



LCD TV

LW22N23N

Owner's Instructions

Before operating the unit,
please read this manual thoroughly,
and retain it for future reference.

ON-SCREEN MENUS
PC DISPLAY
PICTURE IN PICTURE (PIP)
TELETEXT

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Symbols



Press

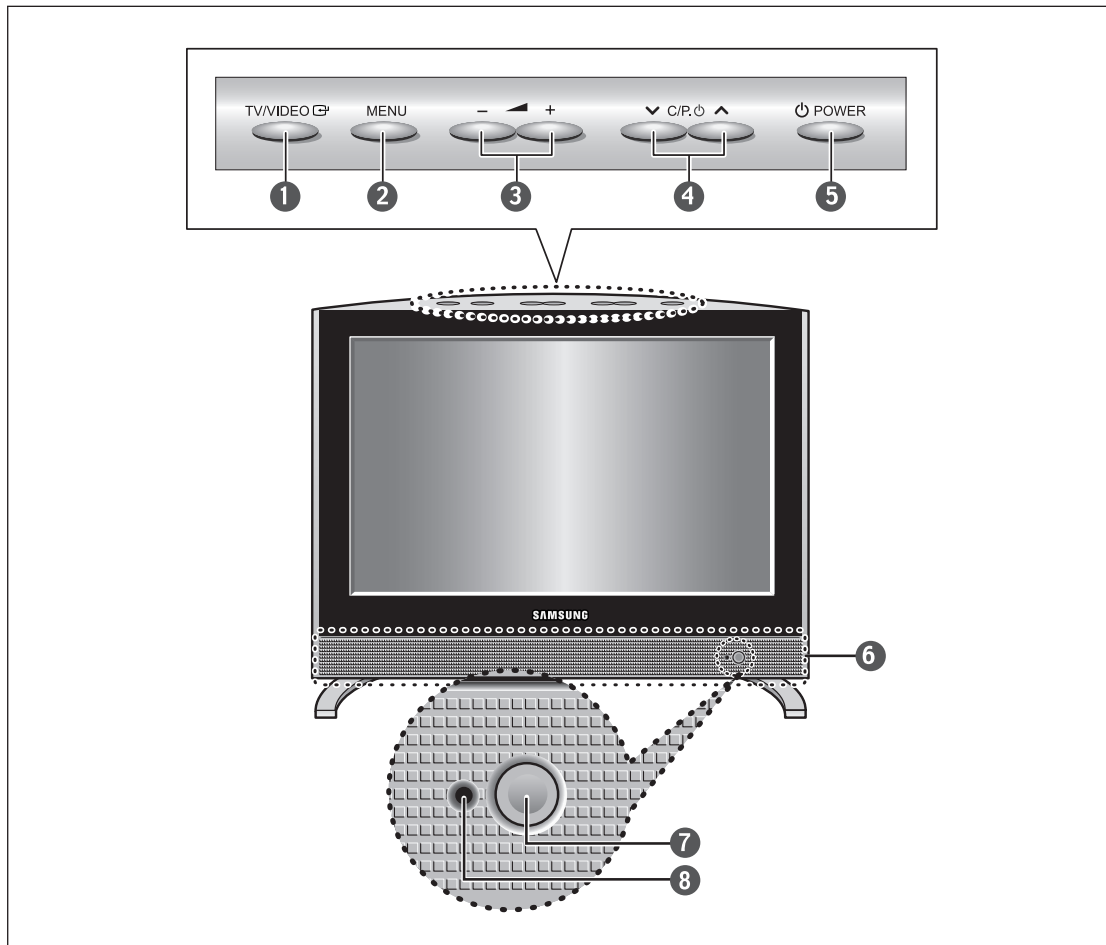


Important



Note

Viewing the Control Panel



1 TV/VIDEO

Displays a menu of all of the available input sources (TV - AV1 - AV2 - AV3 - S-Video - PC/DVI).

2 MENU

Opens the on-screen menu.

3 - ▲ +

Moves the selector left or right on the OSD.
Increases or decreases the level of audio volume and the values of the selected function.

4 ▼ C/P. ⏪ ▲

Moves the selector up or down on the OSD.
Increases or decreases the channel number.

5 ⏻ POWER

Turns ON/OFF your set.

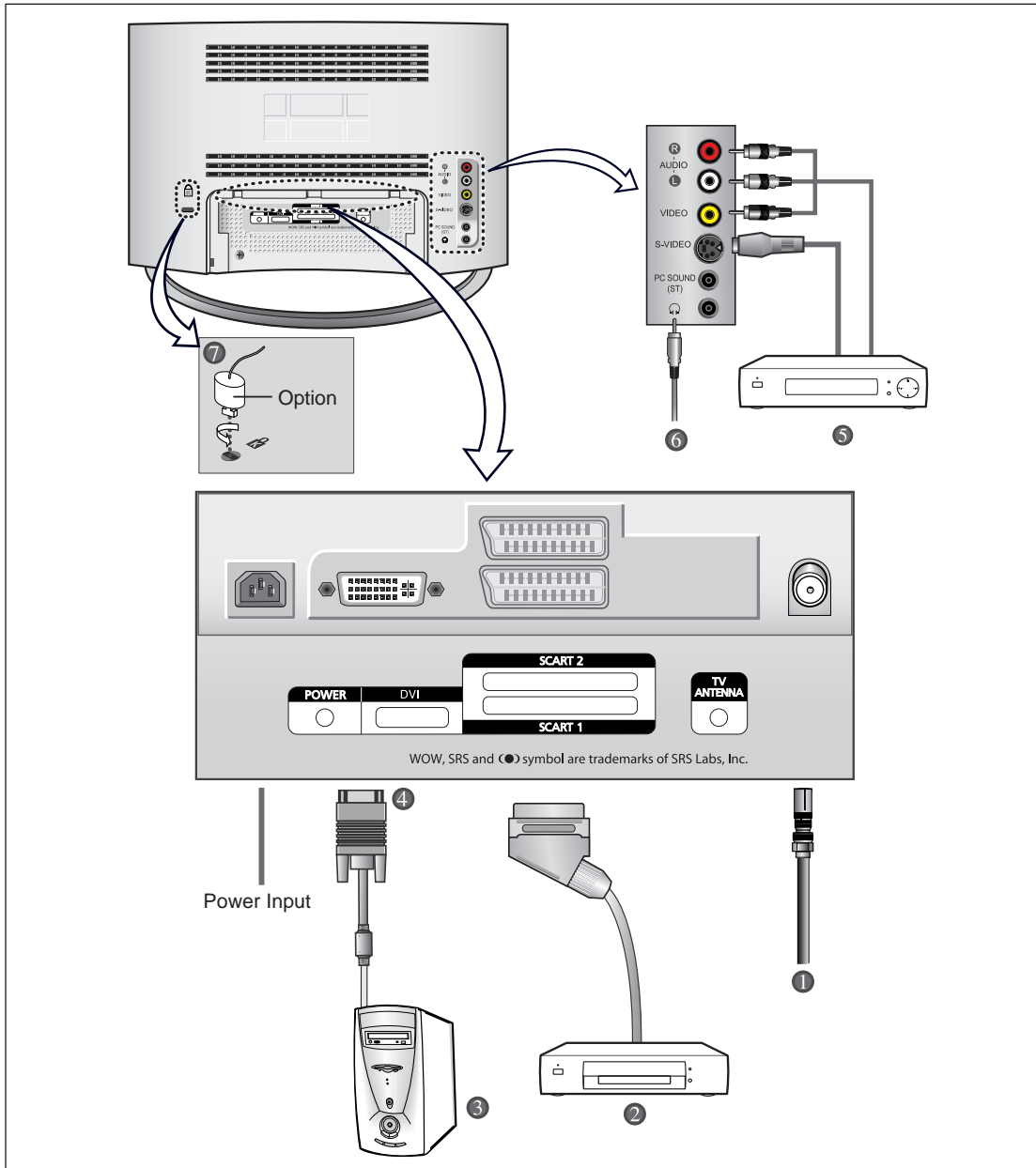
6 SPEAKER

7 REMOTE CONTROL SENSOR

8 POWER INDICATOR

Lights up when you turn the power off.

Viewing the Connection Panel



☞ Whenever you connect an audio or video system to your set, ensure that all elements are switched off. Refer to the documentation supplied with your equipment for detailed connection instructions and associated safety precautions.

Viewing the Connection Panel

❶ **Connecting an Aerial or Cable Television Network (depending on the model)**

To view television channels correctly, a signal must be received by the set from one of the following sources:

- An outdoor aerial
- A cable television network
- A satellite network

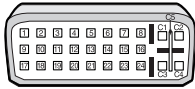
❷ **Connecting a Set-Top Box, VCR, or DVD**

- Connect the VCR, or DVD SCART cable to the SCART connector of the VCR, or DVD.
- If you wish to connect both the Set-Top Box and VCR (or DVD), you should connect the Set-Top Box to the VCR (or DVD) and connect the VCR (or DVD) to your set.

❸ **Connecting a Computer**

- Connect the 24 Pin DVI connector to the PC video connector.
- Connect the stereo audio cable to the "Audio (ST)" jack on the rear of your set and the other end to the "Audio Out" jack of the sound card on your computer.

➤ 24 Pin DVI connector



Pin	Descrizione	Pin	Descrizione
1	Rx 2-	16	Output Signal Connection
2	Rx 2+	17	Rx 0-
3	Grounding	18	Rx 0+
4	No connection	19	Grounding
5	No connection	20	No connection
6	DDC Clock (SCL)	21	No connection
7	DDC Data (SDA)	22	Grounding
8	Analog Vertical Sync	23	Rx C-
9	Rx 1-	24	Rx C+
10	Rx 1+	25(C3)	Analog (Blue)
11	Grounding	26(C5)	Analog Grounding
12	No connection	27(C4)	Analog Horizontal sync.
13	No connection	28(C2)	Analog (Green)
14	DDC Input Power (+5V)	29(C5)	Analog Grounding
15	Self-Raster	30(C1)	Analog (Red)

Viewing the Connection Panel

4 Connecting a DVD Player or Set-Top Box to the TV with a DVI-D Cable

- Connect a DVI-D cable between the DVI-I INPUT connector on the TV and the DVI connector on the DVD player/Set-Top BOX.
- Connect a set of audio cables between the PC AUDIO INPUT jack on the TV and the AUDIO OUTPUT jacks on the DVD player/ Set-Top BOX.

➤ If you are using a DVI-D cable to connect

- ◆ Be sure to connect the audio cable (sold separately) as shown above to get normal TV sound.
- ◆ See Appendix "Display Modes" for supported resolutions.
- ◆ The screen may have shifted to the right or to the left after connecting the cable.
Don't adjust the screen position in a Digital Signal.
- ◆ Each external input Source device has a different back panel configuration.

5 Connecting External A/V Devices

- Connect RCA or S-VIDEO cables to an appropriate external A/V device such as a VCR, DVD, or Camcorder.
- Connect RCA audio cables to "AUDIO (L)" and "AUDIO (R)" on the rear of your set and the other ends to corresponding audio out connectors on the A/V device.
- Headphones may be connected to the headphone output (6) on the rear of your set.
While the headphones are connected, the sound from the built-in speakers will be disabled.

6 Connecting Headphones

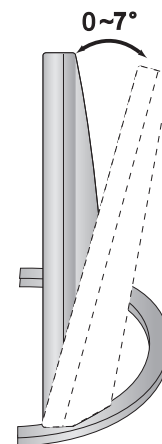
- Plug a set of headphones into the 3.5mm mini-jack socket on the rear of the set.

7 Kensington Slot

- This television has been designed to apply a burglarproof lock.

➤ Retractable Stand

Tilt the screen until you feel comfortable.
The maximum tilt angle is 7 degrees in the backward direction.
Please do not tilt the television beyond the specified range.
Using excessive force to tilt the television beyond the specified range may cause permanent damage to the mechanical part of the stand.



Viewing Pictures From External Sources



Once you have connected up your various audio and video systems, you can view the different sources by selecting the appropriate input.

- 1 Check that all the necessary connections have been made (refer to pages 6 and 7 for further details).
- 2
 - ◆ PC button...
Press the PC button to choose PC mode.
 - ◆ Video button...
Press the Video button to choose Video mode.
The input sources are displayed in the following order:
AV1 - AV2 - AV3 - S-Video.
 - ◆ TV button...
Press the TV button to choose TV mode.

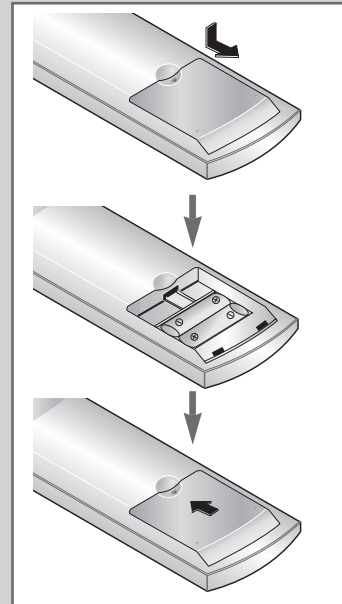
Inserting the Batteries in the Remote Control

You must insert or replace the batteries in the remote control when you:

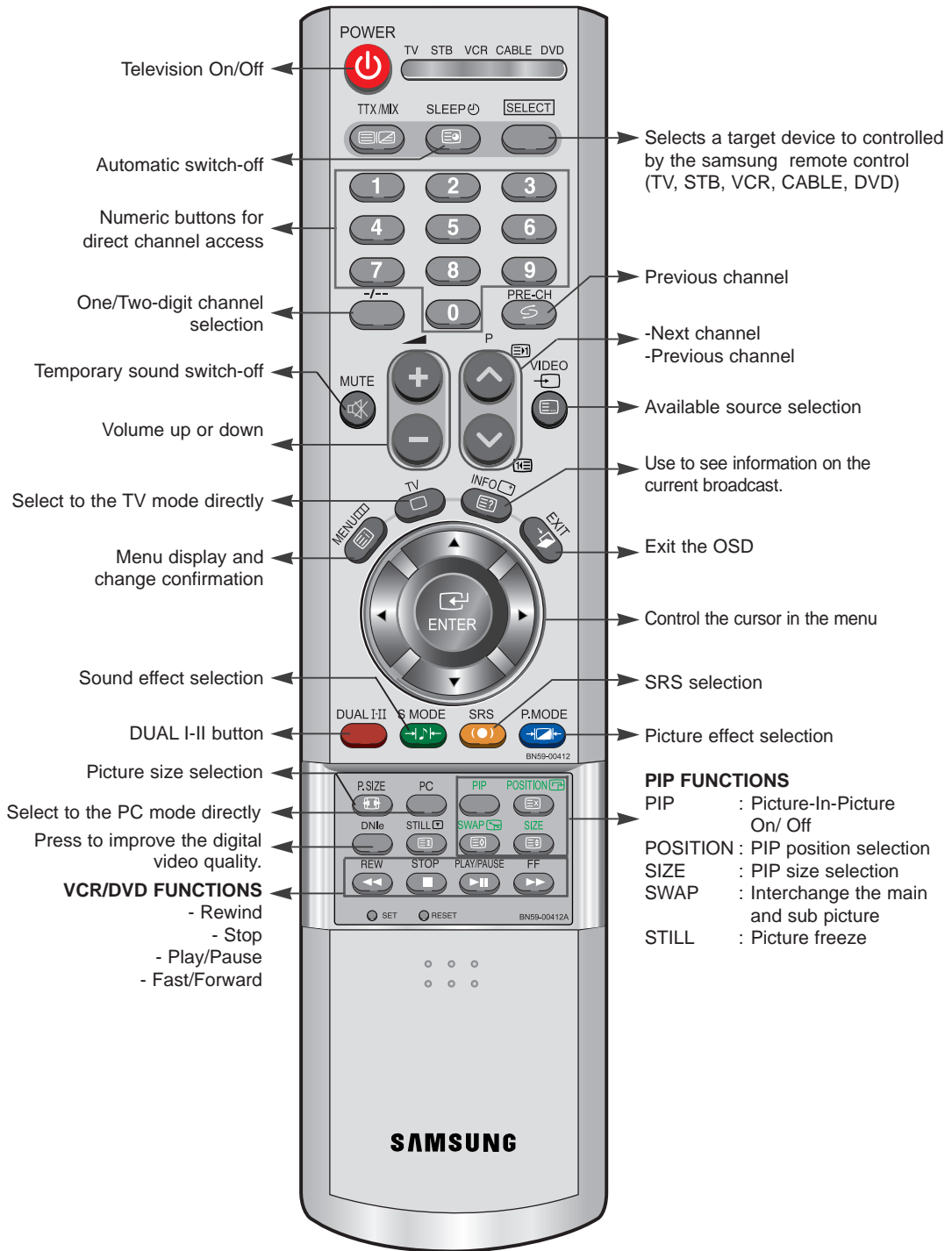
- ◆ *Purchase your set*
- ◆ *Find that the remote control is no longer operating correctly*

- 1 Remove the cover on the rear of the remote control by pressing the symbol downwards and then pulling firmly to remove it.
- 2 Install two **AAA** size batteries.
 - ◆ + on the battery against + on the remote control
 - ◆ - on the battery against - on the remote control
- 3 Replace the cover by aligning it with the base of the remote control and pressing it back into place.

➤ Do not mix battery types, i.e. alkaline and manganese.



Viewing the Remote Control (All Functions Except Teletext)

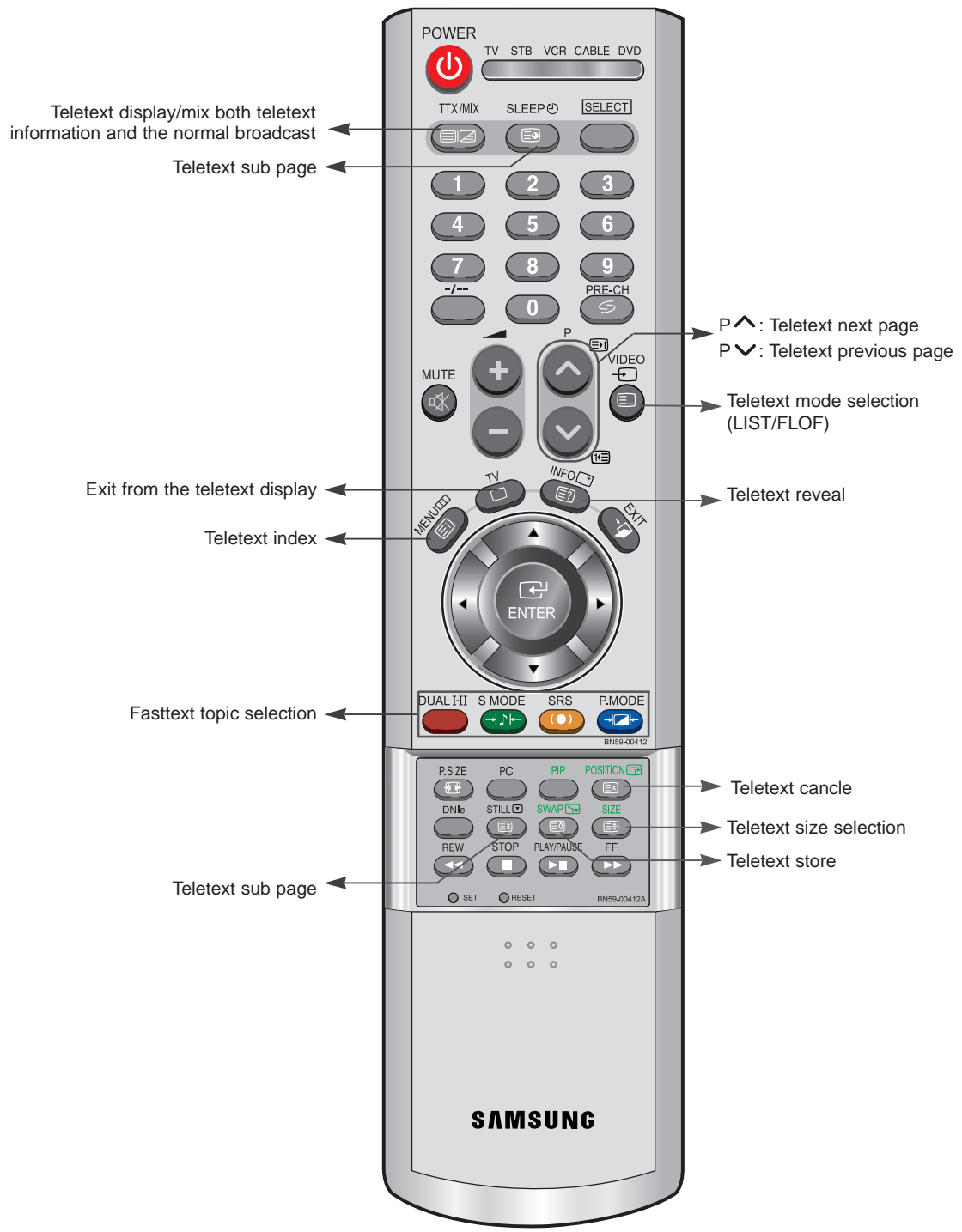


Teletext information

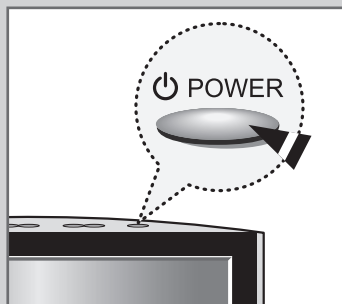
➤ The performance of the remote control may be affected by bright light.

Viewing the Remote Control

(Teletext Functions)



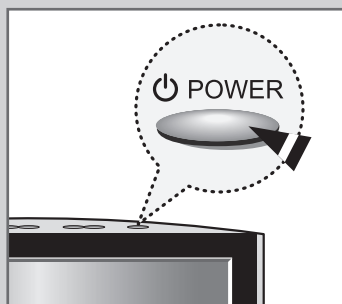
Switching On and Off



The mains lead is attached to the rear of your set.

- 1 Plug the mains lead into an appropriate socket.
Result: When the adaptor is plugged in, the LED turns red.
- 2 Press the **POWER** button to switch on.
- 3 To switch off, press the **POWER** button again.

Placing in Standby Mode



Your set can be placed in Standby mode in order to reduce the power consumption.

The Standby mode can be useful when you wish to interrupt viewing temporarily (during a meal, for example).

- 1 Press the **POWER** button.
- 2 To switch back on, simply press the **POWER** button again or a numeric button.


➤ Do not leave your set in Standby mode for long periods of time (when you are away on holiday, for example). Turn off by pressing the **POWER** button. It is best to unplug the set from the mains and aerial.

Becoming Familiar with the Remote Control

The remote control is used mainly to:

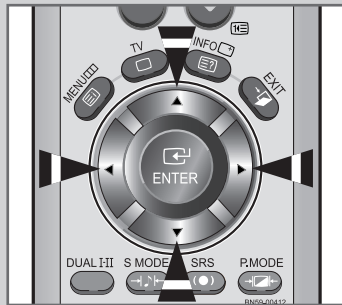
- ◆ Change channels and adjust the volume
- ◆ Set up your set using the on-screen menu system

The following table presents the most frequently used buttons and their functions.

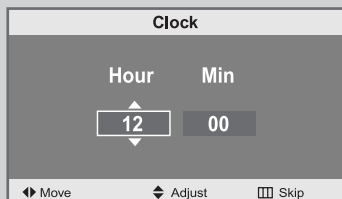
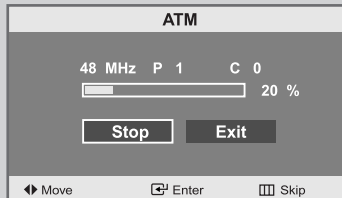
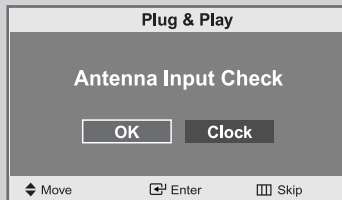
Button	Viewing Function	Menu Function
P ▲	Used to display the next stored channel.	-
P ▼	Used to display the previous stored channel.	-
PRE-CH	Used to switch repeatedly between the last two channels displayed. (PRE-CH ; Previous Channel)	
0 ~ 9	Used to display the corresponding channels.	
-/--	Used to select a channel numbered ten or over. Press this button, and the "--" symbol is displayed. Enter the two-digit channel number.	
▲ +	Used to increase the volume.	-
▼ -	Used to decrease the volume.	-
MUTE 🔇	Used to switch the sound off temporarily. ➤ To turn the sound back on, press this button again, or press the ▲+ or ▼- button.	
MENU ☰	Used to display the on-screen menu system.	Used to return to the previous menu or normal viewing.
EXIT ➤	Used to exit the menu system and return directly to normal viewing.	
	▲ ▼ Used to move among the menu items. ▶ Used to select a menu item or increase the value of the selected item. ◀ Used to return to the previous menu item or decrease the value of the selected item.	



Plug & Play



Plug & Play



Enjoy your watching



English-14

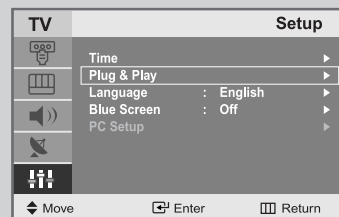
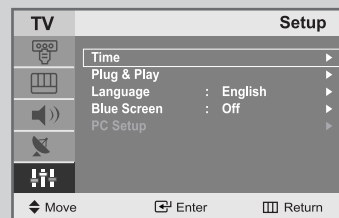
When the set is initially powered ON, you are automatically presented with a series of basic customer settings. The following settings are available.

- 1 If the set is in standby mode, press the **POWER** button on the remote control.
Result: The message **Plug & Play** is displayed. It appears for a little while, and then the **Language** menu is automatically displayed.
- 2 Select the appropriate **Language** by pressing the **▲** or **▼** button.
➤ The available languages are listed.
You can choose one of **18** Languages.
- 3 Press the **ENTER** button to confirm your choice.
Result: The message **Antenna Input Check** is displayed with **OK** selected.
- 4 Press the **ENTER** button.
- 5 Select your **Country** by pressing the **▲** or **▼** button. Press the **ENTER** button.
Result: The country menu is displayed:
Belgie - Deutsch - Espania - France - Italiano - Nederland - Schweiz - Sverige - UK - East Europe - Others
- 6 Select the **Hour** or **Min** by pressing the **◀** or **▶** button. Set the **Hour** or **Min** by pressing the **▲** or **▼** button. (Refer to "**Setting the Clock**" on page 38)
- 7 Press the **MENU** button to confirm your setting.
Result: The message **Enjoy your watching** is displayed, and then the channel which has been stored will be activated.

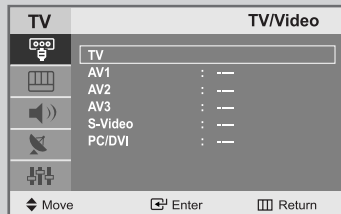
Plug & Play

If you want to reset this feature...

- 1 Press the **MENU** button.
Result: The main menu is displayed.
- 2 Press the **▲** or **▼** button to select the **Setup**.
Result: The options available in the **Setup** group are displayed.
- 3 Press the **ENTER**  button.
- 4 Press the **▲** or **▼** button to select the **Plug & Play**.
Press the **ENTER**  button.
Result: The message **Plug & Play** is displayed.
- 5 For further details on how to set up this feature, refer to page 14 and 23.



Selecting TV Mode or an Input Source



You can choose TV mode or change to an input source connected to the TV set. Use this button to choose an input source that you would like to watch.

- 1 Press the **MENU** button.

Result: The main menu is displayed.


- 2 Press the **▲** or **▼** button to select the **Input**.

Result: The options available in the **Input** group are displayed.

- 3 Press the **ENTER**  button.

- 4 Press the **ENTER**  button.

Result: The **TV/Video** is selected.

- 5 Press the **▲** or **▼** button to move to the input source that you wish to choose.
Press the **ENTER**  button.

Result: The input source changes to the one you have chosen.

Editing an Input Source Name

Entering the names of the input source devices connected to the input ports on the TV set allows you to find and choose an input source that you would like to watch in a quick and convenient manner.


- 1 Press the **MENU** button.


Result: The main menu is displayed.

- 2 Press the **▲** or **▼** button to select the **Input**.

Result: The options available in the **Input** group are displayed.

- 3 Press the **ENTER**  button.

- 4 Press the **▲** or **▼** button to select the **Edit Name**.
Press the **ENTER**  button.

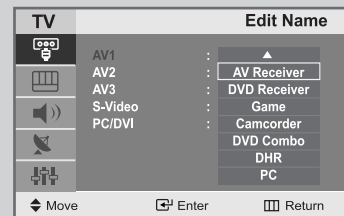
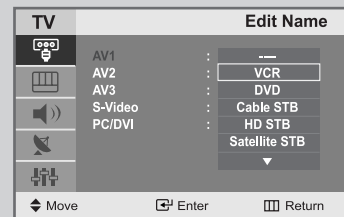
- 5 Press the **▲** or **▼** button to move to the input source that you wish to edit.
Press the **ENTER**  button.

Result: The following options are available:
AV 1 - AV 2 - AV 3 - S-Video - PC/DVI

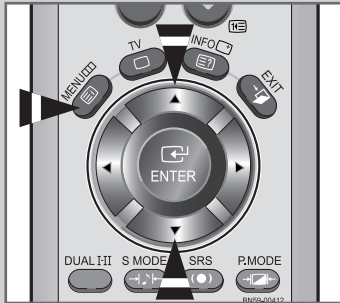
- 6 Select the required device by pressing the **▲** or **▼** repeatedly.

Result: The following options are available:
---- - VCR - DVD - Cable STB - HD STB - Satellite STB - AV Receiver - DVD Receiver - Game - Camcorder - DVD Combo - DHR - PC.



- 7 When you are satisfied with your choice, press the **EXIT** button to return to normal viewing.

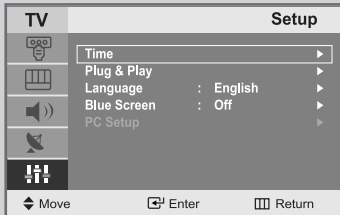


Choosing Your Language



When you start using your set for the first time, you must select the language which will be used for displaying menus and indicators.

- 1 Press the **MENU** button.
Result: The main menu is displayed.
- 2 Press the **▲** or **▼** button to select the **Setup**.
Result: The options available in the **Setup** group are displayed.
- 3 Press the **ENTER**  button.
- 4 Press the **▲** or **▼** button to select the **Language**.
Press the **ENTER**  button.
- 5 Select a particular **Language** by pressing the **▲** or **▼** button repeatedly.
- 6 When you are satisfied with your choice, press the **EXIT** button to return to normal viewing.





Storing Channels Automatically




You can scan for the frequency ranges available to you (and availability depends on your country). Automatically allocated programme numbers may not correspond to actual or desired programme numbers. However you can sort numbers manually and clear any channels you do not wish to watch.

- 1 Press the **MENU** button.
Result: The main menu is displayed.

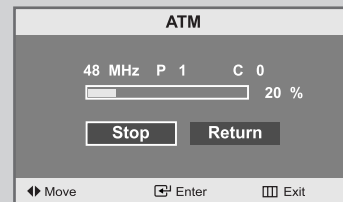
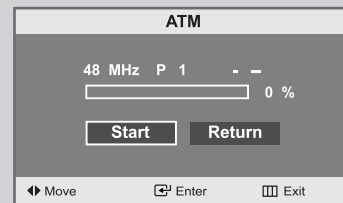
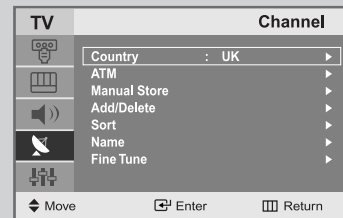
- 2 Press the **▲** or **▼** button to select the **Channel**.
Result: The options available in the **Channel** group are displayed.

- 3 Press the **ENTER**  button.

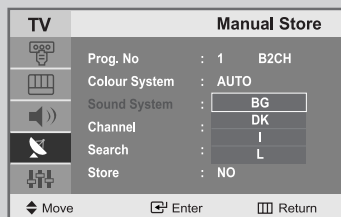
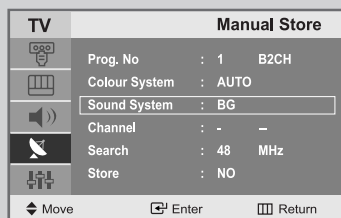
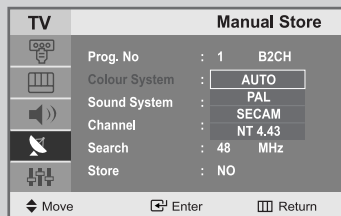
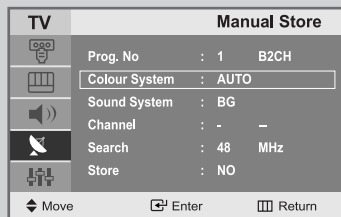
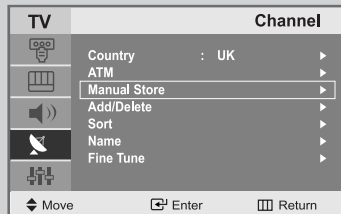
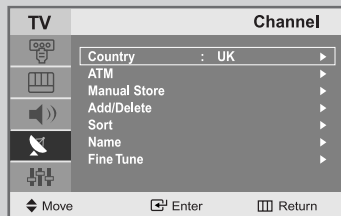
- 4 Press the **▲** or **▼** button to select **ATM**.
Press the **ENTER**  button.
Result: The **Start** is selected.

- 5 Press the **ENTER**  button to search the channels.
The sub menu is changed from **Start** to **Stop** with channel search started.
Result: The search will end automatically.
Channels are sorted and stored in an order which reflects their position in the frequency range, (with lowest first and highest last). The programme originally selected is then displayed.
 - To return to the previous menu, press **◀** or **▶** button to select **Return** and then press **ENTER**  button.
 - To stop the search before it has finished, press the **ENTER**  button to search the channels.

- 6 When the channels have been stored, you can:
 - ◆ Add or delete the channels (refer to page 22)
 - ◆ Sort them in the order required (refer to page 23)
 - ◆ Assign a name to the stored channels (refer to page 24)
 - ◆ Fine tune channel reception if necessary (refer to page 25)



Storing Channels Manually



You can store up to 100 channels, including those received via cable networks.

When storing channels manually, you can choose:

- ◆ Whether or not to store each of the channels found
- ◆ The programme number of each stored channel which you wish to identify

1 Press the **MENU** button.

Result: The main menu is displayed.

2 Press the **▲** or **▼** button to select the **Channel**.

Result: The options available in the **Channel** group are displayed.

3 Press the **ENTER** button.

4 Press the **▲** or **▼** button to select the **Manual Store**. Press the **ENTER** button.

Result: The options available in the **Manual Store** group are displayed with the **Prog. No** selected.

5 Press the **▲** or **▼** button to select **Colour System**.

Press the **ENTER** button.

Select the **Colour System** required by pressing the **▲** or **▼** button repeatedly and then press the **ENTER** button.

Result: The colour standards are displayed in the following order:
AUTO - PAL - SECAM - NT 4.43

6 Press the **▲** or **▼** button to select **Sound System**.

Press the **ENTER** button.








Select the **Sound System** required by pressing the **▲** or **▼** button repeatedly and then press the **ENTER** button.










Result: The sound standards are displayed in the following order:
BG - DK - I - L










7 For all the channels to move to the required channel numbers, repeat steps 5 to 6 after selecting **Prog. No** by pressing the **▲** or **▼** button.










➤ Press the number button to input Prog.No.

Storing Channels Manually

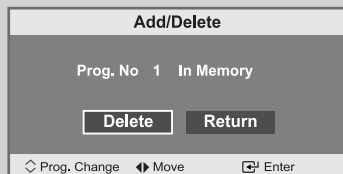
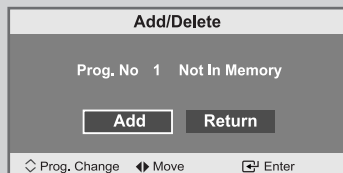
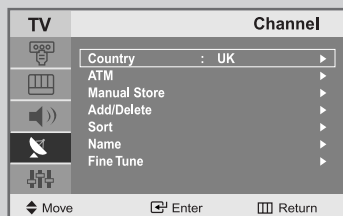
- 8** If you know the channel number to be stored,
- ◆ Press the ▲ or ▼ button to select the **Channel**.
Press the **ENTER**  button.
 - ◆ Select **C** (Air channel) or **S** (Cable channel) by pressing the ▲ or ▼ button and then press the **ENTER**  button.
 - ◆ Select the required number by pressing the ▲ or ▼ button and then press the **ENTER**  button.
- If there is normal sound or no sound, re-select the sound system required.
-
- 9** If you do not know the channel numbers, press the ▲ or ▼ button to select **Search**.
Press the **ENTER**  button.
Start the **Search** by pressing the ▲ or ▼ button.
Press the **ENTER**  button.
- Result: The tuner scans the frequency range until the first channel or the channel that you selected is received on your screen.
-
- 10** Press the ▲ or ▼ button to select **Store**.
Press the **ENTER**  button.
Select **YES** by pressing the ▲ or ▼ button.
Press the **ENTER**  button.
- Result: The channel and associated programme number are stored.
-
- 11** Repeat Steps **8** to **10** for each channel to be stored.

TV	Manual Store	
	Prog. No	: 1 B2CH
	Colour System	: AUTO
	Sound System	: BG
	Channel	: - -
	Search	: 48 MHz
	Store	: NO
 Move  Enter  Return		

TV	Manual Store	
	Prog. No	: 1 B2CH
	Colour System	: AUTO
	Sound System	: BG
	Channel	: - -
	Search	: 48 MHz
	Store	: NO
 Move  Enter  Return		

TV	Manual Store	
	Prog. No	: 1 B2CH
	Colour System	: AUTO
	Sound System	: BG
	Channel	: - -
	Search	: 48 MHz
	Store	: NO
 Move  Enter  Return		

Editing the Channels



You can exclude any channels of your choice from the channels you have scanned. When you scan through the stored channels, those you have chosen to skip are not displayed.

All channels that you do not specifically choose to skip are displayed during scanning.

- 1 Press the **MENU** button.
Result: The main menu is displayed.

- 2 Press the **▲** or **▼** button to select the **Channel**.
Result: The options available in the **Channel** group are displayed.

- 3 Press the **ENTER** button.
Result: The state of the current channel is displayed.

- 4 Press the **▲** or **▼** button to select **Add/Delete**. Press the **ENTER** button.
Result: If the channel that you wish to edit is not in the memory, Add is selected and displayed. Otherwise, if the channel that you wish to edit is in the memory, Delete is selected and displayed.

- 5 Press the **▲** or **▼** button to select the channel that you wish to **Add or Delete**.
Result: If the channel that you wish to edit is not in the memory, Add is selected and displayed. Otherwise, if the channel that you wish to edit is in the memory, Delete is selected and displayed.

- 6 Press the **ENTER** button to **Add or Delete** the channel.





- 7 To return to the previous menu, select **Return** by pressing the **◀** or **▶** button and then press the **ENTER** button.

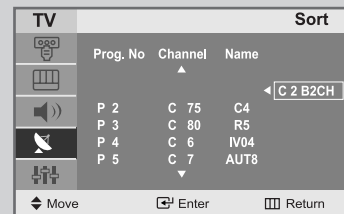
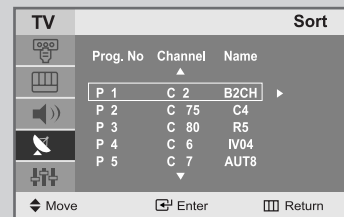
- 8 Repeat Step 5 for each channel to be added or erased.

Sorting the Stored Channels

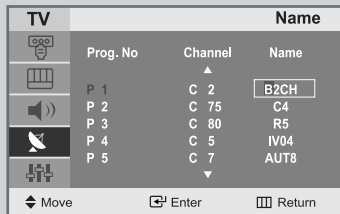
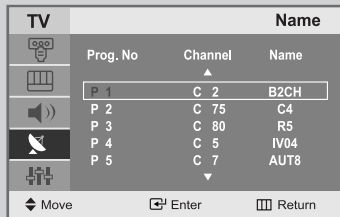
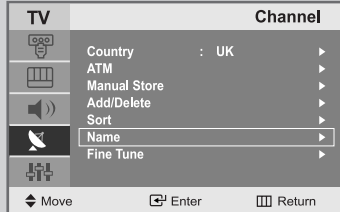
You can exchange the numbers of two channels, in order to:

- ◆ *Modify the numeric order in which the channels have been automatically stored.*
- ◆ *Assign easily remembered numbers to the channels that you watch most often.*

- 1 Press the **MENU** button.
Result: The main menu is displayed.
- 2 Press the **▲** or **▼** button to select the **Channel**.
Result: The options available in the **Channel** group are displayed.
- 3 Press the **ENTER**  button.
- 4 Press the **▲** or **▼** button to select **Sort**.
Press the **ENTER**  button.
Result: The current **Prog. No.**, **Channel** and **Name** are displayed.
- 5 Select the channel number that you wish to change by pressing the **▲** or **▼** button repeatedly.
Press the **ENTER**  button.
Result: The selected **Channel number** and **Name** are moved to the right side.
- 6 Press the **▲** or **▼** button to move to the position which you would like to change and then press the **ENTER**  button.
Result: The selected channel is exchanged with the one previously stored to the chosen number.
- 7 Repeat step 5 to 6 for another channel to sort again.



Giving Channels Names



If channel name information is broadcast when you store the channels either manually or automatically, the names are assigned to the channels directly. You can however change these names or assign new names as required.

- 1 Press the **MENU** button.
Result: The main menu is displayed.
- 2 Press the **▲** or **▼** button to select the **Channel**.
Result: The options available in the **Channel** group are displayed.
- 3 Press the **ENTER** button.
- 4 Press the **▲** or **▼** button to select the **Name**.
Press the **ENTER** button.
Result: The current **Prog. No**, **Channel** and **Name** are displayed.
- 5 If necessary, select the channel to be assigned to a new **Name** by pressing the **▲** or **▼** button.
Press the **ENTER** button.
Result: The selection bar is displayed around the name box.
- 6






To...	Then...
Select a letter, number or symbol	Press the ▲ or ▼ button
Move on to the next letter	Press the ▶ button
Move back to the previous letter	Press the ◀ button
Confirm the name	Press the ENTER button

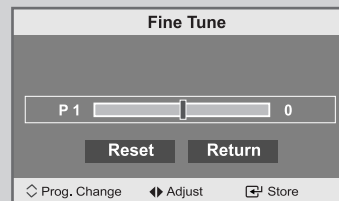
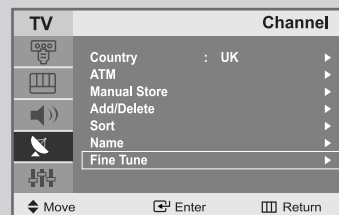
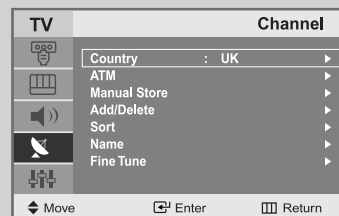
➤ The characters available are :

 - ◆ Letters of the alphabet (A~Z)
 - ◆ Numbers (0~9)
 - ◆ Special characters (space, _, -, *)
- 7 Repeat Steps 5 to 6 for each channel to be assigned to a new name.
- 8 When you have finished entering the name, press the **ENTER** button to confirm the name.

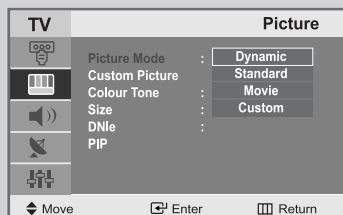
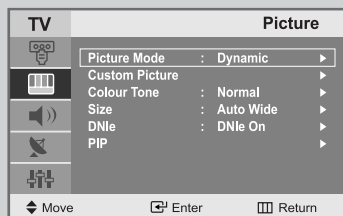
Fine Tuning Channel Reception

If the reception is clear, you do not have to fine-tune the channel, as this is done automatically during the search and store operation. If however the signal is weak or distorted, you may have to fine-tune the channel manually.




- 1 Press the **MENU** button.
Result: The main menu is displayed.
- 2 Press the **▲** or **▼** button to select the **Channel**.
Result: The options available in the **Channel** group are displayed.
- 3 Press the **ENTER**  button.
- 4 Press the **▲** or **▼** button to select the **Fine Tune**.
Press the **ENTER**  button.
- 5 Press the **^** or **v** button to select the channel that you wish to **Fine Tune**.
- 6 Press **◀** or **▶** button until you reach the setting to obtain a sharp and clear picture and good sound quality.
To store the setting, press the **ENTER**  button.
- 7 To reset the fine tuning, select **Reset** by pressing the **▲** or **▼** button and then press the **ENTER**  button.
To return to the previous menu, select **Return** by pressing the **◀** or **▶** button and press the **ENTER**  button.



Changing the Picture Standard






You can select the type of picture which best corresponds to your viewing requirements.

- 1 Press the **MENU** button.
Result: The main menu is displayed.
- 2 Press the **▲** or **▼** button to select the **Picture**.
Result: The options available in the **Picture** group are displayed.
- 3 Press the **ENTER**  button.
- 4 Press the **ENTER**  button.
Result: The **Picture Mode** is selected.
- 5 Select the required picture effect by pressing the **▲** or **▼** button repeatedly.
Press the **ENTER**  button.
Result: The following picture effects are available:
Dynamic - Standard - Movie - Custom

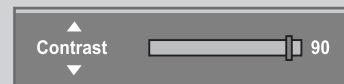
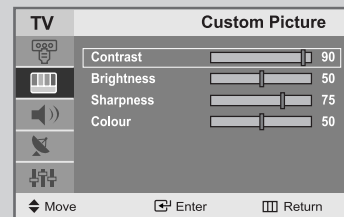
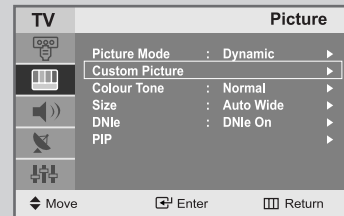
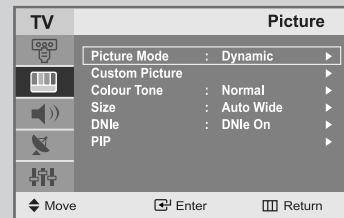
➤ You can also set these options simply by pressing the **P.MODE** (Picture Mode) button.

Adjusting the Custom Picture

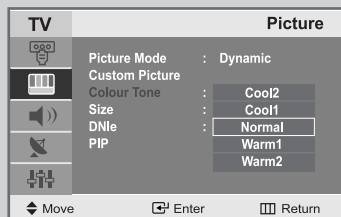
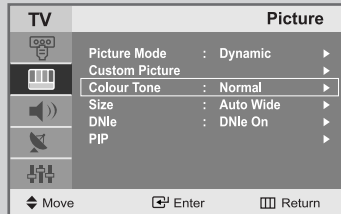
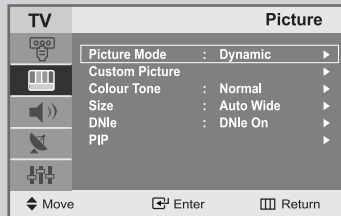
Your set has several settings which allow you to control picture quality.

- 1 Press the **MENU** button.
Result: The main menu is displayed.
- 2 Press the **▲** or **▼** button to select the **Picture**.
Result: The options available in the **Picture** group are displayed.
- 3 Press the **ENTER**  button.
- 4 Press the **▲** or **▼** button to select the **Custom Picture**.
Press the **ENTER**  button.
- 5 Select the option (**Contrast, Brightness, Sharpness, Colour or Tint-NTSC only**) to be adjusted by pressing the **▲** or **▼** button.
Press the **ENTER**  button.
Result: The horizontal bar is displayed.
- 6 Press the **◀** or **▶** button to reach the required setting.
- 7 When you are satisfied with the setting, press the **MENU** button to return to the previous menu or press the **EXIT** button to return to normal viewing.

➤ If you make any changes to these settings, the picture standard is automatically switched to **Custom**.



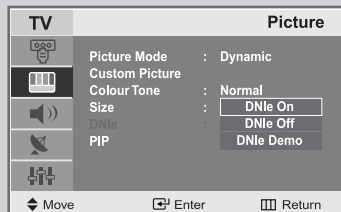
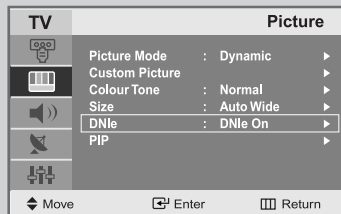
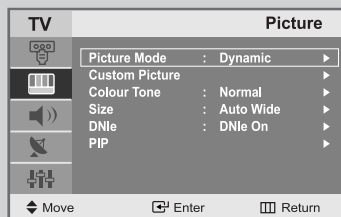
Adjusting the Screen Background Colour



You can change the screen background colour according to your preference.

- 1 Press the **MENU** button.
Result: The main menu is displayed.
- 2 Press the **▲** or **▼** button to select the **Picture**.
Result: The options available in the **Picture** group are displayed.
- 3 Press the **ENTER** **↵** button.
- 4 Press the **▲** or **▼** button to select the **Colour Tone**. Press the **ENTER** **↵** button.
Result: The following options are available:
Cool 2 - Cool 1 - Normal - Warm 1 - Warm 2
- 5 When you are satisfied with your choice, press the **EXIT** button to return to normal viewing.

DNle (Digital Natural Image engine)



DNle On

English-28

Samsung's New Technology brings you more detailed images with contrast and white enhancement. A new image compensation algorithm gives viewers brighter and clearer image. DNle technology will match every signal to your eye.

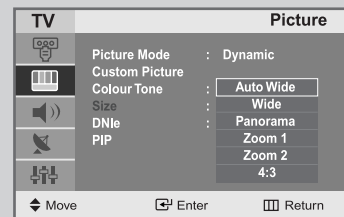
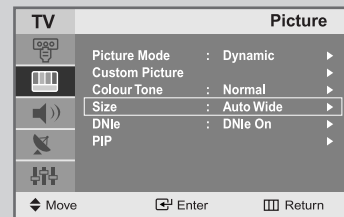
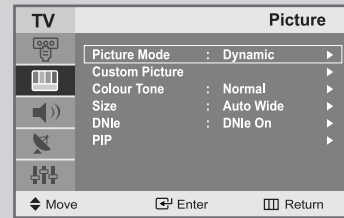
- 1 Press the **MENU** button.
Result: The main menu is displayed.
 - 2 Press the **▲** or **▼** button to select **Picture**.
Result: The options available in the **Picture** group are displayed.
 - 3 Press the **ENTER** **↵** or **▶** button.
 - 4 Press the **▲** or **▼** button to select **DNle** and then press the **ENTER** **↵** or **▶** button. Select the required option by pressing the **▲** or **▼** button. The following options are available:
 - You can also select these options by simply pressing the **DNle** button.
 - 5 When you are satisfied with your choice, press the **EXIT** button to return to normal viewing.
- **DNle Demo** The screen shows the improved image on the left-side and the original image on the right-hand side.
- DNle On** Improved picture mode demonstrated by DNle Demo is activated.
- DNle Off** The mode is deactivated and the screen returns to its original condition.

Selecting the Picture Size

You can select the picture size which best corresponds to your viewing requirements.

- 1 Press the **MENU** button.
Result: The main menu is displayed.
- 2 Press the **▲** or **▼** button to select the **Picture**.
Result: The options available in the **Picture** group are displayed.
- 3 Press the **ENTER** button.
- 4 Press the **▲** or **▼** button to select the **Size**.
Press the **ENTER** button.
- 5 Select the required picture format by pressing the **▲** or **▼** button repeatedly.
Press the **ENTER** button.
Result: The following options are available:
Auto Wide - Wide - Panorama - Zoom 1 - Zoom 2 - 4: 3

- ◆ You can also set these options simply by pressing the **P.SIZE** (Picture SIZE) button.
- ◆ This feature does not work when the (Only Double Window) feature is active.



Auto Wide

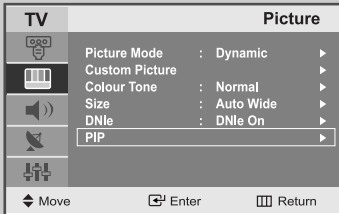
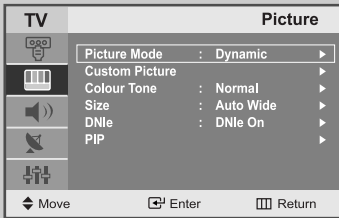
Freezing the Current Picture

Press the **"STILL"** button on the remote control to freeze the picture on a given frame.

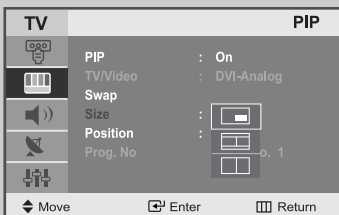
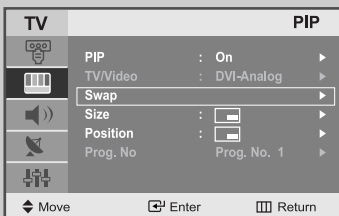
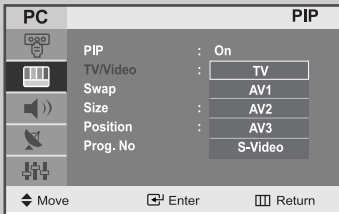
To return to normal viewing, press the **"STILL"** button again.



Viewing the Picture In Picture (PIP)



[PC Only]



You can display a sub picture within the main picture of a set programme or video input. In this way you can watch or monitor the set programme or video input from any connected equipment while watching the set or other video input.

- 1 Press the **MENU** button.
Result: The main menu is displayed.
- 2 Press the **▲** or **▼** button to select the **Picture**.
Result: The options available in the **Picture** group are displayed.
- 3 Press the **ENTER** button.
- 4 Press the **▲** or **▼** button to select the **PIP**.
Press the **ENTER** button.
Result: The options available in the **PIP** menu are displayed.
- 5 Press the **ENTER** button.
- 6 Select **On** by pressing the **▲** or **▼** button.
Press the **ENTER** button.

7 ►► PC/DVI Only...

Press the **▲** or **▼** button to select **TV/Video**.

Press the **ENTER** button.

Select the source of the sub picture by pressing the **▲** or **▼** button and then press the **ENTER** button.

Result: The sources are displayed in the following order:
TV - AV1 - AV2 - AV3 - S-Video

► PC Only



“TV/Video” and “Prog.No” are inactive and not available in TV mode.
However, they become active and available in PC mode.

- 8 To swap the main picture and the sub picture, select the **Swap** option and press the **ENTER** button.
Result: The main picture and the sub picture are interchanged.
- 9 Press the **▲** or **▼** button to select the **Size**.
Press the **ENTER** button.
Select the size of the sub picture by pressing the **▲** or **▼** button and then press the **ENTER** button.

Result: The sizes are displayed in the following order:

Small - Double1 - Double2

Viewing the Picture In Picture (PIP)


- 10** Press the ▲ or ▼ button to select the **Position**.
Press the **ENTER**  button.
Select the position of the sub picture by pressing the ▲ or ▼ button and then press the **ENTER**  button.

Result: You can move the sub picture counterclockwise.

- ◆ When the size of sub picture is set to **Double1** or **Double2**, this feature does not work.

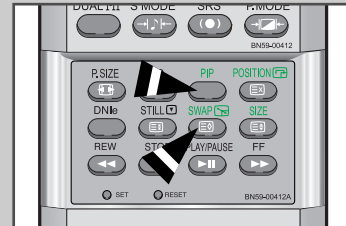
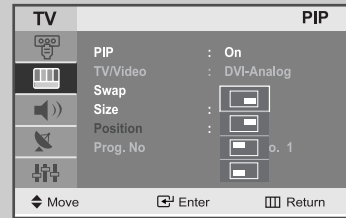
- 11** To return to normal viewing press the **EXIT** button.

➤ Remote-control functions while "PIP" is "On":

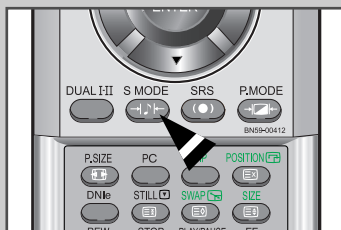
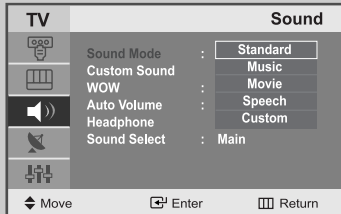
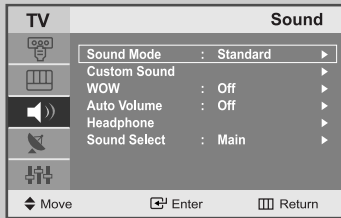
Features	Description
PIP ON	Used to operate the ON/OFF function of PIP directly.
SWAP	Used to interchange the main picture and the sub picture. ➤ When the main picture is in Video mode and the sub picture is in the set mode, you might not hear the sound of main picture when pressing the SWAP button after changing the sub picture channel. At this time, reselect the main picture channel.
	Used to select the channel of sub picture.

➤ PIP Settings

Sub Picture Main Picture	O : PIP operates X : PIP does not operate					
	TV	AV1	AV2	AV3	S-Video	PC/DVI
TV	X	X	X	X	X	O
AV1	X	X	X	X	X	O
AV2	X	X	X	X	X	O
AV3	X	X	X	X	X	O
S-Video	X	X	X	X	X	O
PC/DVI	O	O	O	O	O	X



Changing the Sound Standard



You can select the type of special sound effect to be used when watching a given broadcast.

- 1 Press the **MENU** button.
Result: The main menu is displayed.
- 2 Press the **▲** or **▼** button to select the **Sound**.
Result: The options available in the **Sound** group are displayed.
- 3 Press the **ENTER** button.
- 4 Press the **ENTER** button.
Result: The **Sound Mode** is selected .
- 5 Select the required sound effect by pressing the **▲** or **▼** button repeatedly.
Press the **ENTER** button.

Result: The following sound effects are available:
Standard - Music - Movie - Speech - Custom

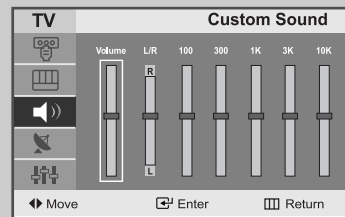
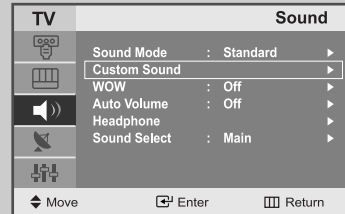
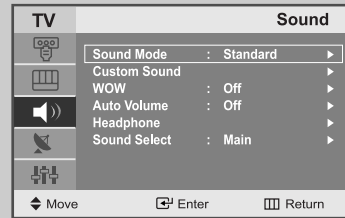
- You can also set these options simply by pressing the **S.MODE** (Sound Mode) button.

Adjusting the Custom Sound

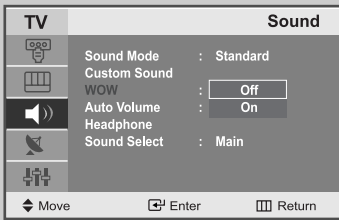
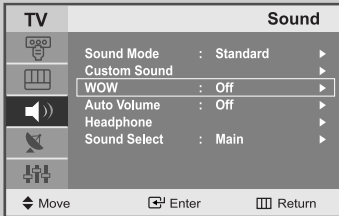
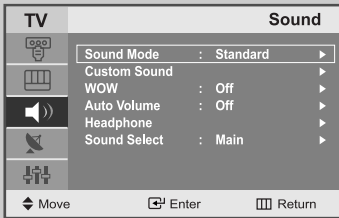
The sound settings can be adjusted to suit your personal preferences.

- 1 Press the **MENU** button.
Result: The main menu is displayed.
- 2 Press the **▲** or **▼** button to select the **Sound**.
Result: The options available in the **Sound** group are displayed.
- 3 Press the **ENTER** button.
- 4 Press the **▲** or **▼** button to select the **Custom Sound**.
Press the **ENTER** button.
- 5 Select the option (**Volume, L/R, 100, 300, 1K, 3K, 10K**)
be adjusted by pressing the **◀** or **▶** button.
Press the **ENTER** button.
Result: The Vertical bar is activated.
- 6 Press the **▲** or **▼** button to reach the required setting.
- 7 When you are satisfied with the setting, press the **MENU** button
to return to the previous menu or press the **EXIT** button to return to
normal viewing.




➤ If you make any changes to these settings,
the Sound Mode is automatically switched to Custom.



Selecting WOW Surround






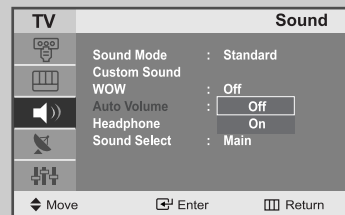
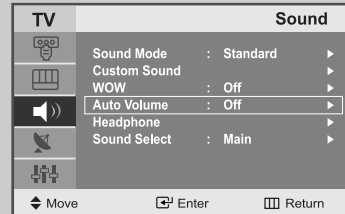
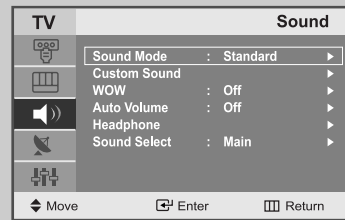
Select the Wow Surround feature to amplify the mid- to low-range sounds or create a surround sound effect.

- 1 Press the **MENU** button.
Result: The main menu is displayed.
- 2 Press the **▲** or **▼** button to select the **Sound**.
Result: The options available in the **Sound** group are displayed.
- 3 Press the **ENTER**  button.
- 4 Press the **▲** or **▼** buttons to select **WOW**.
Press the **ENTER**  button.
- 5 Press the **▲** or **▼** button to select **Off/On**.
Press the **ENTER**  button.

Selecting Auto Volume Control

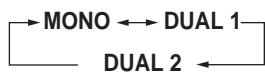
Reduces the differences in volume level between broadcasters.

- 1 Press the **MENU** button.
Result: The main menu is displayed.
- 2 Press the **▲** or **▼** button to select the **Sound**.
Result: The options available in the **Sound** group are displayed.
- 3 Press the **ENTER**  button.
- 4 Press the **▲** or **▼** button to select **Auto Volume**.
Press the **ENTER**  button.
- 5 Press the **▲** or **▼** button to select **Off/On**.
Press the **ENTER**  button.



Selecting the Sound Mode

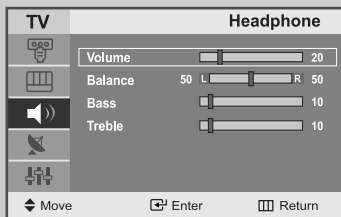
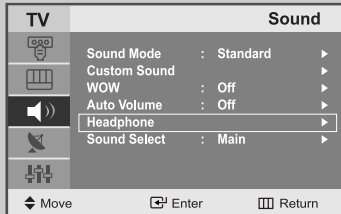
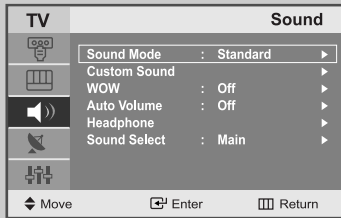
*You can set the sound mode by pressing the "DUAL I-II" button.
When you press it, current sound mode is displayed on the screen.*

	Audio Type	DUAL 1/2	Default
FM Stereo	Mono	MONO	Automatic change
	Stereo	STEREO ↔ MONO	
	Dual	DUAL 1 ↔ DUAL 2	DUAL 1
	Mono	MONO	Automatic change
NICAM Stereo	Stereo	MONO ↔ STEREO	
	Dual		DUAL 1

- ◆ If the receiving conditions deteriorate, listening will be easier if the mode is set to **Mono**.
- ◆ If the stereo signal is weak and automatic switching occurs, switch to **Mono**.



Adjusting Your Headphone Preferences



*You can adjust the headphone settings to suit your preferences.
The following headphones settings are available:*

◆ **Volume, Balance, Bass, Treble.**

- 1 Press the **MENU** button.
Result: The main menu is displayed.

- 2 Press the **▲** or **▼** button to select the **Sound**.
Result: The options available in the **Sound** group are displayed.

- 3 Press the **ENTER** button.

- 4 Press the **▲** or **▼** button to select **Headphone**.
Press the **ENTER** button.

- 5 Select the option (**Volume, Balance, Bass, Treble**) to be adjusted by pressing the **▲** or **▼** button.s
Result: The horizontal bar is activated.

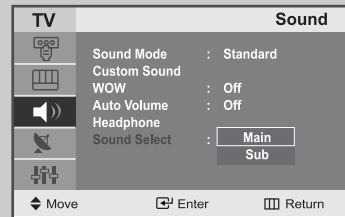
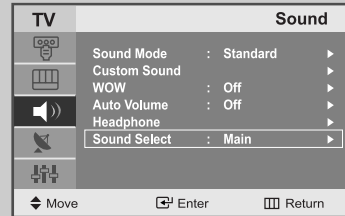
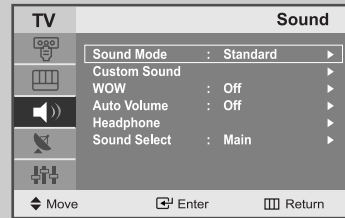
- 6 Press the **◀** or **▶** button to reach the required setting.

- 7 When you are satisfied with the setting, press the **MENU** button to return to the previous menu or press the **EXIT** button to return to normal viewing.

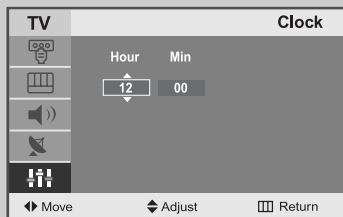
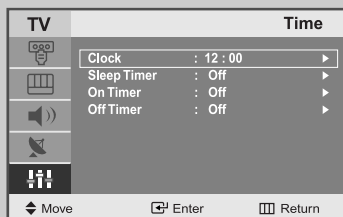
Selecting a Sound Mode for the Sub-Screen

- 1 Press the **MENU** button.
Result: The main menu is displayed.
- 2 Press the **▲** or **▼** button to select the **Sound**.
Result: The options available in the **Sound** group are displayed.
- 3 Press the **ENTER** button.
- 4 Press the **▲** or **▼** button to select the **Sound Select**.
Press the **ENTER** button.
- 5 Press the **▲** or **▼** button to select **Main/Sub**.
Press the **ENTER** button.

➤ You can use the sub-screen sound mode feature only when the PIP feature is ON.



Setting the Clock






- 1 Press the **MENU** button.
Result: The main menu is displayed.
- 2 Press the **▲** or **▼** button to select **Setup**.
Result: The options available in the **Setup** group are displayed.
- 3 Press the **ENTER** button.
- 4 Press the **ENTER** button.
Result: The **Time** is selected.
- 5 Press the **ENTER** button.
Press the **▲** or **▼** button to set the **Hour**.
- 6 Press the **◀** or **▶** button to move to **Min**.
Press the **▲** or **▼** button to set the minutes.
- 7 Press the **ENTER** button.
Result: The clock is set.

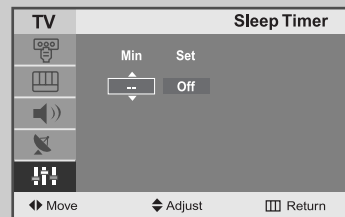
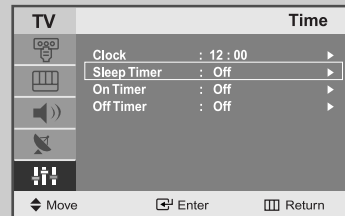
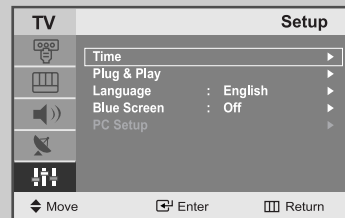
➤ You can also set the time using the numeric buttons on the remote.

Switching Off Automatically

You can select a time period of between -- and 180 minutes after which your set automatically switches off.

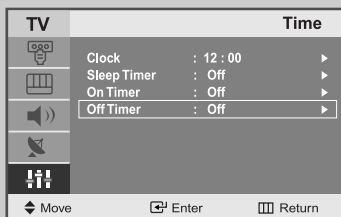
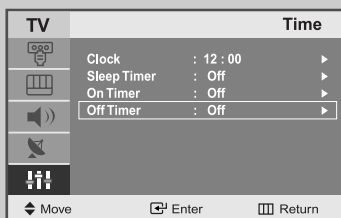
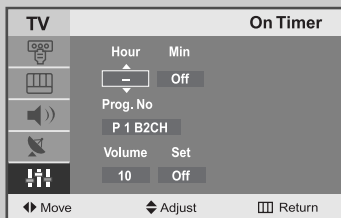
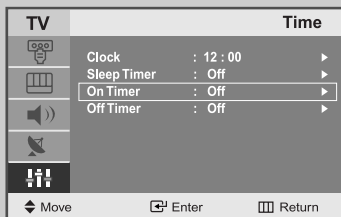
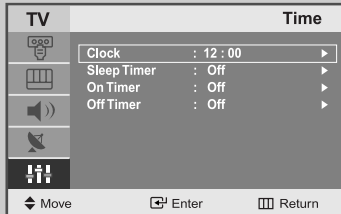
- 1 Press the **MENU** button.
Result: The main menu is displayed.
- 2 Press the **▲** or **▼** button to select **Setup**.
Result: The options available in the **Setup** group are displayed.
- 3 Press the **ENTER**  button.
- 4 Press the **ENTER**  button.
Result: The **Time** is selected.
- 5 Press the **▲** or **▼** button to select the **Sleep Timer**.
Press the **ENTER**  button.
- 6 Select the number of minutes after which your set switches **On** by pressing the **▲** or **▼** button repeatedly.
Result: The preset time intervals:
--, **30**, **60**, **90**, **120**, **150**, **180** minutes.

- You can also select this feature by simply pressing the "**SLEEP**" button.
If the sleep timer is already set, the screen displays the remaining time and then your set will be switched **Off**.
If the sleep timer is not yet set, **Off** is displayed.
◆ Off • 30 • 60 • 90 • 120 • 150 • 180 • Off



30 Min

Switching the Television On and Off Automatically



You can set the On/Off timers so that the set will:

- ◆ Switch on automatically and tune to the channel of your choice at the time you select.
- ◆ Switch off automatically at the time you select.

1 Press the **MENU** button.

Result: The main menu is displayed.

2 Press the **▲** or **▼** button to select **Setup**.

Result: The options available in the **Setup** group are displayed.

3 Press the **ENTER** button.

4 Press the **ENTER** button.

Result: The **Time** menu are displayed with **Clock** selected.

5 Press the **▲** or **▼** button to select the **On Timer**.
Press the **ENTER** button.

Result: The **On Timer** menu is displayed.

To...	Press the...
Move to Hour, Min, Prog. No and Volume	◀ or ▶ button
Set Hour, Min, Prog. No and Volume level	▲ or ▼ button
Move to Set	◀ or ▶ button
Select On to enable above setting	▲ or ▼ button

6 Press the **▲** or **▼** button to select **Off Timer**.
In the same way, set the time at which you wish the set to be switched off automatically.



7 **To display the...** **Press the...**

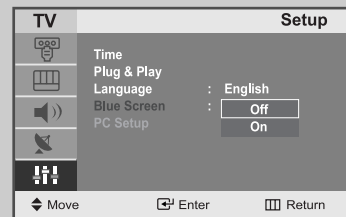
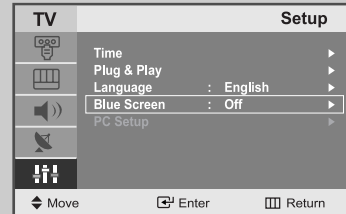
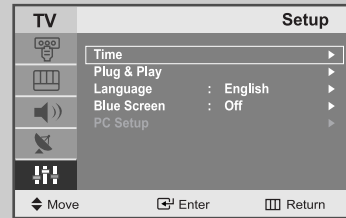
Current time and selected audio/video setting status	INFO button
--	-------------

Setting the Blue Screen Mode

If no signal is being received or the signal is very weak, a blue screen automatically replaces the noisy picture background.

If you wish to continue viewing the poor picture, you must set the "Blue Screen" mode to "Off".

- 1 Press the **MENU** button.
Result: The main menu is displayed.
- 2 Press the **▲** or **▼** button to select **Setup**.
Result: The options available in the **Setup** group are displayed.
- 3 Press the **ENTER**  button.
- 4 Press the **▲** or **▼** button to select **Blue Screen**.
Press the **ENTER**  button.
- 5 Select the required option (**On** or **Off**) by pressing the **▲** or **▼** button.
- 6 Press the **EXIT** button to return to normal viewing.



Displaying Information

You can view the setting status of the selected source by pressing the "INFO" button on the remote control.

The information displayed varies according to the selected source.



P 1 B2CH

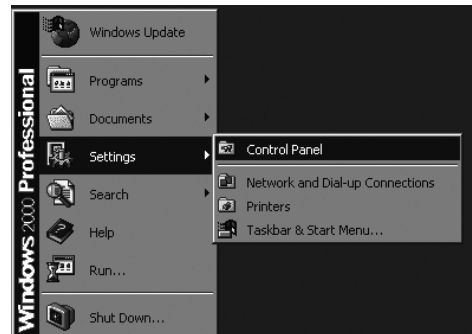
Mono

Picture	Dynamic
Sound	Standard
WOW	Off
Clock	12:00

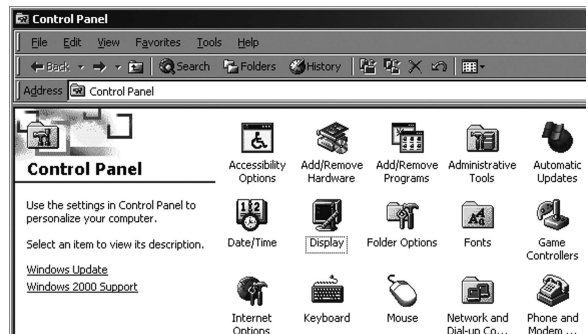
Setting Up Your PC Software (Based on Windows 2000)

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

- 1 First, click on "**Settings**" on the Windows start menu. While "**Settings**" is highlighted, move the cursor so that "**Control Panel**" is highlighted.



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







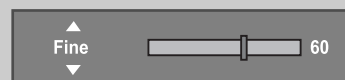
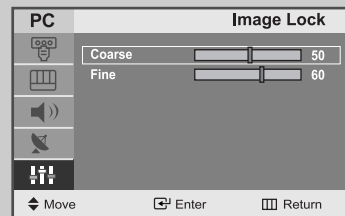
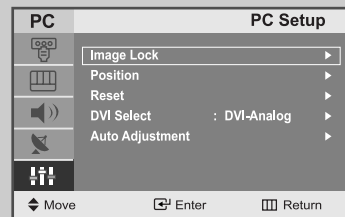
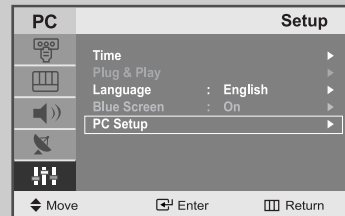
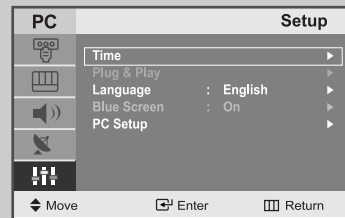
- 3 Navigate to the "**Settings**" tab on the display dialog-box. The correct size setting (resolution) - **1280 x 720 pixels**. If a vertical-frequency option exists on your display settings dialog box, the correct value is "**60**" or "**60 Hz**". Otherwise, just click "**OK**" and exit the dialog box.



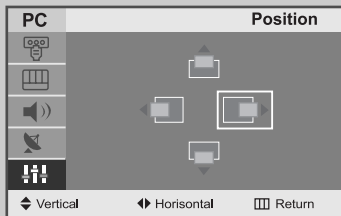
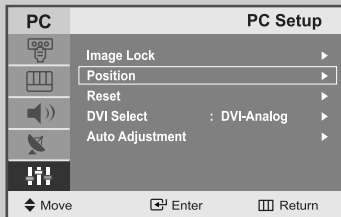
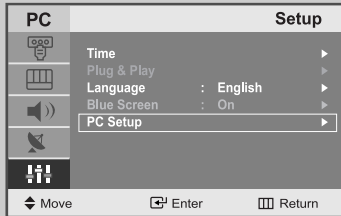
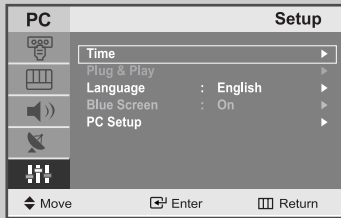
Coarse and Fine Tuning of the Image

➤ Preset to PC mode by pressing the **PC** button.

- 1 Press the **MENU** button.
Result: The main menu is displayed.
- 2 Press the **▲** or **▼** button to select **Setup**.
Result: The options available in the **Setup** group are displayed.
- 3 Press the **ENTER**  button.
- 4 Press the **▲** or **▼** button to select **PC Setup**.
Press the **ENTER**  button.
Result: The options available in the **PC Setup** menu are displayed.
- 5 Press the **ENTER**  button.
Result: The **Image Lock** menu is selected.
- 6 Press the **▲** or **▼** button to select **Coarse** or **Fine**.
Press the **ENTER**  button.
Result: The horizontal bar is displayed.
- 7 Press the **◀** or **▶** button to adjust the screen quality.
Vertical stripes may appear or the picture may become blurry.
- 8 When you are satisfied with the settings, press the **MENU** button to return to the previous menu or press the **EXIT** button to return to normal viewing.



Changing the Image Position



➤ Preset to PC mode by pressing the **PC** button.

1 Press the **MENU** button.

Result: The main menu is displayed.

2 Press the **▲** or **▼** button to select **Setup**.

Result: The options available in the **Setup** group are displayed.

3 Press the **ENTER**  button.

4 Press the **▲** or **▼** button to select **PC Setup**.
Press **ENTER**  button.

Result: The options available in the **PC Setup** menu are displayed.

5 Press the **▲** or **▼** button to select **Position**.
Press the **ENTER**  button.

Result: You can adjust the image **Position**.

6 Press the **▲** or **▼** button to adjust the vertical position.
Press the **◀** or **▶** button to adjust the horizontal position.

7 Press the **MENU** button to return to the previous menu or press the **EXIT** button to return to normal viewing.


Initializing the Image Settings


➤ Preset to PC mode by pressing the **PC** button.


You can replace all image settings with the factory default values.


- 1 Press the **MENU** button.
Result: The main menu is displayed.

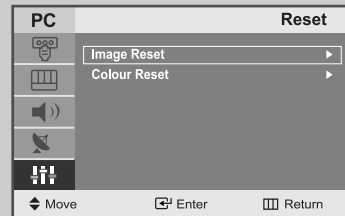
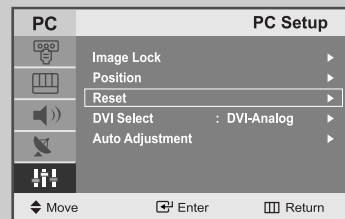
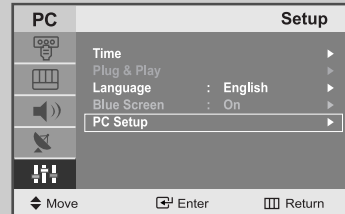
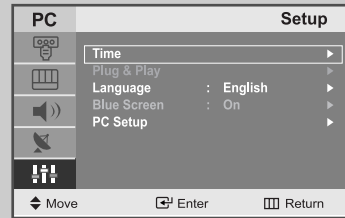
- 2 Press the **▲** or **▼** button to select **Setup**.
Result: The options available in the **Setup** group are displayed.

- 3 Press the **ENTER**  button.

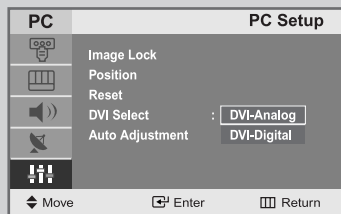
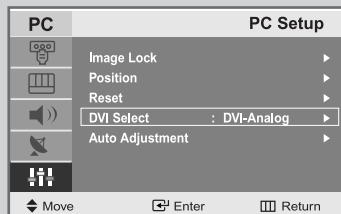
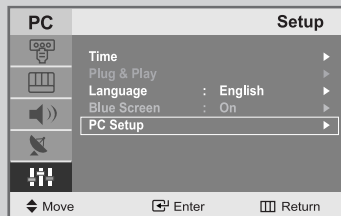
- 4 Press the **▲** or **▼** button to select **PC Setup**.
Press **ENTER**  button.
Result: The options available in the **PC Setup** menu are displayed.

- 5 Press the **▲** or **▼** button to select **Reset**.
Press the **ENTER**  button.

- 6 Select the option (**Image Reset** or **Colour Reset**) to be replaced by pressing the **▲** or **▼** button.
Press the **ENTER**  button.



Selecting the DVI mode



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

1 Press the **MENU** button.

Result: The main menu is displayed.

2 Press the **▲** or **▼** button to select **Setup**.
Press the **ENTER**  or **▶** button.

3 Press the **▲** or **▼** button to select **PC Setup**.
Press the **ENTER**  or **▶** button.

Result: The options available in the **PC Setup** menu are displayed.

4 Press the **▲** or **▼** button to select **DVI Select**.
Press the **ENTER**  or **▶** button.

5 Press the **▲** or **▼** button to select **DVI-Analog** or **DVI-Digital**.

6 Press **MENU** button to return to the previous menu or press the **EXIT** button to return to normal viewing.

Adjusting the PC Screen Automatically

➤ Preset to PC mode by pressing the **PC** button.

- 1 Press the **MENU** button.

Result: The main menu is displayed.

- 2 Press the **▲** or **▼** button to select **Setup**.

Result: The options available in the **Setup** group are displayed.

- 3 Press the **ENTER**  button.

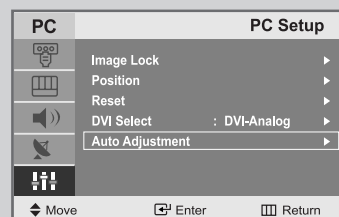
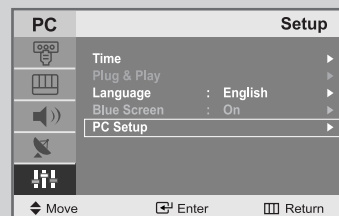
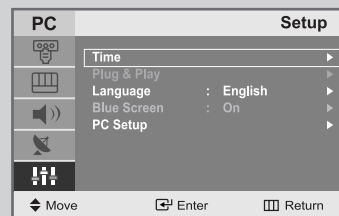
- 4 Press the **▲** or **▼** button to select **PC Setup**.
Press **ENTER**  button.

Result: The options available in the **PC Setup** menu are displayed.

- 5 Press the **▲** or **▼** button to select **Auto Adjustment**.

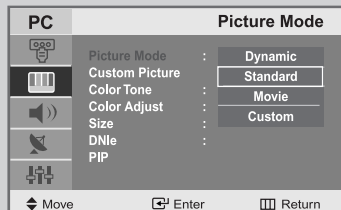
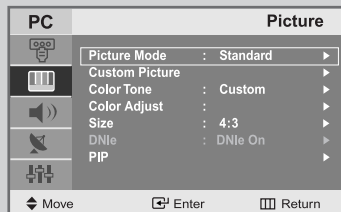
Press the **ENTER**  button.

Result: The screen quality and position are automatically adjusted, and the screen returns to the original view a few seconds later.






Auto Adjustment

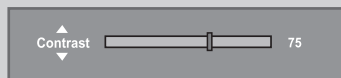
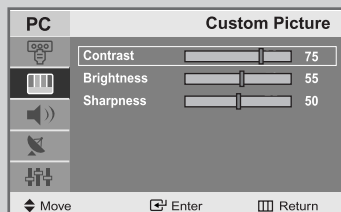
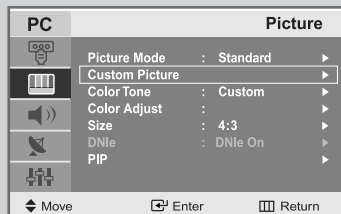
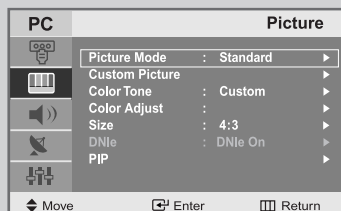
Picture Mode






You can select the type of picture which best corresponds to your viewing requirements.

- 1 Press the **MENU** button.
Result: The main menu is displayed.
- 2 Press the **▲** or **▼** button to select the **Picture**.
Result: The options available in the **Picture** group are displayed.
- 3 Press the **ENTER**  button.
- 4 Press the **ENTER**  button.
Result: The **Picture Mode** is selected.
- 5 Select the required picture effect by pressing the **▲** or **▼** button repeatedly. Press the **ENTER**  button.
Result: The following picture effects are available:
Dynamic - Standard - Movie - Custom

Adjusting the Custom Picture





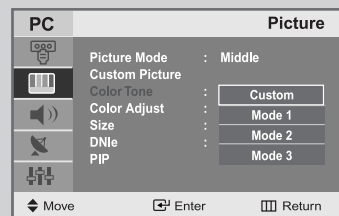
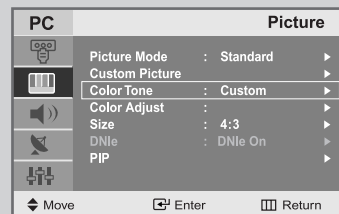
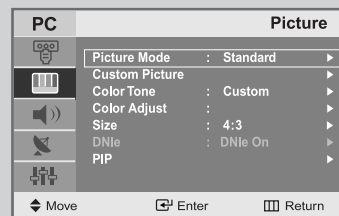
Your set has several settings which allow you to control picture quality.

- 1 Press the **MENU** button.
Result: The main menu is displayed.
 - 2 Press the **▲** or **▼** button to select the **Picture**.
Result: The options available in the **Picture** group are displayed.
 - 3 Press the **ENTER**  button.
 - 4 Press the **▲** or **▼** button to select the **Custom Picture**. Press the **ENTER**  button.
 - 5 Select the option (**Contrast**, **Brightness**, **Sharpness**) to be adjusted by pressing the **▲** or **▼** button. Press the **ENTER**  button.
Result: The horizontal bar is displayed.
 - 6 Press the **◀** or **▶** button to reach the required setting.
 - 7 When you are satisfied with the setting, press the **MENU** button to return to the previous menu or press the **EXIT** button to return to normal viewing.
- If you make any changes to these settings, the picture standard is automatically switched to **Custom**.

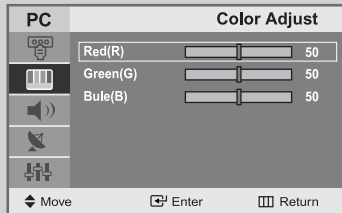
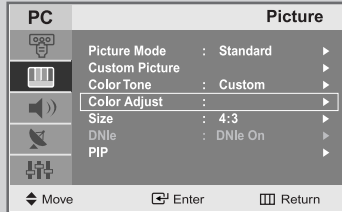
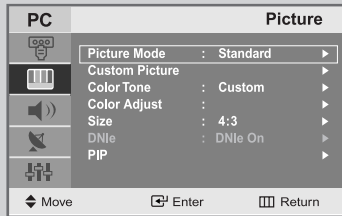
Adjusting the Screen Background Colour

You can change the screen background colour according to your preference.

- 1 Press the **MENU** button.
Result: The main menu is displayed.
- 2 Press the **▲** or **▼** button to select the **Picture**.
Result: The options available in the **Picture** group are displayed.
- 3 Press the **ENTER**  button.
- 4 Press the **▲** or **▼** button to select the **Colour Tone**.
Press the **ENTER**  button.
Result: The following options are available:
Custom - Mode1 - Mode2 - Mode3
- 5 When you are satisfied with your choice, press the **EXIT** button to return to normal viewing.



Customizing the color



- 1 Press the **MENU** button.
Result: The main menu is displayed.

- 2 Press the **▲** or **▼** button to select the **Picture**.
Result: The options available in the **Picture** group are displayed.

- 3 Press the **ENTER** button.

- 4 Press the **▲** or **▼** button to select the **Color Adjust**.
Press the **ENTER** button.

- 5 Select the option (**Red(R)**, **Green(G)**, **Blue(B)**) to be adjusted by pressing the **▲** or **▼** button.
Press the **ENTER** button.
Result: The horizontal bar is displayed.

- 6 Press the **◀** or **▶** button to reach the required setting.

- 7 When you are satisfied with the setting, press the **MENU** button to return to the previous menu or press the **EXIT** button to return to normal viewing.

Teletext Feature

Most television channels provide written information services via teletext.

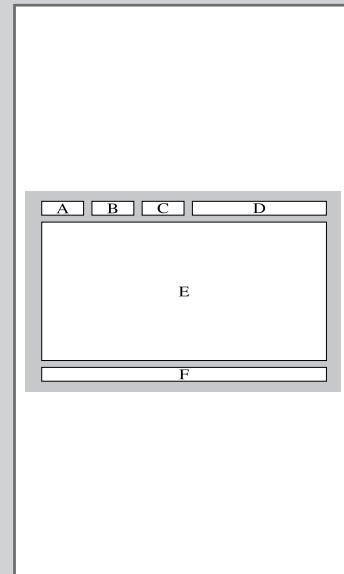
Information provided includes:

- ◆ *Television programme times.*
- ◆ *News bulletins and weather forecasts.*
- ◆ *Sports results.*
- ◆ *Travel information.*

This information is divided into numbered pages (see diagram).

Part	Contents
A	Selected page number.
B	Broadcasting channel identity.
C	Current page number or search indicators.
D	Date and time.
E	Text.
F	Status information. FASTEXT information.

- Teletext information is often divided between several pages displayed in sequence, which can be accessed by:
- ◆ Entering the page number
 - ◆ Selecting a title in a list
 - ◆ Selecting a coloured heading (FASTEXT system)



Displaying the Teletext Information



You can display Teletext information at any time on your set.



✎ For Teletext information to be displayed correctly, channel reception must be stable; otherwise:

- ◆ Information may be missing
- ◆ Some pages may not be displayed







- 1 Select the channel providing the Teletext service using the \wedge or \vee button.
- 2 Press the **TTX/MIX** button to activate the teletext mode.
Result: The contents page is displayed. It can be redisplayed at any time by pressing the [INDEX] (index) button.
- 3 If you wish to display the actual broadcast at the same time as the teletext page, press the **TTX/MIX** button again.
- 4 To return to normal viewing, press the [CANCEL] (cancel) button.
- 5 Press the **TV** button again to exit the teletext display.

Selecting a Page by Number

You can enter the page number directly by pressing the numeric buttons on the remote control.

- 1 Enter the three-digit page number given in the content by pressing the corresponding numeric buttons.
Result: The current page counter is incremented and the page is then displayed.
- 2 If the selected page is linked with several secondary pages, the secondary pages are displayed in sequence.
To freeze the display on a given page, press the  (hold) button. Press the  (hold) button again to resume.

Using the various display options:




To display...	Press the...
◆ Hidden text (answers to quiz games, for example)	 (reveal)
◆ The normal screen	 (reveal) again
◆ A secondary page, by entering its 4-digit number	 (subpage)
◆ The next page	 (page up)
◆ The previous page	 (page down)
◆ Double-size letters in the: <ul style="list-style-type: none"> • Upper half of the screen • Lower half of the screen 	 (size) <ul style="list-style-type: none"> • Once • Twice
◆ Normal screen	• Three times



Using FLOF to Select a Page






The various topics included in the teletext pages are colour-coded, and can be selected by pressing the coloured buttons on the remote control.

- 1 Display the teletext contents page by pressing the **TEXT/MIX** button.
- 2 Press the coloured button corresponding to the topic that you wish to select; the available topics are given on the status line.
Result: The page is displayed with other coloured information that can be selected in the same way.
- 3 To display the previous or next page, press the corresponding coloured button.
- 4 To display the subpage, see the following steps.
 - ◆ Press the  (subpage) button.
Result: The available subpages appear.
 - ◆ Select the required subpage.
Subpages can be scrolled by using the  or  button.

Storing Teletext Pages

You can store up to four teletext pages to display them later at leisure.

- 1 Select the LIST mode using the  (LIST/FLOF) button.
Result: Four 3-digit numbers are displayed in different colours.
 - The  (LIST/FLOF) button is used to switch between the LIST and FLOF modes.
- 2 Press the coloured button corresponding to the page that will be replaced.
- 3 Enter the new page number using the numeric buttons.
- 4 Repeat steps 2 and 3 for each page to be stored, using a different coloured button each time.
- 5 Press the  (store) button until the corresponding blocks blink.



Troubleshooting: Before Contacting Service Personnel

Before contacting Samsung after-sales service, perform the following simple checks.

If you cannot solve the problem using the instructions below, note the model and serial number of your set and contact your local dealer.

No sound or picture.	<ul style="list-style-type: none"> ◆ Check that the mains lead has been connected to a wall socket. ◆ Check that you have pressed the POWER button. ◆ Check the picture contrast and brightness settings. ◆ Check the volume.
Normal picture but no sound.	<ul style="list-style-type: none"> ◆ Check the volume. ◆ Check whether the MUTE button has been pressed on the remote control.
No picture or black and white picture.	<ul style="list-style-type: none"> ◆ Adjust the colour settings. ◆ Check that the broadcast system selected is correct.
Sound and picture interference.	<ul style="list-style-type: none"> ◆ Try to identify the electrical appliance that is affecting the set and move it further away. ◆ Plug your set into a different mains socket.
Blurred or snowy picture, distorted sound.	<ul style="list-style-type: none"> ◆ Check the direction, location and connections of your aerial. This interference is often due to the use of an indoor aerial.
Remote control malfunctions.	<ul style="list-style-type: none"> ◆ Replace the remote control batteries. ◆ Clean the upper edge of the remote control (transmission window). ◆ Check the battery terminals.
"Check Signal Cable" message is displayed.	<ul style="list-style-type: none"> ◆ Check that the signal cable is firmly connected to the PC. ◆ Check that the PC is turned on.
In PC mode, "Not Supported Mode" message is displayed.	<ul style="list-style-type: none"> ◆ Check the maximum resolution and the frequency of the video Adapter. ◆ Compare these values with the data in the Display Modes Timing Chart.
In PC mode, horizontal or vertical bars appear to flicker, jitter or shimmer on the image.	<ul style="list-style-type: none"> ◆ Adjust the Coarse or Fine function.
In PC mode, the screen is black and the power indicator light is steady amber or blinks every 0.5 or 1 seconds.	<ul style="list-style-type: none"> ◆ The TV is using its power management system. ◆ Move the computer's mouse or press a key on the keyboard.

Troubleshooting: Before Contacting Service Personnel

In PC mode, the image is not stable and may appear to vibrate.

- ◆ Check that the display resolution and frequency from your computer or video board is an available mode for your set. On your computer check: Control Panel, Display, Settings.
- ◆ If the setting is not correct, use your computer utility programme to change the display settings.

➤ Your set supports multiscan display functions within the following frequency domain:

Horizontal frequency - 30 ~ 68 kHz

Vertical frequency - 56 ~ 85 Hz

Maximum refresh rate - 1280 x 720 @ 60Hz

In PC mode, the image is not centred on the screen.

- ◆ Adjust the horizontal and vertical position.

PowerSaver

This set has a built-in power management system called PowerSaver. This system saves energy by switching your set into a low-power mode when it has not been used for a certain period of time. The available modes are "On", "Standby", "Sleep", and "Deep Sleep". PowerSaver operates with a VESA DPMS compliant video card installed in your computer. You use a software utility installed on your computer to set up this feature.

State	Normal Operation	Power-Saving Function mode (EPA/NUTEK)
Horizontal Sync	Active	Inactive
Vertical Sync	Active	Inactive
Power Indicator	Green	Red, Blinking (1 sec interval)
Power Consumption	70 W (Normal)	Less than 5 W

- ***This set automatically returns to normal operation when horizontal and vertical sync are restored. This occurs when you move the computer's mouse or press a key on the keyboard.***

Technical and Environmental Specifications

Model	LW22N23N
Panel	
Size	22" Diagonal
Display Size	487.68 (H) X 274.32(V) mm
Type	PVA
Pixel Pitch	0.381(H) X 0.381(V)mm
Viewing Angle	170/170 (Horizontal/Vertical)
Frequency	
Horizontal	30 ~ 68 kHz
Vertical	56 ~ 85 Hz
Display colour	16,194,277 colours
Display Resolution	
Maximum Mode	1280 x 720 @ 60 Hz
Input Signal	
Sync.	H/V Separate, TTL, P. or N.
Video Signal	RGB, Analog, 0.7 Vp-p @ 75 ohm
Power Supply	
Input	AC 100 ~ 240 V (50 / 60 Hz)
Power Consumption	
Normal	70 W
Power Saving	< 5 W
Dimensions (W x D x H) / Weight	
TV Body	23.58 x 4.43 x 16.45 inch / 18.21 lbs (599 x 112.7 x 418 mm / 8.26 kg)
With Stand	23.58 x 8.24 x 17.28 inch / 19.79 lbs (599 x 209.4 x 439 mm / 8.98 kg)
Environmental Considerations	
Operating Temperature	50 °F to 104 °F (10 °C to 40 °C)
Operating Humidity	10% to 80%
Storage Temperature	-13 °F to 113 °F (-25 °C to 45 °C)
Storage Humidity	5% to 95%
Audio Characteristics	
Audio Input 1	RCA Jack Red(R) White(L), 0.5Vrms (-9dB)
Audio Input 2	3.5ø Stereo Jack, 0.5Vrms (-9dB)
Headphone Output	Max. 10mW Output (3.5ø Stereo Jack 32)
Frequency	RF: 80Hz ~ 15kHz (at- 3dB)
Response	A/V: 80Hz ~ 20kHz (at - 3dB)

Display Modes

*If the signal from the system equals the standard signal mode, the screen is adjusted automatically.
If the signal from the system does not equal the standard signal mode, adjust the mode with reference to the Video card user guide, as the screen may not display or only the power LED may be on.
For the display modes listed below, the screen image has been optimised during manufacture.*

Mode	Resolution	Horizontal Frequency (kHz)	Vertical Frequency (Hz)	Pixel Clock Frequency (MHz)	Sync Polarity (H/V)
Macintosh	640 X 480	35.000	66.667	30.240	- / -
	832 X 624	49.726	74.551	49.500	+ / +
IBM	640 X 480	31.496	59.940	25.175	- / -
	720 X 400	31.469	70.087	28.322	- / -
VESA	640 X 480	37.861	72.809	31.500	- / -
	640 X 480	37.500	75.000	31.500	- / -
	640 X 480	43.269	85.008	36.000	- / -
	800 X 600	35.156	56.250	36.000	+ / -
	800 X 600	37.879	60.317	40.000	+ / +
	800 X 600	48.077	72.188	50.000	+ / +
	800 X 600	46.875	75.000	49.500	+ / +
	800 X 600	53.674	85.061	56.250	- / -
	1024 X 768	48.363	60.004	65.000	- / -
	1024 X 768	56.476	70.069	75.000	- / -
	1024 X 768	60.023	75.029	78.750	+ / +
1024 X 768	68.677	84.997	94.500	+ / +	
GTF	1280 X 720	44.769	60.000	74.841	- / +

Maintenance of Your Television

To avoid risk of electric shock, do not disassemble the TV cabinet.

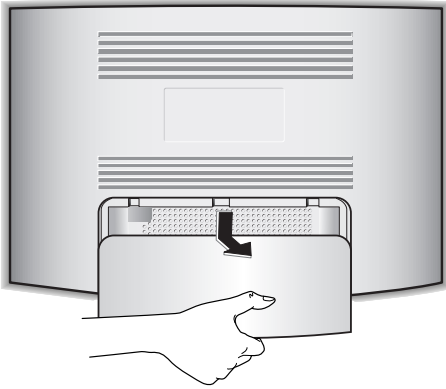
Users must not service the TV.

User maintenance is restricted to cleaning, as explained below:

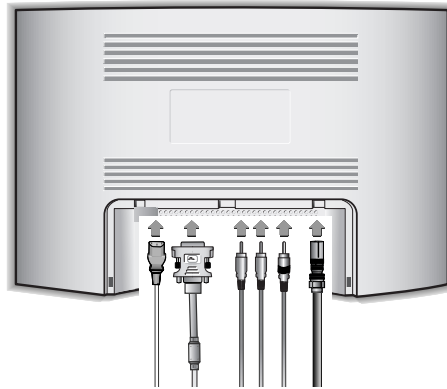
Unplug the television from the power outlet before cleaning.

- ◆ When you clean the TFT-LCD and the external panel, please apply the recommended small amount of cleaner, using a soft, dry cloth to polish it.
Do not force your television screen, scrubbing it only softly.
The use of excessive force can result in stains on the screen.
- ◆ Never use flammable cleaning material to clean your television or any other electrical apparatus.

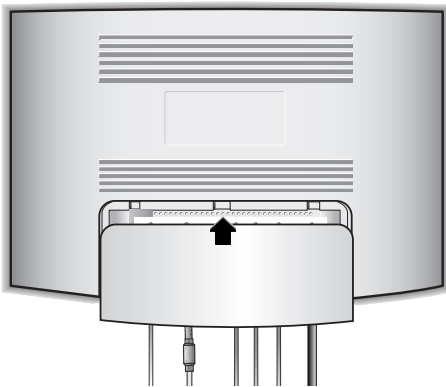
How to connect the cables and stand base



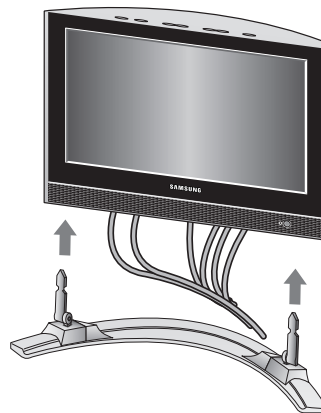
- 1** Remove the cover as shown in the picture.



- 2** Connect the cables as shown in the picture.

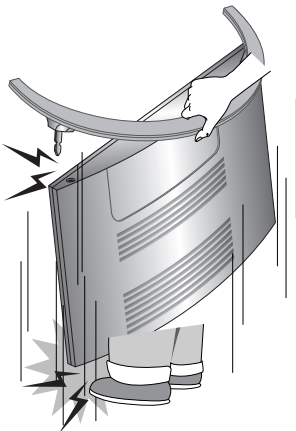


- 3** Replace the cover.



- 4** Attach the stand to the TV set as shown in the picture.

Note : The curved side of the stand base should be placed at the back of the TV set as shown in the above figure.



Do NOT lift the TV set by the stand.
The stand is not screwed to the TV set and lifting the set by the stand may cause injury.

Setting Up Your Remote Control



After it has been set up properly, your remote control can operate in four different modes: TV, VCR, Cable, or DVD. Pressing the corresponding button on the remote control allows you to switch between these modes, and control whichever piece of equipment you choose.

Note

The remote control might not be compatible with all DVD Players, VCRs and Cable boxes.

Setting Up the Remote to Operate Your VCR.

- 1 Turn off your VCR.
- 2 Press the **SELECT** button and make sure that the VCR LED is illuminated.
- 3 Press the **SET** button on your TV's remote control.
- 4 Using the number buttons on your remote control, enter three digits of the VCR code listed on page 65 of this manual for your brand of VCR. Make sure you enter three digits of the code, even if the first digit is a "0".
(If more than one code is listed, try the first one.)
- 5 Press the Power button on the remote control.
Your VCR should turn on if your remote is set up correctly.

If your VCR does not turn on after set up, repeat steps 2, 3, and 4, but try one of the other codes listed for your brand of VCR.
If no other codes are listed, try each VCR code, 000 through 088.

Note on Using Remote Control Modes: VCR

When your remote control is in "VCR" mode, the volume buttons still control your TV's volume.

Setting Up Your Remote Control

Setting Up the Remote to Operate Your Cable Box.

- 1 Turn off your cable box.
- 2 Press the **SELECT** button and make sure that the Cable LED is illuminated.
- 3 Press the **SET** button on your TV's remote control.
- 4 Using the number buttons on your remote control, enter three digits of the cable box code listed on page 65 of this manual for your brand of cable box. Make sure you enter three digits of the code, even if the first digit is a "0".
If there is more than one code listed, try the first one.
- 5 Press the Power button on the remote control.
Your cable box should turn on if your remote is set up correctly.

If your cable box does not turn on after set up, repeat steps 2, 3, and 4, but try one of the other codes listed for your brand of cable box. If no other codes are listed, try each code, 000 through 077.

Note on Using Remote Control Modes: Cable Box
When your remote control is in "Cable Box" mode, the volume buttons still control your TV's volume.



Setting Up Your Remote Control



Setting Up the Remote to Operate Your DVD.

- 1 Turn off your DVD.
- 2 Press the **SELECT** button and make sure that the DVD LED is illuminated.
- 3 Press the **SET** button on your TV's remote control.
- 4 Using the number buttons on your remote control, enter three digits of the DVD code listed on page 65 of this manual for your brand of DVD. Make sure you enter three digits of the code, even if the first digit is a "0".
If there is more than one code listed, try the first one.
- 5 Press the Power button on the remote control.
Your DVD should turn on if your remote is set up correctly.

If your DVD does not turn on after set up, repeat steps 2, 3, and 4, but try one of the other codes listed for your brand of DVD.
If no other codes are list-ed, try each code, 000 through 009.

Note on Using Remote Control Modes: DVD

When your remote control is in "DVD" mode, the volume buttons still control your TV's volume.

Setting Up Your Remote Control

VCR Codes

Admiral	015,088	kenwood	011,023,025,039,055	RCA	009,014,016,017,037,044,046,063,078
Aiwa	024	KLH	082	Samsung	000,016,022,031,041,051
Audio Dynamics	022,025	LG	001,002,007	Sansui	025
Akai	026,031,032	Lloyd	024	Sanyo	011,021
Bell&Howell	011	Logik	040	Scott	022,050,058,077
Broksonic	019	LXI	024	Sears	011,014,018,021,027,028,044,052,057
Candle	016,018,022,054,055,061	Magnavox	017,038,062,065	Sharp	015,036,048,054
Canon	017,062	Marantz	011,017,023,025,038,039,055,070	Shintom	026,035,040,064
Citizen	016,018,022,054,055,061	Marta		Signature	024
Colortyme	023	MEI		Sony	026,035,047
Craig	016,021	Memorex		Sylvania	017,024,038,062,065
Curtis-Mathes	009,016,017,023,024,055,062,073,076	MGA		Symphonic	024
Daewoo	003,004,005,006,007,008,022,054,085	Midland		Tandy	011,024
DB	025,023	Minota		Tashiko	
Dimensia	009	Mitsubishi		Tatung	039
Dynatech	024	Montgomery ward		Teac	024,039,078
Electrohome	036	MTC	016,024	Technics	
Emerson	017,018,019,022,024,029,032,036,043,050,051,056,058,066,071,074,076,077,079	Multitech	016,024,040,041	Temika	
Fisher	011,021,027,028,052,057,067	NEC	011,023,025,039,055,070,073	Teknika	018,030
Funai	024	Optimus	015	TMK	076
GE		Panasonic	017,062,084,086	Toshiba	014,022,028,057,058
Go Video	016	Pentax	014,044	Toshiko	018
Goldstar	018,023,055,069	Pentax Reserch+	055	Totevision	016,018
General Electric	009,016,017,041,062	Philco	017,038,062,065	Unitech	
Harman Kardon	023	Philips	017,038	Vector Research	
Hitach	014,024,044,045	Pioneer	014,025,042,059	Victor	
Instant Replay	017	Portland	053,054,061	Video Concepts	
JC Penney	011,014,016,017,023,025,039,044,060,062	ProScan	009	Videosonic	
JCL	011,017,023,025,039,055	Quartz	011	Wards	
JVC		Quasar	017,053	Yamaha	
		Radio Shack/Realistics	011,015,017,018,021,024,028,036,052,062	Zenith	

Cable Box Codes

Anvision	015,016	Macom	045,051	SAEWOO	007
Cable star	015,016	Magnavox	015,016,027,029,034,036,037,040,041,048,049	Signature	054
DeaRyung	003	Nawoo	001	Sprucer	035
DongKuk	004	NSC	017	Starcom	054
DaeHan	005	Oak	024,046	Stargate 2000	066
Eagle	015,016	Osk Sigma	024	Sylvania	019,067
Eastm Int.		Panasonic	011,035,047,069	TaePyungYang	002
Eastern International	020	Philips	015,016,027,029,034,036,037,040,041,048,049	Texscan	019,067
General Instrument	054	Pioneer	026,028,052	Tocom	025,029,057,058,063
GI	012,013,023,031,032,033,038,044,075,076,077	Randtek	015,016	Unika	039,040,049
Hamlin	011,012,020,021,042,056	RCA	008,035,074	Universal	059,060
Hitachi	045,051,054	Regal	011,020,021	Viewstar	015,016,027,029,034,036,037,040,041,048,049
Jerrold	012,013,023,031,032,033,038,044,054,070,073	Regency	010,041	Warner Amex	052
LG	006	SA		Zenith	022,050,065,069
		Samsung	000,011,030,052,071,072		

DVD Codes

CurtisMathes	009	Toshiba	002
JVC	003	Panasonic	006
LG	001	Sony	004
Philips	007	Samsung	000
Proscan	008	Sharp	005
RCA	008		

- AFTER SALES SERVICE

- Do not hesitate to contact your retailer or service agent if a change in the performance of your product indicates that a faulty condition may be present.

