

LCD Color TV

Operating Instructions

BRAVIA

KL V-20G400A

Owner's Record

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

Model Name.

Serial No.

WARNING

To reduce the risk of fire or electric shock, do not expose this TV to rain or moisture.



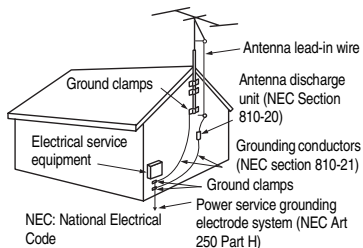
This symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the TV's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



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

The TV shall not be exposed to dripping or splashing and no objects filled with liquids, such as vases, shall be placed on the TV.

Outdoor Antenna Grounding



CAUTION

To prevent electric shock and blade exposure, do not use this polarized AC plug with an extension cord, receptacle or other outlet unless the blades can be fully inserted.

Safety

- ☐ Operate the TV only on 110-240 V AC.
- ☐ Use the AC power cord specified by Sony and suitable for the voltage where you use it.
- ☐ The plug is designed, for safety purposes, to fit into the wall outlet only one way. If you are unable to insert the plug fully into the outlet, contact your dealer.
- ☐ If you will not be using the TV for several days, disconnect the power by pulling the plug itself. Never pull on the cord.
- ☐ For details concerning safety precautions, see "Important Safety Instructions" on page 3.

Installing

- ☐ The TV should be installed near an easily accessible power outlet.
- ☐ To prevent internal heat buildup, do not block the ventilation openings.
- ☐ Do not install the TV in a hot or humid place, or in a place subject to excessive dust or mechanical vibration.
- ☐ Avoid operating the TV at temperatures below 41°F (5°C).
- ☐ If the TV is transported directly from a cold to a warm location, or if the room temperature changes suddenly, the picture may be blurred or show poor color due to moisture condensation. In this case, please wait a few hours to let the moisture evaporate before turning on the TV.
- ☐ To obtain the best picture, do not expose the screen to direct illumination or direct sunlight. It is recommended to use spot lighting directed down from the ceiling or to cover the windows that face the screen with opaque drapery. It is desirable to install the TV in a room where the floor and walls are not of a reflective material.

CAUTION

Use the following Sony TVs only with the following WALL-MOUNT BRACKET.


Sony TV Model No.	
KLV-20G400A	
Sony Wall-Mount Bracket Model No.	SU-WL100

Use with other WALL-MOUNT BRACKET may cause instability and possibly result in injury.

To Customers

Sufficient expertise is required for installing the specified TV. Be sure to subcontract the installation to Sony dealer or licensed contractors and pay adequate attention to safety during the installation.

Trademark Information

"BRAVIA", BRAVIA and  are trademarks of Sony Corporation.



Important Safety Instructions

- 1) Read these instructions.
- 2) Keep these instructions.
- 3) Heed all warnings.
- 4) Follow all instructions.
- 5) Do not use this apparatus near water.
- 6) Clean only with dry cloth.
- 7) Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
- 8) Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- 9) Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
- 10) Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
- 11) Only use attachments/accessories specified by the manufacturer.
- 12) Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.



- 13) Unplug this apparatus during lightning storms or when unused for long periods of time.
- 14) Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

MOISTURE

To reduce the risk of fire or electric shock, do not expose this TV to rain or moisture.

- ☐ The TV must never be exposed to dripping, splashing, or spilling liquids of any kind.
- ☐ Do not place liquid filled objects such as a vase or potted plant on the TV.
- ☐ Do not use a power line operated TV set near water; for example, near a bathtub, washbowl, kitchen sink, laundry tub, wet basement or near a swimming pool, etc.



CLEANING

When cleaning, be sure to unplug the power cord to avoid any chance of electric shock.

- ☐ Clean the cabinet of the TV with a dry soft cloth.
- ☐ Wipe the LCD screen gently with a soft cloth.
- ☐ Stubborn stains may be removed with a cloth slightly moistened with a solution of mild soap and warm water.
- ☐ If using a chemically pretreated cloth, please follow the instruction provided on the package.
- ☐ Never use strong solvents such as a thinner, alcohol or benzene for cleaning.
- ☐ Periodic vacuuming of the ventilation openings is recommended to ensure to proper ventilation.



VENTILATION

The ventilation openings in the TV are necessary to ensure reliable operation of the TV and to protect it from overheating.

- ☐ Do not block or cover the ventilation openings with cloth or other materials.
- ☐ Never place the TV on a bed, sofa, rug or other similar surface where ventilation openings may be blocked.
- ☐ Unless proper ventilation is provided, the TV may accumulate dust and cause damage.
- ☐ Never allow liquid or solid objects to fall into the ventilation openings.



- ☐ If any liquid or solid object falls inside the TV unplug the TV immediately and have it checked by qualified service personnel before operating it further.
- ☐ Never push objects of any kind into the TV through the ventilation openings as they may come in contact with dangerous voltage points or short out parts that could result in a fire or an electric shock.

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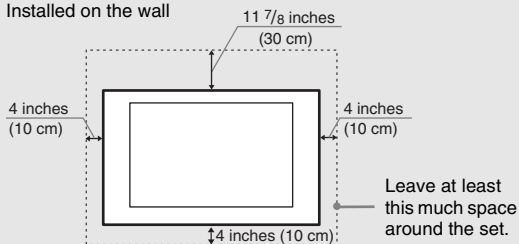
Allow adequate space around the TV set to ensure proper air circulation.

- ❑ Never place the TV in a confined space, such as a bookcase or built-in cabinet, unless proper ventilation is provided.

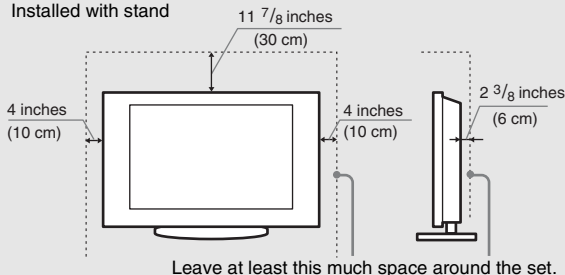


Leave some space around the TV set as shown below. Otherwise, air-circulation may be inadequate and cause overheating, which may cause a fire or damage to the TV set.

Installed on the wall

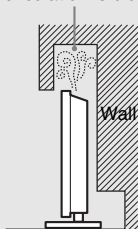


Installed with stand

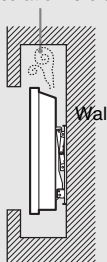


Never install the TV set as follows:

Air circulation is blocked.



Air circulation is blocked.



CARRYING THE TV

Carry the TV in the specified manner

To avoid dropping the TV and causing serious injury, be sure to follow these guidelines:

- ❑ Before carrying TV set, disconnect all cables.
- ❑ When you carry TV set, place your hand as illustrated and hold it securely. Do not put stress on the LCD panel.
- ❑ When carrying TV set, do not subject it to shocks or vibration, or excessive force.



INSTALLATION

The TV should be installed near an easily accessible AC power outlet.

- ❑ Do not install the TV face up or down, upside down or on its side.
- ❑ Do not install the TV in hot, oily, humid, or excessively dusty places.
- ❑ Do not install the TV in places subject to extreme temperature, such as in direct sunlight, near a radiator or a heating vent. The TV may overheat in such conditions and can cause deformation of the enclosure and/or cause TV malfunction.



- ❑ Do not install the TV in a place exposed to direct air conditioning; moisture may condense inside and may cause TV malfunction.



- ❑ Do not install the TV where it may be exposed to mechanical vibration.
- ❑ Do not install the TV where insects may enter.
- ❑ Do not install the TV in a location where it may protrude, such as on or behind a pillar, or any place you might bump your head or receive bodily injury.
- ❑ To prevent fire keep flammable objects or open flame (e.g. candles) away from the TV.
- ❑ Do not place optional equipment on top of the TV.

Prevent the TV from toppling over

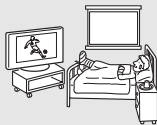
Take measures to prevent the TV from toppling over and causing injury, damage to the TV and property.



- ❑ Secure the TV to a wall and/or stand.
- ❑ Never install the TV on unstable and/or uneven surfaces.
- ❑ Do not allow children to climb on or play with furniture and TV sets.
- ❑ Do not install the TV on furniture that can easily be used as steps, such as a chest of drawers.
- ❑ Care should be taken to install the TV where it cannot be pushed, pulled over, or knocked down.
- ❑ Care should be taken to route all AC power cords and connecting cables so that they cannot be pulled or grabbed by curious children.

Medical institutions

Do not place this TV in a place where medical equipment is in use. It may cause a medical equipment malfunction.

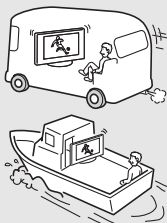


Outdoor use

Do not install this TV outdoors. The TV should not be exposed to rain or direct sunlight in order to avoid damage and possible fire or electric shock.

Do not install this TV in a vehicle, ship or other vessel

- ☐ Excessive bumping motion of a moving vehicle or continuous swaying motion on a boat may cause the TV to fall down and cause injury.



- ☐ Exposing the TV to seawater may cause a fire, electric shock or damage to your TV.

Magnetic influence

- ☐ This TV contains a strong magnet in the speaker unit that generates a magnetic field. Keep any items susceptible to magnetic fields away from the speaker.
- ☐ Electro-magnetic radiation emitted from optional equipment installed too close to the TV may cause picture distortion and/or noisy sound.

Wall-mount use

- ☐ Wall-mount installation requires the use of a Wall-Mount Bracket. When installing or removing the TV and the Wall-Mount Bracket, be sure to use qualified contractors. If not properly secured during installation or removal from the Wall-Mount Bracket, the TV may fall and cause serious injury.
- ☐ Be sure to follow the installation guide supplied with the Wall-Mount Bracket when installing the TV.
- ☐ Be sure to attach the brackets with the specified parts supplied with the Wall-Mount Bracket.
- ☐ Do not hang the TV from the ceiling. It may fall and cause serious injury.
- ☐ Do not hang anything on the TV.
- ☐ Do not allow children to climb on the TV.



AC POWER CORD

- ☐ Do not touch the AC power cord and its plug with wet hand, it may cause electric shock.



- ☐ When disconnecting the AC power cord, grasp the plug and disconnect from the wall outlet first. Do not pull by the cord.



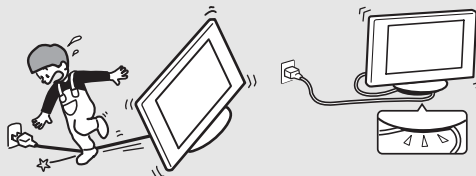
- ☐ Keep the power cord away from heat sources.

A TV set with a three-wire grounding type AC power cord plug must be connected to an AC power outlet with a protective earthing connection.

- ☐ Do not convert or damage the AC power cord.
- ☐ Consult your electrician to have the outlet changed to suit your TV.

Subjecting the AC power cord to wear and/or abuse can damage the AC power cord and your TV.

- ☐ Do not place the TV where the power cord can be easily pinched, bent, twisted, or catch your feet.



- ☐ Do not allow anything to rest on or roll over the cord.
- ☐ Before connecting cables, be sure to unplug the AC power cord for your safety.
- ☐ Do not move the TV with the AC power cord (or other cables such as audio and video) connected.
- ☐ Use only an original Sony AC power cord with your TV; no brand substitution is allowed.
- ☐ Do not use AC power cord supplied with the TV with any other equipment.
- ☐ Never use a damaged AC power cord. A damaged AC power cord can cause a short-circuit, which may result in a fire or electric shock.



Do not use a damaged or poorly fitting AC power outlet as your TV's power source.

- ☐ Insert the plug fully into the outlet. If it is loose, it may cause arcing and result in a fire.



- ☐ Do not overload the same AC power outlet.



Unplugging the AC power cord from the wall outlet will completely remove power from the TV.

- ☐ During lightning storms or when the TV is left unattended and unused for extended periods of time, the AC power cord should be unplugged from the wall outlet. This will avoid possible damage to your TV. Also unplug the antenna to prevent damage to the TV.



- ☐ For energy conservation and safety reasons, practice unplugging the AC power cord from the AC power outlet.

(Continued)

Clean the AC power plug

Unplug the AC power plug and clean it occasionally to avoid dust from accumulating. While cleaning, look for signs of damage. A damaged AC power cord should never be used.



ACCESSORIES

Keep small accessories out of children's reach. Use only the specified accessories with this TV.

Volume Adjustment

- ☐ When using headphones, adjust the volume to avoid excessive audio levels from causing possible hearing loss.



BATTERIES

Your remote control batteries are consumables.

- ☐ To preserve our environment, dispose of used batteries according to your local laws or regulations.
- ☐ Do not dispose of batteries in a fire.
- ☐ Do not short-circuit, disassemble or overheat the batteries.
- ☐ Replace only with the same or equivalent type of batteries. Using incorrect replacement batteries can lead to an explosion.

LCD SCREEN

- ☐ Although the LCD screen is made with high-precision technology and has effective pixels of 99.99% or more, black dots or bright points of light (red, blue, or green) may appear constantly on the LCD screen. This is a structural property of the LCD panel and is not a malfunction.
- ☐ The LCD screen is made with high-precision technology and to achieve a high level of performance and picture quality, this TV's backlight setting is set to maximize the brightness of the TV. However, uneven brightness may be observed when the LCD TV is viewed in a dark ambient without an input source or blank screen. This condition is normal and not a malfunction of the TV. Changing the Picture mode, Backlight setting, enabling the Light Sensor, or turning on the Power Management will improve this condition.
- ☐ To avoid damaging the LCD panel, do not expose the LCD screen to direct sunlight.
- ☐ Do not push or scratch the LCD screen, or place objects on top of the TV. The images may be uneven or the LCD panel may be damaged.
- ☐ If the TV is used in a cold place, smear may occur in the picture or the picture may become dark. This does not indicate a failure. These phenomena improve as the temperature rises.
- ☐ Ghosting may occur when still pictures are displayed continuously. It should disappear after a few moments.
- ☐ The LCD screen and enclosure get warm when the TV is in use. This is not a malfunction.
- ☐ Avoid spraying insect repellent with volatile material on the LCD screen.
- ☐ Avoid prolonged contact with rubber or plastic material to the LCD screen.

Broken screen panel

Do not throw anything at the TV as the impact can cause the LCD screen glass to crack, break or scatter.



- ☐ If damage occurs to the LCD panel, small traces of liquid crystal sandwiched between the glass may be found on scattered broken glass.

- ☐ Do not touch the broken glass with bare hands. As with any broken glass pieces, avoid skin contact and exposure to your eyes or mouth. Avoid direct contact with liquid or damp surfaces of the glass as these may have an adverse effect on some people. The contacted area should be rinsed thoroughly with water. If conditions persist, see your doctor.
- ☐ If the surface of the TV cracks, do not touch the TV until you have unplugged the AC power cord. Otherwise electric shock may result.

SERVICING

Do not use the TV if you suspect the TV is damaged or if the TV is damaged.

- ☐ Do not attempt to service the TV yourself since opening the cabinet may expose you to dangerous voltage levels or other hazards. Refer all servicing to qualified service personnel.
- ☐ If replacement parts are required, acquire a written certification from the service technician which states that adequate replacement parts with the same or similar characteristics as the original parts have been used. Unauthorized substitutions may result in a fire, an electric shock or other hazards.



Safety check

- ☐ Upon completion of any TV servicing or repair, ask the service technician to perform routine safety checks as specified by Sony and to certify that the TV is safe to operate. Have a qualified service technician dispose of the TV if it is not safe to operate.



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Getting Started

Welcome to the World of BRAVIA™

Thank you for purchasing this Sony LCD Color Television. This manual is for model KLV-20G400A. The packing box contains the supplied accessories listed on page 30.

Connecting the TV

To display clear, crisp pictures, your TV must be connected properly. To properly connect your TV, follow the basic connections provided in this section and in the separate Quick Setup Guide accompanied with your TV.

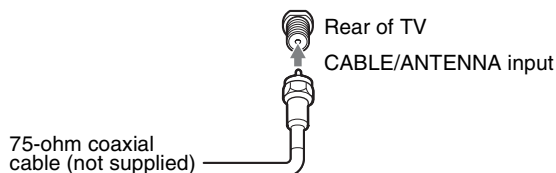
It is strongly recommended that you connect the antenna/cable input using the 75-ohm coaxial cable (not supplied) to receive optimum picture quality. A 300-ohm twin lead cable can be easily affected by radio frequency, resulting in signal deterioration.

When the antenna/cable connection is done, you must perform an Initial Setup so your TV will create a list of channels you can view (see page 16).

Cable System and/or VHF/UHF Antenna System

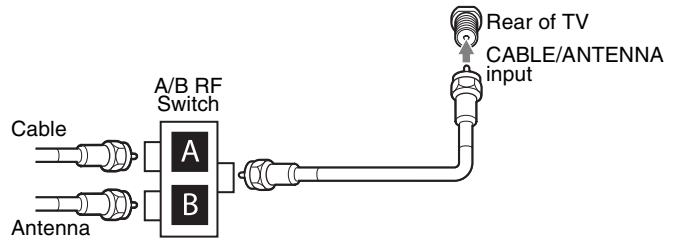
Connecting a cable system or an external VHF/UHF antenna to the CABLE/ANTENNA input will allow you to enjoy standard definition programming.

Cable or VHF/UHF (or VHF only) Antenna



Cable and VHF/UHF (or VHF only) Antenna

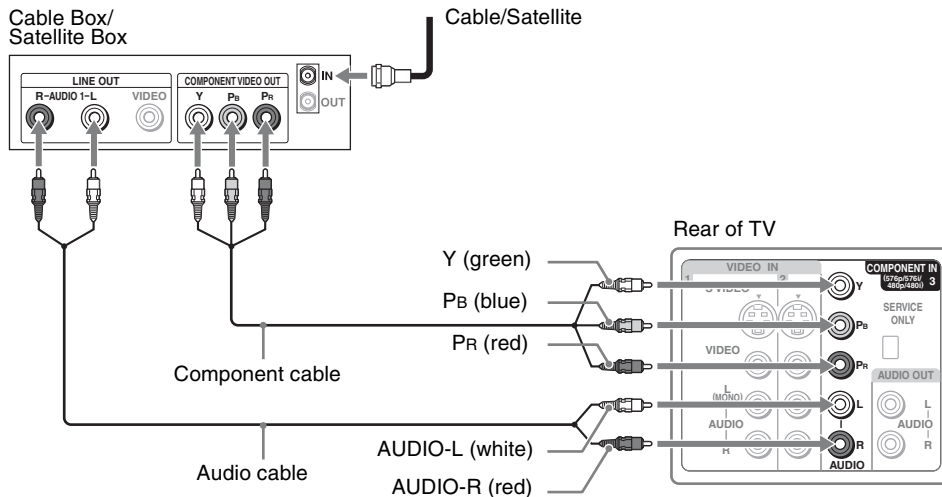
If you want to watch both cable and antenna (over-the-air) programming, you will need to use an optional A-B RF switch (not supplied) to switch between the cable and over-the-air antenna programming, as shown below.



Be sure to set Cable setting option to On or Off in Channel Setup settings for the type of input signal you choose (see page 25).

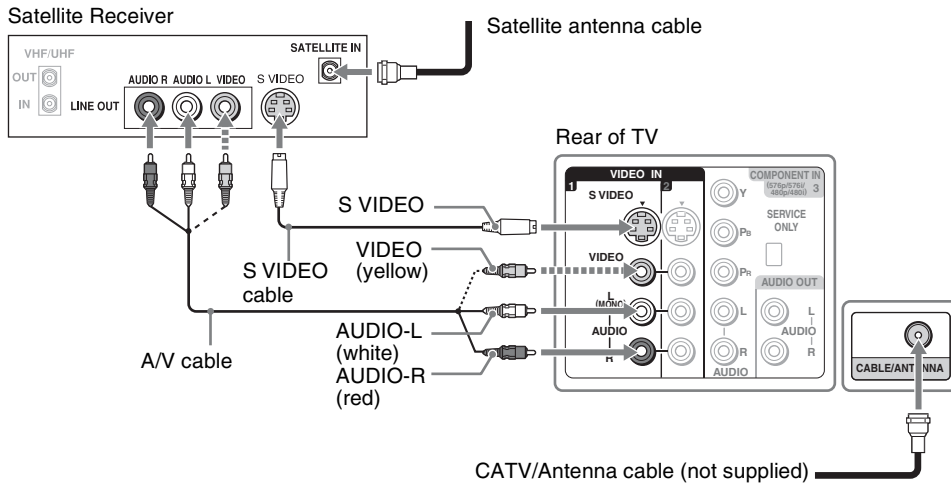
Cable Box/ Satellite Box

Make sure you connect these equipment to your TV via the component video (with audio) input on the back of your TV.



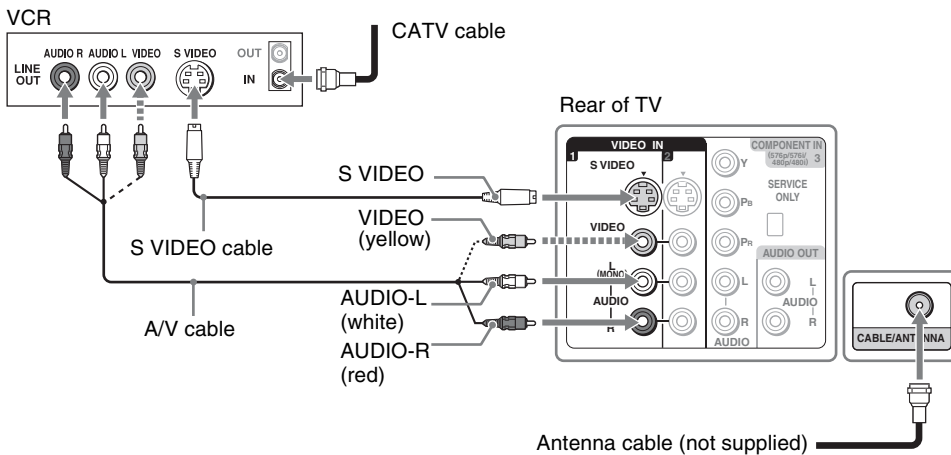
Component video (YPbPr) connection is necessary to view 480i, 480p, 576i and 576p formats. Note that this TV displays all format types of picture in the LCD panel's native resolution (640 dots × 480 lines). HDTV in its original high resolution of 1920 dots × 1080 lines or 1280 dots × 720 lines cannot be displayed. The message "Unsupported video format" will appear, and a vertically stretched picture may appear when a 720p or 1080i format image is received by component video (YPbPr) connection. Nothing will be displayed when a 1080p format image is received.

Satellite Receiver and Cable/Antenna



- If your satellite receiver is not equipped with S VIDEO, use a VIDEO cable (yellow) instead of the S VIDEO cable.
- Run the Initial Setup program, as described in “Setting Up the Channel List” on page 16 after completing your connections.

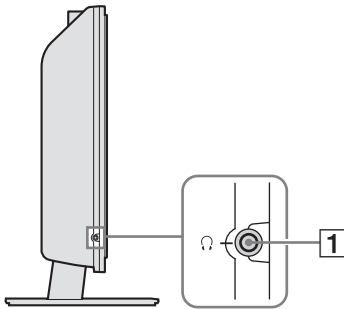
VCR, Cable and Antenna



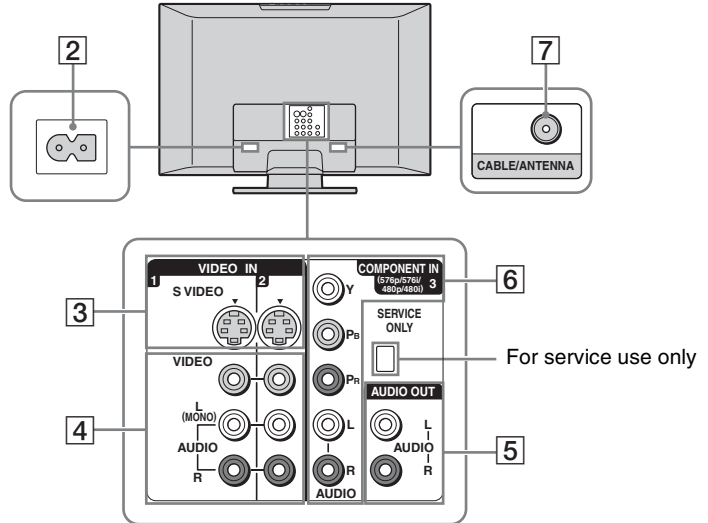
- If your VCR is not equipped with S VIDEO, use a VIDEO cable (yellow) instead of the S VIDEO cable.
- Run the Initial Setup program, as described in “Setting Up the Channel List” on page 16 after completing your connections.




When Connecting to Optional Equipment

Left side






Rear



Item	Description
1 Headphones jack	Connects to your headphones. If your headphones do not match the jack, use a suitable plug adapter (not supplied).
2 AC IN	Connects the supplied AC power cord.
3 VIDEO IN 1/2 S VIDEO	Connects to the S VIDEO output jack on your camcorder or other video equipment that has S VIDEO. S VIDEO provides better picture quality than composite video (4).
4 VIDEO IN 1/2 VIDEO/ L (MONO)-AUDIO-R	Connects to the composite video and audio output jacks on your camcorder or other video equipment such as video game equipment.  If you have mono equipment, connect its audio output jack to the TV's L (MONO) audio input jack.
5 AUDIO OUT L-AUDIO-R	Connects to the left and right audio input jacks of your audio or video equipment. You can use these outputs to listen to your TV's audio through your stereo system.  To turn off the TV speakers, see the Sound settings on page 21.
6 COMPONENT IN 3 L-AUDIO-R	Connects to your DVD player's or digital set-top box's component video (YPbPr) and audio (L/R) jacks. Component video provides better picture quality than the S VIDEO (3) and the composite video (4) connections.  Set the Component output of the connected equipment to 480i or 480p.
7 CABLE/ANTENNA	RF input that connects to your Cable or VHF/UHF antenna.

(Continued)

Getting Started

-  VIDEO IN 1/2 are equipped with S VIDEO. S VIDEO will be selected when both composite video and S VIDEO are connected.
-  Component video (YPbPr) connection is necessary to view 480i, 480p, 576i and 576p formats. Note that this TV displays all format types of picture in the LCD panel's native resolution (640 dots × 480 lines). HDTV in its original high resolution of 1920 dots × 1080 lines or 1280 dots × 720 lines cannot be displayed. The message "Unsupported video format" will appear, and a vertically stretched picture may appear when a 720p or 1080i format image is received by component video (YPbPr) connection. Nothing will be displayed when a 1080p format image is received.
-  For the connected TV screen, select "4:3 Letter Box" or "4:3 Pan Scan" in the setting menu of the external equipment, such as a DVD player.

Securing the TV

Sony strongly recommends taking measures to prevent the TV from toppling over; as unsecured TVs may topple and result in property damage, serious bodily injury or even death.

Preventing the TV from Toppling

- ☐ Secure the TV to a wall and/or stand.
- ☐ Do not allow children to play or climb on furniture and TV sets.
- ☐ Avoid placing or hanging items on the TV.
- ☐ Never install the TV on:
 - slippery, unstable and/or uneven surfaces.
 - furniture that can easily be used as steps, such as a chest of drawers.
- ☐ Install the TV where it cannot be pulled, pushed, or knocked over.
- ☐ Route all AC power cords and connecting cables so that they are not accessible to curious children.

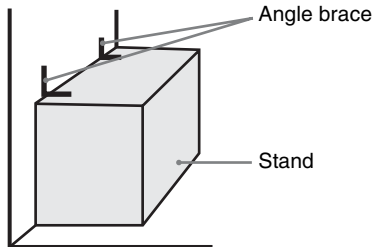
Recommended Measures to Secure the TV

1 Secure the Stand for the TV.

Make sure the TV stand can adequately support the weight of the TV. Use two angle braces (not supplied) to secure the stand.

For each angle brace use the appropriate hardware to:

- attach one side of the angle brace to the wall stud.
- attach the other side to the TV stand.



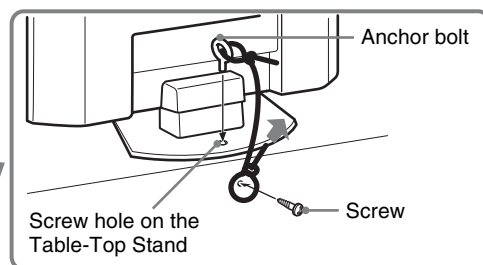
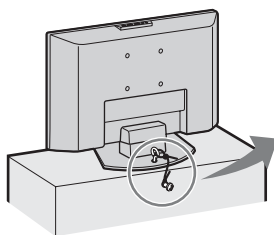
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2 Secure the TV to the Stand.

Use the optional hardware listed below (not supplied):

- M6 × 12mm anchor bolt (screwed into the TV's Table-Top Stand).
- A screw or similar (attach it to the TV stand).
- Rope or chain (strong enough to support the weight of the TV). Make sure that there is no excess slack in the rope or chain.

An alternative way to secure the TV is with an optional Sony Support Belt Kit.



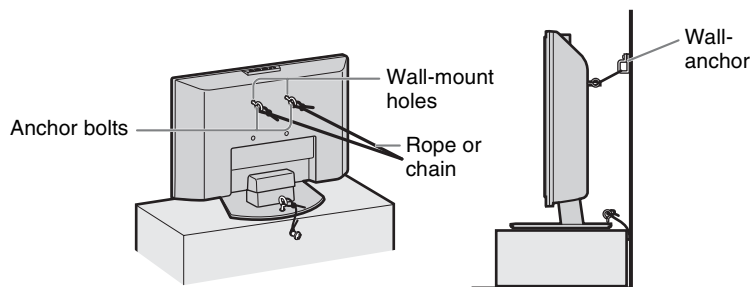
Contact Sony Customer Support to obtain the optional Support Belt Kit by providing your TV model name.

– For Canada call: 1-877-899-7669

3 Anchor the TV to the Wall.

Use the hardware listed below (not supplied).

- Two M4 × 12-18mm anchor bolts (screw into the top-most wall-mount holes located on the rear of the TV).
- Rope or chain (attach to one M4 anchor bolt).
- Wall-anchor (attach to the wall stud) strong enough to support the weight of the TV (pass the rope through the wall-anchor, then attach to the other M4 anchor bolt).



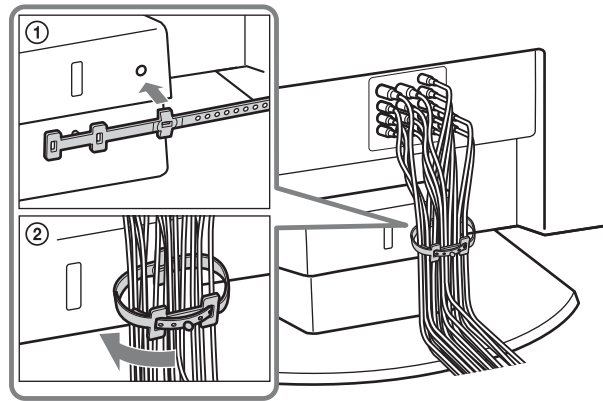
Measure 2 provides minimal protection against the TV toppling over. For further protection, follow all three measures recommended above.



If an electric screw driver is used, set the torque to tighten at approximately 1.5 N·m {15 kgf·cm}.

Bundling the Connecting Cables

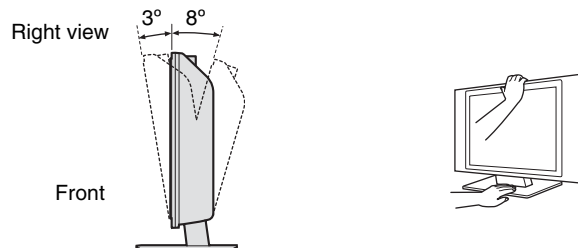
You can bundle the connecting cables with the supplied cable band as illustrated below.




 Do not bundle the AC power cord with other connecting cables.

Adjusting the Viewing Angle of the TV


This TV can be adjusted back and forth within the angles shown below.

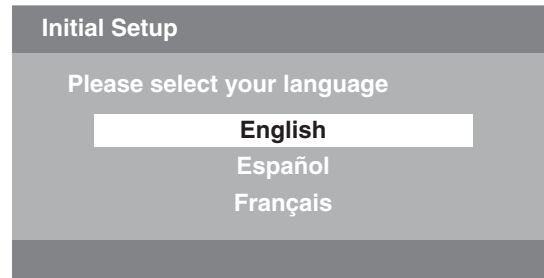






 When tilting the TV, hold the stand with one hand to avoid slipping or tipping the TV.

Setting Up the Channel List - Initial Setup

After you finish connecting your TV, you need to run Initial Setup, which automatically sets up available channels. The Initial Setup screen appears when you turn on your TV for the first time. If you do not want to set up the channels at this time, you can do it later by selecting the **Auto Program** option in the **Channel Setup** settings (see page 25).

- 1 Press  to turn on the TV.
The Initial Setup screen appears.



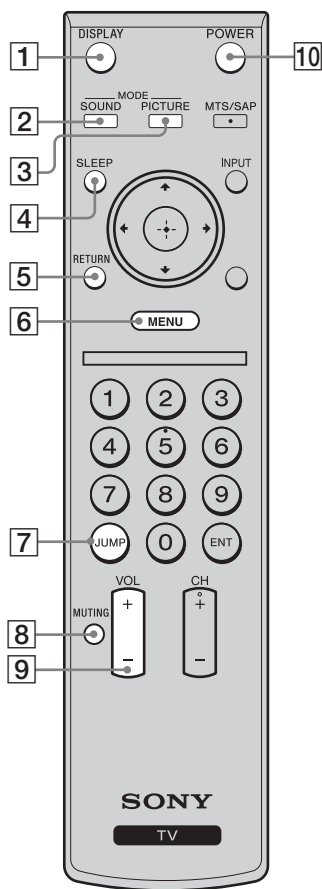
- 2 Press  to highlight the on-screen display language. Then press .
The message “First please connect cable/antenna. Do you want to start Auto Program?” appears.
- 3 Press  to highlight “OK” then press .

To run Auto Program again at a later time

- Use the Auto Program feature as described on page 25.

Basic Operations

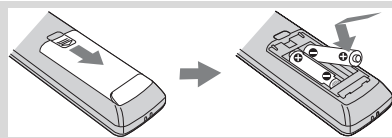
Remote Control



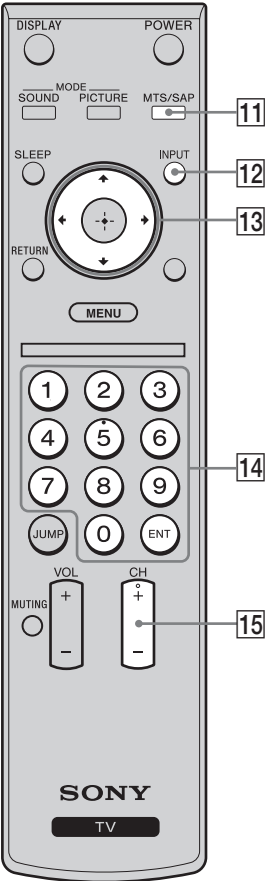
Button	Description
1 DISPLAY	Press once to display the current channel number and channel label settings. The OSD (on-screen display) will turn off after a few seconds or press again to immediately turn off the display.
2 SOUND	Press to cycle through different sound settings: Dynamic for enhanced treble and bass, Standard for spoken dialog and Clear Voice for listening to human voice clearly.
3 PICTURE	Press repeatedly to cycle through the available picture modes: Vivid , Standard , Custom . The picture modes can also be accessed in the Picture settings. For details, see "Using the Picture Settings" on page 20.
4 SLEEP	Press repeatedly until the TV displays the time in minutes (Off, 15, 30, 45, 60, 90 or 120) that you want the TV to remain on before shutting off. Press SLEEP after setting the Sleep Timer to display the time remaining until shutting off. To cancel Sleep Timer, press SLEEP repeatedly until Off appears.
5 RETURN	Press to go back to the previous screen when displaying items and settings.
6 MENU	Press to display the TV functions and settings. See "Using the Menus" on page 20.
7 JUMP	Press to jump back and forth between two channels. The TV alternates between the current channel and the last channel that was selected.
8 MUTING	Press to mute the sound. Press again or press VOL + to restore the sound.
9 VOL +/-	Press to adjust the volume.
10 POWER	Press to turn on and off the TV.

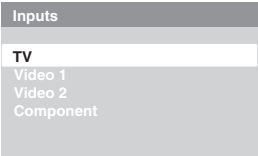

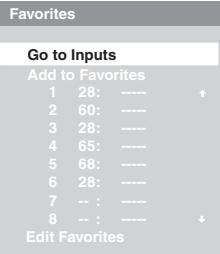
💡 The 5 button, MTS/SAP and CH+ button have a tactile dot. Use them as a reference when operating the TV.

✎ Insert two size AA batteries (supplied) by matching the **+** and **-** on the batteries to the diagram inside the remote control's battery compartment.

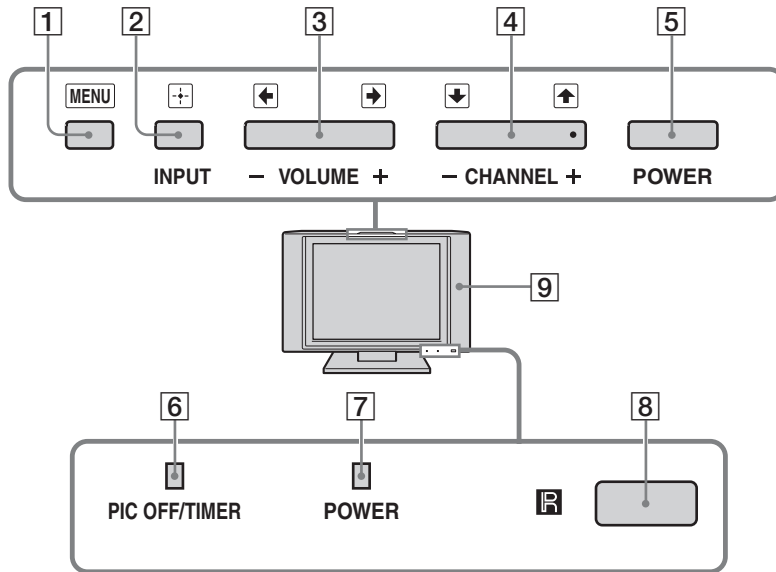


(Continued)



Button	Description
11 MTS/SAP	Press repeatedly to cycle through the Multi-channel TV Sound (MTS) options: Stereo , Auto SAP (Second Audio Program), and Mono . The MTS setting can be also accessed in the Sound setting. For details, see “Using the Sound Settings” on page 21.
12 INPUT	Press to display Inputs . The Inputs feature lets you select the TV and the external inputs connected to your TV. You can also assign a label using Label Video Inputs in the Setup settings (see page 23). 1 Press INPUT to display the input menu. 2 Press ▲/▼ to highlight your selection, then press ⊕ .
	
 See page 23 for information about setting up the video input labels, including the Skip function.	
13 ▲/▼/◀/▶ ⊕	Press ▲/▼/◀/▶ to move the on-screen cursor. Press ⊕ to select/confirm an item. If you press ⊕ when no OSD (on-screen display) is displayed, the Favorites will appear. The Favorites feature lets you select programs from a list of up to 16 favorite channels that you specify. 1 Press ⊕ . 2 Press ▲/▼ to highlight your selection, then press ⊕ . To add the current channel to the list of favorite channels, highlight Add to Favorites and press ⊕ . To remove a channel from your list, use Favorite Channels in the Channel Setup settings (see page 25).
	
14 0 - 9 ENT	Press 0 - 9 to select a channel; the channel changes after two seconds. Press ENT to change channels immediately.
15 CH +/-	Press to scan through channels. To scan quickly through channels, press and hold down either +/− .

TV Controls



Item	Description
1 MENU	Press to display the TV functions and settings (See “Using the Menus” on page 20).
2 INPUT - +	Press to display the inputs list. The Inputs feature lets you select the TV and the external inputs connected to your TV. You can also assign a label using Label Video Inputs in the Setup settings (see page 23). In the TV settings screen, this button is used to confirm the selection or setting.
3 - VOLUME + ← →	Press to adjust the volume. In the TV settings screen, these buttons serve as left/right buttons.
4 - CHANNEL + ↓ ↑	Press to scan through channels. To scan quickly through channels, press and hold down either -/+ . In the TV settings screen, these buttons serve as up/down buttons.
5 POWER	Press to turn on and off the TV.
6 PIC OFF/ TIMER LED	Lights up in green when the Picture Off feature is activated. Lights up in orange when Sleep Timer is set. For details, see page 23.
7 POWER LED	Lights up in green when the TV is turned on.
8 (IR) Infrared Receiver	Receives IR signals from the remote control. Do not put anything near the sensor, as its function may be affected.
9 Speaker	Outputs audio signal.

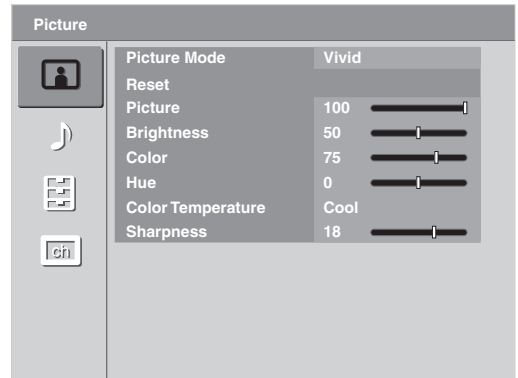
- The CHANNEL + button has a tactile dot. Use it as a reference when operating the TV.
- Make sure that the TV is turned off before unplugging the power cord. Unplugging the power cord while the TV is turned on may cause the TV to malfunction.

Using the Menus

Overview of MENU

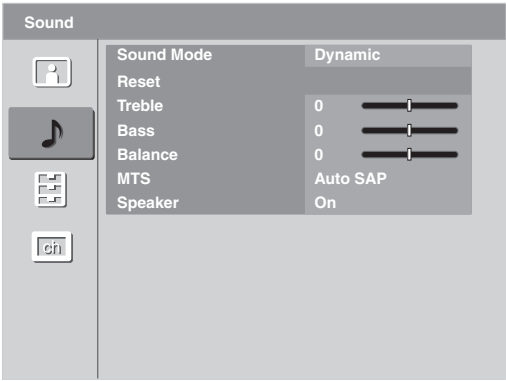
MENU provides one button access for controlling your TV. It enables you to perform a variety of tasks intuitively with a control panel on the screen rather than a variety of remote control button presses.

Using the Picture Settings



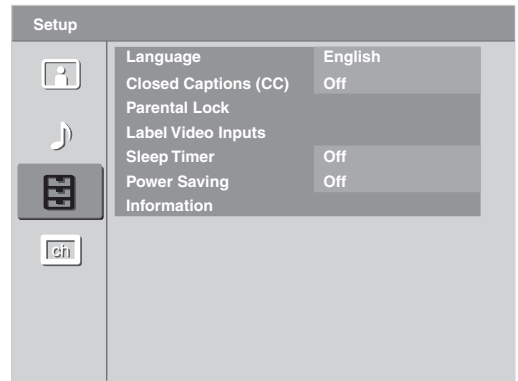
Option	Description	
Picture Mode <i>Customized picture viewing</i>	Vivid	Select for enhanced picture contrast and sharpness.
	Standard	Select for standard picture settings. Recommended for home entertainment.
	Custom	Allows you to store your preferred settings.
Reset	Resets the current Picture Mode settings to the default values.	
Picture	Adjust to increase or decrease picture contrast.	
Brightness	Adjust to brighten or darken the picture.	
Color	Adjust to increase or decrease color intensity.	
Hue	Adjust to increase or decrease the green tones.	
Color Temperature <i>White adjustment</i>	Cool	Select to give the white colors a bluish tint.
	Neutral	Select to give the white colors a neutral tint.
	Warm	Select to give the white colors a reddish tint.
Sharpness	Adjust to sharpen or soften the picture.	




Using the Sound Settings



Option	Description	
Sound Mode <i>Customized sound listening</i>	Dynamic	Enhances treble and bass.
	Standard	Standard sound optimized for home use.
	Clear Voice	Suitable for spoken dialog.
Reset	Resets the current Sound Mode settings to the default values.	
Treble	Adjust to increase or decrease higher-pitched sounds.	
Bass	Adjust to increase or decrease lower-pitched sounds.	
Balance	Adjust to emphasize left or right speaker balance.	
MTS <i>Enjoy stereo, bilingual and mono programs</i>	Stereo	Select for stereo reception when viewing a program broadcast in stereo.
	Auto SAP	Select to automatically switch the TV to Second Audio Programs (SAP) when a signal is received. If no SAP signal is present, the TV remains in Stereo mode.
	Mono	Select for mono reception. Use to reduce noise during weak stereo broadcasts.
Speaker	On	Select to turn on the TV speakers.
	Off	Select to turn off the TV speakers and listen to the TV's sound only through your external audio receiver and speakers.

Using the Setup Settings



Option	Description	
Language	Select to display all on-screen settings in your language of choice: English, Español, Français.	
Closed Captions (CC)	Allows you to select from several closed caption modes (for programs that are broadcast with closed captioning).	
	Off	Closed Captions (CC) is turned off.
	CC 1, CC 2, CC 3, CC 4	Displays a printed version of the dialog or sound effects of a program. (Should be set to CC 1 for most programs.)
	Text 1, Text 2, Text 3, Text 4	Displays network/station information presented using either half or the whole screen (if available).
	 Closed Captions (CC) is not available when the OSD is displayed.	
Parental Lock	The Parental Lock settings allows you to set up the TV to block programs according to their content and rating levels. Use 0-9 on the remote control to enter a four-digit password. The first time you create a password, confirm the password by entering it again.	
	Lock	Off Turn Parental Lock off. No programs are blocked from viewing.
		Child Maximum ratings permitted are: Canada: C, G, TV-Y
		Youth Maximum ratings permitted are: Canada: C8+, PG, 8 ans+, TV-PG
		Young Adult Maximum ratings permitted are: Canada: 14+, 13 ans+, TV-14
		Custom Select to set ratings manually. Canada: See page 23 for details.
	 If you are not familiar with the Parental Guideline rating system, you should select Child, Youth, or Young Adult to help simplify the rating selection. To set more specific ratings, select Custom.	
	Change Password Select to change your password.	
	 You need your password for any future access into the Parental Lock settings. If you lose your password, see "Lost password." on page 27.	
	Select Country	U.S.A. Select to use U.S.A. ratings (see page 24).
		Canada Select to use Canadian ratings (see page 23).

Option	Description				
Label Video Inputs	<p>Allows you to identify A/V equipment you connected to the TV, such as a VCR, DVD, etc. For example, if you have a DVD player connected to the Component jack, you can rename the video label as DVD. Then when you press INPUT to change inputs, the video label you assigned to that input appears on screen.</p> <ol style="list-style-type: none"> 1 Press / to highlight the video input (Video 1-2, Component) to which you want to assign a label. Then press to select the input. 2 Press / to highlight one of the displayed labels. Then press to select the label. <p>You can select from the following labels for each input:</p> <table> <tr> <td>Video 1-2</td><td>Video 1-2, RECEIVER, SATELLITE, CABLE BOX, VCR, DVD, DVR, GAME, CAMCORDER, Edit:, Skip</td></tr> <tr> <td>Component</td><td>Component, RECEIVER, SATELLITE, CABLE BOX, VCR, DVD, DVR, GAME, CAMCORDER, Edit:, Skip</td></tr> </table> <div> Edit: allows you to create a custom five character label. If you select Skip, your TV skips this input when you press the INPUT button. The Skip label is useful for inputs to which no equipment is connected. </div>	Video 1-2	Video 1-2, RECEIVER, SATELLITE, CABLE BOX, VCR, DVD, DVR, GAME, CAMCORDER, Edit:, Skip	Component	Component, RECEIVER, SATELLITE, CABLE BOX, VCR, DVD, DVR, GAME, CAMCORDER, Edit:, Skip
Video 1-2	Video 1-2, RECEIVER, SATELLITE, CABLE BOX, VCR, DVD, DVR, GAME, CAMCORDER, Edit:, Skip				
Component	Component, RECEIVER, SATELLITE, CABLE BOX, VCR, DVD, DVR, GAME, CAMCORDER, Edit:, Skip				
Sleep Timer	Set the time in minutes (Off, 15 min, 30 min, 45 min, 60 min, 90 min, or 120 min) that you want the TV to remain on before shutting off automatically.				
Power Saving	Select to reduce the power consumption by adjusting the backlight brightness. This also enhances the black level. Select from Off, Low, High and Picture Off.				
Information	Select to display the equipment information of your TV.				

Canadian custom rating options



The Custom Rating setting includes the following options.

Option	Description
English Rating	C All children.
	C8+ Children 8 years and older.
	G General programming.
	PG Parental guidance.
	14+ Viewers 14 and older.
	18+ Adult programming.
French Rating	G General programming.
	8 ans+ Not recommended for young children.
	13 ans+ Not recommended for ages under 13.
	16 ans+ Not recommended for ages under 16.
U.S.A Rating	18 ans+ Programming restricted to adults.
	See page 24 for details.

(Continued)

Using the Menus

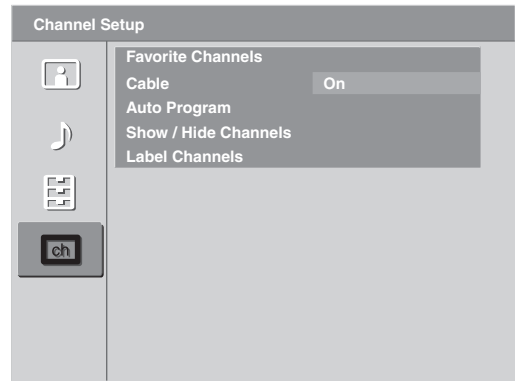
This model is for Canada only, the following US custom rating options are provided for reference.




Option	Description	
Movie Rating	G	All children and general audience.
	PG	Parental guidance suggested.
	PG-13	Parental guidance for children under 13.
	R	Restricted viewing, parental guidance is suggested for children under 17.
	NC-17 and X	No one 17 or under allowed.
TV Rating	Age-Based Ratings	
<i>Block programs by their rating, content or both</i>	TV-Y	All children.
	TV-Y7	Directed to children age 7 and older.
	TV-G	General audience.
	TV-PG	Parental guidance suggested.
	TV-14	Parents strongly cautioned.
	TV-MA	Mature audience only.
	Content-Based Ratings	
	FV	Fantasy violence.
	D	Suggestive dialogue.
	L	Strong language.
	S	Sexual situations.
	V	Violence.
	 To ensure maximum blocking capability, set the Age-Based Ratings.	
Unrated	Allow	Allows programs and movies that are broadcast without a rating.
<i>Block programs or movies that are broadcast without a rating</i>	Block	Blocks all programs and movies that are broadcast without a rating.
	 If you block unrated TV programs, be aware that the following types of programs may be blocked: programs broadcast from another country, emergency broadcasts, political programs, sports, news, public service announcements, religious programs and weather.	

Viewing Blocked Programs

You can view blocked programs by entering the password. Press **ENT** when tuned to a blocked program, then enter the password. This temporarily turns the parental control feature off. To reactivate the **Parental Lock** settings, turn off the TV. When the TV is turned on again, your **Parental Lock** settings are reactivated.

Using the Channel Setup Settings



Option	Description
Favorite Channels	<p>Lets you set up a list of up to 16 of your favorite channels.</p> <ol style="list-style-type: none"> Press ▲/▼ to highlight a favorite channel number (1-16) to apply your favorite channel, then press + to select it. Press ▲/▼ to scroll through the channels until you find the channel that you would like to add and then press + to select it. <p>To add other favorite channel numbers, repeat steps 1-2.</p> <p> To select favorite channel numbers that you specified, see page 18.</p>
Cable	<p>On Select if you are receiving cable channels via Cable TV provider.</p> <p>Off Select if you are using an antenna.</p> <p> You should run Auto Program after changing the Cable setting.</p>
Auto Program	<p>Automatically sets up the channel list on the TV for all receivable channels.</p> <ol style="list-style-type: none"> Select Auto Program. Select OK to start Auto Program. When Auto Program is done, the Show/Hide Channels screen will appear. (See below)
Show/Hide Channels	<p>Allows you to show or hide channels that appear when you use the CH +/- buttons.</p> <ol style="list-style-type: none"> Press ▲/▼ to scroll through the channels until you find the channel you want to show or hide. Then press + to select it. Press ▲/▼ to select if the channel will be shown or hidden. <p>To show or hide more channels, repeat steps 1-2.</p> <p> Channels that you set to be hidden can be accessed only with the 0-9 buttons.</p>
Label Channels	<p>Allows you to assign labels (such as station call letters) to channel numbers.</p> <ol style="list-style-type: none"> Press ▲/▼ to scroll through the channel numbers. Then press + to select the channel number that you want to assign a label. Press ▲/▼ to scroll through the label characters (A-Z, 0-9, etc.). Press ▶ to move to the next character. Repeat to add up to 5 characters to the label. Press ▶ to highlight OK and press + to set. <p>To assign labels to more channels, repeat steps 1-2.</p>

Other Information

Troubleshooting

If you have additional questions, service needs, or required technical assistance related to the use of your Sony TV, please visit our website or call one of the following numbers:

<http://www.sony.com/tvsupport>

1-877-899-SONY(7669) in Canada

Problem	Possible Remedies
No picture.	
No picture.	<input type="checkbox"/> Check Power Saving settings (page 23).
Cannot receive any channels.	<input type="checkbox"/> Make sure the power cord is connected securely. <input type="checkbox"/> Turn on the power of the TV. <input type="checkbox"/> Check antenna/cable connections.
TV is locked to one channel.	<input type="checkbox"/> Perform Auto Program to add receivable channels that are not presently in the TV's memory (page 25).
Cannot receive or select channels.	<input type="checkbox"/> Perform Auto Program to add receivable channels that are not presently in the TV's memory (page 25). <input type="checkbox"/> To receive or select cable channels, make sure that Cable in the Channel Setup settings is set to On (page 25). To receive or select UHF channels over an antenna, make sure Cable is set to Off .
The TV turns off automatically.	<input type="checkbox"/> Check if the Sleep Timer is activated (page 23).
No picture from some video sources.	<input type="checkbox"/> Check the connection between the optional video equipment and the TV. <input type="checkbox"/> Press INPUT on the remote control. Select your desired input from the Inputs list.
Poor picture.	
Double images or ghosts.	<input type="checkbox"/> Check antenna/cable connections. <input type="checkbox"/> Check the antenna location and direction.
Only snow and noise appear on the screen.	<input type="checkbox"/> Check if the antenna is broken or bent. <input type="checkbox"/> Check if the antenna has reached the end of its serviceable life. (3-5 years in normal use, 1-2 years at the seaside.)
Dotted lines or stripes.	<input type="checkbox"/> Keep the TV away from noise sources such as cars, motorcycles, or hair-dryers. <input type="checkbox"/> If using 300 ohm twin lead, move the excess lead away from the TV or try using 75 ohm coaxial cable (not supplied) instead.
No color/Dark picture/Color is not correct/The picture is too bright.	<input type="checkbox"/> Press PICTURE to select the desired picture mode (page 17). <input type="checkbox"/> Adjust the Picture Mode options in the Picture settings (page 20). <input type="checkbox"/> If you set the Power Saving mode to Low or High , it will enhance the black level (page 23).
Noisy picture.	<input type="checkbox"/> Make sure that the antenna is connected using the 75-ohm coaxial cable (not supplied). <input type="checkbox"/> Keep the antenna cable away from other connecting cords. <input type="checkbox"/> To avoid TV interference, make sure to use an undamaged antenna cable.
Images from the connected equipment (DVD player, etc.) are stretched vertically.	<input type="checkbox"/> In the connected equipment setting menu, select "4:3 Letter Box" or "4:3 Pan Scan" for the connected TV.

Problem	Possible Remedies
No sound/Noisy sound.	
Good picture, no sound.	<input type="checkbox"/> Check the volume control. <input type="checkbox"/> Press MUTING or VOL + so that “Muting” disappears from the screen (page 17). <input type="checkbox"/> Disconnect your headphones. <input type="checkbox"/> Set Speaker to On in the Sound settings (page 21). If it is set to Off , sound is not output from the TV’s speakers regardless of the TV’s volume control.
Audio noise.	<input type="checkbox"/> Make sure that the antenna is connected using the 75-ohm coaxial cable (not supplied). <input type="checkbox"/> Keep the antenna cable away from other connecting cords. <input type="checkbox"/> To avoid TV interference, make sure to use an undamaged antenna cable.
“Black box” on screen.	<input type="checkbox"/> You have selected a text option in the Setup setting and no text is available. (See page 22 to reset Setup selections.) To turn off this feature, set the Closed Captions (CC) option to Off . If you were trying to select closed captioning, select CC 1 instead of Text 1-4 .
Remote control does not operate.	<input type="checkbox"/> Check the polarity of the batteries or replace the batteries. <input type="checkbox"/> Point the remote control at the remote control sensor of the TV. <input type="checkbox"/> Fluorescent lamps can interfere with your remote control operation; try turning off the fluorescent lamps. <input type="checkbox"/> Keep the remote control sensor area clear from obstacles.
Lost password.	<input type="checkbox"/> Select the Parental Lock settings on the settings screen, then enter the following master password: 4357. The master password clears your previous password and allows you to enter a new password (page 22).
How to reset the TV to factory settings.	<input type="checkbox"/> Turn on the TV. While holding down the ▲ button on the remote control, press the POWER button on the TV. WARNING: The Reset will clear all of your customized settings including Parental Lock setting.

Preparation for Wall Mounting

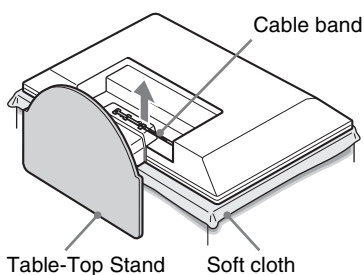
This TV can be installed on a wall by using a wall-mount bracket (sold separately). Before mounting the TV on a wall, the Table-Top Stand must be removed from the TV.

 Do not remove the Table-Top Stand for any reason other than to wall-mount the TV.

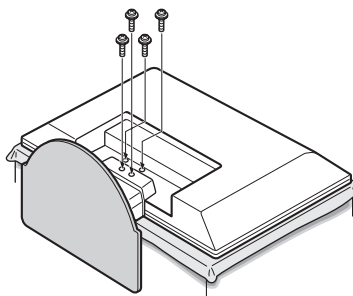
**Sony Wall-Mount
Bracket Model
SU-WL100**

Follow the simple steps below to remove the Table-Top Stand:

- 1** Disconnect all the cables from the TV.
- 2** Cover a level and stable surface with a thick and soft cloth.
- 3** Gently lay the TV, face down, onto the cloth. Make sure the Table-Top Stand is hanging over the edge.
- 4** Pull the cable band out completely.



- 5** Remove the four screws.
Detach the Table-Top Stand from the TV.



- 6** Do not remove any other screws from the TV.

For bracket installation, refer to the instruction guide provided by the Wall-Mount Bracket model for your TV. Sufficient expertise is required in installing this TV, especially to determine the strength of the wall for withstanding the TV's weight. **For product protection and safety reasons, Sony strongly recommends that you use the Wall-Mount Bracket model designed for your TV and the wall-mounting of your TV should be performed by Sony dealers or licensed contractors.**



Be sure to store the removed screws and Table-Top Stand in a safe place until you are ready to reattach the Table-Top Stand. Keep the screws away from small children.

Other Information

Specifications

Television system:

NTSC American TV standard

Channel coverage:

Terrestrial 2-69

Cable 1-135

Antenna: 75-ohm external terminal for VHF/UHF

Screen size:

20 inches

Panel System:

LCD (Liquid Crystal Display) Panel

Display resolution (horizontal × vertical):

640 dots × 480 lines

VIDEO IN 1/2:

S VIDEO (4-pin mini DIN):

Y: 1.0 Vp-p, 75 ohms unbalanced, sync negative

C: 0.286 Vp-p (Burst signal), 75 ohms

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

AUDIO: 500 mVrms (100% modulation)

Impedance: 47 kilohms

COMPONENT IN 3:

YPbPr (Component Video):

Y: 1.0 Vp-p, 75 ohms unbalanced,
sync negative

PB: 0.7 Vp-p, 75 ohms

PR: 0.7 Vp-p, 75 ohms

Signal format: 480i, 480p, 576i, 576p

AUDIO: 500 mVrms (100% modulation)

Impedance: 47 kilohms

AUDIO OUT:

500 mVrms (100% modulation)

Headphones:

Stereo mini jack

Impedance: 16 ohms

Speaker/Full range (2):

45 × 130 mm (1 ¹³/₁₆ × 5 ¹/₈ inches)

Speaker output:

3 W + 3 W

Power Requirement:

110 V-240 V AC, 50/60 Hz

Power consumption:

In use: 48 W

In power off: Less than 1.0 W

Dimensions (W/H/D):

With stand: 609 × 427 × 196 mm

(24 × 16 ⁷/₈ × 7 ³/₄ inches)

Without stand: 609 × 384 × 80 mm

(24 × 15 ¹/₈ × 3 ¹/₄ inches)

Mass:

With stand: 8.7 kg (19 lb 2 ⁷/₈ oz)

Without stand: 7.5 kg (16 lb 8 ¹/₂ oz)

Supplied accessories:

Remote control RM-YA009 (1)

Size AA batteries (2)

AC power cord (1)

Cable band (1)

Operating Instructions (1)

Quick Setup Guide (1)

Warranty Card (1)

Optional accessories:

Headphones plug adapter

Connecting cables

Support belt kit

Wall-Mount Bracket: SU-WL100



Optional accessories availability depends on its stock.

Design and specifications are subject to change without notice.

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TV Rating 24

U

U.S.A Rating 23
Unrated 24

V

VIDEO IN jack 11
Viewing Blocked Programs 24
VOL+/- button 17
VOLUME +/- button 19

For Your Convenience

Please contact Sony directly if you:

- Have questions on the use of your television after reading your Operating Instruction manual and Quick Setup Guide
- Experience difficulty operating your television

Contact Sony Customer Support at:

<http://www.sony.com/tvsupport>

or to speak with a support representative:

Canada

1-877-899-SONY (7669)

Sony will work to resolve your questions more quickly than your retailer or place of purchase.

Please Do Not Return the Product to the Store