SAMSUNG

## LTN1565
LTN1765

TFT-LCD TELEVISION

SAMSUNG

SERVICE DIVISION

400 Valley Road, Suite 201

Mount Arlington, NJ 07856

TEL: 1-800-SAMSUNG (1-800-726-7864)

www.samsungusa.com

Owner's Instructions

BN68-00438A-01

✋ Warning! Important Safety Instructions

CAUTION
RISK OF ELECTRIC SHOCK DO NOT OPEN

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.
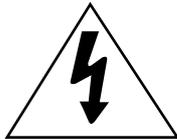
This symbol indicates high voltage is present inside. It is dangerous to make any kind of contact with any inside part of this product.

This symbol alerts you that important literature concerning operation and maintenance has been included with this product.

Note to CATV system installer: This reminder is provided to call CATV system installer's attention to Article 820-40 of the National Electrical Code (Section 54 of Canadian Electrical Code, Part I), 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.

Caution: FCC/CSA regulations state that any unauthorized changes or modifications to this equipment may void the user's authority to operate it.

Caution: To prevent electric shock, match the wide blade of plug to the wide slot, and fully insert the plug.

Attention: pour eviter les chocs electriques, introduire la lame le plus large de la fiche dans la borne correspondante de la prise et pousser jusqu'au fond.

Important: One Federal Court has held that unauthorized recording of copyrighted TV programs is an infringement of U.S. copyright laws.

Certain Canadian programs may also be copyrighted and any unauthorized recording in whole or in part may be in violation of these rights.

To prevent damage which may result in fire or electric shock hazard, do not expose this appliance to rain or moisture.

Thank You for Choosing Samsung

Thank you for choosing Samsung! Your new Samsung TV represents the latest in television technology. We designed it with easy-to-use on-screen menus and closed captioning capabilities, making it one of the best products in its class. We are proud to offer you a product that will provide convenient, dependable service and enjoyment for years to come.
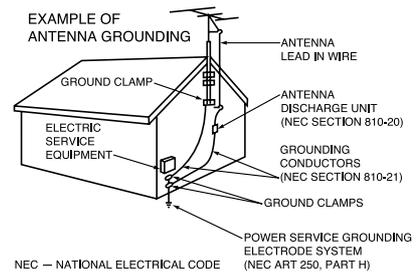
Important Safety Information

Always be careful when using your TV receiver. To reduce the risk of fire, electrical shock, and other injuries, keep these safety precautions in mind when installing, using, and maintaining your machine.

• Read all safety and operating instructions before operating your TV.

• Keep the safety and operating instructions for future reference.

• Heed all warnings on the TV receiver and in the operating instructions.

• Follow all operating and use instructions.

• Unplug the TV receiver from the wall outlet before cleaning. Use a damp cloth; do not use liquid or aerosol cleaners.

• Never add any attachments and/or equipment without approval of the manufacturer. Such additions can increase the risk of fire, electric shock, or other personal injury.

• Do not use the TV receiver where contact with or immersion in water is a possibility, such as near bath tubs, sinks, washing machines, swimming pools, etc.

• Do not place the TV on an unstable cart, stand, tripod, bracket, or table where it can fall. A falling TV can cause serious injury to a child or adult, and serious damage to the appliance. Use only with a cart, stand, tripod, bracket, or table recommended by the manufacturer or sold with the TV. Follow the manufacturer's instructions when mounting the unit, and use a mounting accessory recommended by the manufacturer. Move the TV and cart with care. Quick stops, excessive force, and uneven surfaces can make the unit and cart unsteady and likely to overturn.

• Provide ventilation for the TV receiver. The unit is designed with slots in the cabinet for ventilation to protect it from overheating. Do not block these openings with any object, and do not place the TV receiver on a bed, sofa, rug, or other similar surface. Do not place it near a radiator or heat register. If you place the TV receiver on a rack or bookcase, ensure that there is adequate ventilation and that you've followed the manufacturer's instructions for mounting.

• Operate your TV receiver only from the type of power source indicated on the marking label. If you are not sure of the type of power supplied to your home, consult your appliance dealer or local power company.

• Use only a grounded or polarized outlet. For your safety, this TV is equipped with a polarized alternating current line plug having one blade wider than the other. This plug will fit into the power outlet only one way. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug still does not fit, contact your electrician to replace your outlet.

• Protect the power cord. Power supply cords should be routed so that they won't be walked on or pinched by objects placed on or against them. Pay particular attention to cords at plugs, convenience receptacles, and the point where they exit from the unit.

1

• Unplug the TV from the wall outlet and disconnect the antenna or cable system during a lightning storm or when left unattended and unused for long periods of time. This will prevent damage to the unit due to lightning and power-line surges.

• Avoid overhead power lines. An outside antenna system should not be placed in the vicinity of overhead power lines or other electric light or power circuits or where it can fall into such power lines or circuits. When installing an outside antenna system, be extremely careful to keep from touching the power lines or circuits. Contact with such lines can be fatal.

• Do not overload the wall outlet or extension cords. Overloading can result in fire or electric shock.

• Do not insert anything through the openings in the unit, where they can touch dangerous voltage points or damage parts. Never spill liquid of any kind on the TV.

• Ground outdoor antennas. If an outside antenna or cable system is connected to the TV, be sure the antenna or cable system is grounded so as to provide some protection against voltage surges and built-up static charges. Section 810 of the National Electrical Code, ANSI/NFPA No.70-1984, provides information about proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna discharge unit, connection to grounding electrodes, and requirements for the grounding electrode.

EXAMPLE OF ANTENNA GROUNDING

ANTENNA LEAD IN WIRE

GROUND CLAMP

ANTENNA DISCHARGE UNIT (NEC SECTION 810-20)

ELECTRIC SERVICE EQUIPMENT

GROUNDING CONDUCTORS (NEC SECTION 810-21)

GROUND CLAMPS

POWER SERVICE GROUNDING ELECTRODE SYSTEM (NEC ART 250, PART H)

NEC — NATIONAL ELECTRICAL CODE

• Do not attempt to service the TV yourself. Refer all servicing to qualified service personnel. Unplug the unit from the wall outlet and refer servicing to qualified service personnel under the following conditions:
 - when the power-supply cord or plug is damaged
 - if liquid has been spilled on the unit or if objects have fallen into the unit
 - if the TV has been exposed to rain or water
 - if the TV does not operate normally by following the operating instructions
 - if the TV has been dropped or the cabinet has been damaged
 - when the TV exhibits a distinct change in performance

• If you make adjustments yourself, adjust only those controls that are covered by the operating instructions. Adjusting other controls may result in damage and will often require extensive work by a qualified technician to restore the TV to normal.

• When replacement parts are required, be sure the service technician uses replacement parts specified by the manufacturer or those that have the same characteristics as the original part. Unauthorized substitutions may result in additional damage to the unit.

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

• Keep all power adaptors apart.
  Possible fire hazard.

• Keep the power adaptor away from any other heater.
  Possible fire hazard.

• Remove and discard the plastic cover from the power adaptor before use.
  Possible fire hazard.

• Always keep the power adaptor in a well-ventilated area.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) This device may not cause harmful interference, and
(2) This device must accept any interference that may cause undesired operation.

This television receiver provides display of television closed captioning in accordance with §15.119 of the FCC rules.

2

C ONTENTS

C ONTENTS

Chapter 1

YOUR NEW TV

List of Features

Your TV was designed with the latest technology.
This TV is a high-performance unit that includes the following special features:

• Easy-to-use remote control

• Easy-to-use on-screen menu system

• Adjustable picture and sound settings that can be stored in the TV's memory

• Automatic channel tuning for up to 181 channels

• A special filter to reduce or eliminate reception problems

• Fine tuning control for the sharpest picture possible

• A built-in multi-channel sound decoder for stereo and bilingual listening

• Built-in, dual channel speakers

• A special sleep timer

• Headphone jack for private listening

Accessories

Please make sure the following items are included with your LCD TV.
If any items are missing, contact your dealer.

Remote Control (BN59-00302A) &
Batteries (AAA x 2) (4301-000121)

Owner's Instructions

DC Adapter
(15": BN44-00080A
BN44-00071A
17" : BN44-00075A)

15-pin D-Sub Signal Cable
(BN39-00043A)

Power Cord
(BH39-10339X)

Warranty Card
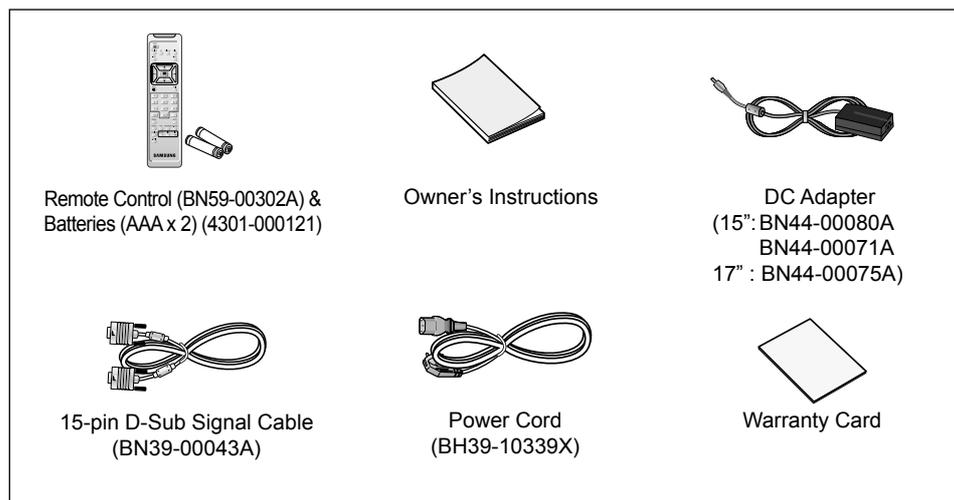
Familiarizing Yourself with The TV

Top Panel Buttons

The buttons on the top panel control your TV's basic features, including the on-screen menu.
To use the more advanced features, you must use the remote control.
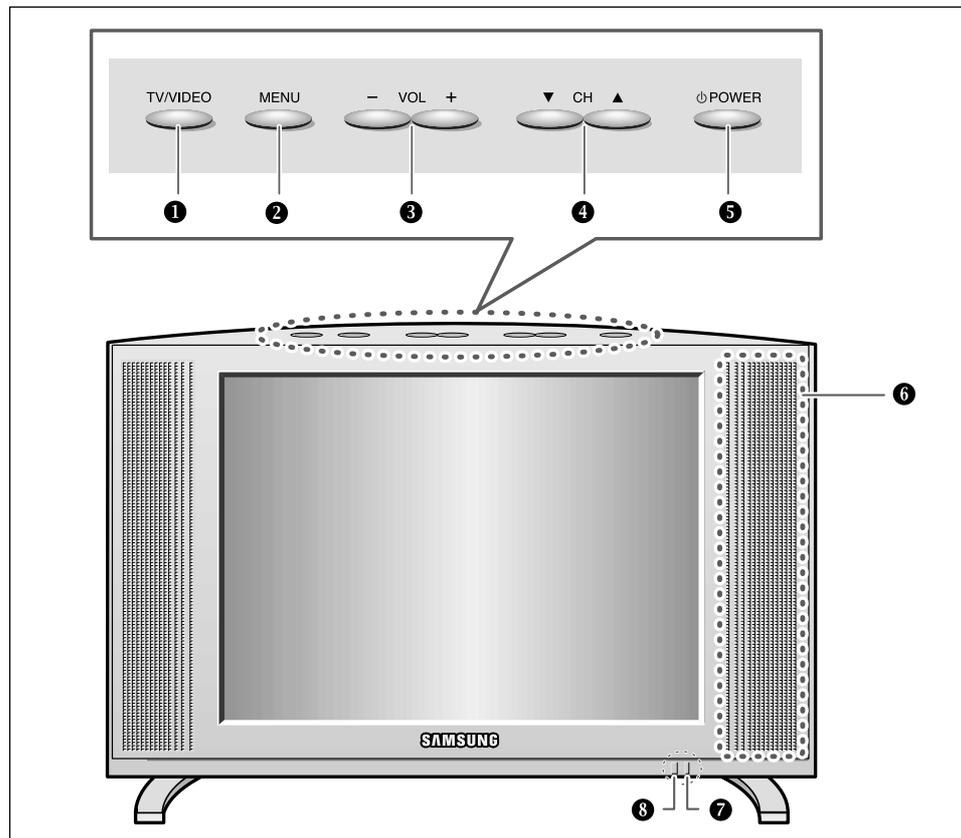
❶ **TV/VIDEO**
Press to display all of the available
video sources.

❷ **MENU**
Press to see an on-screen menu of
your TV's features.

❸ **- VOL +**
Press to increase or decrease the volume.
Also used to select items on the
on-screen menu.

❹ **▼CH▲**
Press to increase or decrease the
channel number.
Also press to highlight various items
on the on-screen menu.

❺ ⏻ **POWER**
Press to turn the TV on and off.

❻ **SPEAKER**

❼ **INDICATOR**
Green: Normal operation.
Green, Blinking: Disconnected signal cable.

❽ **REMOTE CONTROL SENSOR**
Aim the remote control towards
this spot on the TV.

1.2

YOUR NEW TV

Rear Panel Jacks

Use the rear panel jacks to connect an A/V component, such as a VCR or a DVD player.

For more information on connecting equipment, see pages 2.1 – 2.8.
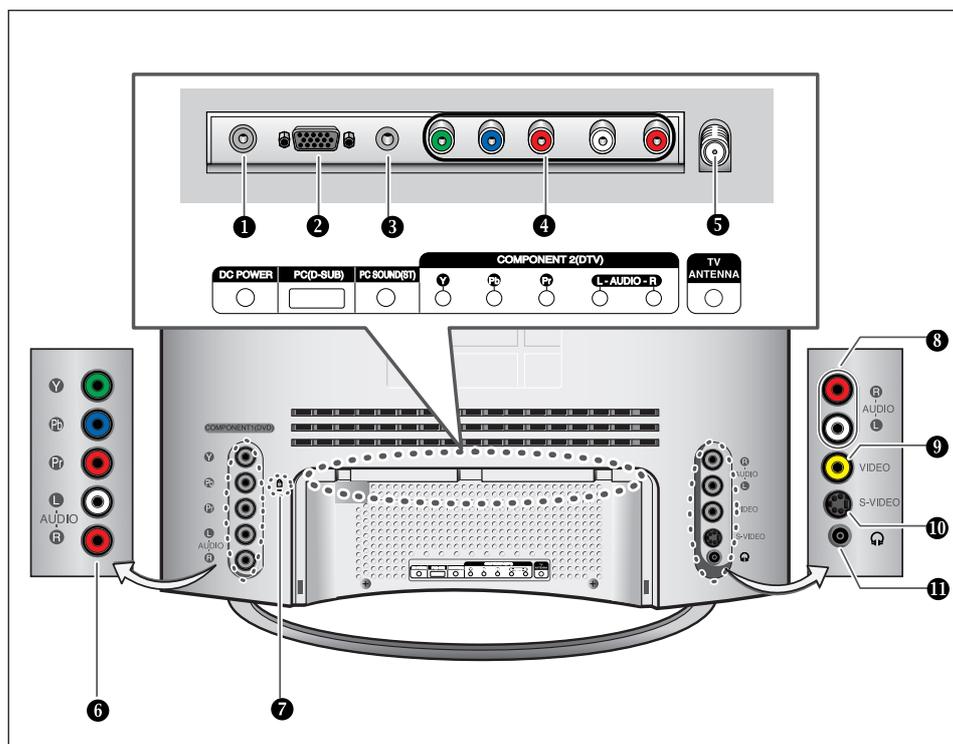
❶ **POWER INPUT CONNECTOR**

❷ **PC VIDEO INPUT**
Connect to the video output port on your PC.

❸ **PC AUDIO INPUT**
Connect to the audio-output jacks on your PC.

❹ **COMPONENT 2(DTV)**
Connect a component video/audio from a Set-Top Box.

❺ **TV ANTENNA**
Connect to an antenna or to a cable TV system.

❻ **COMPONENT 1(DVD)**
Connect a component video/audio from a DVD player.

❼ **KENSINGTON LOCK**
(See page A.1)

❽ **AUDIO INPUT**
Connect audio signal(L/R) from a camcorder or VCR.

❾ **VIDEO INPUT**
Connect a video signal from a camcorder or VCR.

❿ **SUPER VIDEO INPUT**
Connect an S-Video signal from a camcorder or VCR.

⓫ **HEADPHONE**
Connect a set of external headphones to this jack for private listening.

1.3

Yᴏᴜʀ Nᴇᴡ TV

Remote Control

You can use the remote control up to about 23 feet from the TV
When using the remote, always point it directly at the TV.

❶ **Power** (Page 3.1)
Turns the TV on and off.

❷ **TV/VIDEO** (Page 3.11)
Press to display all of the
available video sources.

❸ **P.STD** (Page 3.8)
Adjust the TV picture by
selecting one of the preset
factory settings (or select your
personal, customized picture
settings).

❹ **PC** (Page 5.1)
Press to switch to the PC mode.

❺ **MENU**
Displays the main on-screen
menu.
– VOL / VOL +
Press to increase or decrease
the volume. (Also used to
make selections on the
on-screen menus.)
CH ▲ / CH ▼
(Channel Up/Down)
Press CH▲ or CH▼ to change
channels. (Also used to
highlight selections on the
on-screen menus.)

❻ **MUTE** (Page 3.6)
Press to temporarily cut off
the sound.

❼ **NUMBER BUTTONS**
Press to select channels
directly on the TV.

❽ **+100** (Page 3.5)
Press to select channels over 100.
For example, to select channel
121, press "+100," then press
"2" and "1."

❾ **SLEEP** (Page 4.6)
Press to select a preset time
interval for automatic shutoff.

❿ **ASPECT** (Page 4.3)
Press to change the screen size.

⓫ **MTS** (Page 4.4)
(Multichannel Television Stereo)
Press to choose stereo,
mono or Separate Audio
Program (SAP broadcast).

⓬ **CAPTION** (Page 4.7)
Press to set caption on/off.

⓭ **V.CHIP** (Page 4.10~4.14)
Press to set up and activate
the parental locks.

⓮ **STILL** (Page 4.3)
Press to stop the action during a
particular scene. Press again to
resume normal video.
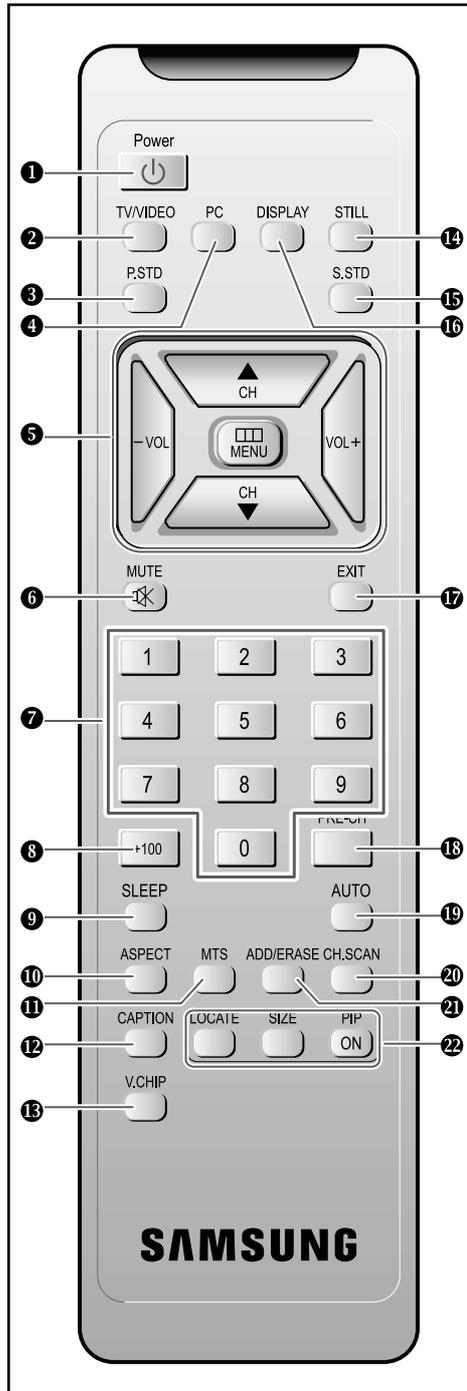
⓯ **S.STD** (Page 3.10)
Adjust the TV sound by selecting
one of the preset factory settings
(or select your personal,
customized sound settings).

⓰ **DISPLAY** (Page 3.1)
Press to display the current
channel and the audio-video
settings.

⓱ **EXIT**
Press the menu to exit.
When the PIP is active, press
the Exit button to turn PIP off.

⓲ **PRE-CH** (Page 3.5)
Tunes to the previous channel.

⓳ **AUTO** (Page 5.8)
Press to self-adjust to the
incoming video signal.
The values of fine, coarse and
position are adjusted
automatically.
(It does work only in PC mode.)
It works only in PC full- screen
mode. It does not work when the
PIP is active.

⓴ **CH.SCAN** (Page 3.3)
Press to memorize (scan) the
available channels.

㉑ **ADD/ERASE** (Page 3.5)
Press to add or erase channels
in the TV's memory.
It works only in PC full- screen
mode. It does not work when the
PIP is active.

㉒ **PIP CONTROLS**
(Page 4.8~4.9)
LOCATE
Press to move the PIP window
to any of the four corners of the
TV screen.
SIZE
Press to make the PIP window
double, large or small.
PIP ON
Activates picture in picture
window directly in PC mode.
. . . .
It is available in PC mode only
It does not work on other screen.

To switch the PIP source:
PC+ ant -> PC+ Video ->
PC+ S- Video.

If the PIP is active, the sound
of PC mode is switched to the
sound of the PIP screen.

To turn PIP off, press the
Exit button.

Remote control layout

Power ❶

TV/VIDEO ❷   PC   DISPLAY   STILL ⓮

P.STD ❸   S.STD ⓯
❹   ⓰

CH ▲
– VOL   MENU   VOL + ❺
CH ▼

MUTE ❻   EXIT ⓱

1   2   3
4   5   6   ❼
7   8   9

+100 ❽   0   PRE-CH ⓲

SLEEP ❾   AUTO ⓳

ASPECT ❿   MTS   ADD/ERASE   CH.SCAN ⓴
⓫   ㉑
CAPTION ⓬   LOCATE   SIZE   PIP
ON   ㉒
V.CHIP ⓭

SAMSUNG

Chapter 2

INSTALLATION

Connecting VHF and UHF Antennas

If your antenna has a set of leads that look like this, see "Antennas with 300-ohm Flat Twin Leads," below.
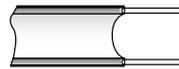
If your antenna has one lead that looks like this, see "Antennas with 75-ohm Round Leads," on page 2.2.

If you have two antennas, see "Separate VHF and UHF Antennas," on page 2.2.

Antennas with 300-ohm Flat Twin Leads

If you are using an off-air antenna (such as a roof antenna or "rabbit ears") that has 300-ohm twin flat leads, follow the directions below.

1

Place the wires from the twin leads under the screws on a 300-75 ohm adaptor (not supplied). Use a screwdriver to tighten the screws.
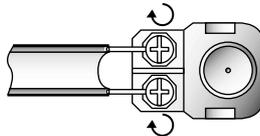
2

Plug the adaptor into the TV ANTENNA terminal on the bottom of the back panel.
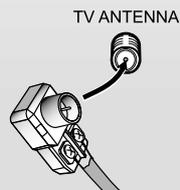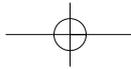
TV ANTENNA

INSTALLATION

Antennas with 75-ohm Round Leads

1

Plug the antenna lead
into the TV ANTENNA
terminal on the bottom
of the back panel.
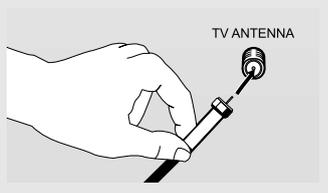
TV ANTENNA

Separate VHF and UHF Antennas

If you have two separate antennas for your TV (one VHF and one UHF), you must
combine the two antenna signals before connecting the antennas to the TV.
This procedure requires an optional combiner-adaptor (available at most electronics shops).

1

Connect both antenna
leads to the combiner.

UHF
VHF
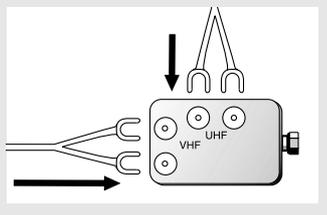
2

Plug the combiner into
the TV ANTENNA
terminal on the bottom
of the rear panel.

UHF
VHF
TV ANTENNA
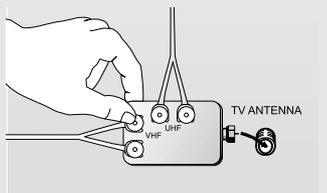
Connecting Cable TV

To connect to a cable TV system, follow the instructions below.

Cable without a Cable Box

1

Plug the incoming cable
into the TV ANTENNA
antenna terminal on
back of the TV.
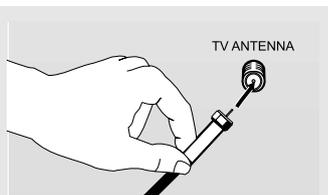
TV ANTENNA

◄ Because this TV is
cable-ready, you do not need a
cable box to view unscrambled
cable channels.

2.2

INSTALLATION

Connecting to a Cable Box that Descrambles <u>All</u> Channels

1

Find the cable that is connected to the ANTENNA OUT terminal on your cable box.

ANTENNA IN   ANTENNA OUT
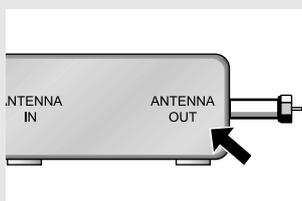
◄ This terminal might be labeled "ANT OUT," "VHF OUT," or simply, "OUT.".

2

Connect the other end of this cable to the TV ANTENNA terminal on the back of the TV.

TV ANTENNA
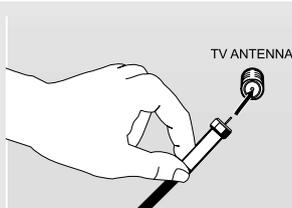
Connecting to a Cable Box that Descrambles Some Channels

If your cable box descrambles only some channels (such as premium channels), follow the instructions below. You will need a two-way splitter, an RF (A/B) switch, and four lengths of coaxial cable. (These items are available at most electronics stores.)

1

Find and disconnect the cable that is connected to the ANTENNA IN terminal on your cable box.

ANTENNA IN   ANT O
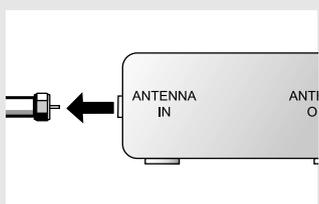
◄ This terminal might be labeled "ANT IN," "VHF IN," or simply, "IN.".

2

Connect this cable to a two-way splitter.

Incoming cable   Splitter

3
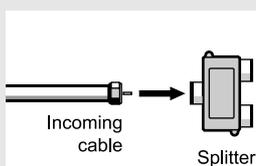
Connect a coaxial cable between an OUTPUT terminal on the splitter and the IN terminal on the cable box.

Incoming cable   Splitter   IN CABLE OUT   Cable Box

2.3
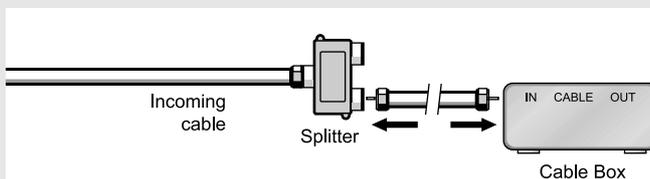
INSTALLATION

4

Connect a coaxial
cable between the
ANTENNA OUT
terminal on the cable box
and the B–IN terminal
on the A/B switch.

Incoming cable   Splitter   IN CABLE OUT   Cable Box   RF(A/B) Switch
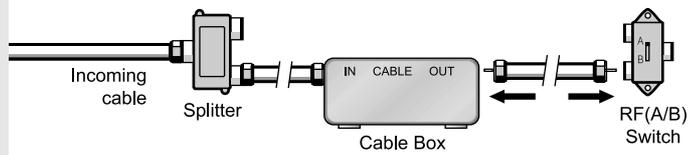
5

Connect another cable
between the other
OUT terminal on the
splitter and the A–IN
terminal on the RF (A/B)
switch.

Incoming cable   Splitter   IN CABLE OUT   Cable Box   RF(A/B) Switch
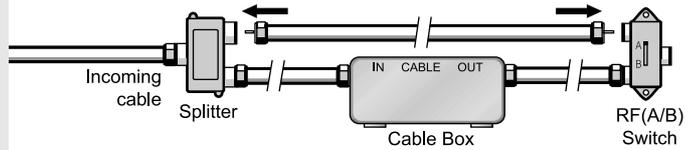
6

Connect the last coaxial
cable between the
OUT terminal on the
RF (A/B) switch and
the VHF/UHF terminal
on the rear of the TV.

Incoming cable   Splitter   IN CABLE OUT   Cable Box   RF(A/B) Switch   TV ANTENNA   TV REAR
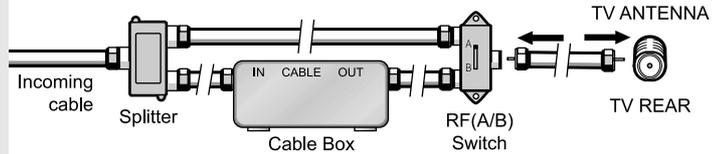
After you've made this connection, set the A/B switch to the "A" position for normal
viewing. Set the A/B switch to the "B" position to view scrambled channels.
(When you set the A/B switch to "B," you will need to tune your TV to the cable box's
output channel, which is usually channel 3 or 4.)

2.4

INSTALLATION

Connecting a VCR

These instructions assume that you have already connected your TV to an antenna or
a cable TV system (according to the instructions on pages 2.1-2.3).
Skip step 1 if you have not yet connected to an antenna or a cable system.

1

Unplug the cable or
antenna from the back
of the TV.
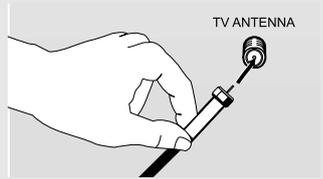
TV ANTENNA

2

Connect the cable or
antenna to the
ANTENNA IN terminal
on the back of the VCR.

VCR Rear Panel

Incoming
cable or
Antenna

3
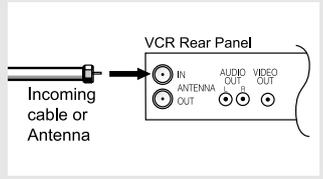
Connect a coaxial cable
between the ANTENNA
OUT terminal on the
VCR and the antenna
terminal on the TV.

VCR Rear Panel   TV Rear Panel

Pr   Audio(L)   Audio(R)
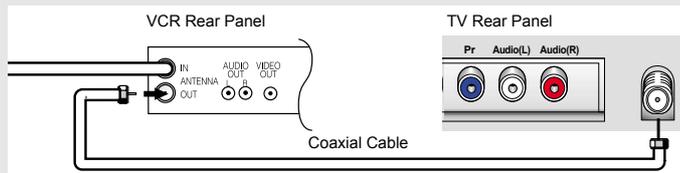
Coaxial Cable

A coaxial cable is usually included with a VCR.
(If not, check your local electronics store).

4

Connect a set of audio
cables between the
AUDIO OUT jacks on
the VCR and the AUDIO
jacks on the TV.

VCR Rear Panel   TV Rear Panel
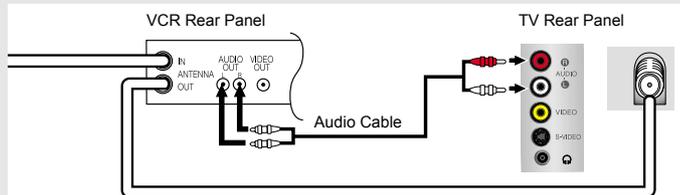
Audio Cable

If you have a "mono" (non-stereo) VCR, use the Y-connector (not supplied) to
hook up to the left and right audio input jacks of the TV.
If your VCR is stereo, you must connect two cables.

5

Connect a video cable
between the VIDEO
OUT jack on the VCR
and the VIDEO jack on
the TV.

VCR Rear Panel   TV Rear Panel

Video Cable
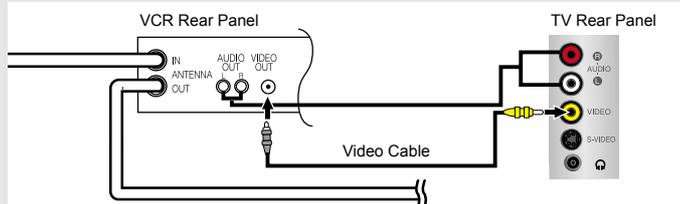
Follow the instructions in "Viewing a VCR or Camcorder Tape" to view your VCR tape.

INSTALLATION

Connecting an S-VHS VCR

Your Samsung TV can be connected to an S-Video signal from an S-VHS VCR.
(This connection delivers a better picture as compared to a standard VHS VCR.)

1

To begin, follow steps
1–3 in the previous
section to connect the
antenna or cable to your
VCR and your TV.
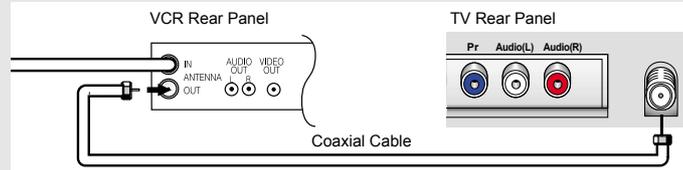
2

Connect a set of audio
cables between the
AUDIO OUT jacks on
the VCR and the AUDIO
INPUT jacks on the TV.
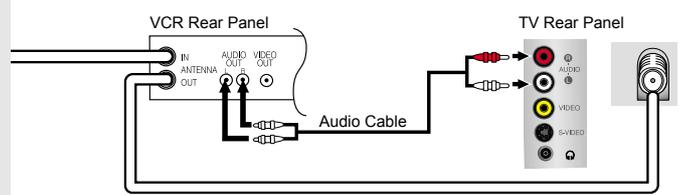
3

Connect an S-video cable
between the S-VIDEO
OUT jack on the VCR
and the S-VIDEO INPUT
jack on the TV.
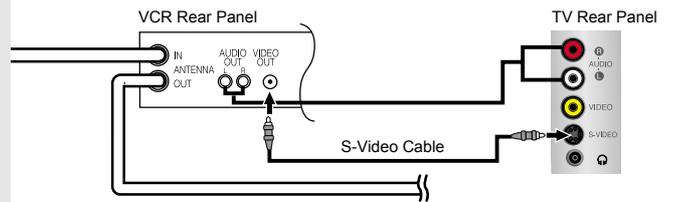
An S-Video cable is usually included with an S-VHS VCR.
(If not, check your local electronics store.)

INSTALLATION

Connecting a DVD Player

The rear panel jacks on your TV make it easy to connect a DVD player to your TV.

1

Connect a set of audio cables between the COMPONENT 1 L, R AUDIO INPUT jacks on the TV and the AUDIO OUT jacks on the DVD player.

2
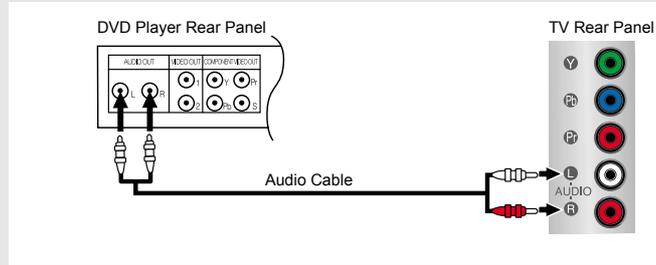
Connect a video cable between the COMPONENT1 (Y, Pb, Pr) jacks on the TV and the Y, Pb, Pr jacks on the DVD player.
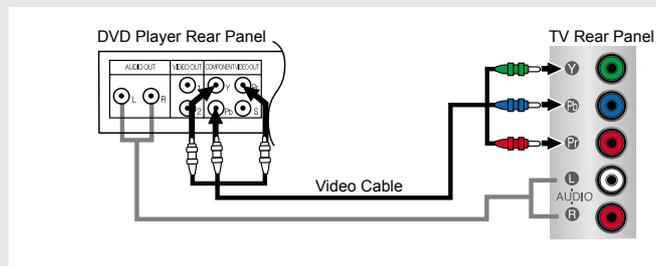
Note: For an explanation of Component video, see your DVD player owner's manual.

Connecting a Digital TV Set-Top Box

The connections for a typical set-top box are shown below.

1

Connect a set of audio cables between the L, R COMPONENT2 AUDIO INPUT jacks on the TV and the AUDIO OUT jacks on the Set-Top Box.

2
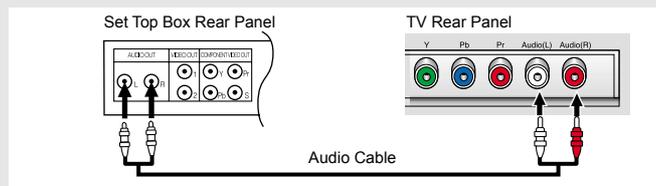
Connect a video cable between the COMPONENT2 (Y, Pb, Pr) jacks on the TV and the Y, Pb, Pr jacks on the Set-Top Box.
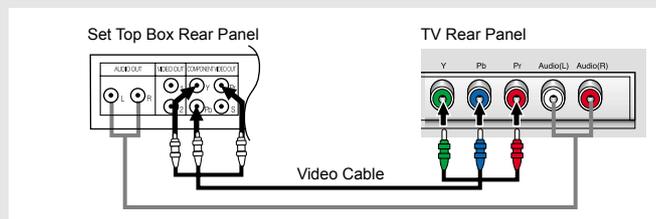
Note: For an explanation of Component video, see your Set-Top Box owner's manual.

2.7

INSTALLATION

Connecting a Camcorder

The jacks on your TV make it easy to connect a camcorder. They allow you to view the camcorder tapes without using a VCR.

1

Locate the A/V output jacks on the camcorder. They are usually found on the side or back of the camcorder.

Camcorder Output Jacks
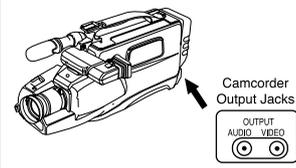
2

Connect an audio cable between the AUDIO OUTPUT jack on the camcorder and the AUDIO terminals on the back of the TV.

Camcorder Output Jacks

TV Rear Panel

Y-Connector
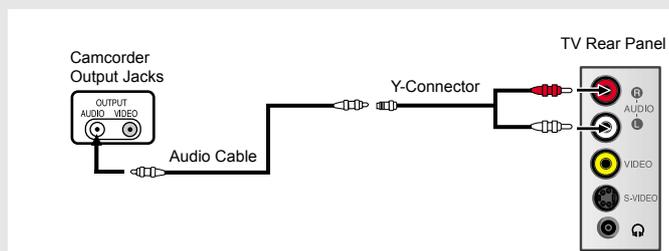
Audio Cable

3

Connect a video cable between the VIDEO OUTPUT jack on the camcorder and the VIDEO terminal on the back of the TV.

Camcorder Output Jacks

TV Rear Panel
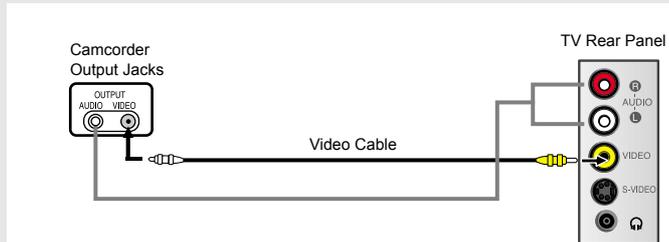
Video Cable

The audio-video cables shown here are usually included with a Camcorder.
(If not, check your local electronics store.) If your camcorder is stereo, you need to connect a set of two cables.

2.8

I NSTALLATION

Installing Batteries in the Remote Control

1

Slide the cover out completely.
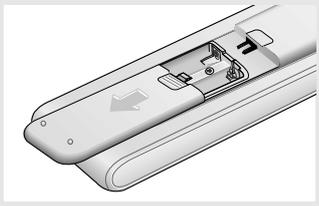
2

Install two AAA size batteries.
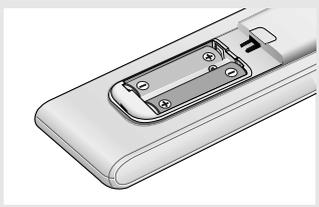
◄ Make sure to match the "+" and "−" ends of the batteries with the diagram inside the compartment.

3

Replace the cover.
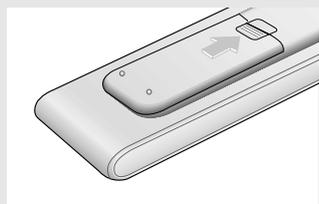
◄ Remove the batteries and store them in a cool, dry place if you won't be using the remote control for a long time.

The remote control can be used up to about 23 feet from the TV.

(Assuming typical TV usage, the batteries last for about one year.)

Chapter 3

OPERATION

Turning the TV On and Off

Press the **Power** button on the remote control.
You can also use the Power button on the top panel.

Viewing the Menus and On-Screen Displays

Viewing the Menus

1

With the power on, press the **MENU** button.

The main menu appears on the screen. Its left side has five icons: Picture, Sound, Channel, Function and PC.

Picture	
Mode	◄ Custom ►
●Contrast	
●Brightness	
●Sharpness	
●Color	
●Tint	
Color Tone	◄ Normal ►

◆ Move   ± Select   ▥ Exit
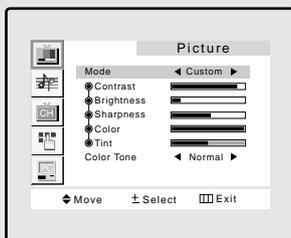
◄ The on-screen menus disappear from the screen after about thirty seconds.

2

Use the **CH▲** and **CH▼** buttons to select one of the 5 icons. Then press **VOL+** to access the icon's sub-menu.

3

Press the **MENU** button to exit the menu.

◄ You can also use the **Menu**, **CHANNEL**, and **VOLUME** buttons on the control panel of the TV to make selections.

Viewing the Display

The display identifies the current channel and the status of certain audio-video settings.

1

Press the **DISPLAY** button on the remote control.

The TV will display the channel, the type of sound, and the status of certain picture and sound settings.

Ant	4
Picture Mode	: Custom
Sound Mode	: Custom
MTS	: Stereo
Signal	: Mono
Caption	: Off
V-Chip	: No
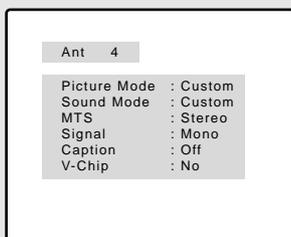
◄ The on-screen displays disappear after about ten seconds.

3.1

OPERATION

Selecting a Menu Language

1

Press the **MENU** button to display the menu.

Press the **CH▼** button to select "Function", then press the **VOL +** button.

```
                          Function
          Sleep timer      ◄   Off   ►
          PIP                        ►
          Caption                    ►
          V-Chip                     ►
          Size             ◄  Normal ►
          Language         ◄ English ►

        ♦ Move      ± Select      Ⅲ Exit
```

2
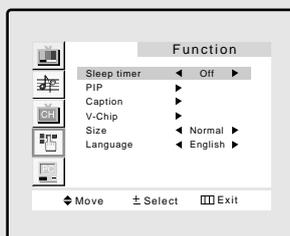
Press the **CH▼** button to select Language.

```
                          Function
          Sleep timer      ◄   Off   ►
          PIP                        ►
          Caption                    ►
          V-Chip                     ►
          Size             ◄  Normal ►
          Language         ◄ English ►

        ♦ Move      ± Select      Ⅲ Exit
```

3
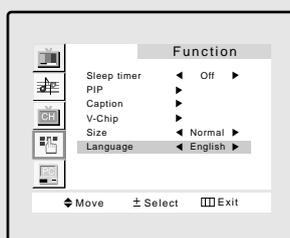
Press the **VOL +** button to select the appropriate language: English, Español, Français or Português.

4

Press the **MENU** button to exit the menu.

Memorizing the Channels

Your TV can memorize and store all of the available channels for both "off-air" (antenna) and cable channels. After the available channels are memorized, use the **CH▲** and **CH▼** buttons to scan through the channels. This eliminates the need to change channels by entering the channel digits. There are three steps for memorizing channels: selecting a broadcast source, memorizing the channels (automatic) and adding and deleting channels (manual).

Selecting the Video Signal-source

Before your television can begin memorizing the available channels, you must specify the type of signal source that is connected to the TV (i.e., an antenna or a cable system).

1

Press the **MENU** button to display the menu.

Press the **CH▼** button to select "Channel", then press the **VOL +** button.

	Channel
ANT/CATV	◄ ANT ►
Auto program	►
Fine tune	◄ 00 ►
Add/Erase	: Erased
LNA	: Off

‡ Move   ± Select   ▥ Exit
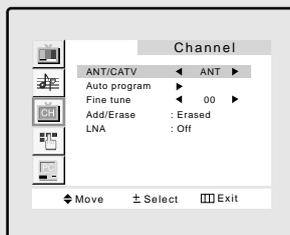
2

Repeatedly press the **VOL +** button to cycle through these choices: ANT (antenna), STD, HRC or IRC (all cable TV).

	Channel
ANT/CATV	◄ STD ►
Auto program	►
Fine tune	◄ 00 ►
Add/Erase	: Erased
LNA	: Off

‡ Move   ± Select   ▥ Exit
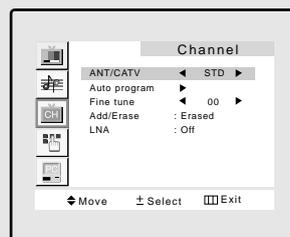
Note: STD, HRC and IRC identify various types of cable
        TV systems. Contact your local cable company to identify
        the type of cable system that exists in your particular area.

At this point the signal source has been selected.
Proceed to "Storing Channels in Memory" (next page).

OPERATION

Storing Channels in Memory (Automatic Method)

1

First, select the correct
signal source (ANT, STD,
HRC, IRC). See steps
1~2 on previous page.

Press the **MENU** button.

Press the **CH▼** button
to select "Channel", then
press the **VOL +** button.

Channel

ANT/CATV	◄ STD ►	
Auto program	►	
Fine tune	◄ 00 ►	
Add/Erase	: Erased	
LNA	: Off	

◆ Move   ± Select   ⊞ Exit

2
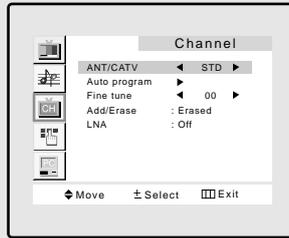
Press the **CH▼** button to
select "Auto program".

Channel

ANT/CATV	◄ ANT ►	
Auto program	►	
Fine tune	◄ 00 ►	
Add/Erase	: Erased	
LNA	: Off	

◆ Move   ± Select   ⊞ Exit

3
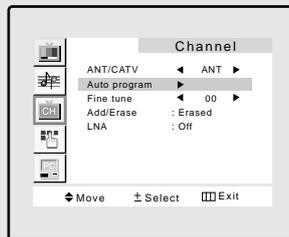
Press the **VOL +** button.
The TV will begin
memorizing all of the
available channels.

Auto program   ANT   30
                                        70%
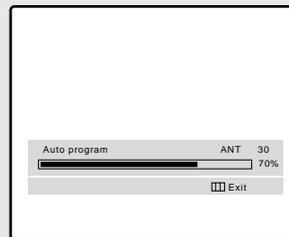
⊞ Exit

4

After all the available channels are stored, the Auto program
menu reappears. Press the **MENU** button to exit the menu.

◄ The TV automatically cycles
through all of the available
channels and stores them in
memory. This takes about one to
two minutes.

Press **VOL+** at any time to
interrupt the memorization
process and return to the
CHANNEL menu.

3.4

Adding and Erasing Channels (Manual Method)

1

Use the number buttons to directly select the channel that will be added or erased.

2

Press the **ADD/ERASE** button.
Repeatedly pressing this button will alternate between "Added" and "Erased."

You can view any channel (including an erased channel) by using the number buttons on the remote control.

Changing Channels

Using the Channel Buttons

1

Press the **CH▲** or **CH▼** buttons to change channels.

When you press the **CH▲** or **CH▼** buttons, the TV changes channels in sequence. You will see all the channels that the TV has memorized. (The TV must have memorized at least three channels.) You will not see channels that were either erased or not memorized.

Directly Accessing Channels

Use the number buttons to quickly tune to any channel.

1

Press the number buttons to go directly to a channel.
For example, to select channel 27, press "2,"then "7." The TV will change channels when you press the second number.

When you use the number buttons, you can directly select channels that were either erased or not memorized.

To select a channel over 100, press the +100 button.
(For channel 122, press "+100," then "2," then "2.")

To change to single-digit channels (0–9) faster, press "0" before the single digit. (For channel "4," press "0," then "4.")

Using the Pre-CH Button to select the Previous Channel

1

Press the **PRE-CH** button.
The TV will switch to the last channel viewed.

To quickly switch between two channels that are far apart, tune to one channel, then use the number button to select the second channel.
Then, use the PRE-CH button to quickly alternate between them.

Adjusting the Volume

1
Press the **- VOL** or **VOL +** buttons to increase or decrease the volume.

Using Mute

At any time, you can temporarily cut off the sound using the Mute button.

1
Press **MUTE** and the sound cuts off.

The icon " "(Mute) will appear in the lower-right corner of the screen.

2
To turn mute off, press the **MUTE** button again, or simply
press either the **- VOL** or **VOL +** button.

Customizing the Picture

You can use the on-screen menus to change the contrast, brightness, sharpness, color, tint and color tone according to personal preference.
(Alternatively, you can use one of the "automatic" settings. See next page.)

1

Press the **MENU** button to display the menu.

Press the **VOL +** button to display the Picture menu.

| Picture |
Mode	◄ Custom ►
⦿ Contrast	
⦿ Brightness	
⦿ Sharpness	
⦿ Color	
⦿ Tint	
Color Tone	◄ Normal ►
⬍ Move   ± Select   ▥ Exit

2
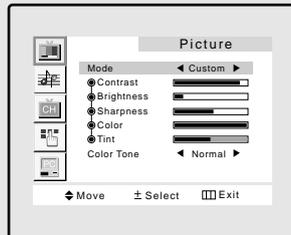
Press the **CH▼** or **CH▲** buttons to select a particular item.

| Picture |
Mode	◄ Custom ►
⦿ Contrast	
⦿ Brightness	
⦿ Sharpness	
⦿ Color	
⦿ Tint	
Color Tone	◄ Normal ►
⬍ Move   ± Ajust   ▥ Exit
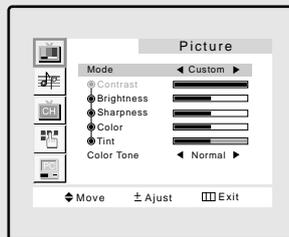
◄ When Color Tone is selected, you can choose between "Normal", "Warm 1, 2", or "Cool 2,1 " according to personal preference.

3

Press the **- VOL** or **VOL +** buttons to increase or decrease the value of a particular item. For example, if you select "Contrast," pressing **VOL +** increases it.

Press the **MENU** button to exit the menu.

| Contrast | |
| ▭▬▬▬▬▭ | 50 |
| ⬍ Move   ± Adjust   ▥ Exit |
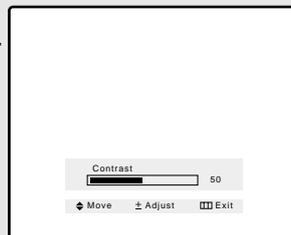
Note : When in Component 1 or Component 2 mode, only Contrast, Brightness and Color can be operated.

3.7

Using Automatic Picture Settings

Your TV has four automatic picture settings ("Dynamic", "Standard", "Movie" and "Custom") that are preset at the factory. You can activate either Dynamic, Standard or Movie by pressing P.STD (or by making a selection from the menu). Or, you can select "Custom" which automatically recalls your personalized picture settings.

Note: This function operates only in the TV, Video and S-Video modes.

1

Press the **MENU** button to display the menu.

Press the **VOL +** button to display the Picture menu.

	Picture
Mode	◄ Custom ►
⊙ Contrast	
⊙ Brightness	
⊙ Sharpness	
⊙ Color	
⊙ Tint	
Color Tone	◄ Normal ►

‡ Move   ± Select   ▥ Exit

2
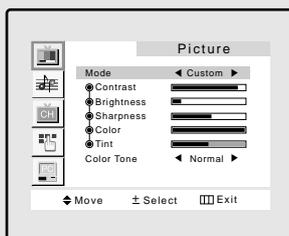
Press the **- VOL** or **VOL +** buttons to select the "Dynamic", "Standard", "Movie" or "Custom" picture setting.

	Picture
Mode	◄ Standard►
⊙ Contrast	
⊙ Brightness	
⊙ Sharpness	
⊙ Color	
⊙ Tint	
Color Tone	◄ Normal ►

‡ Move   ± Select   ▥ Exit
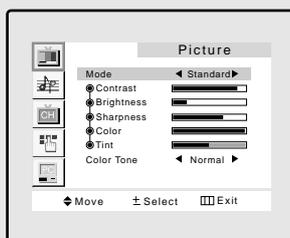
Alternate method:

Simply press the **P.STD** button on the remote control to select one of the standard picture settings.

- Choose *Dynamic* for viewing the TV during the day or when there is brightlight in the room.
- Choose *Standard* for the standard factory settings.
- Choose *Movie* when viewing the movie.
- Choose *Custom* if you want to adjust the settings accordings to personal preference (see "Customizing the Picture, page 3.7).

Customizing the Sound

The sound settings can be adjusted to suit your personal preference.
(Alternatively, you can use one of the "automatic" settings. See next page.)

1

Press the **MENU** button to
display the menu.

Press the **CH▼** button to
select "Sound", then
press the **VOL+** button.

Sound

Mode	◄ Custom ►
⦿ Bass	
⦿ Treble	
Virtual Dolby	: Off
MTS	◄ Stereo ►

‡ Move   ± Select   ▥ Exit

2
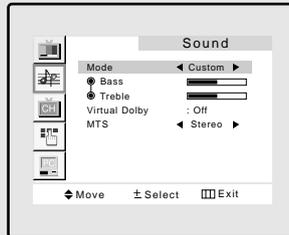
Press the **CH▲** or **CH▼**
button to select a
particular item to be
changed.

Sound

Mode	◄ Custom ►
● Bass	
⦿ Treble	
Virtual Dolby	: Off
MTS	◄ Stereo ►

‡ Move   ± Select   ▥ Exit

3
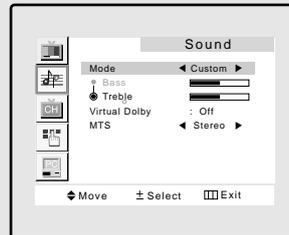
Press the **- VOL** or **VOL +**
button to increase or
decrease the value of a
particular item.

Press the **MENU** button
to exit the menu.

Bass

50

‡ Move   ± Adjust   ▥ Exit

3.9
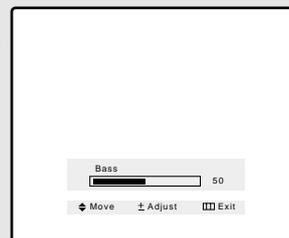
Using Automatic Sound Settings

Your TV has four automatic sound settings ("Standard," "Music," "Movie" and "Speech")
that are preset at the factory. You can activate any of them by pressing the S.STD
button (or by making a selection from the on-screen menu).

1

Press the **MENU** button to
display the menu.

Press the **CH▼** button to
select "Sound", then
press the **VOL+** button.

	Sound
Mode	◄ Custom ►
◉ Bass	
◉ Treble	
Virtual Dolby	: Off
MTS	◄ Stereo ►

♦ Move   ± Select   Exit

2
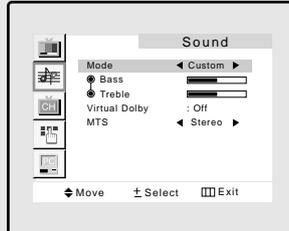
Press the **- VOL** or **VOL +**
buttons repeatedly to
select the "Standard,"
"Music," "Movie,"
"Speech" or "Custom"
sound setting.

	Sound
Mode	◄Standard ►
◉ Bass	
◉ Treble	
Virtual Dolby	: Off
MTS	◄ Stereo ►

♦ Move   ± Select   Exit
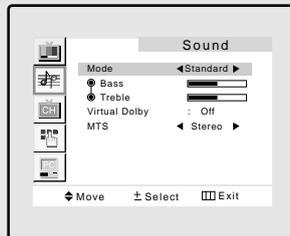
Alternate method:
Simply press the the **S.STD** button on the remote control
to select one of the standard sound settings.

* Choose *Standard* for the standard factory settings.
* Choose *Music* when watching music videos or concerts.
* Choose *Movie* when watching movies.
* Choose *Speech* when watching a show that is mostly dialogue (i.e., news).
* Choose *Custom* to recall your personalized settings.
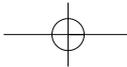
Viewing an External Signal Source

You must select the appropriate mode in order to view the external signal on the TV.

Press the **TV/VIDEO** button.
You will switch between viewing the signals coming from equipment connected to the TV's A/V jacks, and the TV signal.

Video
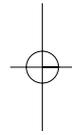
Chapter 4

SPECIAL FEATURES

Fine Tuning Channels

Use fine tuning to manually adjust a particular channel for optimal reception.

1

Select the appropriate channel.

2

Press the **MENU** button to display the menu.

Press the **CH▼** button to select "Channel", then press the **VOL +** button.

	Channel	
ANT/CATV	◄ ANT ►	
Auto program	►	
Fine tune	◄ 00 ►	
Add/Erase	: Erased	
LNA	: Off	

◆ Move   ± Select   Exit

3
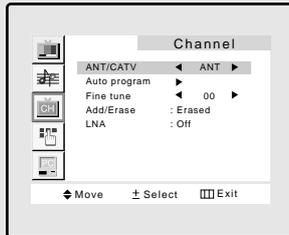
Press the **CH▼** button to select "Fine tune."

	Channel	
ANT/CATV	◄ ANT ►	
Auto program	►	
Fine tune	◄ 00 ►	
Add/Erase	: Erased	
LNA	: Off	

◆ Move   ± Select   Exit

4

Press the **VOL +** and **VOL -** buttons to adjust the fine tuning.

	Channel	
ANT/CATV	◄ ANT ►	
Auto program	►	
Fine tune	◄ +03 ►	
Add/Erase	: Erased	
LNA	: Off	

◆ Move   ± Select   Exit

5

To store the fine tuning setting in the TV's memory, press the **CH▲** button.
(A heart icon will appear.)

To reset the fine tuning to "00,"press the **CH▼** button.

Press the **MENU** button to exit the menu.

	Channel	
ANT/CATV	◄ ANT ►	
Auto program	►	
Fine tune	◄ +03 ♥ ►	
Add/Erase	: Erased	
LNA	: Off	

◆ Move   ± Select   Exit
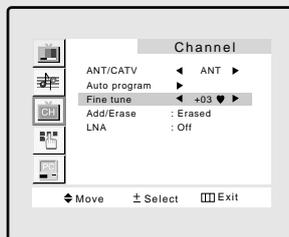
◄ After you adjust the fine tuning, the "heart icon" will appear when you press Display while watching this channel.

4.1

LNA (Low Noise Amplifier)

If the TV is operating in a weak-signal area, sometimes the LNA function can improve
the reception (a low-noise preamplifier boosts the incoming signal).

1

Press the **MENU** button
to display the menu.

Press the **CH ▼** button
to select "Channel",
then press the **VOL +**
button.

```
                        Channel
        ANT/CATV      ◄   ANT  ►
        Auto program  ►
        Fine tune     ◄   00   ►
        Add/Erase     : Erased
        LNA           : Off

        ◆ Move    ± Select    ▥ Exit
```

2

Press the **CH▼** button
to select "LNA."

```
                        Channel
        ANT/CATV      ◄   ANT  ►
        Auto program  ►
        Fine tune     ◄   00   ►
        Add/Erase     : Erased
        LNA           : Off

        ◆ Move    ± Select    ▥ Exit
```

3
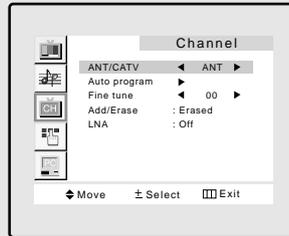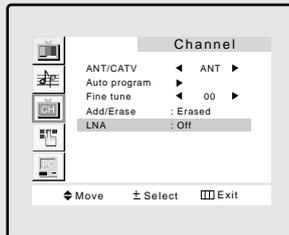
Press the **- VOL** or **VOL +**
button to set LNA "On."

Press the **MENU** button
to exit the menu.

```
                        Channel
        ANT/CATV      ◄   ANT  ►
        Auto program  ►
        Fine tune     ◄   00   ►
        Add/Erase     : Erased
        LNA           : On

        ◆ Move    ± Select    ▥ Exit
```
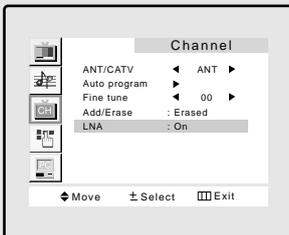
◄ Pressing **- VOL or VOL** + will
alternate between "On" and "Off."

4.2

Changing the Screen Size

For 480i(DVD, DTV) and TV, Video, S-Video

1

Press the **ASPECT** button to change the screen size.
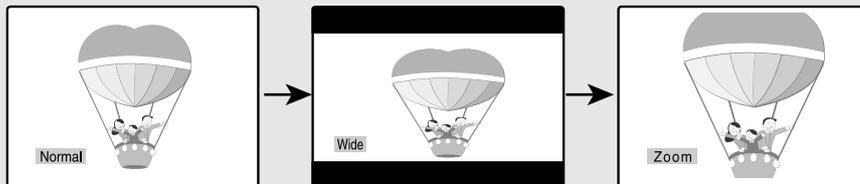
- Normal: Sets the picture to 4:3 normal mode.
  This is a standard TV screen size.
- Wide: Sets the picture to 16:9 wide mode.
- Zoom: Magnifies the size of the picture on screen.

For the DTV and the DVD(480p)

1

Press the **ASPECT** button to change the screen size.
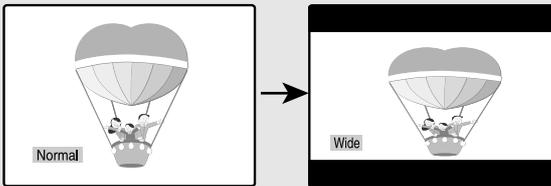
- Normal: Sets the picture to 4:3 normal mode.
  This is a standard TV screen size.
- Wide: Sets the picture to 16:9 wide mode.

Freezing the Picture

1

Press the **STILL** button to freeze the main picture.
• Not available if V-Chip is turned on.
• Normal sound will still be heard.
Press again to cancel.

4.3

Special Sound Options

Choosing a Multi-Channel Sound (MTS) Soundtrack

Depending on the particular program being broadcast, you can listen to stereo, mono, or a Separate Audio Program. (SAP audio is usually a foreign-language translation. Sometimes SAP has unrelated information like news or weather.)

1
Press the **MENU** button to display the menu.

Press the **CH▼** button to select "Sound", then press the **VOL +** button.

```
                    Sound
Mode            ◄ Custom ►
  Bass          ▮▮▮▮▯▯
  Treble        ▮▮▮▮▮▯
Virtual Dolby   : Off
MTS             ◄ Stereo ►

  ⬍ Move     ± Select     Exit
```
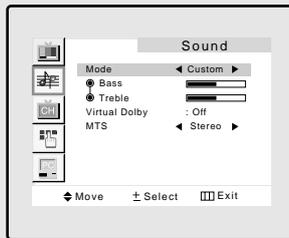
2
Press the **CH▼** button four times to select "MTS".

```
                    Sound
Mode            ◄ Custom ►
  Bass          ▮▮▮▮▯▯
  Treble        ▮▮▮▮▮▯
Virtual Dolby   : Off
MTS             ◄ Stereo ►

  ⬍ Move     ± Select     Exit
```

3
Press the **VOL +** button repeatedly to select "Mono," "SAP," or "Stereo."

Press the **MENU** button to exit the menu

```
                    Sound
Mode            ◄ Custom ►
  Bass          ▮▮▮▮▯▯
  Treble        ▮▮▮▮▮▯
Virtual Dolby   : Off
MTS             ◄ SAP ►

  ⬍ Move     ± Select     Exit
```

◄ The text at the bottom of the menu tells you if the incoming audio is stereo, SAP, or mono.

- Choose *Stereo* for channels that are broadcasting in stereo.
- Choose *Mono* for channels that are broadcasting in mono, or if you are having difficulty receiving a stereo signal.
- Choose *SAP* to listen to the Separate Audio Program, which is usually a foreign-language translation.

You can also change the MTS setting by pressing the "MTS" button on the remote control. (When you change channels, MTS is set to "Stereo" automatically. To listen in 'SAP' or 'Mono,' change the MTS setting.)

S PECIAL F EATURES

Virtual Dolby

This feature allows the TV's L/R speakers to provide a home Theater-like Virtual Dolby effect.
The center and surround sounds are mixed into the L/R speakers.
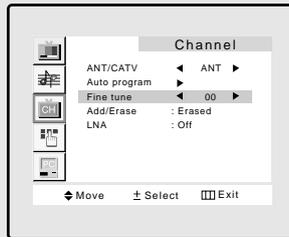
1

Press the **MENU** button
to display the menu.

Press the **CH▼** button to
select "Sound", then press
the **VOL +** button

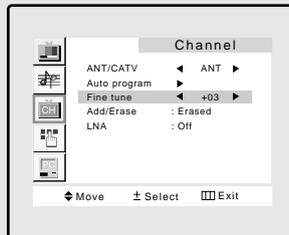|	Sound
Mode	◄ Custom ►
⦿ Bass	
⦿ Treble	
Virtual Dolby	: Off
MTS	◄ Stereo ►

‡ Move   ± Select   Exit

2
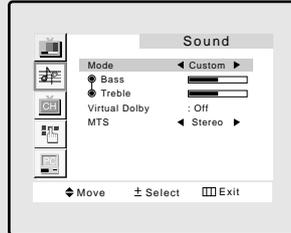
Press the **CH▼** button to
select "Virtual Dolby".

	Sound
Mode	◄ Custom ►
⦿ Bass	
⦿ Treble	
Virtual Dolby	: Off
MTS	◄ Stereo ►

‡ Move   ± Select   Exit

3

Press the **VOL +** button
to select "On".

Press the **MENU** button
to exit the menu.

	Sound
Mode	◄ Custom ►
⦿ Bass	
⦿ Treble	
Virtual Dolby	: On
MTS	◄ Stereo ►

‡ Move   ± Select   Exit

4.5
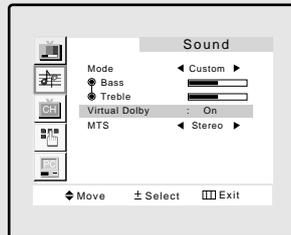
Setting the Sleep Timer

The sleep timer automatically shuts off the TV after a preset time (from 10 to 240 minutes).

1

Press the **MENU** button to display the on-screen menu.

Press the **CH▼** button three times to select "Function", then press the **VOL +** button.

	Function		
Sleep timer	◄	Off	►
PIP			►
Caption			►
V-Chip			►
Size	◄	Normal	►
Language	◄	English	►

◆ Move   ± Select   Exit
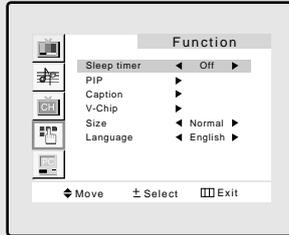
◄ Quick way to access the Sleep timer :
Simply press the SLEEP button on the remote control.

2

Press **VOL +** repeatedly until the appropriate time interval appears (any of the preset values from "Off" to "240").

	Function		
Sleep timer	◄	30	►
PIP			►
Caption			►
V-Chip			►
Size	◄	Normal	►
Language	◄	English	►

◆ Move   ± Select   Exit
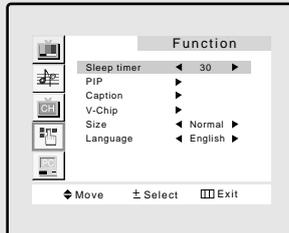
Viewing Closed Captions

Your TV decodes and displays the closed captions that are broadcast with certain TV shows. These captions are usually subtitles for the hearing impaired or foreign-language translations. All VCRs record the closed caption signal from television programs, so home-recorded video tapes also provide closed captions. Most pre-recorded commercial video tapes provide closed captions as well. Check for the closed caption symbol in your television schedule and on the tape's packaging: CC .

Note: The Caption feature does not work with DVD or DTV signals.

1

Press the **MENU** button to display the menu.

Press the **CH▼** button to select "Function", then press the **VOL+** button.

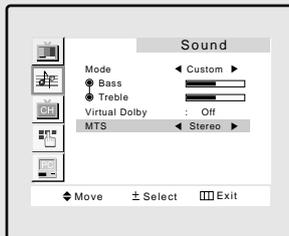| Function		
Sleep timer	◀ Off ▶	
PIP	▶	
Caption	▶	
V-Chip	▶	
Size	◀ Normal ▶	
Language	◀ English ▶	

‡ Move ± Select Exit

2
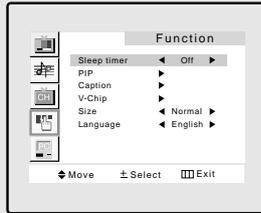
Press the **CH▼** button to select "Caption", then press the **VOL+** button.

Function		
Sleep timer	◀ Off ▶	
PIP	▶	
Caption	▶	
V-Chip	▶	
Size	◀ Normal ▶	
Language	◀ English ▶	

‡ Move ± Select Exit

3

Press the **- VOL** or **VOL+** buttons to turn closed captioning on/off.

Function		
Caption	:	On
Mode		Caption
Channel		1
Field		1

‡ Move ± Select Exit

4

Press the **CH▼** button to select "Mode."

Press the **- VOL** or **VOL+** buttons to select "Caption" or "Text."

Function		
Caption	:	On
Mode		Text
Channel		1
Field		1

‡ Move ± Select Exit
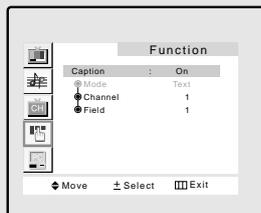
5

Depending on the particular broadcast, it might be necessary to make changes to "Channels" and "Field":
Use the **CH▲, CH▼, - VOL** and **VOL +** buttons to make the changes. (Follow the same procedure as in steps 3~4 above.)
Press the **MENU** button to exit the menu.

◀ Different channels and fields display different information: Field 2 carries additional information that supplements the information in Field 1.
(For example, Channel 1 may have subtitles in English, while Channel 2 has subtitles in Spanish.)

4.7

Viewing Picture-in-Picture

You can use the PIP feature to simultaneously watch two video sources.
Note: PIP function operates only in the PC mode.

Activating Picture-in-Picture

1

Press the **MENU** button to
display the menu.

Press the **CH▼** button to
select "Function", then
press the **VOL+** button.

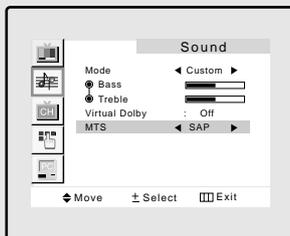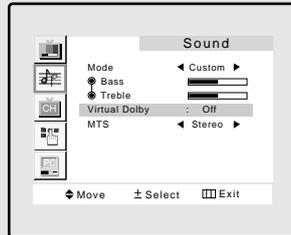|	Function
Sleep timer	◄ Off ►
PIP	►
Caption	►
V-Chip	►
Size	◄ Normal ►
Language	◄ English ►

◆ Move   ± Select   ▥ Exit
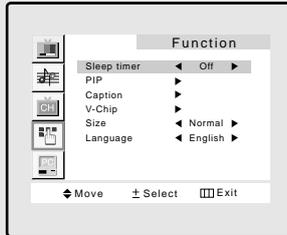
◄ Quick way to access PIP:
Simply press PIP ON button on
the remote control.

2

Press the **CH▼** button to
select "PIP", then press
the **VOL+** button.

	Function
Sleep timer	◄ Off ►
PIP	►
Caption	►
V-Chip	►
Size	◄ Normal ►
Language	◄ English ►

◆ Move   ± Select   ▥ Exit

3

Press the **VOL +** button
to select PIP "On."

	Function
PIP	: On
● TV/Video	◄ TV ►
● Size	◄ Small ►
● Locate	►

◆ Move   ± Select   ▥ Exit
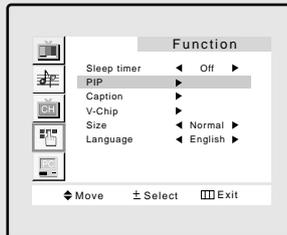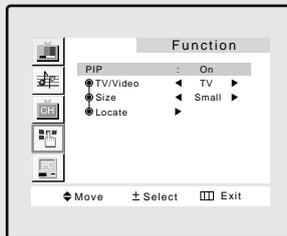
◄ If you turn the TV off while
watching and turn it on again,
the PIP window will disappear.

4

Press the **MENU** button to exit the menu.

4.8

SPECIAL **F**EATURES

Selecting a Signal Source (External A/V) for PIP

1

Press the **MENU** button
to display the menu.

Press the **CH▼** button
to select "Function", then
press the **VOL+** button.

```
                    Function
  Sleep timer      ◄   Off    ►
  PIP                         ►
  Caption                     ►
  V-Chip                      ►
  Size              ◄ Normal  ►
  Language          ◄ English ►

  ♦ Move      ± Select    ▥ Exit
```

2

Press the **CH▼** button
to select "PIP", then press
the **VOL+** button.

```
                    Function
  Sleep timer      ◄   Off    ►
  PIP                         ►
  Caption                     ►
  V-Chip                      ►
  Size              ◄ Normal  ►
  Language          ◄ English ►

  ♦ Move      ± Select    ▥ Exit
```

3

Press the **CH▼** button
to select "TV/Video".

```
                    Function
  PIP              :    On
  ◉ TV/Video        ◄  Video   ►
  ◉ Size            ◄  Small   ►
  ◉ Locate                     ►

  ♦ Move      ± Select    ▥ Exit
```
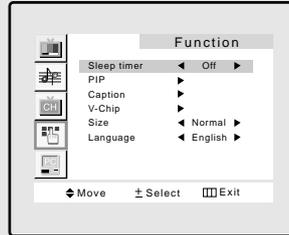
4

Press the **- VOL** or **VOL +**
button repeatedly to cycle
through all of the
available signal sources:
"TV" ,"Video ", "S-Video".

Press the **MENU** button
to exit the menu.

```
                    Function
  PIP              :    On
  ◉ TV/Video        ◄ S-Video  ►
  ◉ Size            ◄  Small   ►
  ◉ Locate                     ►

  ♦ Move      ± Select    ▥ Exit
```
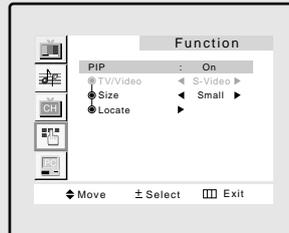
Changing the Location of the PIP Window

When you press the **LOCATE** button repeatedly, the PIP
window moves from corner to corner on the TV screen.

Changing the Size of the PIP Window

Press the **SIZE** button to alternate between a small,
medium and large PIP window.

4.9

SPECIAL FEATURES

Using the V-Chip

The V-Chip feature automatically locks out programming that is deemed inappropriate for children. The user must first enter a PIN (personal ID number) before any of the V-Chip restrictions can be set up or changed.
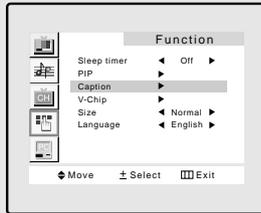
Setting Up Your Personal ID Number (PIN)

1

Press the **MENU** button to display the menu.

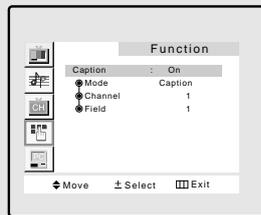Press the **CH▼** button to select "Function", then press the **VOL +** button.

	Function	
Sleep timer	◄ Off ►	
PIP	►	
Caption	►	
V-Chip	►	
Size	◄ Normal ►	
Language	◄ English ►	

◆ Move   ± Select   Exit
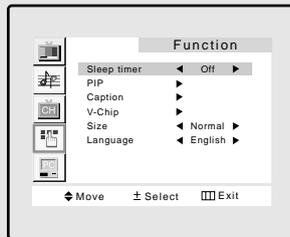
◄ Quick way to access the V.CHIP menu: Simply press the V.CHIP button on the remote control.

2

Press the **CH▼** button to select "V-chip", then press the **VOL+** button.

Function
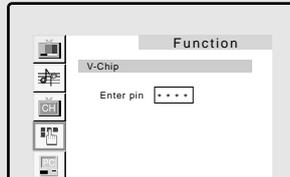
V-Chip

Enter pin   • • • •

The "Enter Pin" screen will appear. Enter your 4-digit PIN number. Note: The default PIN number for a new TV set is **"0-0-0-0."**

3

After entering a valid PIN number, the "V-chip" screen will appear. Press the **CH▼** button to select "Change Pin."

	Function	
V-Chip lock	: Yes	
⦿TV guideLines	►	
⦿MPAA rating	►	
Change pin	►	

◆ Move   ± Select   Exit

4

Press the **VOL+** button. The Change pin screen will appear. Choose any 4-digits for your PIN and enter them.

Function

Change pin

Enter pin   • • • •

↓

Function

Change pin

Enter pin   • • • •
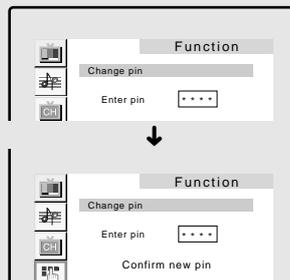
Confirm new pin

As soon as the 4 digits are entered, the "Confirm new Pin" screen appears. Re-enter the same 4 digits. When the Confirm screen disappears, your PIN has been memorized. Press the **MENU** button to exit the menu.

◄ If you forget the PIN, press the EXIT button on the top panel while 5 seconds which resets the pin to 0-0-0-0.

4.10

SPECIAL **F**EATURES

How to Enable/Disable the V-Chip

1

Press the **MENU** button to display the menu.

Press the **CH▼** button to select "Function", then press the **VOL +** button.

```
                    Function
  Sleep timer      ◄  Off  ►
  PIP                      ►
  Caption                  ►
  V-Chip                   ►
  Size             ◄  Normal  ►
  Language         ◄  English  ►

  ◆ Move    ± Select   ▥ Exit
```
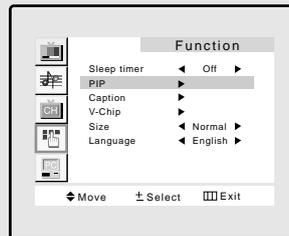
2

Press the **CH▼** button to select "V-chip", then press the **VOL+** button.

The "Enter pin" screen will appear. Enter your 4-digit PIN number.

```
                    Function
  V-Chip

  Enter pin    ▪ ▪ ▪ ▪

  0~9 Select           ▥ Exit
```
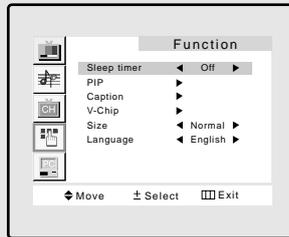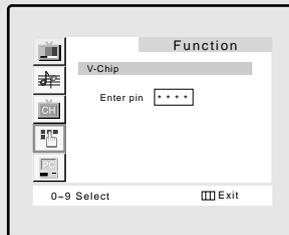
3

The "V-Chip" screen will appear, and "V-Chip lock" will be select.

To enable the V-Chip feature, press the **VOL +** button so that the "V-Chip Lock" is set to Yes. (Pressing the **VOL +** button will alternate between Yes and No.)

```
                    Function
  V-Chip lock      :  Yes
  ◉TV guideLines           ►
  ◉MPAA rating             ►
  Change pin               ►

  ◆ Move    ± Select   ▥ Exit
```
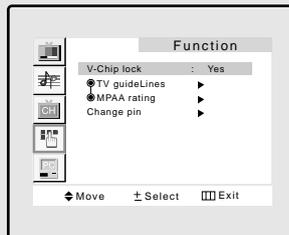
How to Set up Restrictions Using the "TV guidelines"

First, set up a personal identification number (PIN), and enable the V-Chip.
(See previous section.) Parental restrictions can be set up using either of two methods:
The TV guidelines or the MPAA rating.

1

Press the **MENU** button to display the menu.

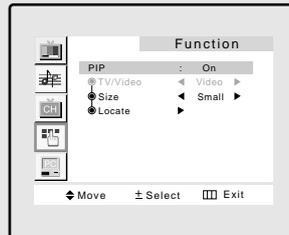Press the **CH▼** button to select "Function", then press the **VOL +** button.

```
                    Function
  Sleep timer      ◄  Off  ►
  PIP                      ►
  Caption                  ►
  V-Chip                   ►
  Size             ◄  Normal  ►
  Language         ◄  English  ►

  ◆ Move    ± Select   ▥ Exit
```
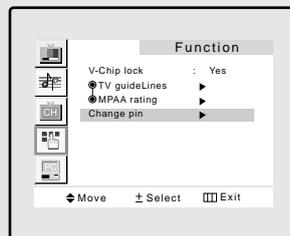
4.11
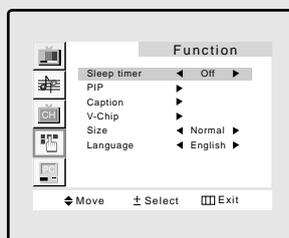
S PECIAL F EATURES

2

Press the **CH▼** button to
select "V-chip", then
press the **VOL+** button.

The "Enter pin" screen
will appear. Enter your
4-digit PIN number.

```
                    Function
          V-Chip

              Enter pin    ▪ ▪ ▪ ▪


      0~9 Select                 Exit
```

3
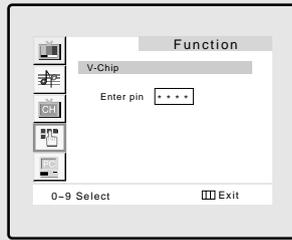
Press the **CH▼** button,
to select "TV Guidelines",
then press the **VOL+**
button.

```
                    Function
          V-Chip lock        :   Yes
          TV guideLines        ▶
          MPAA rating          ▶
          Change pin           ▶


      Move       Select       Exit
```

4

The "TV guidelines"
screen will appear. Press
the the **CH▲**, **CH▼**
buttons to select one of
the six age-based
categories:

TV-Y   Young children
TV-Y7   Children 7 and over

TV-G   General audience
TV-PG   Parental guidance
TV-14   Viewers 14 and over
TV-MA   Mature audience

```
                    Function
               All  FV  V   S   L   D
       TV-Y  ▶   U
       TV-Y7 ▶   U    U
       TV-G  ▶   U
       TV-PG ▶   U        U   U   U
       TV-14 ▶   U        U   U   U   U
       TV-MA ▶   U        U   U   U   U
       B: Blocked    U: Unblocked

      Move       Select       Exit
```
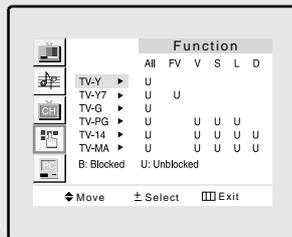
◄   Note:These categories consist of
two separate groups:
TV-Y and TV-Y7 (young
children through age 7), and
TV-G through TV-MA
(everybody else).

The restrictions for these two groups
work independently: If a household
includes very young children as well
as young adults, the TV guidelines
must be set up separately for each
age group. (See next step.)

5

At this point, one of the TV-Ratings is selected.

Press the **VOL +** button: Depending on your existing setup, a letter "U" or "B" will start blinking.
(U= Unblocked, B= Blocked)

While the "U" or "B" is blinking, press the **CH▲** or **CH▼** buttons to block or unblock the category.

Press the **MENU** button once to save the TV guidelines. A TV-Rating will be highlighted, and no letters will blink.
To menu this screen, press the **MENU** again. To select a different TV-Rating, press the **CH▲** or **CH▼** buttons
and then repeat the process.

Note 1:   The TV-Y7, TV-PG, TV-14 and TV-MA have additional options. See the next step to change any of the
following sub-ratings:

FV: **F**antasy **v**iolence
D   :   Sexual suggestive **d**ialog
L   :   Adult **l**anguage
S   :   **S**exual situation
V   :   **V**iolence

Note 2:   The V-Chip will automatically block certain categories that are "more restrictive." For example, if you
block "TV-Y" category, then TV-Y7 will automatically be blocked. Similarly, if you block the TV-G
category, then all the categories in the "young adult" group will be blocked (TV-G, TV-PG, TV-14 and
TV-MA). The sub-ratings (D, L, S, V) work together similarly. (See next section.)

6

How to set the FV, D, L, S and V sub-ratings.

First, highlight one of these TV-Ratings: TV-Y7, TV-PG, TV-14 or TV-MA (See Step 4, on previous page).
Next, while the TV-Rating is selected, repeatedly press the **VOL+** button.
This will cycle through the available sub-ratings (FV,L, S, D or V).

A blinking letter ("U" or "B") will be displayed for each sub-rating. While the "U" or "B" is blinking,
press the **CH▲** or **CH▼** buttons to change the sub-rating.

Press **MENU** once to save the TV guidelines. A TV-Rating will be selected, and no letters will blink.
To menu this screen, press the **MENU** button again. To select a different TV-Rating, press the
CH▲ or **CH▼** buttons and then repeat the process.

Note: The V-chip will automatically block certain categories that are "More restrictive".
For example, if you block "L" sub-rating in TV-PG, then the "L" sub-ratings in TV-14 and TV-MA
will automatically be blocked.

7

Press the **MENU** button to clear all the screens.
(Or proceed to the next section, and set up additional restrictions based on the MPAA codes).

How to Set up Restrictions using the MPAA Ratings: G, PG, PG-13, R, NC-17, X

The MPAA rating system uses the Motion Picture Association of America (MPAA) system,
and its main application is for movies. (Eventually, movie videocassettes will be encoded
with MPAA ratings.) When the V-Chip lock is on, the TV will automatically block any
programs that are coded with objectionable ratings (either MPAA or TV-Ratings).

1

Press the **MENU** button
to display the menu.

Press the **CH▼** button to
select "Function", then
press the **VOL +** button.

```
                        Function
  Sleep timer      ◄    Off    ►
  PIP                   ►
  Caption               ►
  V-Chip                ►
  Size             ◄  Normal  ►
  Language         ◄  English ►

     ◆ Move      ± Select      Ⅲ Exit
```

2
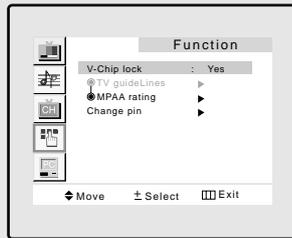
Press the **CH▼** button to
select "V-chip", then press
the **VOL +** button.

The "Enter pin" screen
will appear. Enter your
4-digit PIN number.

```
                        Function
    V-Chip

    Enter pin   ▪ ▪ ▪ ▪

  0~9 Select                  Ⅲ Exit
```
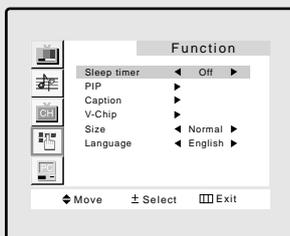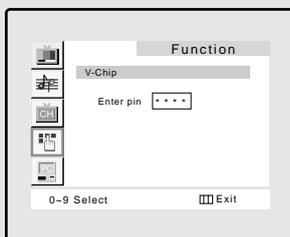
S PECIAL F EATURES

3

Press the **CH▼** button
to select "MPAA rating",
then press the **VOL +**
button.

```
                    Function
  V-Chip lock          :   Yes
  TV guideLines            ▶
  MPAA rating              ▶
  Change pin               ▶

   ⬍ Move    ± Select    ▥ Exit
```
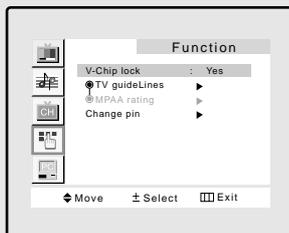
4

Repeatedly press the **CH▼**
button to select a particular
MPAA category.
(When a category is
selected, its color changes
to blue.) Pressing the **CH▼**
button will cycle through
the MPAA categories:

```
                   Function
              B / U
   G      ▶  U
   PG     ▶  U
   PG-13  ▶  U
   R      ▶  U
   NC-17  ▶  U
   X      ▶  U   B: Blocked
   NR     ▶  U   U: Unblocked

   ⬍ Move    ± Select    ▥ Exit
```
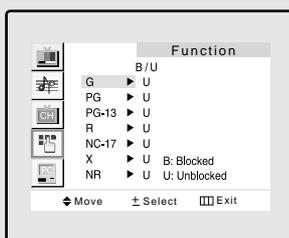
G	General audience (no restrictions).
PG	Parental guidance suggested.
PG-13	PG-13 (Parents strongly cautioned).
R	R (Restricted. Children under 17 should be accompanied by an adult).
NC-17	No children under age 17.
X	X (Adults only).
NR	Not rated.

While a particular category is highlighted, press the **VOL+** button to activate it.
A blinking letter ("U" or "B") will be displayed. Press the **CH▲** or **CH▼** buttons to
select "U" or"B".

Press the **MENU** button three times to save the settings and to clear all screens.

Note: The V-Chip will automatically block any category that is "more restrictive."
       For example, if you block the "PG-13" category, then "R," "NC-17," and "X"
       will automatically be blocked also.

How to Reset the TV after the V-Chip
Blocks a Channel ("Emergency Escape")

If the TV is tuned to a restricted channel, the V-Chip will block it. The screen will go blank and the following
message will appear: "Excessive rating."

To resume normal viewing, tune to a different channel using the number buttons.
Under certain conditions (depending on the rating of the local TV programs) the V-Chip might lock out
all the channels. In this case, use the V.Chip button for an "emergency escape":

Press the V.chip button on the remote control. Enter your PIN number, and press the **VOL +** button to
temporarily disable the V-Chip Lock.

Chapter 5

PC DISPLAY

Using Your TV as a Computer (PC) Display

How to Connect Your PC to the TV

Note: This figure shows the Standard Connector-jack panel.
The actual configuration on your TV may be different, depending on the model.

TV rear panel   PC rear

❶ **PC AUDIO INPUT**
   Connect these to the audio-output jacks on your PC.

❷ **PC VIDEO INPUT**
   Connect to the video output port on your PC.
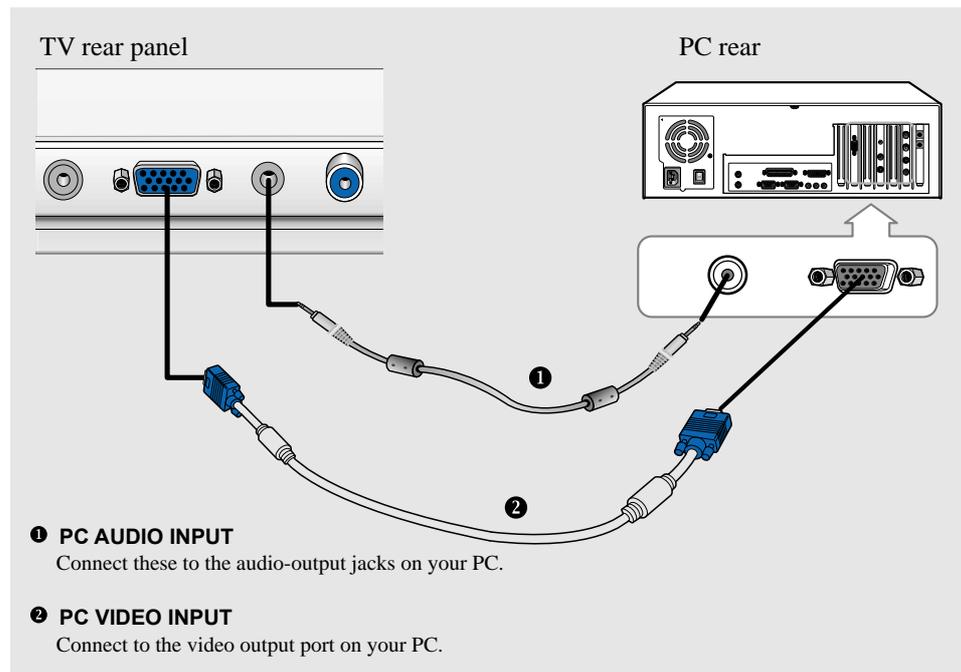
How to Set up Your PC display

"Auto" allows the TV to self-adjust to the incoming video signal.
The values of fine, coarse and position are adjusted automatically.

Press the PC button on the remote control to select the PC mode

1
Press the **AUTO** button on the remote control.
(refer to pages 5.8).

PC DISPLAY

How to Set up Your PC Software (Windows 2000)

The Windows display-settings for a typical computer are shown below. However, the actual screens on your PC will probably look different, depending upon your particular version of Windows and your particular video card. Even if your actual screens look different, the same, basic set-up information will apply in most cases.
(If not, contact your computer manufacturer or Samsung Dealer.)
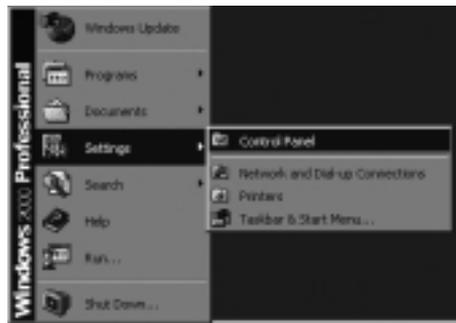
First, click on "Settings" on the Windows start menu.

While "Settings" is highlighted, move the cursor so that "Control Panel" is highlighted.

When the control panel screen appears, click on "Display" and a display dialog-box will appear.

Navigate to the "settings" tab on the display dialog-box.

The two key variables that apply the TV-PC interface are "resolution" and "colors." The correct settings for these two variables are:

* Size (sometimes called "resolution"):
  15" - 1024 x 768 pixels
  17" - 1280 x 1024 pixels.

If a vertical-frequency option exists on your display settings dialog box, the correct value is "60" or "60 Hz." Otherwise, just click "OK" and exit the dialog box.
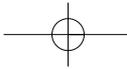
PC DISPLAY

Adjusting the Screen Quality

The purpose of picture quality adjustment is to remove or reduce picture noise.
If the noise is not removed by fine tuning alone, then do the frequency adjustments to the utmost and fine tune again. After the noise has been reduced, re-adjust the picture so that it is aligned on the center of screen.

Press the PC button on the remote control to select the PC mode.

1

Press the **MENU** button to display the menu.

Press the **CH▼** button to select "PC", then press the **VOL +** button.

```
                              PC
        Image                      ▶
        Image lock                 ▶
        Position                   ▶
        Color adjust               ▶
        Recall                     ▶
        Auto adjustment            ▶

        1024x768  48.3kHz 59.9Hz

     ◆ Move      ± Select    Ⅲ Exit
```

2
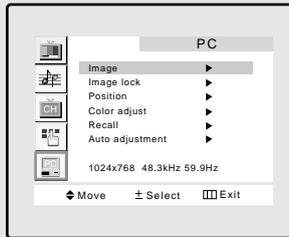
Press the **CH▼** button to select "Image lock", then press the **VOL +** button.

```
                              PC
        Image                      ▶
        Image lock                 ▶
        Position                   ▶
        Color adjust               ▶
        Recall                     ▶
        Auto adjustment            ▶

        1024x768  48.3kHz 59.9Hz

     ◆ Move      ± Select    Ⅲ Exit
```

3

Press the **CH▼** button to select "Coarse" or "Fine".

```
                              PC
        Image lock
         Coarse      ▬▬▬▬▬
         Fine        ▬▬▬▬▬



     ◆ Move      ± Select    Ⅲ Exit
```

Press the **- VOL** or **VOL +** button to adjust the screen quality, vertical stripes appear or the picture may be blurry.

```
        Coarse
        ▬▬▬▬        1043
     ◆ Move    ± Adjust    Ⅲ Exit
```

<Adjusting Coarse>

```
        Fine
        ▬▬▬▬        50
     ◆ Move    ± Adjust    Ⅲ Exit
```

<Adjusting Fine>

4

When you are satisfied with the settings, press the **MENU** button repeatedly to return to normal viewing.
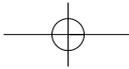
PC DISPLAY

Changing the Screen Position

Press the PC button on the remote control to select the PC mode.

1

Press the **MENU** button to display the menu.

Press the **CH▼** button to select "PC", then press the **VOL +** button.

```
                    PC
  Image            ▶
  Image lock       ▶
  Position         ▶
  Color adjust     ▶
  Recall           ▶
  Auto adjustment  ▶

  1024x768  48.3kHz 59.9Hz

  ⬍ Move    ± Select    ▥ Exit
```

2

Press the **CH▼** button to select "Position", then press the **VOL +** button.

```
                    PC
  Image            ▶
  Image lock       ▶
  Position         ▶
  Color adjust     ▶
  Recall           ▶
  Auto adjustment  ▶

  1024x768  48.3kHz 59.9Hz

  ⬍ Move    ± Select    ▥ Exit
```

3

Press the **CH▼** button to select "H-Position" or "V-Position".

```
                    PC
  Position
  H-Position  ▬▬▬▬
  V-Position  ▬▬▬▬




  ⬍ Move    ± Select    ▥ Exit
```

Press the **- VOL** or **VOL +** button to adjust.

Press the **MENU** button to exit.

```
  H-Position  ▬▬▬▬    50

  ⬍ Move    ± Adjust    ▥ Exit
```

<Adjusting the H-Position>

```
  V-Position  ▬▬▬▬    50

  ⬍ Move    ± Adjust    ▥ Exit
```

<Adjusting the V-Position>
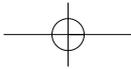
PC DISPLAY

Changing the Screen Color Standard

Press the PC button on the remote control to select the PC mode.

1

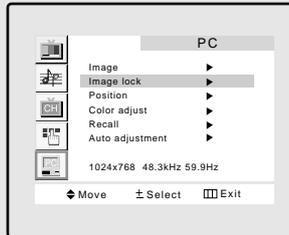Press the **MENU** button to display the menu.

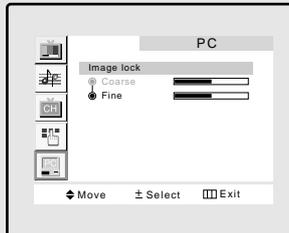Press the **CH▼** button to select "PC", then press the **VOL +** button.

	PC	
Image	▶
Image lock	▶
Position	▶
Color adjust	▶
Recall	▶
Auto adjustment	▶

1024x768 48.3kHz 59.9Hz

♦ Move   ± Select   ▥ Exit

2

Press the **CH▼** button to select "Color Adjust".

	PC	
Image	▶
Image lock	▶
Position	▶
Color adjust	▶
Recall	▶
Auto adjustment	▶

1024x768 48.3kHz 59.9Hz

♦ Move   ± Select   ▥ Exit

3

Press the **- VOL** or **VOL +** buttons to select "Custom", "Color1", "Color2" or "Color3".

Press the **MENU** button to exit.

	PC	
Color mode	◀ Color1 ▶
Red	
Green	
Blue	

♦ Move   ± Select   ▥ Exit
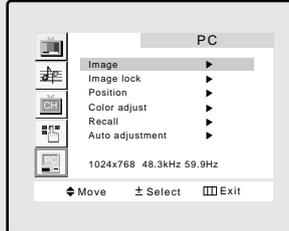
PC DISPLAY

Adjusting the Screen Color Settings
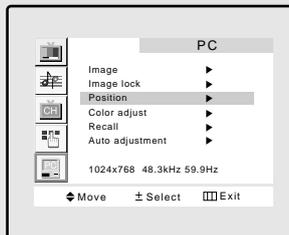
Press the PC button on the remote control to select the PC mode.

1

Press the **MENU** button to display the menu.

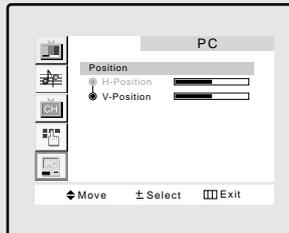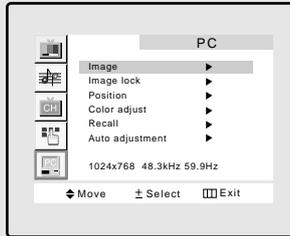Press the **CH▼** button to select "PC", then press the **VOL +** button.

	PC	
Image	▶	
Image lock	▶	
Position	▶	
Color adjust	▶	
Recall	▶	
Auto adjustment	▶	

1024x768 48.3kHz 59.9Hz

✦ Move   ± Select   ▥ Exit

2

Press the **CH▼** button to select "Color Adjust", then press the **VOL +** button.
Repeatedly press **VOL +** to choose between Color 1,2, and 3 auto settings and Custom.

	PC	
Image	▶	
Image lock	▶	
Position	▶	
Color adjust	▶	
Recall	▶	
Auto adjustment	▶	

1024x768 48.3kHz 59.9Hz

✦ Move   ± Select   ▥ Exit

3

If Custom is selected, press the **CH▼** or **CH▲** button to select the item you want to adjust, then press the **- VOL** or **VOL +** button to adjust the color(R, G, B).

Press the **MENU** button to exit.

	PC	
Color mode	◀ Custom ▶	
Red		
Green		
Blue		

✦ Move   ± Select   ▥ Exit

5.6
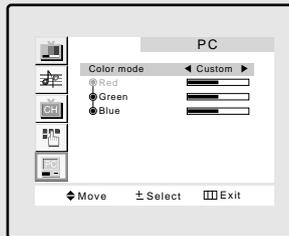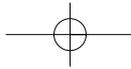
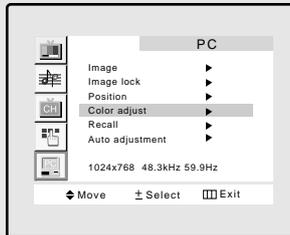# PC DISPLAY

To Initialize the Screen Position or Color Settings

1

Press the **MENU** button to display the menu.

Press the **CH▼** button to select "PC", then press the **VOL +** button.

	PC	
Image	▶	
Image lock	▶	
Position	▶	
Color adjust	▶	
Recall	▶	
Auto adjustment	▶	
1024x768 48.3kHz 59.9Hz		
✦Move ± Select ▥Exit		

2
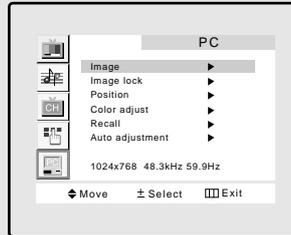
Press the **CH▼** button to select "Recall", then press the **VOL +** button.

	PC	
Image	▶	
Image lock	▶	
Position	▶	
Color adjust	▶	
Recall	▶	
Auto adjustment	▶	
1024x768 48.3kHz 59.9Hz		
✦Move ± Select ▥Exit		

3
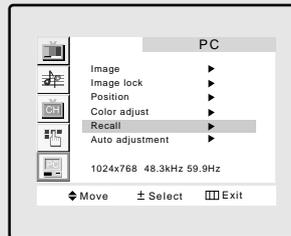
Press the **CH▼** button to select "Image recall" or "Color recall".

Press the **- VOL** or **VOL +** button to return position or color to their default settings.

Press the **MENU** button to exit.

	PC	
Recall		
Image recall	▶	
Color recall	▶	
✦Move ± Select ▥Exit		
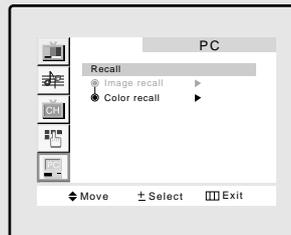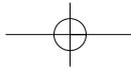
PC DISPLAY

Adjusting the PC Screen Automatically

Press the PC button on the remote control to select the PC mode.

1

Press the **MENU** button to display the menu.

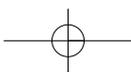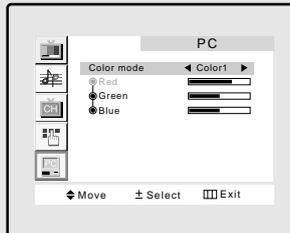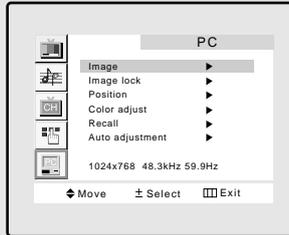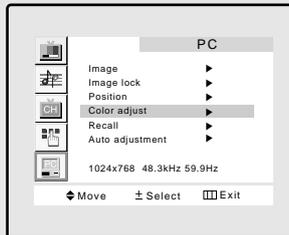Press the **CH▼** button to select "PC", then press the **VOL +** button.

	PC
Image	▶
Image lock	▶
Position	▶
Color adjust	▶
Recall	▶
Auto adjustment	▶

1024x768 48.3kHz 59.9Hz

◆ Move   ± Select   ▥ Exit

2
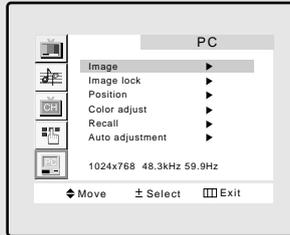
Press the **CH▼** button to select "Auto adjustment", then press the **VOL +** button.

Press the **MENU** button to exit.

	PC
Image	▶
Image lock	▶
Position	▶
Color adjust	▶
Recall	▶
Auto adjustment	▶

1024x768 48.3kHz 59.9Hz

◆ Move   ± Select   ▥ Exit

▼
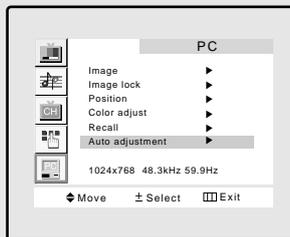
Auto adjustment
Please wait

◄ The Screen quality and position are automatically adjusted, and the screen returns original view about a few seconds later.

Chapter 6

Troubleshooting

If the TV seems to have a problem, first try this list of possible problems and solutions. If none of these troubleshooting tips apply, call your nearest Samsung authorized service center.

Identifying Problems

Problem	Possible Solution
Poor picture	Try another channel.
	Adjust the antenna.
	Check all wire connections.
Poor sound quality.	Try another channel.
	Adjust the antenna.
No picture or sound.	Try another channel.
	Press the TV/VIDEO button.
	Make sure the TV is plugged in.
	Check the antenna connections.
No color, wrong colors or tints.	Make sure the program is broadcast in color.
	Adjust the picture settings.
	If the set is moved or turned in a different direction,
	the power should be OFF for at least 30 minutes.
	Adjust the antenna.
Picture rolls vertically.	Check all wire connections.
The TV operates erratically.	Unplug the TV for 30 seconds, then try operating it again.
The TV won't turn on.	Make sure the wall outlet is working.
Blurred or snowy picture, distorted sound	Check the direction, location and connections of
	your antenna.
	This interference is often due to the use of
	an indoor antenna.
Remote control malfunctions	Replace the remote control batteries.
	Clean the upper edge of the remote control
	(transmission window).
	Check the battery terminals.
"Check Signal Cable" message.	Ensure that the signal cable is firmly connected
	to the PC sources.
	Ensure that the PC sources are turned on.

TROUBLESHOOTING

Problem	Possible Solution
"Not Supported Mode!" message.	Check the maximum resolution and the frequency of the video Adapter. Compare these values with the data in the Display Modes Timing Chart.
The image is too light or too dark.	Adjust the Brightness and Contrast. Adjust the Fine function.
Horizontal bars appear to flicker, jitter or shimmer on the image.	Adjust the Coarse function and then adjust the Fine function.
Vertical bars appear to flicker, jitter or shimmer on the image.	The TV is using its power management system. Move the computer's mouse or press a key on the keyboard.
Screen is black and power indicator light blinks steadily.	Check that the display resolution and frequency from your PC or video board is an available mode for your TV. On your computer check: Control Panel, Display, Settings.
Image is not stable and may appear to vibrate.	If the setting is not correct, use your computer utility program to change the display settings. NOTE: Your TV supports multiscan display functions within the following frequency domain: • Horizontal frequency: 15": 30 kHz ~ 69 kHz 17": 30 kHz ~ 81 kHz • Vertical frequency: 56 Hz ~ 75 Hz • Maximum refresh rate: 15" : 1024 x 768 @ 75Hz 17" : 1280 x 1024 @ 75Hz
Image is not centered on the screen.	Adjust the horizontal and vertical position.

APPENDIX

Retractable Stand

Note: The maximum tilt angle is 15 degrees in the backward direction.
Please do not tilt the TV outside the specified range. Using excessive force to tilt
the TV may cause permanent damage to the mechanical part of the stand.

Using the Anti-Theft Kensington Lock

<Optional>
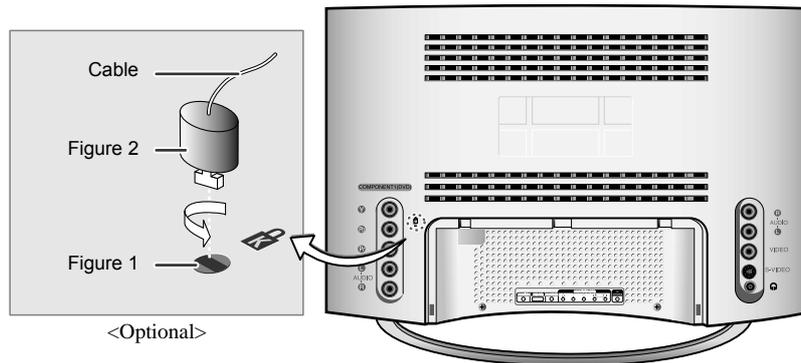
The Kensington lock is a device used to physically fix the system when using it in a public place.
The locking device has to be purchased separately. The appearance and locking method may differ from the
illustration depending on the manufacturer. Please refer to the manual provided with the Kensington lock for
proper use.

1

Insert the locking device into the Kensington slot on the LCD TV(figure 1), and turn it in the locking
direction(figure 2).

2

Connect the Kensington lock cable.

3

Fix the Kensington lock to a desk or a heavy stationary object.

A.1

APPENDIX

Pin Assignments

Pin D-Sub Connection

PIN	Separate H/V	Composite H/V
1	Red	Red
2	Green	Green
3	Blue	Blue
4	GND	GND
5	GND (DDC Return)	GND (DDC Return)
6	GND-Red	GND-Red
7	GND-Green	GND-Green
8	GND-Blue	GND-Blue
9	No Connection	No Connection
10	GND-Sync/Self Test	GND-Sync/Self Test
11	GND	GND
12	DDC-SDA	DDC-SDA
13	H_Sync	H/V_Sync
14	V_Sync	Not used
15	DDC-SCL	DDC-SCL

APPENDIX

Display Modes

If the signal from the system equals the standard signal mode, the screen is adjusted automatically. If the signal from the system doesn't equal the standard signal mode, adjust the mode by referring to your Videocard user guide; otherwise there may be no video. For the display modes listed below, the screen image has been optimized during manufacture.

Preset timing modes

Mode	Resolution	Horizontal Frequency (kHz)	Vertical Frequency (Hz)	Pixel Clock Frequency (MHz)	Sync Polarity (H/V)
VGA	720 x 400	31.469	70.087	28.322	- / +
	640 x 480	31.469	59.940	25.175	- / -
	640 x 480	37.500	75.000	31.500	- / -
SVGA	800 x 600	46.875	75.000	49.500	+ / +
XGA	1024 x 768	48.363	60.004	65.000	- / -
	1024 x 768	60.023	75.029	78.750	+ / +
SXGA (LTN1765 only)	1280 x 1024	63.981	60.020	108.000	+,- / +,-
	1280 x 1024	79.976	75.025	135.000	+ / +

NTSC Broadcasting Systems

Color System	Sound System	Stereo System	Channel System	Countries
NTSC	M	A2	US	Korea
		*BTSC (SAP)	US	USA, Canada, Chile, Venezuela, Cuba, Colombia, Jamaica, Mexico, Panama, Peru, Philippines, Puerto-Rico, Taiwan
		EIAJ	Japan	Japan

* Note : This Model is set up for BTSC (SAP).

A.3

APPENDIX

Cleaning and Maintaining Your TV

With proper care, your TV unit will give you many years of service. Please follow these guidelines to get the maximum performance from your TV.

Placement

- Do not place the TV near extremely hot, cold, humid or dusty places.
- Do not place the TV near appliances with electric motors that create magnetic fields, such as vacuum cleaners.
- Keep the ventilation openings clear; do not place the TV on a soft surface, such as cloth or paper.
- Place the TV in a vertical position only.

Liquids

- Do not handle liquids near or on the TV.
  Liquids that spill into it can cause serious damage.

Cabinet

- Never open the cabinet or touch the parts inside.
- Wipe your TV with a clean, dry cloth. Never use water, cleaning fluids, wax, or chemicals.
- Do not put heavy objects on top of the cabinet.

Temperature

- If your TV is suddenly moved from a cold to a warm place, unplug the power cord, and allow at least two hours for moisture that may have formed inside the unit to dry completely.

Using Your TV in Another Country

If you plan to take your TV with you to a foreign country, please be aware of the different television systems that are in use around the world. A TV designed for one system may not work properly with another system due to differences in the TV channel frequencies.

Maintenance of Your LCD TV/Monitor

WARNING: To avoid risk of electric shock, do not disassemble the TV cabinet.
Users cannot service the TV.
User maintenance is restricted to cleaning as explained below:

Unplug the monitor from the power outlet before cleaning.
- To clean your flat panel display screen, lightly dampen a soft, clean cloth with water or mild detergent.
  If possible, use a special screen cleaning tissue or solution suitable for the antistatic coating.
- To clean the monitor cabinet, use a cloth lightly dampened with a mild detergent.
- Never use flammable cleaning material to clean your LCD TV or any other electrical apparatus.

A.4

APPENDIX

Specifications

		LTN1565	LTN1765
Panel	Size	15.0" Diagonal	17." Diagonal
	Display Size	304.1(H) X 228.1(V)mm	337.92(H) X 270.336(V)mm
	Type	a-si TFT active matrix	a-si TFT active matrix
	Pixel Pitch	0.297(H) X 0.297(V)mm	0.264(H) X 0.264(V)mm
	Viewing Angle	140/110 (Horizontal/Vertical)	140/115 (Horizontal/Vertical)
*Frequency	Horizontal	30~69 kHz	30~81 kHz
	Vertical	56~75 Hz	56~75Hz (~XGA)/60~75Hz (SXGA)
	Display Color	16,777,216 color	16,777,216 color
Display Resolution	Optimum Mode	1024 X 768 @ 60 Hz	1280 X 1024 @ 60 Hz
	Maximum Mode	1024 X 768 @ 75 Hz	1280 X 1024 @ 75 Hz
Input Signal	Sync.	H/V Separate, TTL, P. or N.	H/V Separate, TTL, P. or N.
	Video signal	0.7 Vp-p @ 75 ohm	0.7 Vp-p @ 75 ohm
Video	Color system	NTSC	NTSC
	Video system	CVBS, S-VHS, RGB	CVBS, S-VHS, RGB
Component	Video In	1.0 Vp-p @ 75 ohm	1.0 Vp-p @ 75 ohm
	Audio In	500mVrms	500mVrms
Power Supply	Input	AC100~240 V, 50/60Hz	AC100~240 V, 50/60Hz
	Output	14V/3A	14V/3.5A
Power Consumption	Maximum	48W	58 W
	Power Saving	< 3 W	< 3 W
Dimensions/ Weight	Unit (WxDxH) : TV body	18.1 x 3.4 x 12.0 inches/8.6lbs	20.2 x 3.5 x 13.8 inches/11.0 lbs
		(461 x 87.6 x 305.5 mm/3.9 kg)	(514.6 x 89.0 x 351.1 mm/5.0kg)
	With stand	18.1 x 7.2 x 12.8 inches/13.6 lbs	20.2 x 7.1 x 14.6 inches/16.9 lbs
		(461 x 182.2x 325.1 mm/6.2 kg)	(514.6 x 180.9 x 371.3 mm/7.7kg)
Environmental Considerations	Operating Temperature	50 °F to 104 °F (10 °C to 40 °C)	50 °F to 104 °F (10 °C to 40 °C)
	Operating Humidity	10% to 80%	10% to 80%
	Storage Temperature	-13 °F to 113 °F (-25 °C to 45 °C)	-13 °F to 113 °F (-25 °C to 45 °C)
	Storage Humidity	5% to 95%	5% to 95%
Audio Characteristics	Audio Input 1	RCA Jack Red(R) White(L), 0.5Vrms (-9dB)	RCA Jack Red(R) White(L), 0.5Vrms (-9dB)
	Audio Input 2	3.5ø Stereo Jack, 0.5Vrms (-9dB)	3.5ø Stereo Jack, 0.5Vrms (-9dB)
	DVD	RCA Jack Red(R) White(L), 0.5Vrms (-9dB)	RCA Jack Red(R) White(L), 0.5Vrms (-9dB)
	DTV	RCA Jack Red(R) White(L), 0.5Vrms (-9dB)	RCA Jack Red(R) White(L), 0.5Vrms (-9dB)
	Headphone out	Max. 10mW Output (3.5ø Stereo Jack 32)	Max. 10mW Output (3.5ø Stereo Jack 32)
	Frequency	RF: 80Hz ~ 15kHz (at- 3dB)	RF: 80Hz ~ 15kHz (at- 3dB)
	Response	A/V: 80Hz ~ 20kHz (at - 3dB)	A/V: 80Hz ~ 20kHz (at - 3dB)

* Referring to Preset timing modes, page A.3.

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A PPENDIX

FCC Information

User Instructions

The Federal Communications Commission Radio Frequency Interference Statement includes the following warning:
NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation .

If this equipment does cause harmful interference to radio or television receptions, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
• Reorient or relocate the receiving antenna.
• Increase the separation between the equipment and receiver.
• Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
• Consult the dealer or an experienced radio/TV technician for help.

User Information

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
If necessary, consult your dealer or an experienced radio/television technician for additional suggestions. You may find the booklet called How to Identify and Resolve Radio/TV Interference Problems helpful. This booklet was prepared by the Federal Communications Commission. It is available from the U.S. Government Printing Office, Washington, DC 20402, Stock Number 004-000-00345-4 .

The party responsible for product compliance:
SAMSUNG ELECTRONICS CO., LTD
America QA Lab of Samsung
3351 Michelson Drive,
Suite #290, Irvine, CA92612 USA
Tel) 949-975-7310
Fax) 949-922-8301

Warning

User must use shielded signal interface cables to maintain FCC compliance for the product.
Provided with this monitor is a detachable power supply cord with IEC320 style terminations. It may be suitable for connection to any UL Listed personal computer with similar configuration. Before making the connection, make sure the voltage rating of the computer convenience outlet is the same as the monitor and that the ampere rating of the computer convenience outlet is equal to or exceeds the monitor voltage rating.
For 120 Volt applications, use only UL Listed detachable power cord with NEMA configuration 5-15P type (parallel blades) plug cap. For 240 Volt applications use only UL Listed Detachable power supply cord with NEMA configuration 6015P type (tandem blades) plug cap.

IC Compliance Notice

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations of ICES-003.

Cet appareil Numérique de classe B respecte toutes les exigences du Règlemont NMB-03 sur les équipements produisant des interférences au Canada.

Notice de Conformité IC

Cet appareil numérique de classe B respecte toutes les exigences du Règlement ICES-003 sur les équipements produisant des interférences au Canada.

VCCI

This is a Class B product based on the standard of the Voluntary Control Council for Interference by Information Technology Equipment (VCCI). If this is used near a radio or television receiver in a domestic environment, it may cause radio interference. Install and use the equipment according to the instruction manual.

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