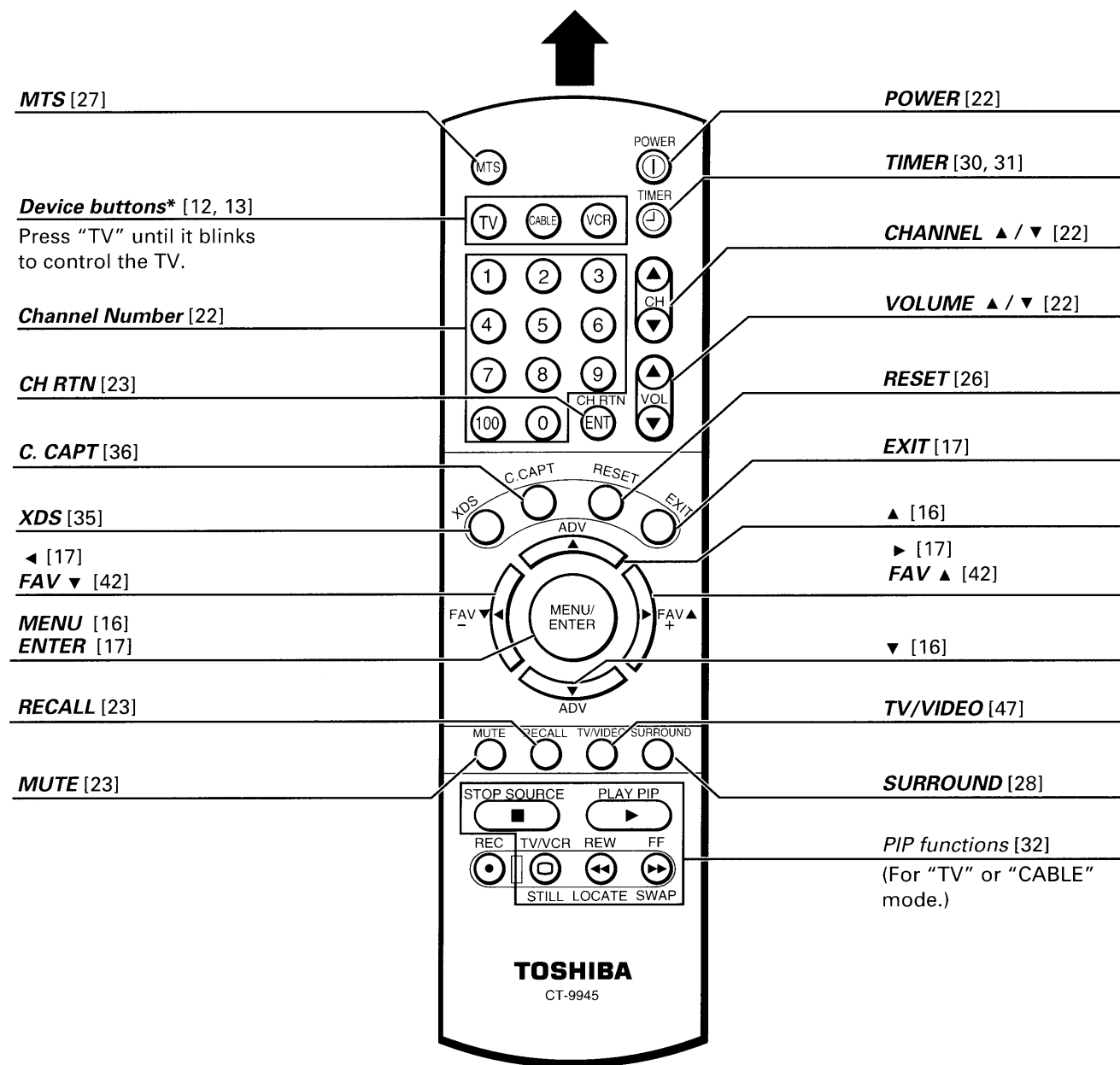
* These buttons have dual functions.

Location of Controls (continued)

Remote Control

Only the buttons that are used to operate the TV set are described here.
For details on the use of each control, refer to the pages in brackets.

Aim at the remote sensor on the TV



*When you press a button other than the Device buttons, one of these buttons (TV, CABLE or VCR you have selected) will light up (by the back-light) as a transmit indicator.

Before Using the Remote Control

Introduction and battery installation

With this Remote Control, you can operate your TV and most VCR and cable box models regardless of the manufacturer. However, this Remote Control must first be programmed to control other VCR and cable box brands. See page 13.

If you have a TOSHIBA VCR, your Remote Control has already been programmed for you.

Before attempting to operate your Remote Control, install the batteries according to "To install the batteries" below.

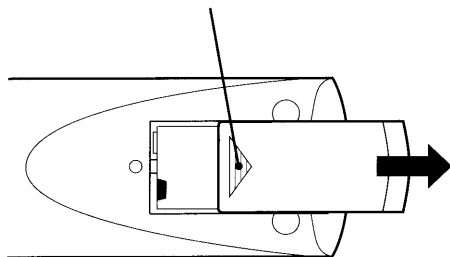
Notes:

- After installing new batteries, the Remote Control will set itself to the codes for TOSHIBA TVs and VCRs. If you are using the Remote Control to operate other manufacturer's equipment, you will have to reprogram those codes.
- This Remote Control may have functions not available on your VCR and cable box remote controllers. These functions may or may not operate your VCR or cable box. Refer to the owner's manuals supplied with the equipment to see which functions are available.
- The remote controller supplied with your VCR or cable box may have keys not duplicated on this Remote Control. If you want to use these functions, please use the original remote controller.

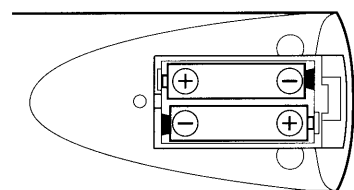
To install the batteries

- 1 Place the Remote Control face down and remove the battery cover.

Press and slide to remove.



- 2 Insert two "AA" size batteries, matching the + and - signs on each battery with the + and - signs in the battery compartment.



- 3 Slide the battery cover shut until the lock clicks.

CAUTIONS

- Do not throw your batteries into a fire. Dispose of your batteries in a designated disposal area.
- Do not combine used batteries with new ones.
- Do not mix battery types.

Tips for best operation

- For optimum performance, aim the Remote Control directly at the TV from a distance within 16 feet (5 m), and be sure there is no obstruction between the Remote Control and the TV.
- If your Remote Control does not always operate the TV as you wish, you probably need to replace the batteries.
- If the Remote Control will not be used for a long period of time or when the batteries are worn out, remove the batteries to prevent leakage.
- Do not drop, dampen or disassemble the Remote Control.

Using the Remote with VCR or Cable TV Converter

VCR and CABLE function buttons

- To control a TOSHIBA VCR, first press the **VCR** button. The buttons shown below will then control the VCR. The rest of the buttons operate the TV as usual.
If you have another brand of VCR, you can probably program your Remote to control it.
Details are on page 13.
- To control a cable TV converter, this Remote Control must be programmed to recognize the brand of your converter.
See page 13. The shaded buttons can be used to control the cable TV converter.
Press the **CABLE** button whenever you control the cable TV converter.

Aim at the VCR or cable TV converter

VCR

Press to control VCR.

CABLE

Press to control cable TV converter.

Channel Number

Press the numbers desired for direct access.

STOP

Press to stop the tape.

REC

Press to start recording.

TV/VCR

Press to the TV mode to view one program while recording another program.

POWER

Press the button to turn the VCR (or converter) on.
Press again to turn off.

CHANNEL ▲ / ▼

Press ▲ button to select next higher channel.
Press ▼ button to select next lower channel.

ENT

Some VCR's and Cable TV converters require **ENT** to change channel numbers.
This button does not function until you program the Remote Control to enter the VCR (or CABLE) code.

PLAY

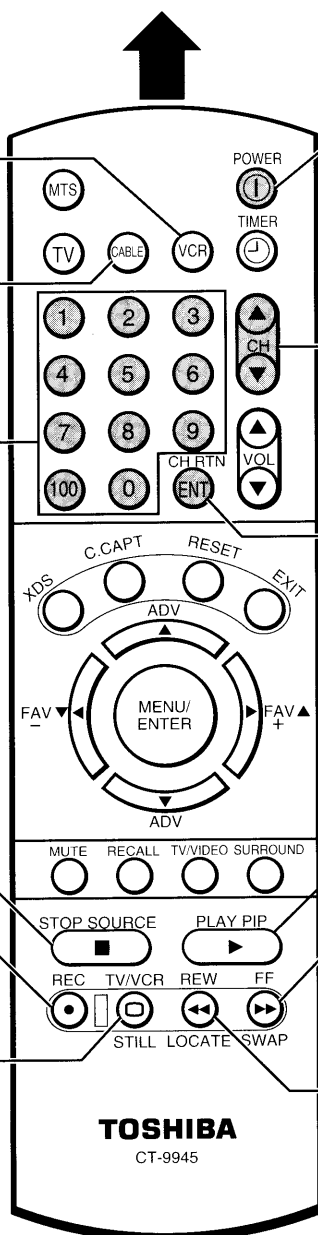
Press to begin tape playback.

FF

Press to rapidly advance the tape. In playback mode, press to view the picture moving rapidly in forward direction.

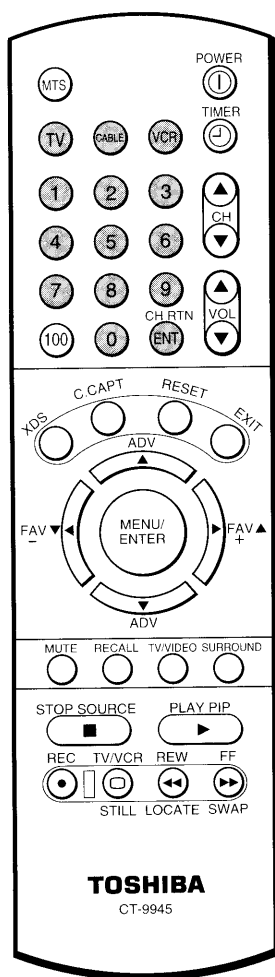
REW

Press to rewind the tape. In playback mode, press to view picture moving rapidly in reverse.



Programming the Remote Control

To control other brands of VCR's and cable TV converters



- This Remote Control is preprogrammed to operate TOSHIBA VCR's.
- To use VCR's other than Toshiba models (or cable converter), perform the following procedures before operating.

1 Refer to the "**VCR code table**" (or "**Cable TV converter code table**") on pages 14 and 15 to find the code number that corresponds to the brand name of your VCR (or converter).

If more than one number is listed, try each one separately until you find the one that works.

2 Turn on the device (VCR or converter) you wish to program the code.

3 Press the matching Device button "**VCR**" (or "**CABLE**") and **ENT** at the same time. The device button will light up by the back-light to indicate that it is in the program mode. Perform the following steps while the back-light is on (about 20 seconds).

4 Point the Remote Control toward the VCR (or converter) and press the **Number** buttons to enter the three digit code number for your brand of VCR (or converter).

— If the **right number** was entered, the VCR (or the converter) should turn off.

— If the **VCR (or the converter) does not respond to the Remote Control**, repeat steps 1 to 4 with another code number until the device turns off.

The back-light will blink to confirm the storage.

5 Press the Device button (**CABLE** or **VCR**) to release the program mode.

6 Press **TV** to control the TV.

Notes:

- You have to reprogram the Remote Control when you change its batteries.
- Some newer VCR's are capable of working on either of two remote codes. These VCR's have a switch labeled "VCR 1/VCR 2." If your VCR has this kind of switch, and does not respond to all the code numbers for your VCR brand name, set the switch to another position ("VCR 1" or "VCR 2") and reprogram the Remote Control.

For future reference, write the code you used.

VCR CODE: _____

CABLE CODE: _____

Programming the Remote Control (continued)

- In some rare cases, you may not be able to operate your non-Toshiba equipment with the supplied Remote Control. This is because your equipment may use a code that is not provided with this Remote Control. In this case, please use the equipment's own remote control.

VCR code table

BRAND NAME	CODE NUMBER	BRAND NAME	CODE NUMBER	BRAND NAME	CODE NUMBER
AIWA	034	MITSUBISHI	059, 061, 046, 051,	TOSHIBA	001, 112, 131, 008,
AKAI	146, 043, 046, 124,		142, 013, 020, 045		047, 059, 082, 013,
	142, 016	MTC	034, 040		017
ALBA	202	MULTITECH	024, 034	TOTEVISION	040, 101
AMPRO	072	NEC	012, 023, 043, 048	UNITECH	040
ANAM	031	NORDMENDE	043	VECTOR	
AUDIO DYNAMICS	012, 023, 043	OPTONICA	053, 054	RESEARCH	012
BRANDT	204	ORION	202	VIDEO	
BROKSONIC	035, 037, 129, 203	PANASONIC	070, 140, 201, 031	CONCEPTS	012, 046, 034, 141
CANON	031	PENTAX	013, 020, 031, 063	VIDEOSONIC	040
CRAIG	003, 040	PHILCO	031, 034, 067	WARDS	013, 024, 031, 034,
CURTIS MATHES	031, 041	PHILIPS	031, 067, 034, 101,		040, 053, 054, 003,
DAEWOO	010, 110, 111, 112,		054		017, 131
	017	PILOT	101	YAMAHA	012, 043, 034
DBX	012, 023, 043	PIONEER	021, 048, 013	ZENITH	072, 080, 056, 048,
DYNATECH	034, 053	PULSAR	072		034, 101, 058
ELECTROHOME	059	QUARTZ	014		
EMERSON	006, 029, 035, 025,	QUASAR	031		
	034, 036, 037, 046,	RCA	013, 020, 034, 041,		
	101, 129, 131, 138,		040, 107, 109, 140,		
	017, 031, 202, 203		144, 147, 031, 205,		
FISHER	003, 008, 009, 010		206, 207, 208		
FUNAI	034	REALISTIC	003, 008, 010, 014,		
GE	031, 072, 144, 147,		031, 034, 040, 053,		
	063, 107, 109, 205,		054, 101		
	206, 207, 208	RICOH	058		
GO VIDEO	132, 136	RUNCO	072		
GOLDSTAR	012, 013, 020, 101,	SALORA	014		
	123	SAMSUNG	040, 107, 109, 112,		
HARMAN KARDON ...	012, 045		017, 205, 206		
HITACHI	004, 026, 034, 043,	SANSUI	043, 048		
	063, 047, 013	SANYO	003, 010, 014		
INSTANTREPLAY	031	SCOTT	017, 037, 129, 112,		
JCL	031		131		
JCPENNY	012, 013, 040, 101,	SEARS	003, 008, 010, 013,		
	031		014, 017, 101, 009,		
JENSEN	043		031		
JVC	048, 043, 130, 152,	SHARP	031, 054, 053		
	055, 060, 012, 031,	SHINTOM	024		
	047	SONY	056, 057, 058, 003,		
KENWOOD	014, 048, 043		052, 031		
LLOYD	034	SOUNDESIGN	034		
LXI	003, 009, 017, 034,	STS	013		
	101, 013, 014	SYLVANIA	031, 034, 067		
MAGIN	040	SYMPHONIC	034		
MAGNAVOX	067, 031, 034, 041	TANDY	010, 034		
MARANTZ	031, 067, 012	TATUNG	043		
MARTA	101	TEAC	034, 043		
MATSUI	202	TECHNICS	031, 070		
MEI	031	TEKNIKA	031, 019, 034, 101		
MEMOREX	101, 003, 010, 014,	TELEFUNKEN	204		
	031, 034, 053, 072	THOMAS	034		
MGA	045, 046, 059	TMK	006		
MINOLTA	013, 020				

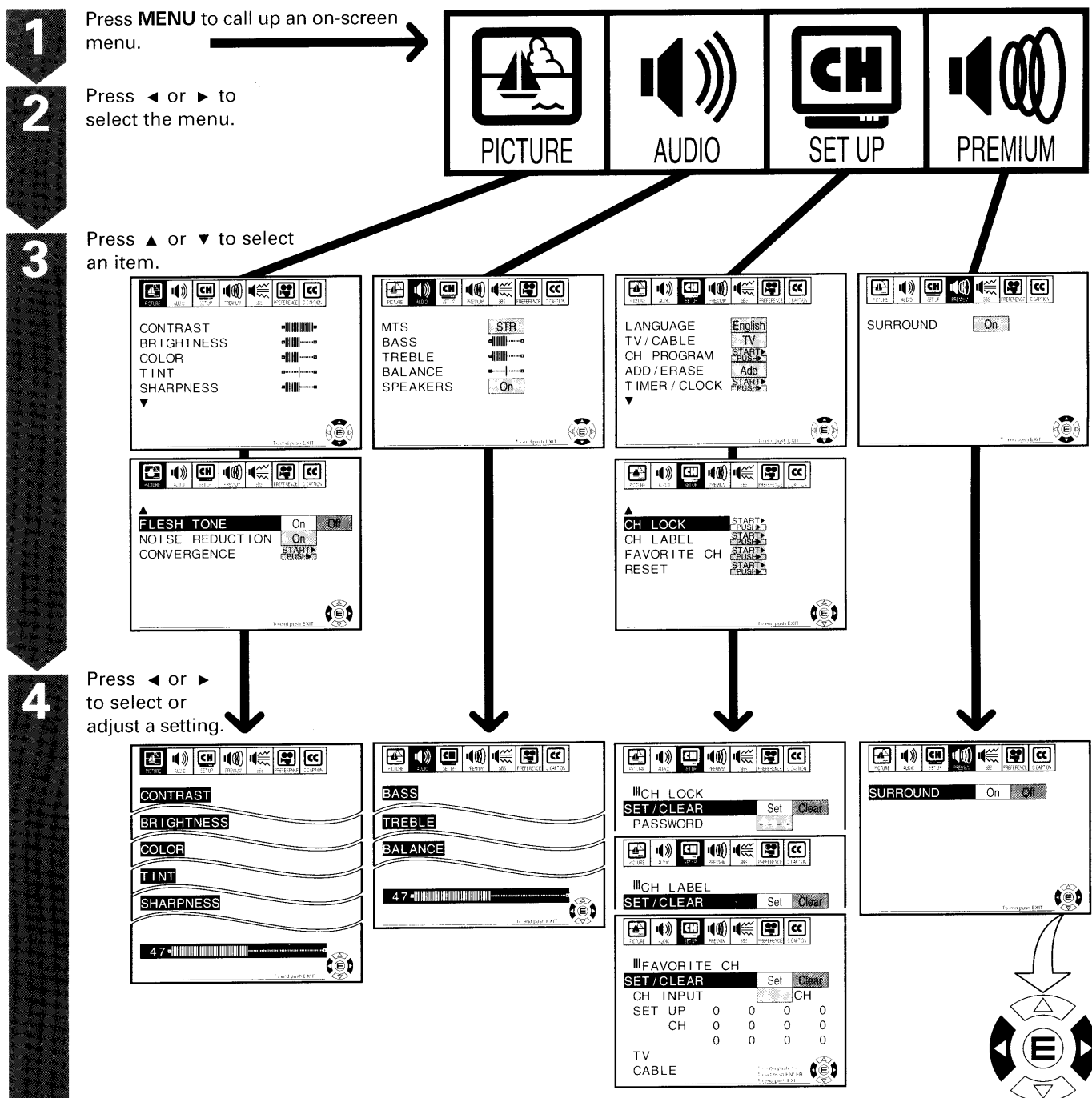
Cable TV converter code table

BRAND NAME	CODE NUMBER	BRAND NAME	CODE NUMBER
ABC	001, 004, 039, 045, 053, 003, 042	RK	091
ANTRONIK	014	SAMSUNG	030, 068
ARCHER	005, 007, 014, 024	SCIENTIFIC	
CABLE STAR	026	ATLANTA	003, 011, 041, 042, 043, 045, 046
CENTURY	007	SHERITECH	022
CITIZEN	007	SIGNAL	030
COLOUR VOICE	065, 090	SIGNATURE	001
COMBANO	080, 081	SL MARX	030
COMTRONICS	019, 030, 202	SPRUCER	047, 078
DIAMOND	023	STANDARD	
EAGLE	020, 030, 040	COMPONENTS ...	203
EASTERN	057, 062, 066	STARCOM	002, 004, 008, 009
ELECTRICORD	032	STARGATE	008, 030
GE	072	SYLVANIA	067
GEMINI	008, 022, 025, 054	TADIRAN	030
GI	001, 074	TANDY	017
GOLDEN		TELECAPATION	021
CHANNEL	030	TEXSCAN	029, 067
HAML IN	049, 050, 055, 204, 207	TOCOM	039, 040, 056
HITACHI	001, 055	TOSHIBA	052
HOSPITALITY	070, 077	UNIKA	007, 014, 024
JERROLD	002, 003, 004, 010, 001, 008, 009, 069, 074, 201	UNITED CABLE	004, 053
M-NET	037	UNIVERSAL	007, 024, 027, 035, 005, 014, 026, 032
MACOM	033	VIEWSTAR	086, 087, 088, 089, 012, 015, 018, 202, 205
MAGNAVOX	012, 079, 010, 064	ZENITH	052, 060, 093
MEMOREX	052		
MOVIE TIME	028, 032		
NSC	071, 073, 015, 028, 038		
OAK	016, 031, 037, 053		
PANASONIC	044, 047		
PARAGON	052		
PHILIPS	020, 065, 006, 012, 013, 085, 090, 202		
PIONEER	034, 051, 001, 063, 076		
POPULAR			
MECHANICS	206		
POST NEWS			
WEEK	016		
PRUCER	059		
PTS	011, 048, 071, 072, 073, 074		
PULSAR	052		
RCA	047		
REGAL	049, 050		
REGENCY	057		
REMBRANT	025		

Quick Reference Menu Guide

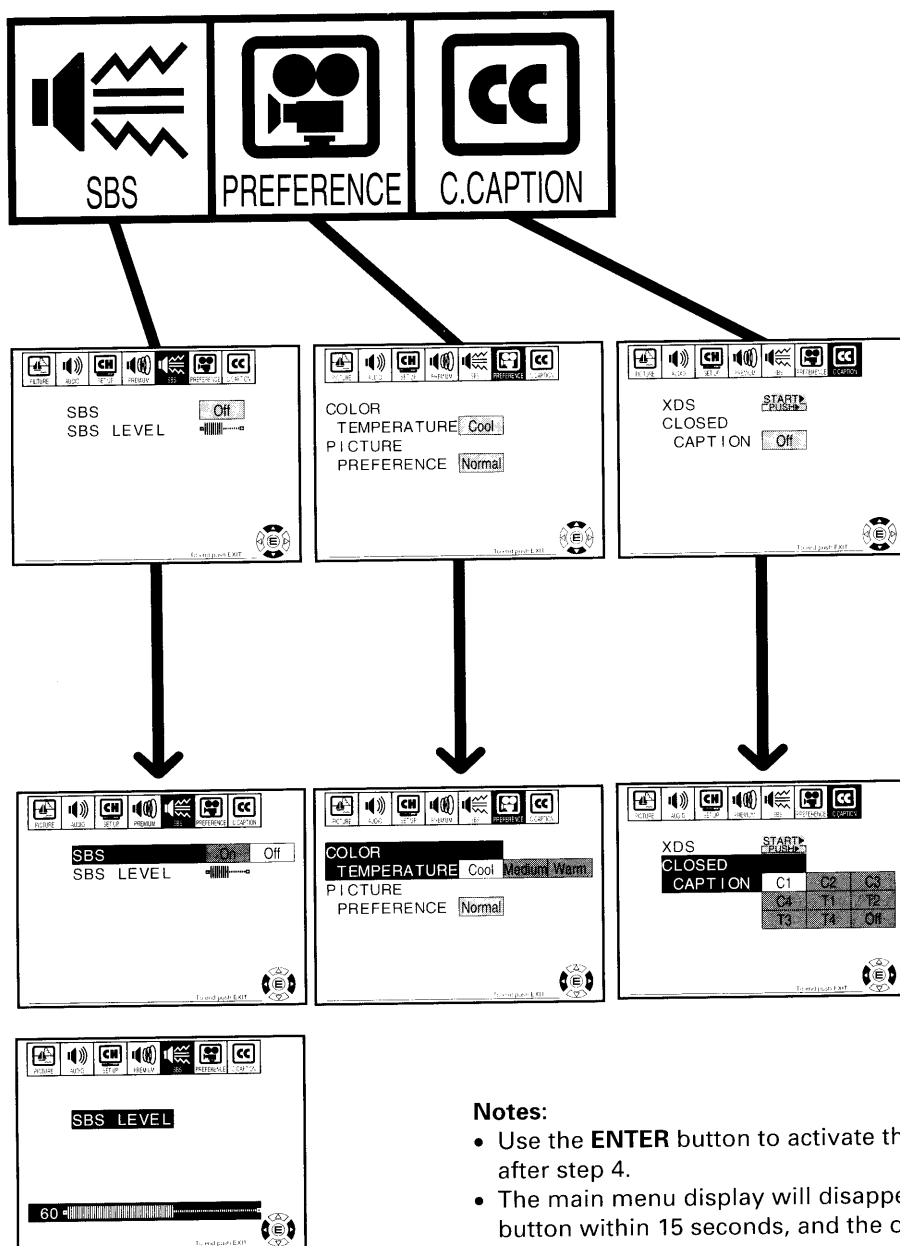
- We recommend that you familiarize yourself with these procedures for using the Menu function.

Menus and functions



This mark indicates which button you should press next.

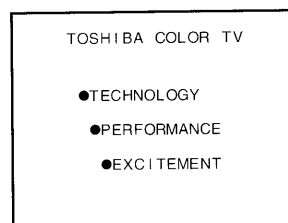
Menus and functions (continued)



Demonstration mode

When you press **DEMO** on the TV, the TV will automatically display a variety of its on-screen menus and special features. This function is provided for demonstration purposes only. Press **DEMO**.

The on-screen demonstration will start after about 4 seconds.



To stop the on-screen demonstration

Press **DEMO** again or press Exit or Recall on the remote control.

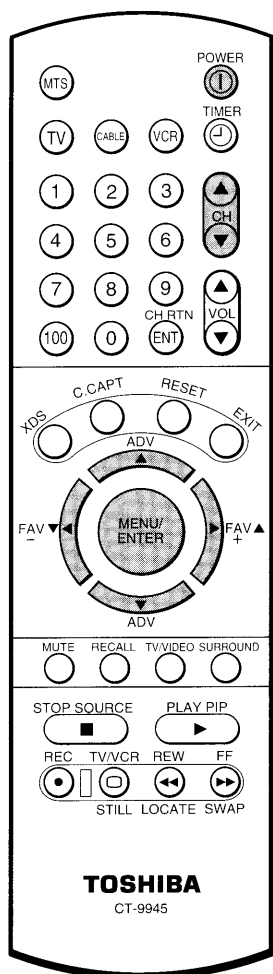
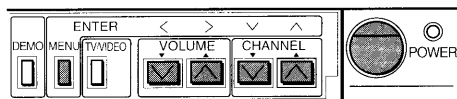
Notes:

- Use the **ENTER** button to activate the function settings in the SET UP menu after step 4.
- The main menu display will disappear automatically if you do not press a button within 15 seconds, and the other displays will disappear within 6 seconds.
- If you want to close all the on-screen displays instantly, press the **EXIT** button on the Remote Control.
- The **▼/▲** buttons on the TV function as the **CHANNEL ▼/▲** buttons when no menu display is on the screen.
- The **</>** buttons on the TV function as the **VOLUME ▼/▲** buttons when no menu display is on the screen.
- The **◀/▶** buttons on the Remote Control function as the **FAV ▼/▲** buttons when no menu display is on the screen.

Programming Channel Memory

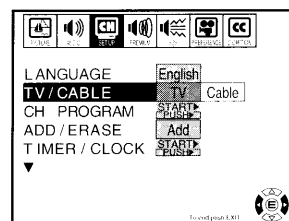
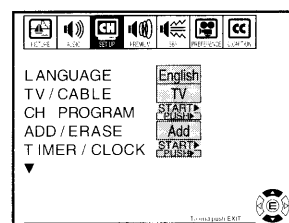
- The channel memory is a list of TV channel numbers the TV tunes in when you press the **CHANNEL ▲/▼** button. **First, use the TV/CABLE and CH PROGRAM functions to preset all active channels in your area automatically.** If necessary, arrange the preset channels with the ADD/ERASE function so you tune into only the desired channels.

TV/CABLE and CH PROGRAM functions



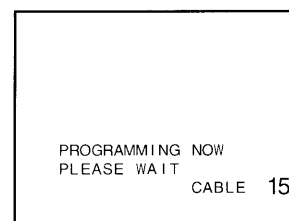
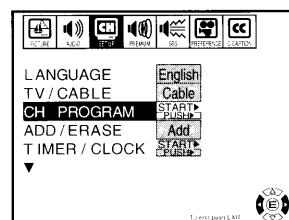
TV/CABLE function

- Press **POWER** to turn on the TV, then select an active channel. (See page 22 for details.)
- Press **MENU**, then press ◀ or ▶ until the SET UP menu appears.
- Press ▼ (or ▲) until "TV/CABLE" is highlighted.
- Press ◀ or ▶ to select "TV" or "Cable" whichever you use.

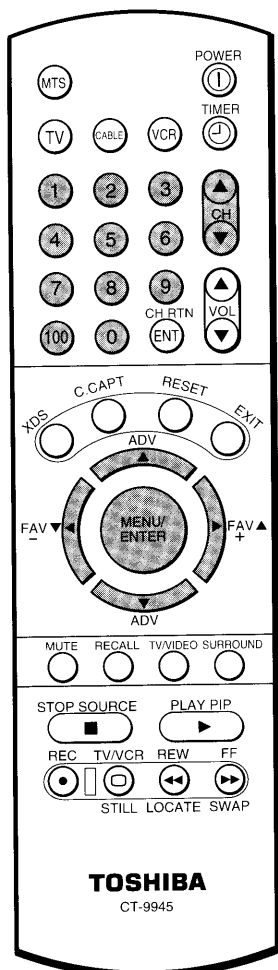
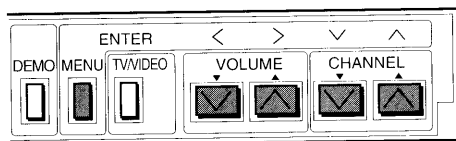


CH PROGRAM function

- Select "CH PROGRAM" from the Set Up menu. (Step 2 above)
- Press ◀ or ▶ to start channel programming. The TV automatically cycles through all TV or CABLE channels depending on the mode selected, storing received channels in the channel memory.
- When channel programming is complete, the message "COMPLETED" appears on the screen.
- Press **CHANNEL ▲/▼** to make sure channel programming has been done properly.



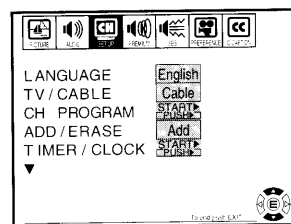
ADD/ERASE function



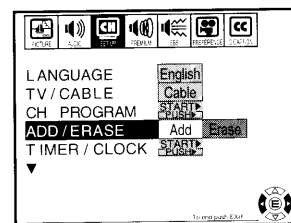
After performing the CH PROGRAM function, you can add or erase specific channels.

- 1 Select the channel to erase using the **CHANNEL ▲** or **▼** button, or select the channel to add with the **Channel Number** buttons.
See page 22 on how to select channels.

- 2 Press **MENU**, then press **◀** or **▶** until the SET UP menu appears.



- 3 Press **▼** (or **▲**) until "ADD/ERASE" is highlighted.



- 4 Press **◀** or **▶**.

To erase the channel

Press **◀** or **▶** to select "Erase". The channel will be erased from the memory.

To add the channel

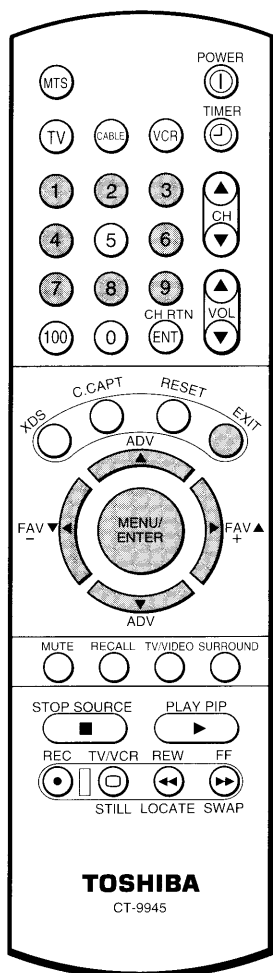
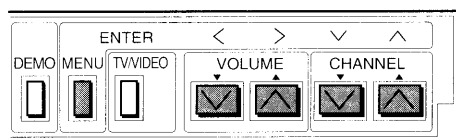
Press **◀** or **▶** to select "Add". The channel will be memorized.

- 5 Repeat steps 1 through 4 for other channels.

Aligning the colors

- This projection TV uses three separate TV tubes: a red one, a green one, and a blue one. The red, green, and blue images are projected onto the screen where they converge to form a full color picture. You can see a clear picture only when they converge correctly.
- Convergence may drift over time or if you move the TV. If you can see clear images on the screen, skip this procedure.

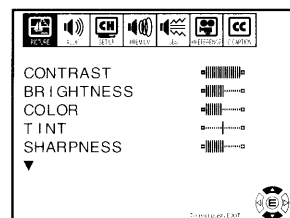
To align the colors



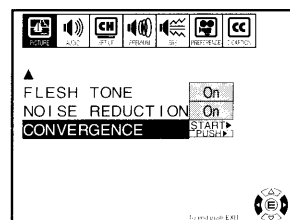
This adjustment should be made after the TV has been on for at least 30 minutes.

To check and align the colors

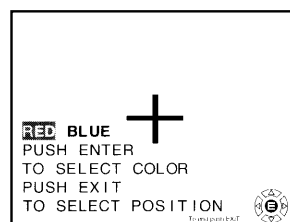
- 1 Press **MENU**, then press ◀ or ▶ until the PICTURE menu appears.



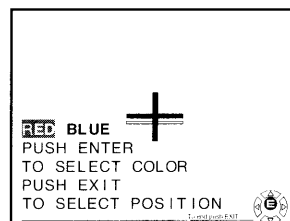
- 2 Press ▲ (or ▼) until "CONVERGENCE" is highlighted.



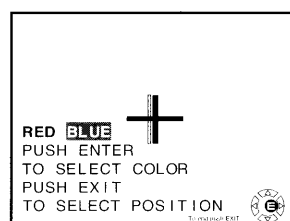
- 3 Press ◀ or ▶ to display the center CONVERGENCE menu. If alignment is correct, there will be one vertical and one horizontal white line.



- 4 If you see separate colored lines, you have to align the colors. Press **ENTER** to select "RED" or "BLUE." The selected color is highlighted.

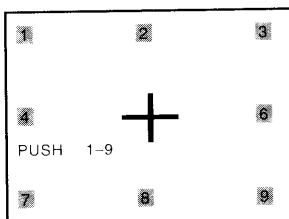


- 5 Press the "▲ (up)", "▼ (down)", "◀ (left)" or "▶ (right)" button to converge the red or blue line into the green line. When color convergence is correctly adjusted, you will see two single white lines.



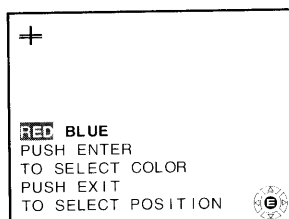
To align the colors (continued)

- 6** Press **EXIT** to display the circumference CONVERGENCE menu.

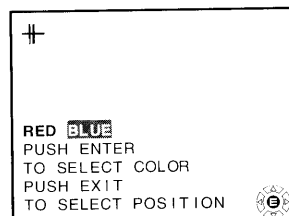


- 7** Press the corresponding **Number button** (1-9) to select the place you want to adjust.

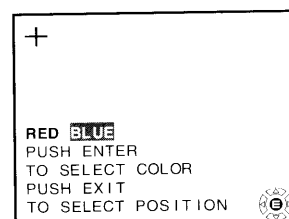
Example: Number 1



- 8** Press **ENTER** to select "RED" or "BLUE". The selected color is highlighted.

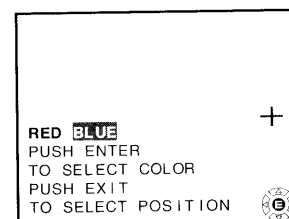


- 9** Press **▲**, **▼**, **◀**, or **▶** to converge the red or blue line into the green line. Repeat steps 8 and 9 until you see two single white lines.



- 10** Press **EXIT** once to select any other place you want to adjust, then repeat steps 7 through 9.

Example: Number 6

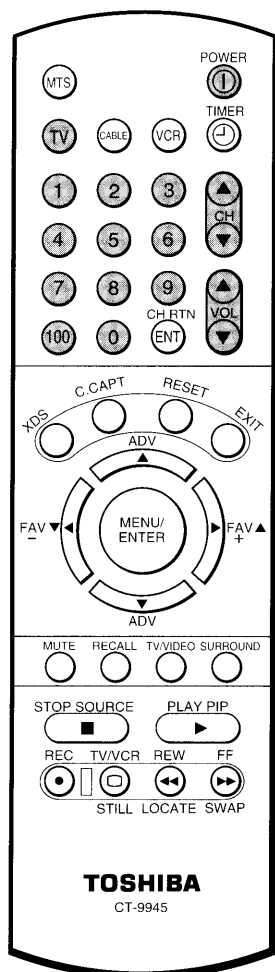
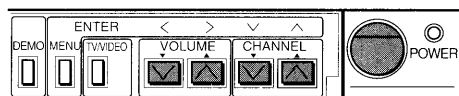


- 11** Press **EXIT** twice to close the CONVERGENCE menu.

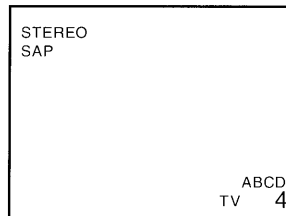
Watching TV Programs

To watch a TV program

First press the **TV** button on the Remote Control.



- 1 Press **POWER** on the Remote Control or the TV.
The following on-screen information will be displayed for a few seconds,
 - Channel label (if previously preset)
 - Channel number or VIDEO mode selected
 - STEREO or SAP audio status



- 2 Select the desired program in one of the following two ways.

To scan the memorized channels in numerical sequence

Press **CHANNEL ▲** to select the next higher channel.

Press **CHANNEL ▼** to select the next lower channel.

Press the button again to select the next memorized channel.



To select a channel directly

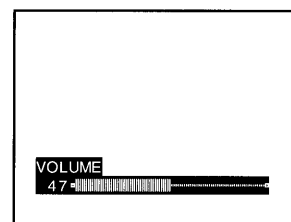
Press the **Channel Number** buttons (0 – 9 and 100).

To select channel 4, press "4" (or press "0" and "4" in order).

To select channel 38, press "3" and "8" in order.

To select channel 125, press "100," "2," and "5" in order.

- 3 Adjust the sound volume with the **VOLUME ▲ / ▼** on the Remote Control or the TV.
Press **▲** to increase the volume; **▼** to decrease the volume.



- 4 To turn off the TV, press **POWER** again.

If you cannot select certain channels (either TV broadcast or CABLE channels)

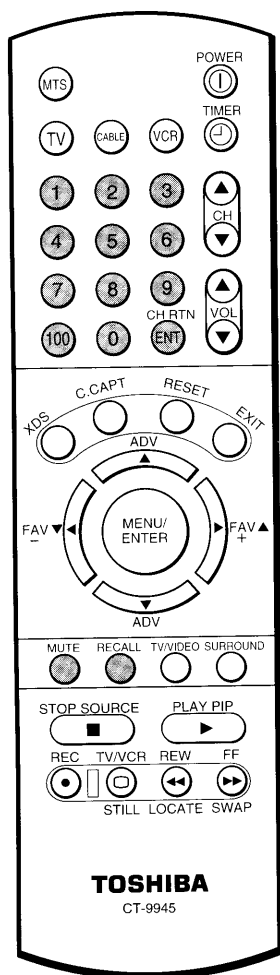
Check to see if the TV/CABLE function is properly set. See page 18.

Notes:

- The **CHANNEL ▼ / ▲** buttons on the TV function as the menu **▼ / ▲** buttons while a menu is on the screen.
- The **VOLUME ▼ / ▲** buttons on the TV function as the menu **< / >** buttons while a menu is on the screen.

Convenient Remote Functions

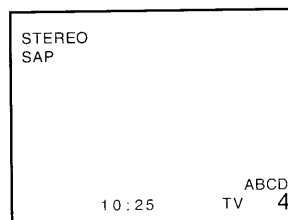
To use On-screen displays/Sound muting/Channel return



To display on-screen information

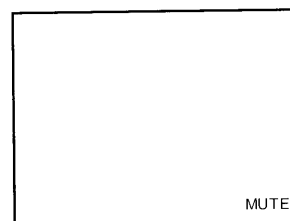
Press **RECALL** to display the following on-screen information.

- Channel label (if previously preset)
- Channel number or VIDEO mode selected
- Time (if the clock has been set)
- STEREO or SAP audio status



To mute the sound

- 1 Press **MUTE** to mute the sound immediately without affecting the picture.



- 2 To restore the sound, press **MUTE** again.

Note:

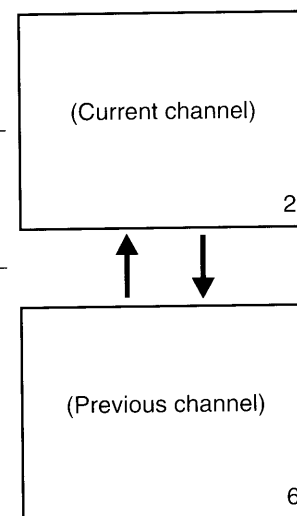
When the **MUTE** button is pressed, the Closed Captioned feature "C1" is activated. To deactivate it, press the **MUTE** button again. This feature only functions when the Closed Caption mode is set to "Off." (See page 36.)

To return to the previously viewed channel

Using this function, you can watch two channels alternately.

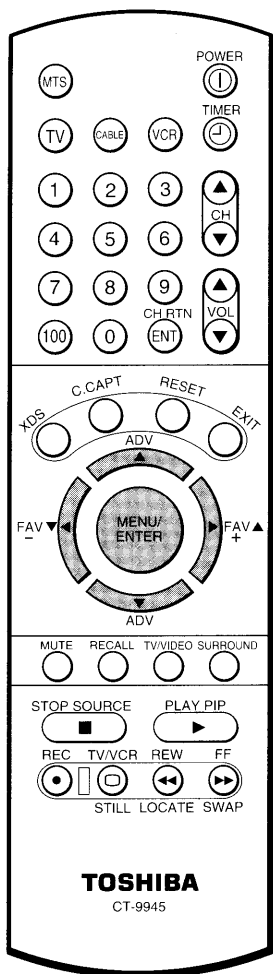
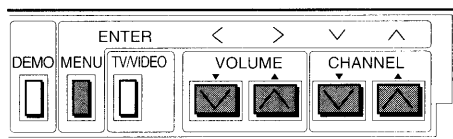
- 1 Select the first channel you want to watch.
- 2 Select the other channel with the **Channel Number** buttons.
- 3 Press **CH RTN**.
The previous channel returns.

Each time you press **CH RTN**, the TV will switch back and forth between the two channels.



Controlling the Picture

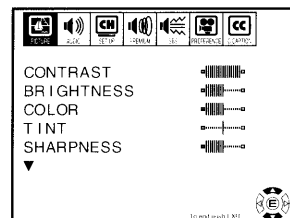
To adjust the picture



To adjust the picture quality

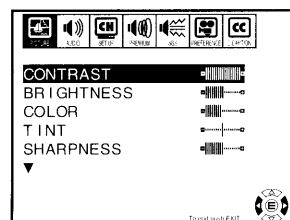
You can adjust the picture quality (CONTRAST, BRIGHTNESS, COLOR, TINT, and SHARPNESS) to suit your personal preference.

- 1 Press **MENU**, then press ◀ or ▶ until the PICTURE menu appears.

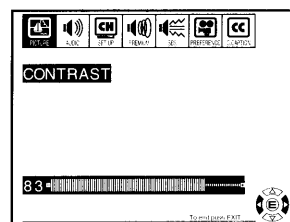


- 2 Press ▼ (or ▲) until the item you want to adjust is highlighted.

Example: CONTRAST adjustment mode display



- 3 Press ◀ or ▶ to adjust the level.



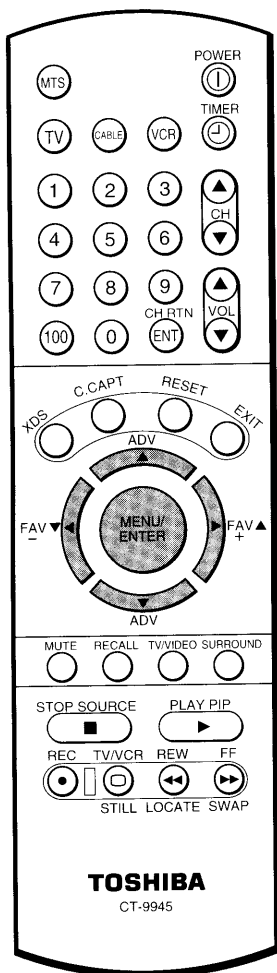
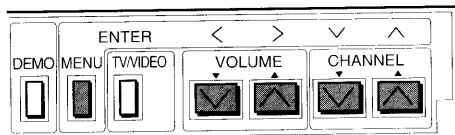
Item	Pressing	
	◀	▶
CONTRAST	lower	higher
BRIGHTNESS	darker	lighter
COLOR	weaker	stronger
TINT	reddish	greenish
SHARPNESS	softer	sharper

When you adjust any of the five PICTURE items, the new setting will be stored in the "Memory." (See page 25.)

Note:

You can reset the PICTURE setting to the factory preset status by using the RESET function. (See page 26.) When you turn on the RESET function, the TV will return to the Normal mode in the PICTURE PREFERENCE function. (The settings you have adjusted remain in the Memory mode.)

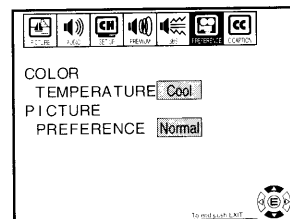
To adjust the picture (continued)



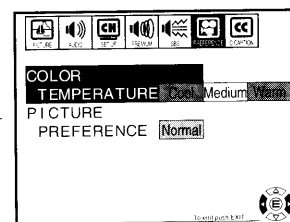
To select the color temperature

These selections change the appearance of gray and white tones of the picture.

- 1 Press **MENU**, then press ◀ or ▶ until the PREFERENCE menu appears.



- 2 Press ▲ or ▼ until "COLOR TEMPERATURE" is highlighted.



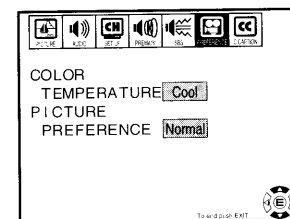
- 3 Press ◀ or ▶ to select the temperature you want.

Cool: Bluish
Medium: Neutral
Warm: Reddish

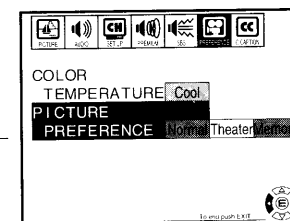
To select the picture preference

You can select the type of picture you want from three preset picture modes (Normal, Theater, and Memory).

- 1 Select the PREFERENCE menu.



- 2 Press ▲ or ▼ until "PICTURE PREFERENCE" is highlighted.



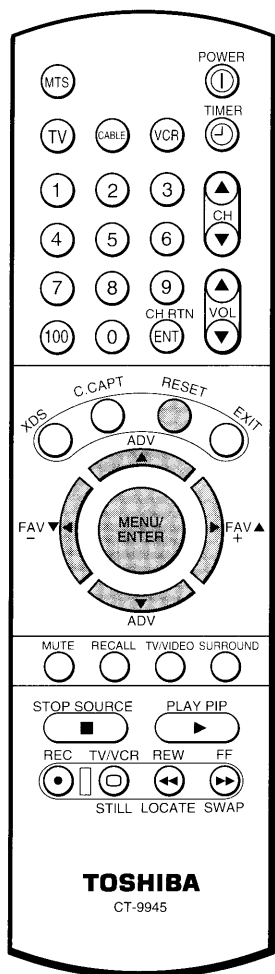
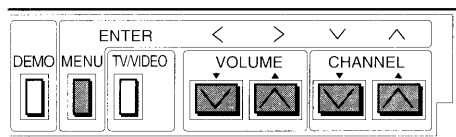
- 3 Press ◀ or ▶ to select the mode you want.

Mode	Picture quality
Normal	the picture quality preset at the factory
Theater	movie-like picture setting
Memory	the picture quality you set (See page 24.)

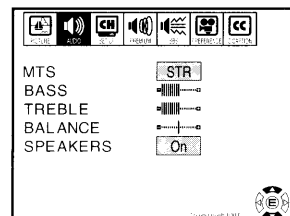
Controlling the Sound

- You can adjust the sound quality (BASS, TREBLE and BALANCE) to suit your personal preference.

To adjust the sound

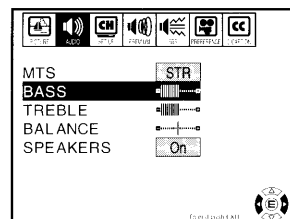


1 Press **MENU**, then press ◀ or ▶ until the **AUDIO** menu appears.

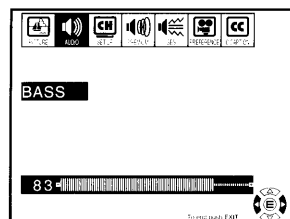


2 Press ▼ (or ▲) until the item you want to adjust is highlighted.

Example: Adjusting "BASS."



3 Press ◀ or ▶ to adjust the level.



Item	Pressing	
	◀	▶
BASS	weaker	stronger
TREBLE	weaker	stronger
BALANCE	decreases the right channel	decreases the left channel

RESET function

To reset the **PICTURE** and **AUDIO** adjustments to the factory preset status (maximum CONTRAST and all other adjustments centered)
Press **RESET**, or select **RESET** in the **SET UP** menu with ▲ or ▼, then press ◀ or ▶.

The **RESET** function also performs the following adjustments.

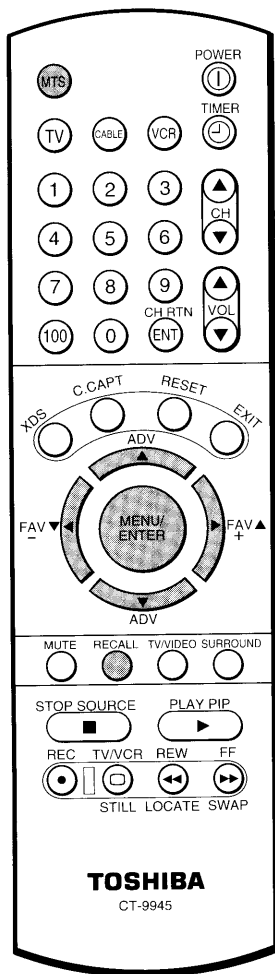
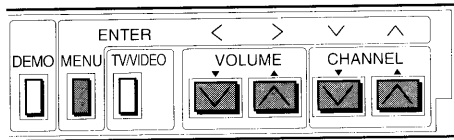
- COLOR TEMPERATURE Cool
- PICTURE PREFERENCE Normal
- NOISE REDUCTION Off

RESET

Selecting Stereo and SAP Broadcasts

- The MTS (Multi-channel TV Sound) feature allows you to improve your TV viewing with high fidelity stereo sound. MTS also provides for an extra audio channel, SAP (Second Audio Program), used to transmit a second language or other audio information.

To listen to Stereo/SAP broadcasts

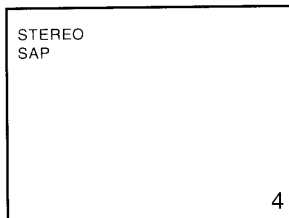


If the stereo sound is noisy

If a broadcast signal is not strong enough, and noise-free stereo sound is not available, select "MONAURAL" or "MONO".

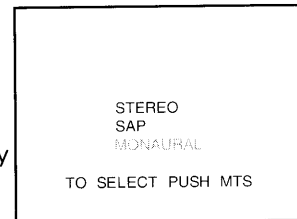
The noise should be reduced.

When the TV receives a stereo broadcast, the word "STEREO" (or "SAP") is displayed on the screen. It is also displayed whenever the TV is turned on, a channel is selected, or the **RECALL** button is pressed.



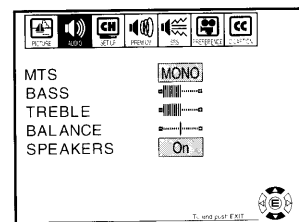
Press **MTS** repeatedly until "STEREO" or "SAP" is displayed in purple. The usable selections are displayed in yellow.

Normally this function can be left in the STEREO mode. Your TV will then automatically reproduce either stereo or monaural sound, whichever is broadcast.

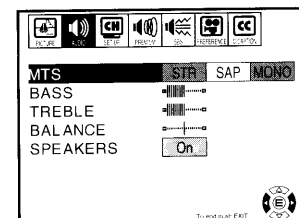
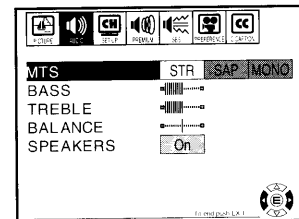


You can also select the stereo or SAP mode by using the on-screen menu.

- Press **MENU**, then press ◀ or ▶ until the AUDIO menu appears.



- Press ▼ (or ▲) until "MTS" is highlighted, then Press ◀ or ▶ to select "STR" or "SAP".



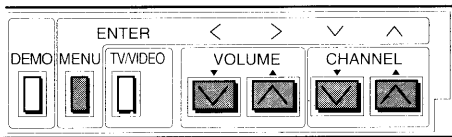
Notes:

- Be sure to select the "STEREO" mode if the broadcast is in stereo.
- The MTS function is not available while in VIDEO mode.

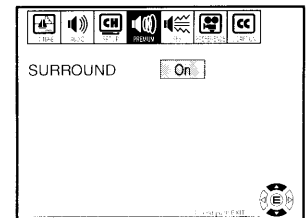
Enhancing the Surround Sound Effect

- This TV allows you to activate or deactivate the stereo surround effect. First make sure the STEREO mode is selected. (See the previous page.)

To activate the Surround sound function

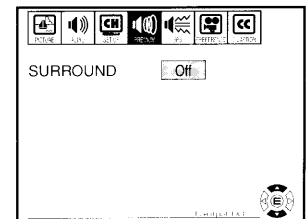


Press **SURROUND** until "SURROUND On" appears on the screen.

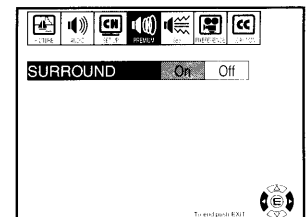


You can select the SURROUND mode by using the on-screen menu.

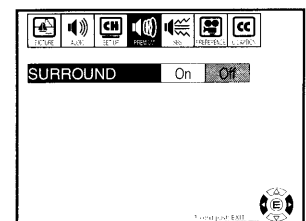
- 1 Press **MENU**, then press ◀ or ▶ until the PREMIUM menu appears.



- 2 Press ▲ or ▼ until "SURROUND" is highlighted.



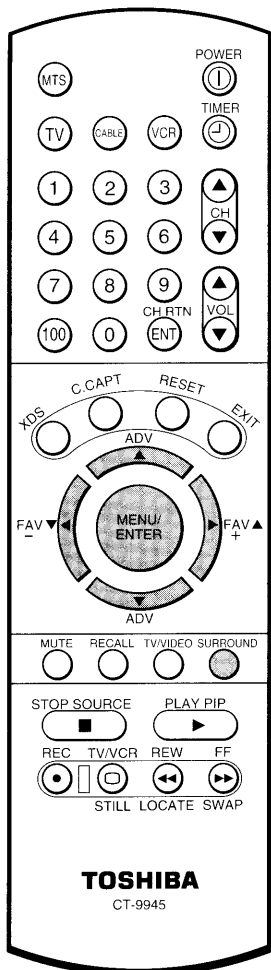
- 3 Press ◀ or ▶ to select "On."



To deactivate the Surround sound function
Select "SURROUND Off".

Note:

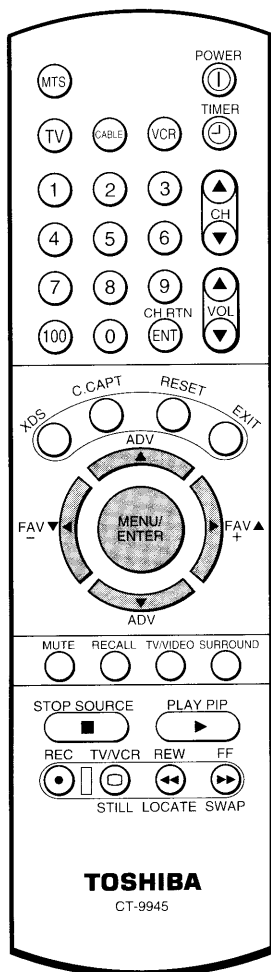
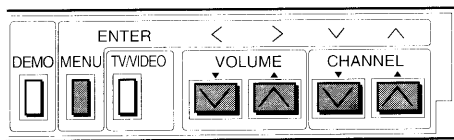
Normally you can leave the MTS function set to "STEREO" and the SURROUND sound function set to "On". The TV will automatically produce either Surround, stereo or monaural, whichever is broadcast.



Operating the Sub-Bass System

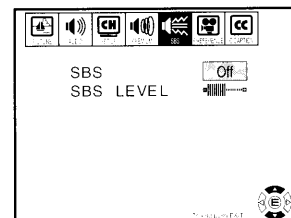
- The Sub-Bass System allows you to improve bass performance (even when the sound volume is low).

To operate the Sub-Bass System

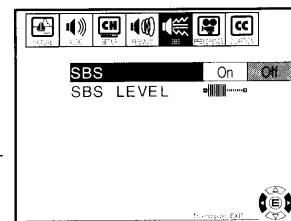


To activate the Sub-Bass System (SBS)

- Press **MENU**, then press ◀ or ▶ until the SBS menu appears.



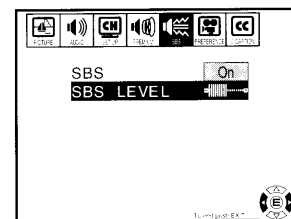
- Press ▲ or ▼ until "SBS" is highlighted.



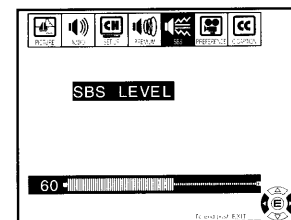
- Press ◀ or ▶ to select "On."

To adjust the SBS level

- Select "SBS LEVEL" in the SBS menu.



- Press ◀ or ▶ to adjust the SBS level.



To deactivate the Sub-Bass System function

Select "Off" in step 3 above.

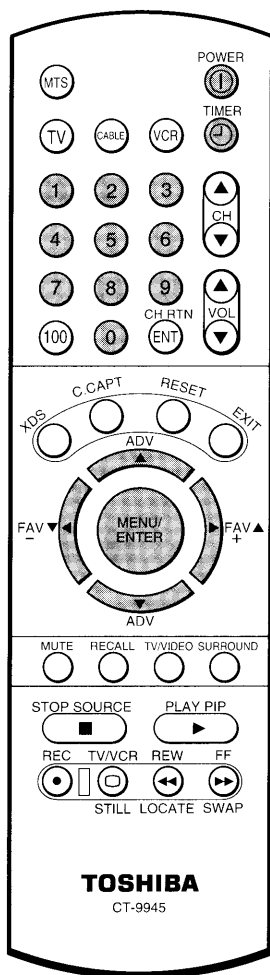
Note:

The Sub-Bass System signal does not pass through the "VARIABLE AUDIO OUTPUT" jacks. (See page 50.) However, the above on-screen displays will appear when the buttons are pressed.

Setting the OFF Timer and the Clock

- With the OFF timer, you can set the TV to turn off automatically after a pre-determined period of time (in 10 minute increments, up to 180 minutes).

To set the OFF timer



To cancel the OFF timer
Press **POWER** twice, once to turn the TV off and once to turn it on again.

- Press **TIMER** to select the TIMER mode. The first digit will flash.

OFF TIMER

0 0 0

- Press any two **Number buttons** to enter the length of time you want the TV to stay on. The remaining number(s) to be adjusted will flash continuously.

OFF TIMER

1 0 0

OFF TIMER

1 2 0

Example: 120 minutes
Press 1, then 2.

- Press **TIMER** again to start the timer. The display color will change from purple to blue, then the display will disappear.

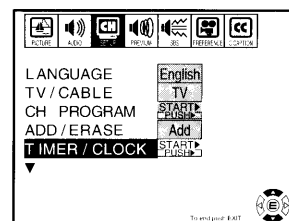
OFF TIMER

1 2 0

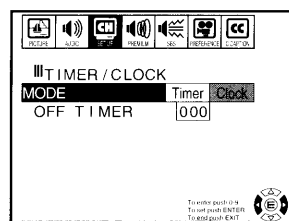
TO SET OFF TIME
PUSH 0-9
TO START
PUSH TIMER

You can also set the OFF timer by using the on-screen menu.

- Select the SETUP menu, then press ▼ (or ▲) until "TIMER/CLOCK" is highlighted.

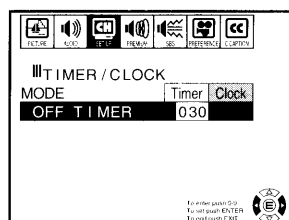


- Press ◀ or ▶ to display the TIMER/CLOCK menu. Press ◀ or ▶ to select "Timer".



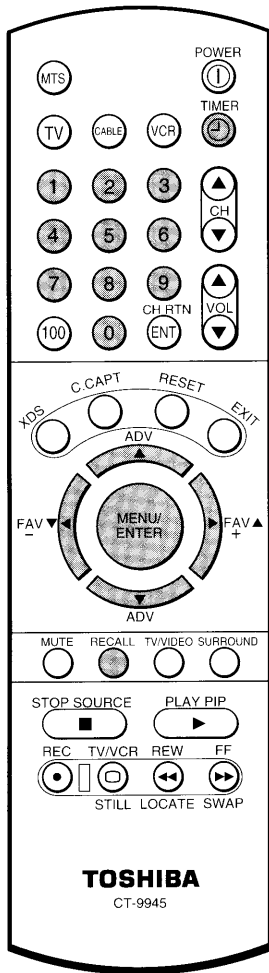
- Press ▼ or ▲ until the "OFF TIMER" is highlighted. Then press two **Number buttons** to enter the length of time you want the TV to stay on.

Example: 30 minutes
Press 0, then 3.



- Press **ENTER** to start the timer.

To set the clock



To monitor the time
Press **RECALL**.

Note:
If the power source for the TV is interrupted (i.e., AC cord unplugged or power failure), the clock will have to be reset. (The time display will show "00:00.")

1 Press **TIMER** twice to select the **CLOCK** mode.
The first digit will flash.

CLOCK
00:00

2 Press four **Number buttons** to enter the correct time.
The remaining number(s) to be adjusted will flash continuously.

Example: To set 9:25 a.m.
Press 0, 9, 2 and 5.

- The clock operates on a 12 hour-cycle.

CLOCK
09:00

CLOCK
09:20

CLOCK
09:25

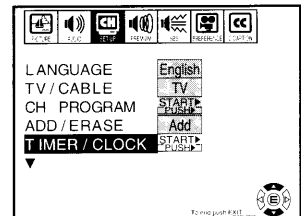
3 Press **TIMER** to start the clock.
The display color will change from purple to blue, then the display will disappear.

CLOCK
09:25

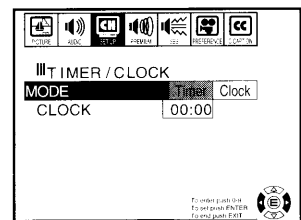
TO SET HOUR AND MINUTE
PUSH 0-9
TO START
PUSH TIMER

You can also set the clock by using the on-screen menu.

1 Select the **SETUP** menu, then press **▼** (or **▲**) until "**TIMER/CLOCK**" is highlighted.



2 Press **◀** or **▶** to display the **TIMER/CLOCK** menu.
Press **◀** or **▶** to select "**Clock**".



3 Press **▼** or **▲** until the "**CLOCK**" is highlighted. Then press four **Number buttons** to enter the correct time.

Example: To set 12:06 p.m.
Press 1, 2, 0 and 6.

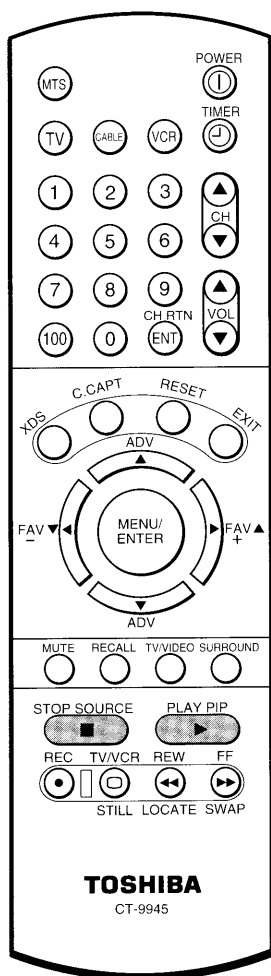


4 Press **ENTER** to start the clock.

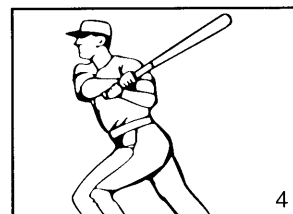
Watching Picture-in-Picture

- In addition to the main picture, another TV program or video source being received through the VIDEO input jacks can be displayed simultaneously as a small picture.
- When using the PIP, the TV can display two pictures at once. However, to watch **two different** pictures, one picture must be received from an antenna and the other must be from an external VIDEO source. See the next page.

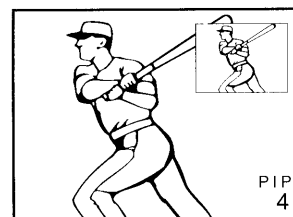
To display a small picture



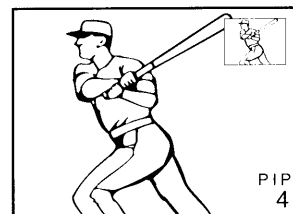
1 Select the desired program.



2 Press **PIP** **once** to display a small picture. The 1/9 size window picture appears. The main picture and small picture are the same.



3 If you press **PIP** **again**, the 1/16 size picture appears.



To turn off the small picture, press PIP

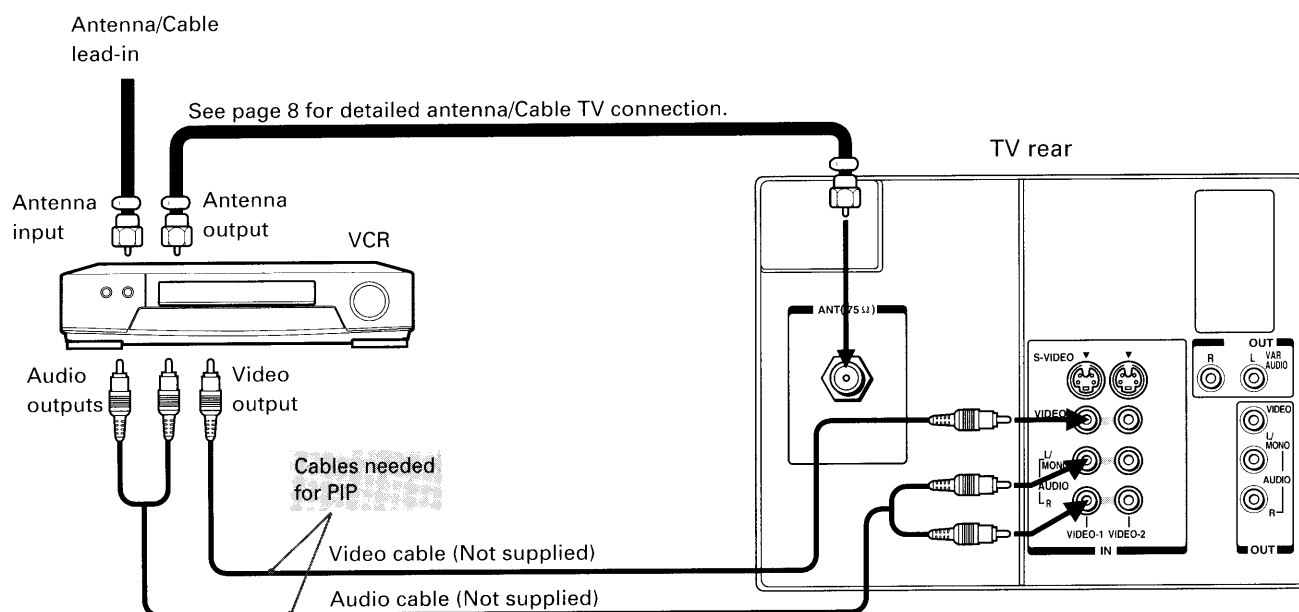
- **Twice**, if you are watching the 1/9 size window picture.
- **Once**, if you are watching the 1/16 size window picture.

CAUTION:

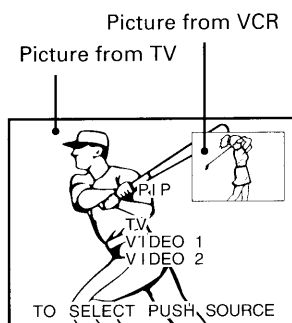
Avoid displaying stationary images on your TV screen for an extended period of time. Stationary patterns generated by the PIP display, computer displays, videogames, stock market reports etc. can become permanently ingrained on the picture tube. This damage is not protected by your warranty as it is the result of misuse. If you use your TOSHIBA Television to display still images, it is always advisable to reduce the brightness and contrast settings. Never leave a PIP display, computer display or videogame unattended.

To display a picture from an external source

To connect a VCR to the TV for PIP



- 1 Press **SOURCE** repeatedly to select an input source for the small picture. Select "VIDEO 1" or "VIDEO 2."

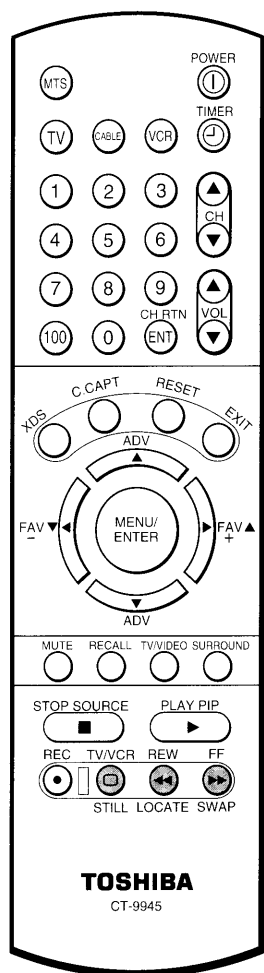


- 2 Select channels for the small picture using the VCR's channel keys.

Watching Picture-in-Picture

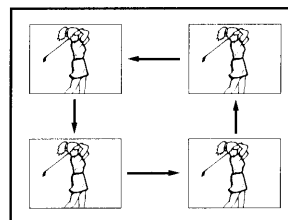
(continued)

To use advanced functions



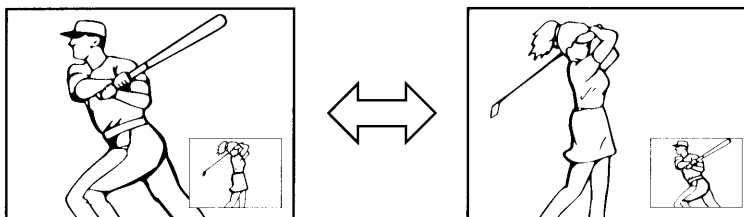
To change the position of the small picture

Press **LOCATE** repeatedly while a small picture is displayed. The display position of the small picture will change in order.



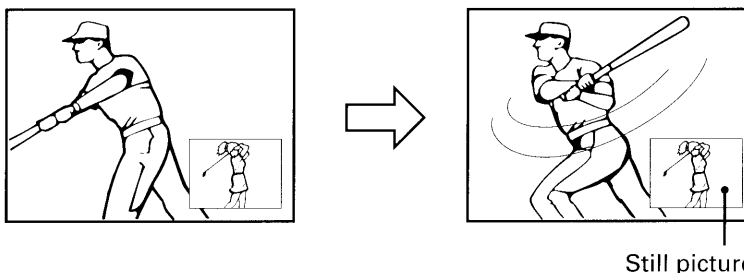
To switch the main and small picture

Press **SWAP** while a small picture is displayed. The main and small pictures will switch. To switch them again, press **SWAP** again.



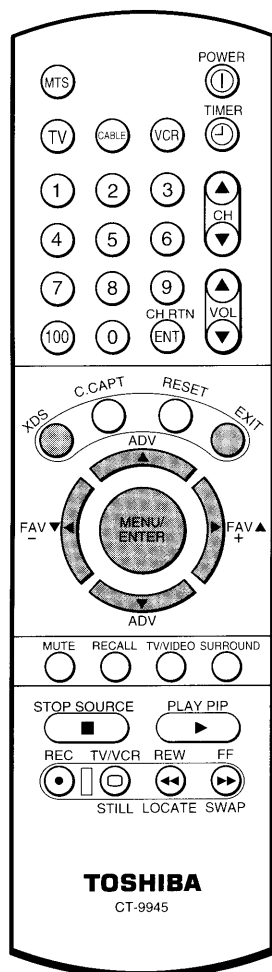
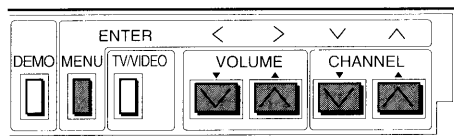
To freeze the small picture

Press **STILL** while a small picture is displayed. The small picture will become a still picture. To return it to a moving picture, press **STILL** again.



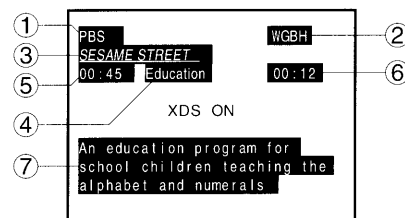
Displaying XDS Information

To display XDS information



Press **XDS** to display the following XDS (eXtended Data Service) information for about 30 seconds.

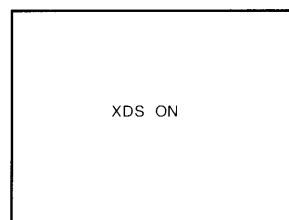
- Network name ①
- Call letters ②
- Program name ③
- Program type ④
- Program length ⑤
- Elapsed time in show ⑥
- Program description ⑦



Some of the above information may not be displayed.

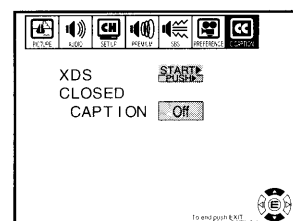
If the TV program you are watching does not include XDS information

Only "XDS ON" will be displayed for about 4 seconds when you press the XDS button.

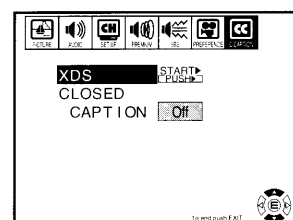


You can also display the XDS information by using the on-screen menu.

- 1 Press **MENU**, then press ◀ or ▶ until the CLOSED CAPTION menu appears.



- 2 Press ▲ or ▼ until "XDS" is highlighted.

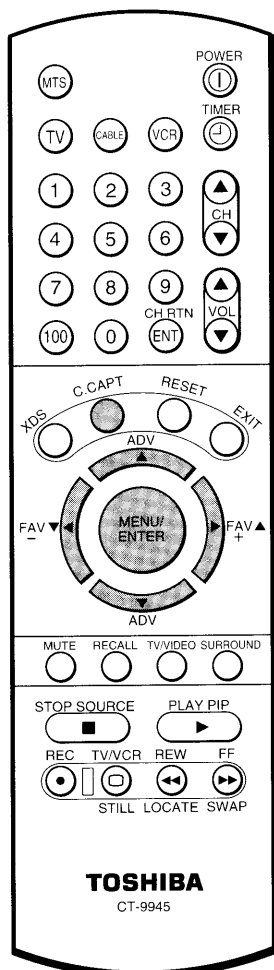
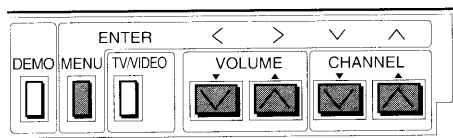


- 3 Press ◀ or ▶ to display the XDS information.

To close the XDS display
Press **EXIT**.

Operating the Closed Captioning Feature

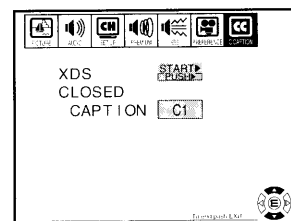
To display Closed Captioning



To view captions

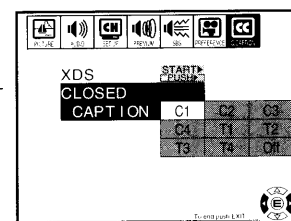
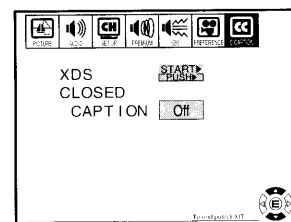
Closed captioning is a printed version of the dialogue, narration, and/or sound effects of a TV program. Captions will appear at either the top or bottom of the screen during captioned broadcasts as shown. Captioning is especially helpful for hearing impaired individuals.

- 1 Select the desired program.
- 2 Press **C. CAPT** on the Remote Control repeatedly to select the caption you want — C1 (Caption 1), C2 (Caption 2), C3 (Caption 3), or C4 (Caption 4). Select "C1" for a transcription of the primary language in your area.



You can also select this feature using the on-screen menu function.

- 1 Press **MENU**, then press ◀ or ▶ until the CLOSED CAPTION menu appears.
- 2 Press ▲ or ▼ until "CLOSED CAPTION" is highlighted.
- 3 Press ◀ or ▶ to select the caption you want.



To deactivate this function

Select "Off" in the closed caption mode.

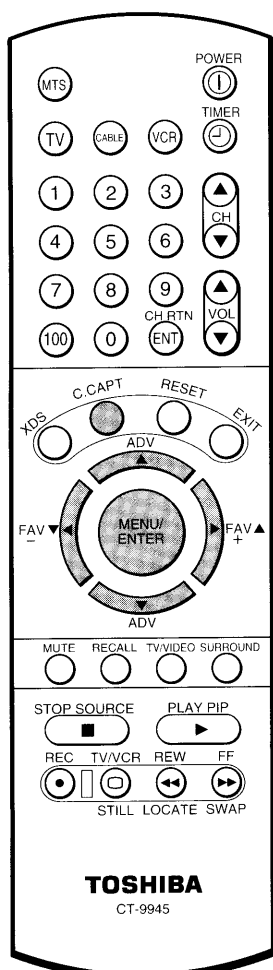
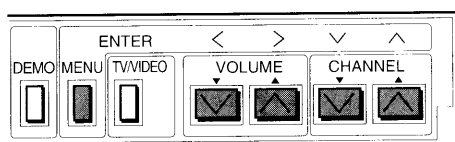
Note:

A closed-captioned signal may not be decoded in the following situations.

- When a video tape has been dubbed.
- When the signal reception is weak.
- When the signal reception is non-standard.

To display text information

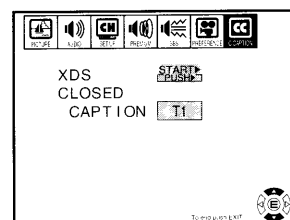
WORLD WEATHER			Current Weather
	Temps		
	F	C	
LONDON	51	11	Clear
MOSCOW	57	14	Cloudy
PARIS	53	12	Clear
ROME	66	19	Cloudy
TOKYO	65	18	Rain



To view text

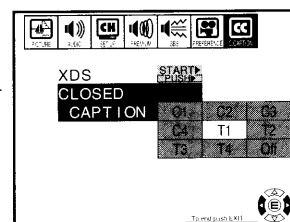
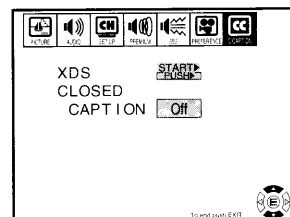
Text is information presented using all of the television screen. It is usually not related to the current program. For example, it could be a listing of closed captioned programs, news, weather information, or stock market reports.

- 1 Select the desired program.
- 2 Press **C. CAPT** on the Remote Control repeatedly to select the text you want — T1 (Text 1), T2 (Text 2), T3 (Text 3), or T4 (Text 4).



You can also select this feature using the on-screen menu function.

- 1 Press **MENU**, then press ◀ or ▶ until the CLOSED CAPTION menu appears.
- 2 Press ▲ or ▼ until "CLOSED CAPTION" is highlighted.
- 3 Press ◀ or ▶ to select the text you want.



To deactivate this function

Select "Off" in the closed caption mode.

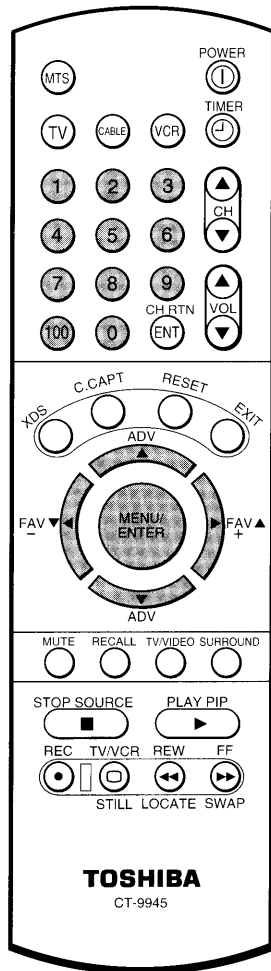
Note:

When you select a caption format channel and the Text mode, the Text screen will always be displayed. However, if Text character signals are not transmitted, the characters will not be displayed.

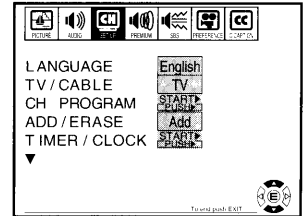
Locking Channels

- With this function, you can lock out specific channels by entering your own 4-digit code. The TV will not be able to tune to those channels for the next 24 hours, unless you enter the code. This TV has 8 memory spaces total — 4 for TV mode and 4 for CABLE mode.

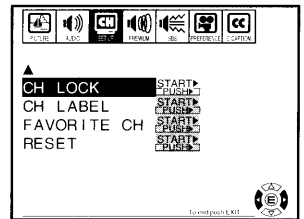
To lock out channels



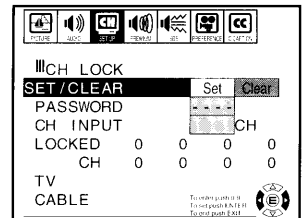
1 Press **MENU**, then press ◀ or ▶ until the SET UP menu appears.



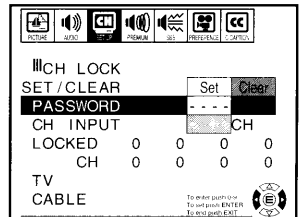
2 Press ▲ (or ▼) until "CH LOCK" is highlighted.



3 Press ◀ or ▶ to display the CH LOCK menu. "SET/CLEAR" will be highlighted. Press ◀ or ▶ to select "Set."

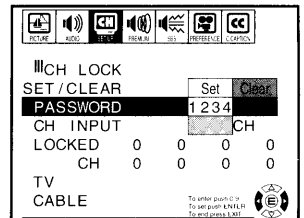


4 Press ▼ until "PASSWORD" is highlighted.

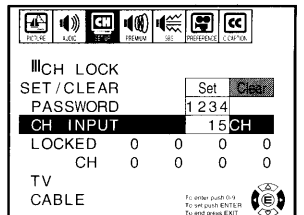


5 Press the **Number buttons** (0-9) to enter a 4-digit code. The numbers you enter will replace the dashes in the display. **Pick a number that is easy to remember.**

Example: To enter "1234".
Press 1, 2, 3, and 4 in order.
1 ----> 12 ----> 123 ----> 1234



6 Press ▼ until "CH INPUT" is highlighted, then press the **Number buttons** (0-9, 100) to enter the channel number.

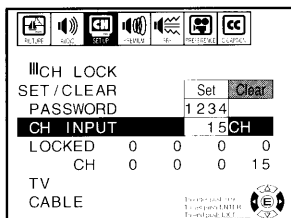


Note:

If a different code number is used to lock out a channel, the last one has priority over the preceding ones.

To lock out channels (continued)

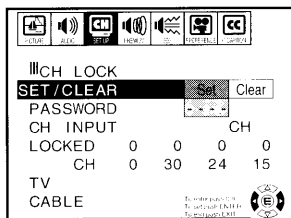
7 Press **ENTER**.



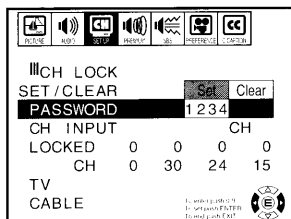
8 Repeat steps 6 and 7 for other channels.

To unlock channels

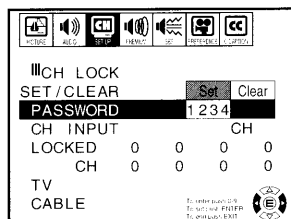
1 Select **CH LOCK** in the **SET UP** menu, then press **◀** or **▶** to select **“Clear.”**



2 Press **▼** until **“PASSWORD”** is highlighted, and enter the 4-digit code used to lock out the channels with the **Number buttons (0-9)**.

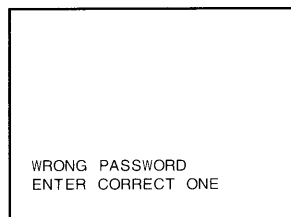


3 Press **ENTER**.



If a wrong code has been entered

These messages appear. Try to enter the correct code again.



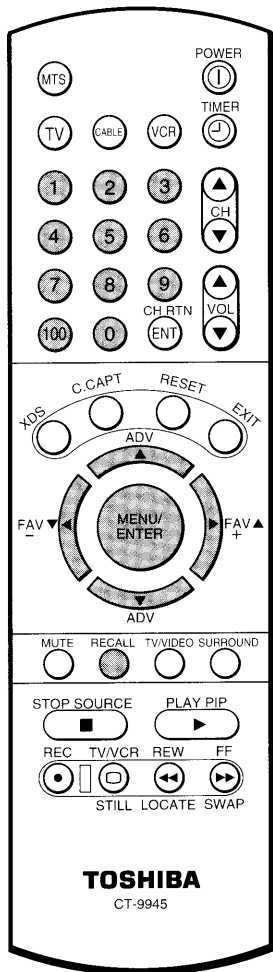
If you want to know the channels you have locked out

Call up the **CH LOCK** menu.

Labeling Channels

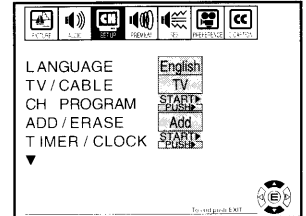
- This feature allows you to enter a 4 letter channel identifier of your choice that will appear over the channel number display. The label can be anything you want (for example the station call letters).
- The label you set will appear when you turn the TV on, select a channel, or press the **RECALL** button.

To program channel labels

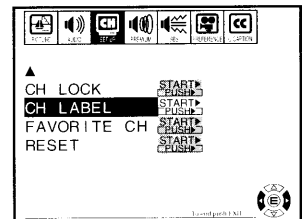


- 1 Press **MENU**, then press ◀ or ▶ until the SET UP menu appears.

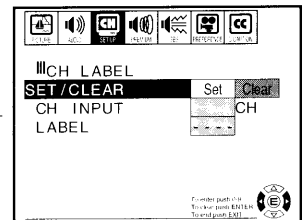
Example: To assign "ABCD" to channel 4.



- 2 Press ▲ (or ▼) until "CH LABEL" is highlighted.

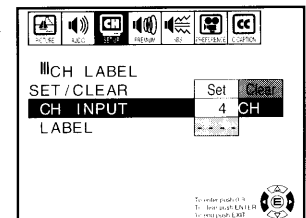


- 3 Press ◀ or ▶ to display the CH LABEL menu. "SET/CLEAR" will be highlighted.

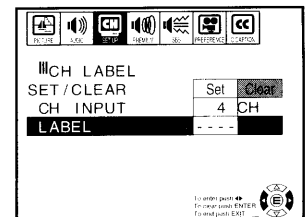


- 4 Press ◀ or ▶ to select "Set."

- 5 Press ▼ until "CH INPUT" is highlighted, and select the channel you want to label with the **Channel Number** buttons.



- 6 Press ▼ until "LABEL" is highlighted.



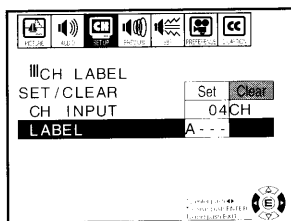
To program channel labels (continued)

- 7** Press ◀ or ▶ to select the first character for the label, then press **ENTER**.

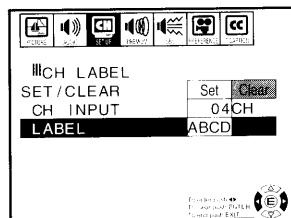
Letters of the alphabet, numbers and other graphic symbols are available for labeling.

Each time you press the ◀ or ▶ button, the displayed character will change in the following order.

▶ button → -- → 0 --→ 9 → A --→ Z → [] → +
 ◀ button → -- → + → [] → Z --→ A → 9 --→ 0



- 8** Repeat step 7 to enter the second, third and fourth characters.

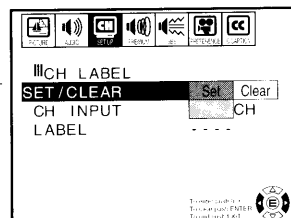


- 9** To label another channel, repeat steps 5 through 8. You can label 32 channels.

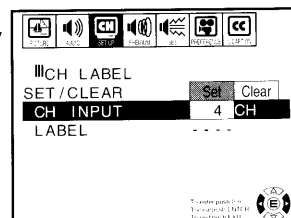
To clear the channel label

- 1** Select CH LABEL in the SET UP menu.

- 2** Press ◀ or ▶ to select "Clear."



- 3** Press ▼ until "CH INPUT" is highlighted, then select the channel you want to clear with the **Channel Number** buttons.



- 4** Press **ENTER**.

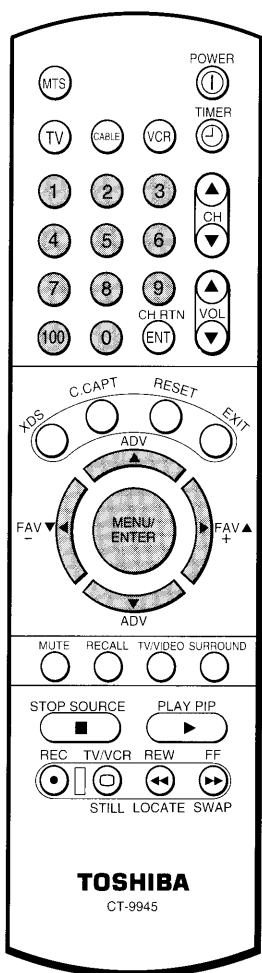
- 5** Repeat steps 3 and 4 for other channels.

Programming Your Favorite Channels

- The Favorite Channel Programming feature allows you to program up to 12 of your favorite channels.

Once programmed, you can use **FAV** ▼ / ▲ on the Remote Control to scan through only your favorite channels, skipping other channels you do not normally view.

To program your favorite channels

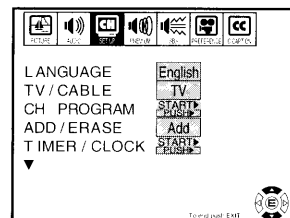


To select your favorite channels

Press **FAV** ▼ / ▲.

When you want to access all the channels you programmed in the TV's memory, press **CHANNEL** ▲ / ▼.

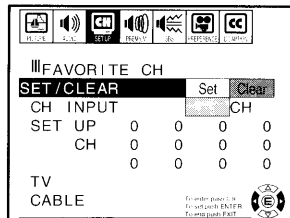
- Press **MENU**, then press ◀ or ▶ until the SET UP menu appears.



- Press ▲ (or ▼) until "FAVORITE CH" is highlighted.

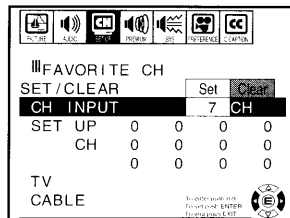


- Press ◀ or ▶ to display the FAVORITE CH menu. "SET/CLEAR" will be highlighted.

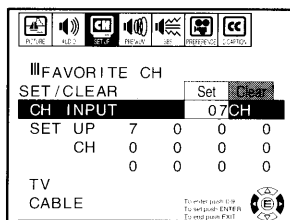


- Press ◀ or ▶ to select "Set."

- Press ▼ until "CH INPUT" is highlighted, then press the **Channel Number** buttons to enter the channel number.



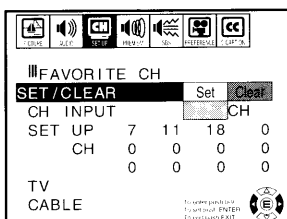
- Press **ENTER**.



- Repeat steps 5 and 6 for other channels.

To clear the channels you have programmed

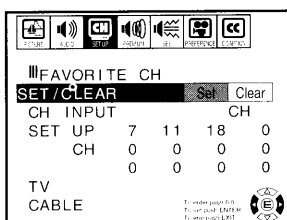
- 1 Select FAVORITE CH menu in the SET UP menu.



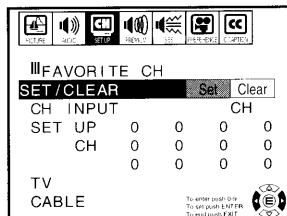
Note:

FAV ▼ / ▲ will function only after you have programmed your favorite channels.

- 2 Press ◀ or ▶ to select "Clear."

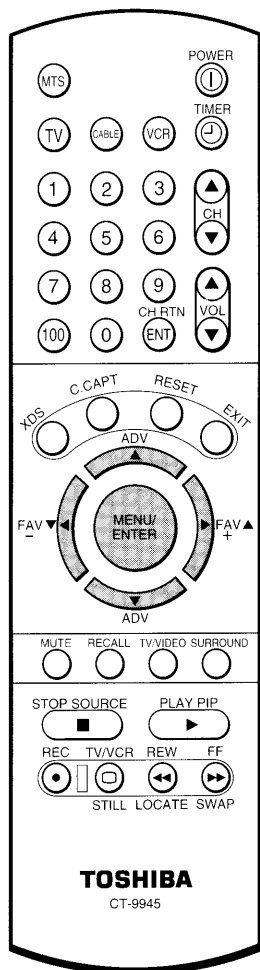
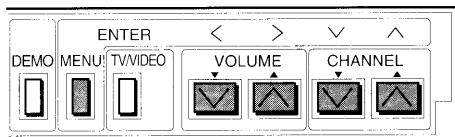


- 3 Press ENTER.
All the favorite channels you have programmed are cleared.



Flesh Tone/Noise Reduction

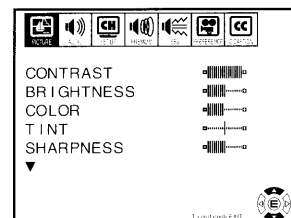
To activate the Flesh Tone and Noise Reduction Functions



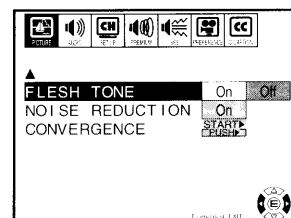
Flesh Tone Function

This function allows you to obtain natural flesh tones by correcting the difference of tint between TV stations.

- 1 Press **MENU**, then press ◀ or ▶ until the PICTURE menu appears.



- 2 Press ▲ (or ▼) until "FLESH TONE" is highlighted.

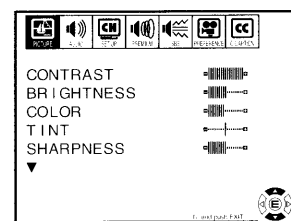


- 3 Press ◀ or ▶ to select "On."

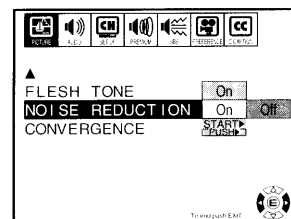
Noise Reduction Function

This function allows you to reduce visible interference in your TV picture. This is useful when receiving a broadcast with a weak signal or playing back a video cassette or disk damaged by repeated use.

- 1 Press **MENU**, then press ◀ or ▶ until the PICTURE menu appears.



- 2 Press ▲ (or ▼) until "NOISE REDUCTION" is highlighted.



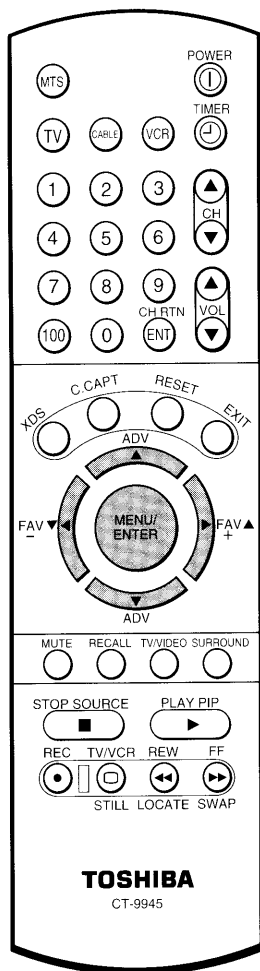
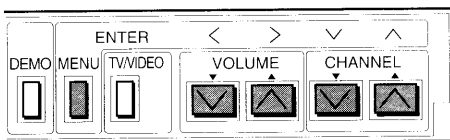
- 3 Press ◀ or ▶ to select "On."

To deactivate these functions
Select "Off" in step 3 above.

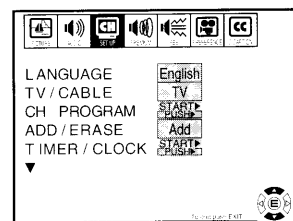
Changing the On-screen Display Language

- You can choose from three different languages (English, French and Spanish) for the on-screen displays (adjustment menus and messages).

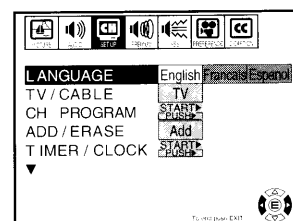
To select a language for the on-screen displays



1 Press **MENU**, then press ◀ or ▶ until the SET UP menu appears.



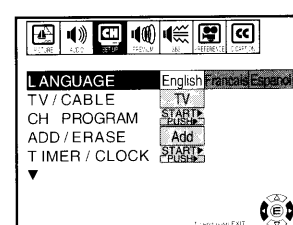
2 Press ▲ (or ▼) until "LANGUAGE" is highlighted.



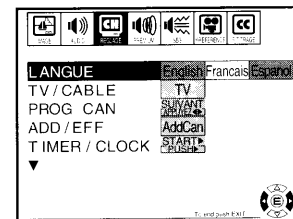
3 Press ◀ or ▶ to select the language you want.



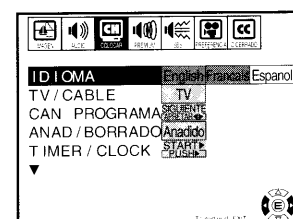
"English"



"French"



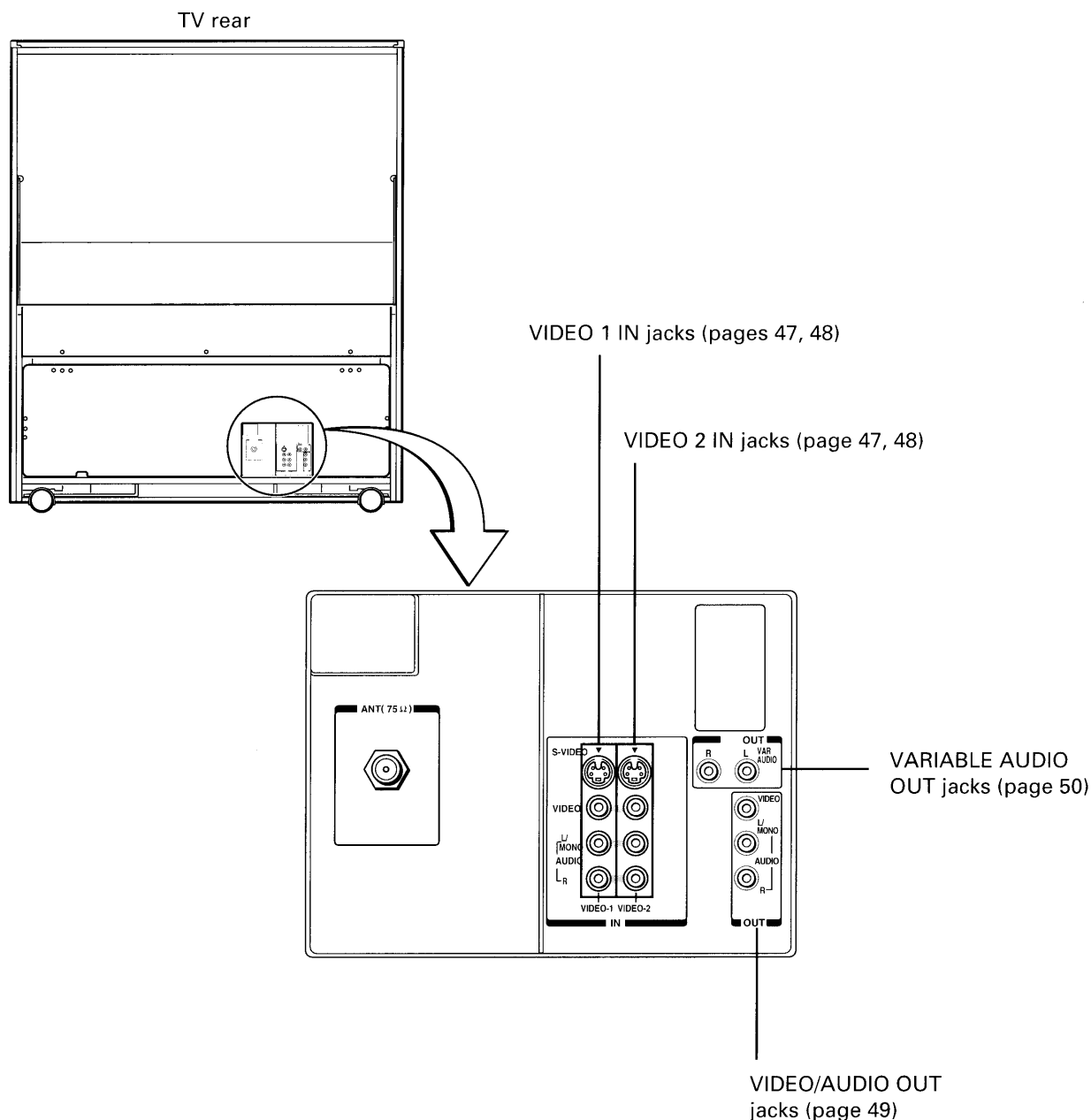
"Spanish"



Connecting External Equipment

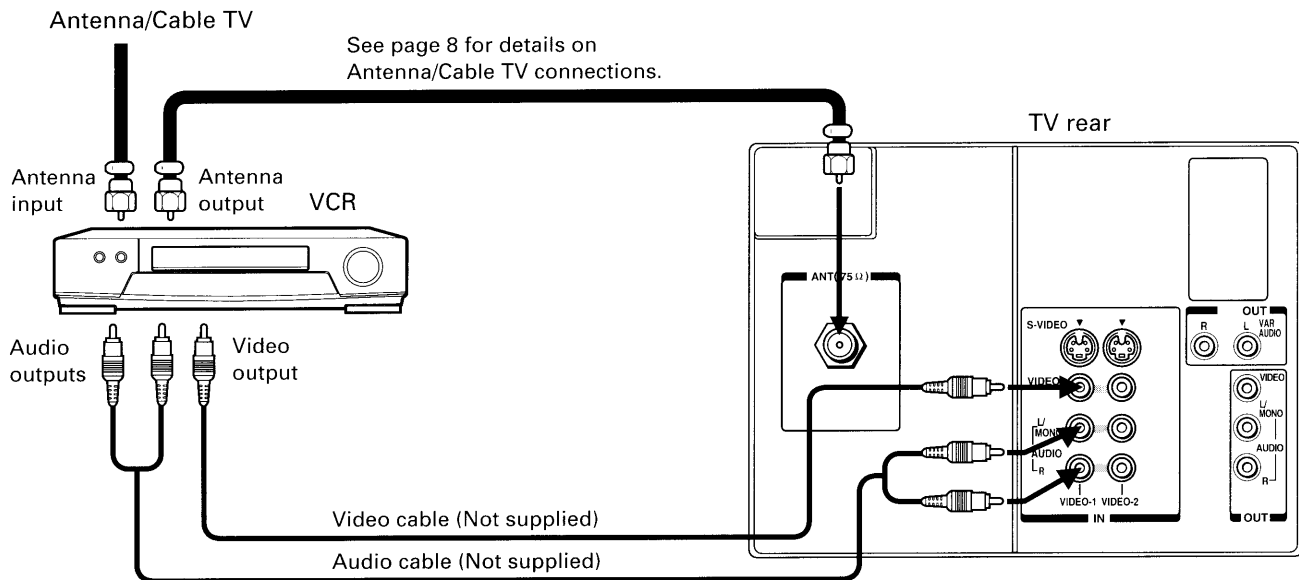
- Refer also to the owner's manual of the equipment to be connected.
- When connecting other equipment to the TV, first turn off all main power switches.

Monitor panel



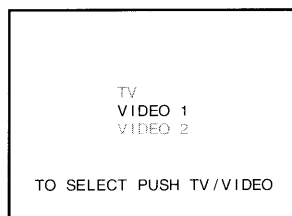
To connect a standard VCR

Connect the VIDEO 1 or VIDEO 2 IN jacks on the rear panel of the TV to the video/audio output jacks of the VCR, Laser Disc Player, video camera, etc. for playback of video recordings.



To select the video input source

Press **TV/VIDEO** on the Remote Control or on the TV repeatedly to select the appropriate source. Each time you press the button, the TV, VIDEO 1, or VIDEO 2 source will be selected in order. Select "VIDEO 1" in this example. The selected source will be displayed in purple.



Note on the VIDEO 2 IN jacks

The VIDEO 2 IN jacks can also be used for connecting a second piece of video equipment with video/audio outputs.

To view signals from equipment connected to the VIDEO 2 IN jacks, select "VIDEO 2."

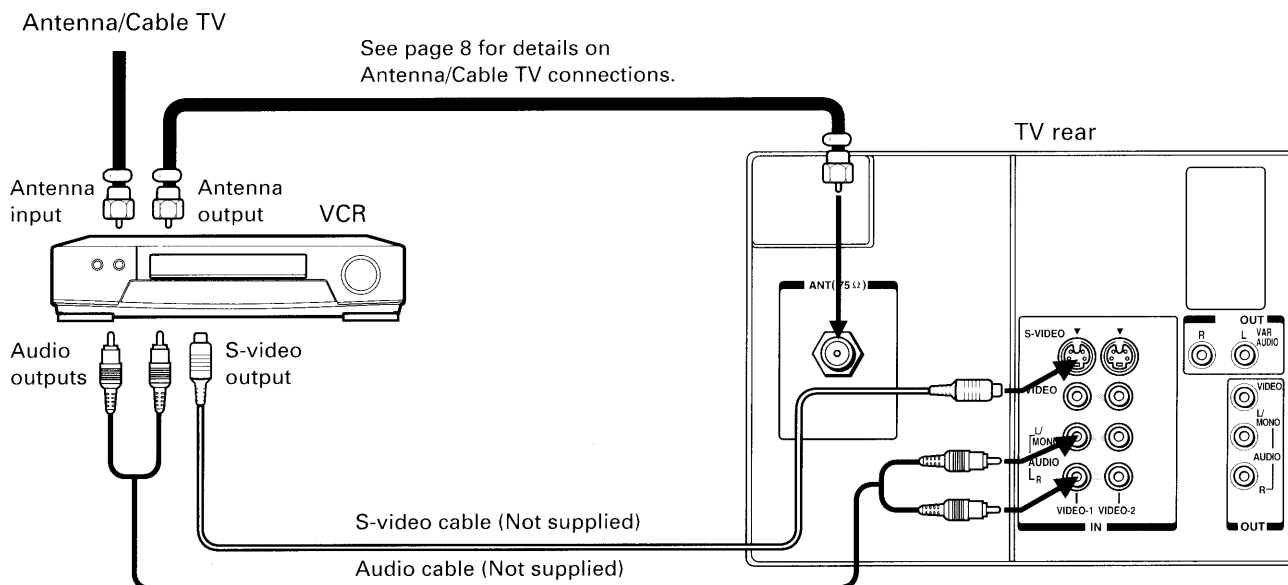
Note:

If you connect a monaural VCR, connect the audio output of the VCR to the L/MONO jack.

Connecting External Equipment (continued)

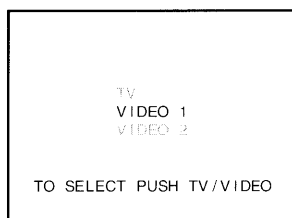
To connect a VCR with an S-video jack

If you connect a VCR with an S-video jack to the "S-VIDEO" jack on the back of the TV, you must also connect the audio cables to the "VIDEO 1 IN" AUDIO jacks. The S-video cable supplies video signals only.



To select the video input source

- 1 Turn on the TV and the VCR.
- 2 Press **TV/VIDEO** on the Remote Control or on the TV to select "VIDEO 1".



- 3 Operate your VCR normally.

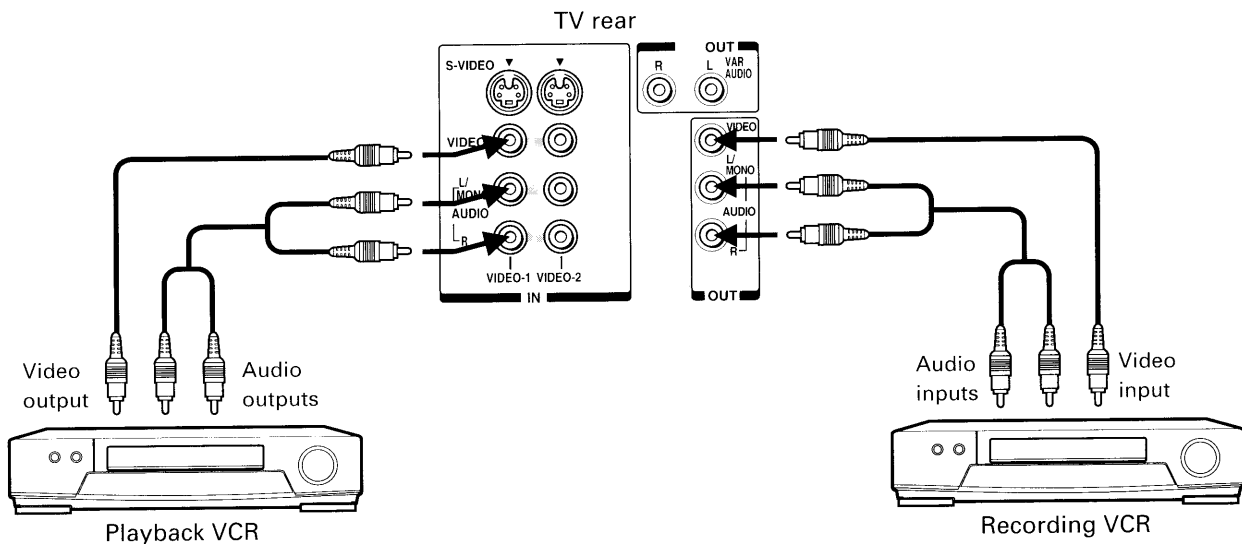
Notes:

- The VIDEO 2 IN jacks can also be used for connecting a second piece of video equipment with S-video out. To view signals from equipment connected to the VIDEO 2 IN jacks, select "VIDEO 2".
- When the S-video cable is connected to the S-VIDEO IN jack, the video cable (phono-type) should not be connected.
- The S-VIDEO jack accepts SEPARATED Luminance/Chrominance (Y/C) signals conforming to the NTSC standard.

To dub/edit video tapes using two VCRs

To connect equipment for dubbing/editing

- 1** Connect the output jacks of the playback VCR to the input jacks (VIDEO 1 or VIDEO 2) on the TV.
- 2** Connect the output jacks (VIDEO/AUDIO OUT) on the TV to the input jacks of the recording VCR.



Note:

Do not connect one VCR to the output and input jacks on the TV at the same time.

To monitor dubbing/editing

- 1** Turn on the TV and both VCRs.
- 2** Press **TV/VIDEO** on the Remote Control or on the TV to select the input source of the playback VCR.
- 3** Set the recording VCR to record mode and the playback VCR to play.
- 4** You can view the video signal from the playback VCR on the TV screen while dubbing it onto the recording VCR.

CAUTION:

The unauthorized recording of television programs, video tapes and other materials may infringe upon the provisions of copyright laws.

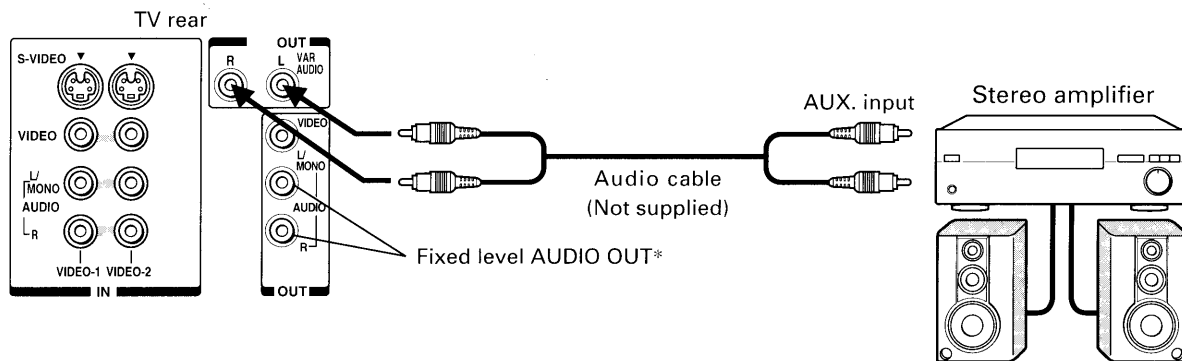
Notes:

- The input switch of the VCR is normally in the TV position. Change the switch of the recording VCR to the LINE or CAMERA position when using the video/audio inputs of the VCR as above. Some VCRs automatically switch when cables are plugged into the video/audio inputs.
- The PIP picture cannot be output through the VIDEO OUTPUT.

Connecting External Equipment (continued)

To connect an audio amplifier

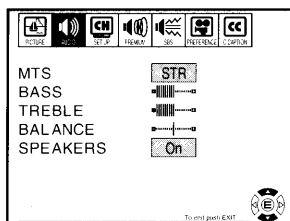
Connect the VARIABLE AUDIO OUT jacks to the auxiliary input jacks on the stereo amplifier. You can control the audio signal going to the audio equipment using the Remote Control for this TV.



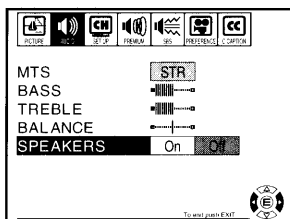
* The "fixed level" AUDIO OUT jacks are also available for connecting to an audio cassette recorder (or amplifier) to record audio from the TV. This constant audio signal is not affected by pressing the VOLUME buttons on the TV or the TV's Remote Control.

To turn off the built-in speakers

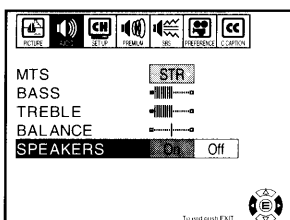
- 1 Press **MENU**, then press **◀** or **▶** until the AUDIO menu appears.



- 2 Press **▲** or **▼** until "SPEAKERS" is highlighted.



- 3 Press **◀** or **▶** to select "Off."



To turn on the built-in speakers

Select "On" in step 3.

Note:

Make sure the volume control of your stereo amplifier is set to a moderate listening level.

Specifications

TELEVISION SYSTEM	NTSC standard
CHANNEL COVERAGE	VHF: 2 through 13 UHF: 14 through 69 Cable TV: Mid band (A-8 through A-1, A through I) Super band (J through W) Hyper band (AA through ZZ, AAA, BBB) Ultra band (65 through 94, 100 through 125)
POWER SOURCE	120 V AC, 60 Hz
POWER CONSUMPTION	171 W (average)
AUDIO POWER	14 W + 14 W
SPEAKER TYPE	Two 6-1/4 inches (16 cm) round
VIDEO/AUDIO TERMINALS	S-VIDEO INPUT (VIDEO 1/VIDEO 2) Y-INPUT: 1 V(p-p), 75 ohm, negative sync. C-INPUT: 0.286 V(p-p) (burst signal), 75 ohm VIDEO 1/VIDEO 2 INPUT VIDEO: 1 V(p-p), 75 ohm, negative sync. AUDIO: 150 mV(rms) (30% modulation equivalent, 47 kohm) VIDEO/AUDIO OUTPUT VIDEO: 1 V(p-p), 75 ohm, negative sync. AUDIO: 150 mV(rms) (30% modulation equivalent, 4.7 kohm) VARIABLE AUDIO OUTPUT 0–350 mV(rms) (30% modulation equivalent, 4.7 kohm)
DIMENSIONS	Width: 42-3/4 inches (1,086 mm) Height: 50-1/4 inches (1,276 mm) Depth: 20-13/16 inches (528 mm)
MASS	217 lbs (98.4 kg)
SUPPLIED ACCESSORIES	Remote Control with 2 size “AA” batteries

Design and specifications are subject to change without notice.

Before Calling Service Personnel

- Before calling service personnel, please check the following chart for the possible cause of the problem you are experiencing.

Symptom	Solutions	Pages
The TV does not turn on.	• Make sure power cord is plugged in, then press POWER. • Check the batteries in the Remote Control. If the batteries are dead, replace them with new ones.	22 11
No picture, no sound	• Check the antenna/cable connections.	6
No sound, picture OK	• Maybe the sound is muted. Press VOLUME ▲. • Maybe there is station trouble. Try another channel. • Check that the SPEAKERS function in AUDIO menu is properly set.	22 50
Poor sound, picture OK	• Maybe there is station trouble or local interference from an appliance. Try another channel.	
Poor picture, sound OK	• Check the antenna/cable connections. • Maybe there is station trouble or local interference. Try another channel. • Adjust the picture quality.	24
Poor reception of broadcast channels	• Try another channel. • Check the antenna/cable connections. • If using a VCR, check the TV/VCR switch.	12
Cannot receive UHF channels, VHF OK	• Make sure the TV/CABLE function is in "TV" mode.	18
Black box appears on the screen.	• Captioning may be turned on.	36
Cannot select a certain channel	• That channel may be locked out with the CH LOCK function, or erased with the ADD/ERASE function.	38 19
Multiple images (ghosts)	• Maybe there is station trouble. Try another channel. • Use a highly directional outdoor antenna.	
Poor color or no color	• Maybe there is station trouble or local interference. Try another channel. • Adjust TINT and/or COLOR in the PICTURE menu.	24
No stereo or SAP sound from an MTS broadcast	• Check that the MTS function is properly set.	27
The Remote Control does not operate.	• Check that the Device buttons are properly set. • Maybe something is between the Remote Control and the sensor. • Maybe batteries are dead. Try replacing batteries with new ones.	10, 12 11

Limited United States Warranty

Toshiba America Consumer Products, Inc. ("TACP") and Toshiba Hawaii Inc. ("THI") make the following limited warranties. These limited warranties extend to the original consumer purchaser or any person receiving this set as a gift from the original consumer purchaser and to no other purchaser or transferee.

Limited One (1) Year Warranty

TACP and THI warrant this product and its parts against defects in materials or workmanship for a period of one (1) year after the date of original retail purchase. During this period, TACP and THI will repair a defective product or part, without charge to you. "Authorized TACP/THI service station personnel will come to your home when warranty service is required. Depending on the type of repair required, the service will either be performed in your home or the set will be taken to the authorized TACP/THI service station for repair and returned to your home at no cost to you."

Limited Two (2) Year Warranty of Picture Tube

TACP and THI further warrant the picture tube in this product against defects in materials or workmanship for a period of two (2) years after the date of original retail purchase. During this period, TACP and THI will replace a defective picture tube without charge (1) year from the date of the original retail purchase, you pay labor charges involved in the replacement.

Rental Units

The warranty for rental units begins with the first rental or thirty (30) days from the date of shipment to the rental firm, whichever comes first.

Commercial Units

Products sold and used for commercial use have a limited ninety (90) day warranty for all parts, labor and picture tube.

Owner's Manual and Demographic Card

You should read this owner's manual thoroughly before operating this product. You should complete and mail the enclosed Demographic card within ten days after you, or the person who has given you this product as a gift, purchased this product. This is one way to enable TACP/THI to provide you with better customer service and improved products. Failure to return the Demographic card will not affect your rights under this warranty.

Your Responsibility

The above warranties are subject to the following conditions;

- (1) You must retain your bill of sale or provide other proof of purchase.
- (2) All warranty servicing of this product must be made by an Authorized TACP/THI Service Station.
- (3) **These warranties are effective only if the product is purchased and operated in the U.S.A. or Puerto Rico.**
- (4) Labor service charges for set installation, set up, adjustment of customer controls and installation or repair of antenna systems are not covered by this warranty. Reception problems caused by inadequate antenna systems are your responsibility.
- (5) Warrant extend only to defects in materials or workmanship as limited above and do not extend to any product or parts which have been lost or discarded by you or to damage to products or parts caused by misuse, accident, damage caused by Acts of God, such as lightning or fluctuations in electric power, improper installation, improper maintenance or use in violation of instructions furnished by us; or to units which have had the serial number removed, altered, defaced or rendered illegible.

How to Obtain Warranty Service

If after following all of the operating instructions in this manual and checking the section "BEFORE CALLING SERVICE PERSONNEL," you find that service is needed,;

- (1) Call the TACP toll free number 1-800-631-3811 after you find a defective product or part to find the nearest TOSHIBA Authorized Service Station.
- (2) Please present your bill of sale or other proof to the Authorized Service Station. "Authorized TACP/THI service station personnel will come to your home when warranty service is required. Depending on the type of repair required, the service will either be performed in your home or the set will be taken to the TACP/THI Authorized service station for repair and returned to your home at no cost to you."

In the Continental United States call:



HAWAII

327 Kamakee Street, Honolulu, HI 96814 (808) 521-5377

All warranties implied by state law, including the implied warranties of merchantability and fitness for a particular purpose, are expressly limited to the duration of the limited warranties set forth above. With the exception of any warranties implied by state law as hereby limited, the foregoing warranty is exclusive and in lieu of all other warranties, guarantees, agreements and similar obligations of manufacturer or seller with respect to the repair or replacement of any parts. In no event shall TACP or THI be liable for consequential or incidental damages.

No person, agent, distributor, dealer or company is authorized to change, modify or extend the terms of these warranties in any manner whatsoever. The time within which action must be commenced to enforce any obligation of TACP or THI arising under this warranty or under any state, or law of the United States or any state thereof, is hereby limited to 90 days from the date you discover or should have discovered, the defect. This limitation does not apply to implied warranties arising under state law.

This warranty gives you specific legal rights and you may also have other rights which may vary from state to state. Some states do not allow limitation on how long an implied warranty lasts, when an action may be brought, or the exclusion or limitation of incidental or consequential damages, so the above provisions may not apply to you.



ATTENTION CANADIAN CONSUMERS:

Canadian consumers are requested to complete the special Canadian "Warranty Registration Form" enclosed, and forward this completed form with a copy of bill of sale to TOSHIBA OF CANADA to "Register and Validate" their warranty.

Products purchased in the U.S.A. and used in Canada are not covered by these warranties.
Products Purchased in Canada and used in the U.S.A. are not covered by these warranties.

TOSHIBA AMERICA CONSUMER PRODUCTS, INC.

HEAD OFFICE/82 TOTOWA ROAD, WAYNE, NEW JERSEY 07470

FACTORY SERVICE CENTER: 1420B TOSHIBA DRIVE, LEBANON, TENNESSEE 37087

TOSHIBA HAWAII, INC.

HEAD OFFICE/327 KAMAKEE STREET, HONOLULU, HAWAII 96814, U.S.A. TEL: (808) 521-5377

TOSHIBA OF CANADA LTD.

HEAD OFFICE/191 McNABB STREET MARKHAM, ONTARIO L3R 8H2, CANADA TEL: (905) 470-5400

SERVICE CENTERS/TORONTO: 191 McNABB STREET MARKHAM, ONTARIO L3R 8H2, CANADA TEL: (905) 470-5400

MONTREAL: 1643, NORTH SERVICE RD., TRANS-CANADA HIGHWAY, DORVAL QUEBEC, H9P 1J1, CANADA

TEL: (514) 856-4100

VANCOUVER: 222171 FRASERWOOD WAY, RICHMOND, B.C. V6W 1J5, CANADA TEL: (604) 303-2500

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