

Return your Warranty Registration card today to ensure you receive all the benefits you're entitled to.

Once your PHILIPS purchase is registered, you're eligible to receive all the privileges of owning a PHILIPS product. So complete and return the Warranty Registration Card enclosed with your purchase at once. And take advantage of these important benefits.

Warranty Verification

Registering your product within 10 days confirms your right to maximum protection under the terms and conditions of your PHILIPS warranty.

Owner Confirmation

Your completed Warranty Registration Card serves as verification of ownership in the event of product theft or loss.

Model Registration

Returning your Warranty Registration Card right away guarantees you'll receive all the information and special offers which you qualify for as the owner of your model.

Congratulations on your purchase, and welcome to the "family!"



PHILIPS



Dear PHILIPS product owner:

Thank you for your confidence in PHILIPS. You've selected one of the best-built, best-backed products available today. And we'll do everything in our power to keep you happy with your purchase for many years to come.

As a member of the PHILIPS "family," you're entitled to protection by one of the most comprehensive warranties and outstanding service networks in the industry.

What's more, your purchase guarantees you'll receive all the information and special offers for which you qualify, plus easy access to accessories from our convenient home shopping network.

And most importantly you can count on our uncompromising commitment to your total satisfaction.

All of this is our way of saying welcome—and thanks for investing in a PHILIPS product.

Sincerely,

Robert Minkhorst
President and Chief Executive Officer

P.S. Remember, to get the most from your PHILIPS product, you must return your Warranty Registration Card within 10 days. So please mail it to us right now!

Know these safety symbols



This "bolt of lightning" indicates uninsulated material within your unit which may cause an electrical shock. For the safety of everyone in your household, please do not remove product covering.



The "exclamation point" calls attention to features for which you should read the enclosed literature closely to prevent operating and maintenance problems.

WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS EQUIPMENT TO RAIN OR MOISTURE.

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


ATTENTION: Pour éviter les chocs électriques, introduire la lame la plus large de la fiche dans la borne correspondante de la prise et pousser jusqu'au fond.

Let's make things better

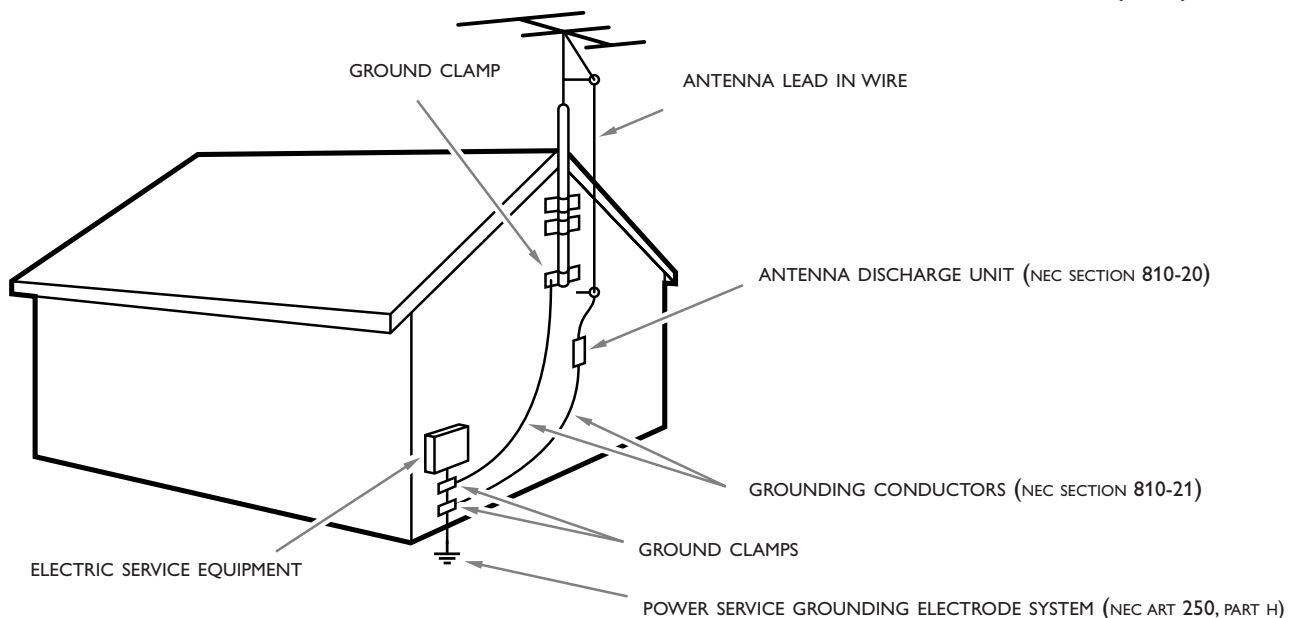
INTERNET ADDRESS: <http://www.philipsusa.com>

IMPORTANT SAFETY INSTRUCTIONS

Read before operating equipment

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with a dry cloth.
7. Do not block any of the ventilation openings. Install in accordance with the manufacturers instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and third grounding prong. The wide blade or third prong are provided for your safety. When the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12.  Use only with a cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
15. This product may contain lead or mercury. Disposal of these materials may be regulated due to environmental considerations. For disposal or recycling information, please contact your local authorities or the Electronic Industries Alliance: www.eiae.org.
16. **Damage Requiring Service** - The appliance should be serviced by qualified service personnel when:
 - A. The power supply cord or the plug has been damaged; or
 - B. Objects have fallen, or liquid has been spilled into the appliance; or
 - C. The appliance has been exposed to rain; or
 - D. The appliance does not appear to operate normally or exhibits a marked change in performance; or
 - E. The appliance has been dropped, or the enclosure damaged.
17. **Tilt/Stability** - All televisions must comply with recommended international global safety standards for tilt and stability properties of its cabinets design.
 - Do not compromise these design standards by applying excessive pull force to the front, or top, of the cabinet which could ultimately overturn the product.
 - Also, do not endanger yourself, or children, by placing electronic equipment/toys on the top of the cabinet. Such items could unsuspectingly fall from the top of the set and cause product damage and/or personal injury.
18. **Wall or Ceiling Mounting** - The appliance should be mounted to a wall or ceiling only as recommended by the manufacturer.
19. **Power Lines** - An outdoor antenna should be located away from power lines.
20. **Outdoor Antenna Grounding** - If an outside antenna is connected to the receiver, be sure the antenna system is grounded so as to provide some protection against voltage surges and built up static charges. Section 810 of the National Electric Code, ANSI/NFPA No. 70-1984, provides information with respect to proper grounding of the mats and supporting structure grounding of the lead-in wire to an antenna-discharge unit, size of grounding connectors, location of antenna-discharge unit, connection to grounding electrodes and requirements for the grounding electrode. See Figure below.
21. **Objects and Liquid Entry** - Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.

EXAMPLE OF ANTENNA GROUNDING AS PER NATIONAL ELECTRICAL CODE (NEC)



Note to the CATV system installer : This reminder is provided to call the CATV system installer's attention to Article 820-40 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

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Preparation

Your remote control

SOURCE SELECT p. 9
selection of **AV1, AV2, AV3, AV4** or **SIDE**

Mode buttons p. 9

TV, HD, CBL, SAT, VCR, DVD, AMP or **CD** selection

Display Format p. 9

Alternate Audio p. 9

Sound Mode p. 9

Freeze Format p. 9

OK activate your choice p. 9

VOL Volume Up/Down p. 10

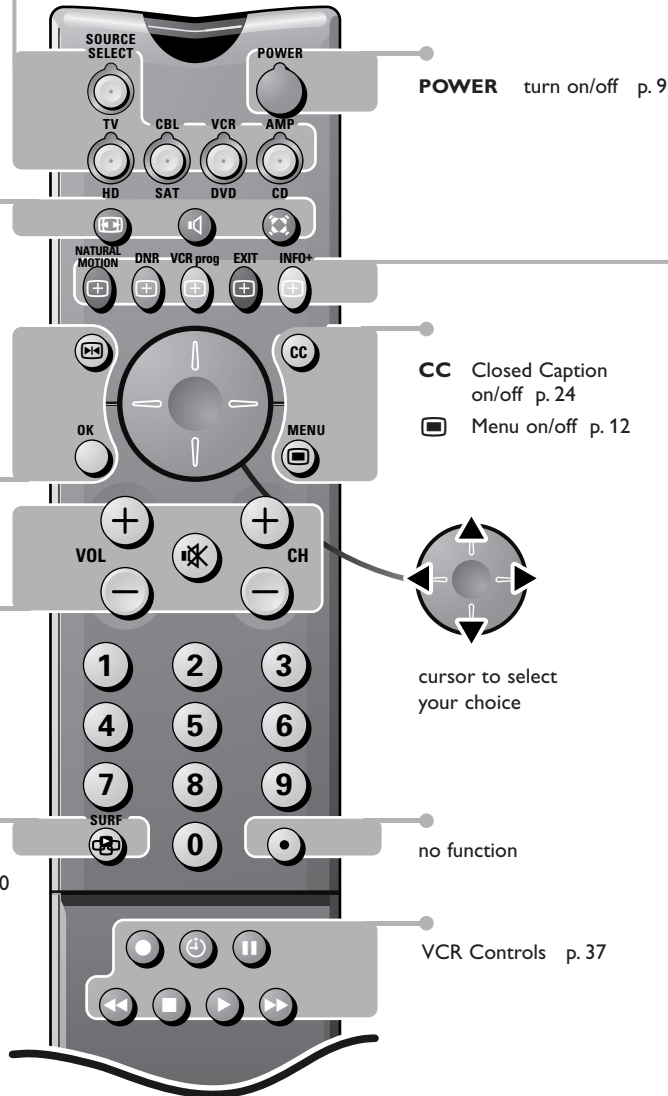
Sound Mute p. 10

CH Channel Up/Down p. 10

Allows users to browse through pre-defined list of programs p. 10

ZOOM

Zoom p. 11



Color buttons

NATURAL MOTION Natural Motion p. 12

DNR Digital Noise Reduction p. 13

VCR Prog VCR programming p. 10

EXIT to exit the menus of other universal devices like VCR, SAT, DVD... p. 10

INFO+ on screen information p. 10

Dual Screen/Single PIP p. 28

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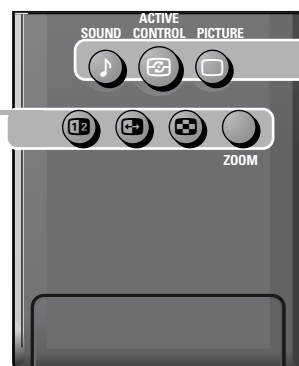
Multi-PIP p. 29

Auto Controls

sound p. 11

active control p. 11

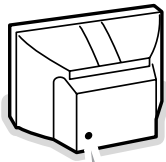
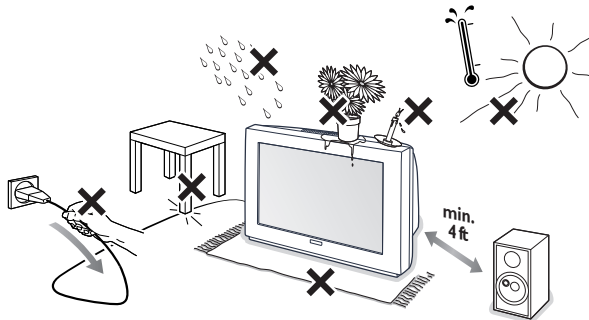
picture p. 11



Preparation

Do not insert the power plug in a wall socket before all connections are made.

- 1 Place the TV on a solid surface.



ANT. / CABLE

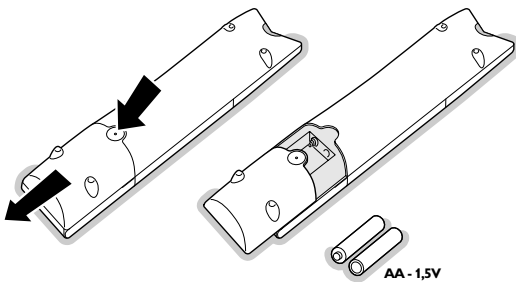


For ventilation, leave at least 2" free all around the TV.

Do not place the TV on a carpet.

To prevent any unsafe situations, do not place any objects on top of the TV. Avoid heat, direct sunlight and exposure to rain or water.

- 2 Connect a cable TV signal, to the **ANT./CABLE** jack at the back of the TV. For best picture quality use the suppressor-aerial cable supplied.
- 3 **Insert the power plug** in the wall socket. Refer to the rear of the TV set for the correct operation voltage. Consult your local dealer if your AC power supply is different. To prevent damaging the power (AC) cord which could cause a fire or electric shock, do not place the TV on the cord.



AA - 1,5V

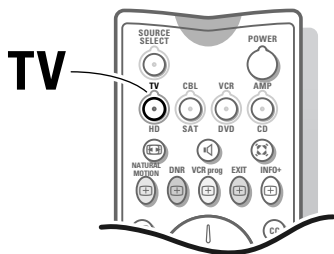
- 4 **Remote Control**

Remove the cover of the battery compartment.

Insert the 2 batteries supplied (Type AA-1,5V).

Press the **TV** button to be sure your remote control is in the TV mode.

The batteries supplied do not contain the heavy metals mercury and cadmium. Nevertheless in many areas exhausted batteries may not be disposed of with your household waste. Please check on how to dispose of exhausted batteries according to local regulations.



- 5 **Turn the TV on**

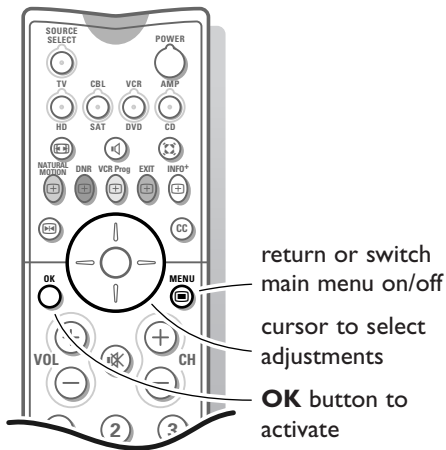
Press the **POWER** switch ① on the front of your TV or press the red power button on the remote control.


A green LED on the front of the TV lights up and the screen comes on.

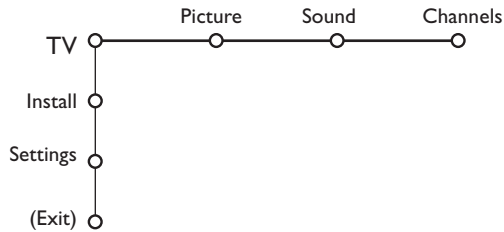
When you switch on your set for the first time, the **Install** menu automatically appears on the screen.

Follow the instructions shown on the screen to guide you through the first time setup and use of your TV.


To use the menus and the menu system

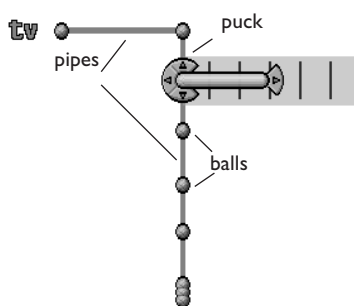
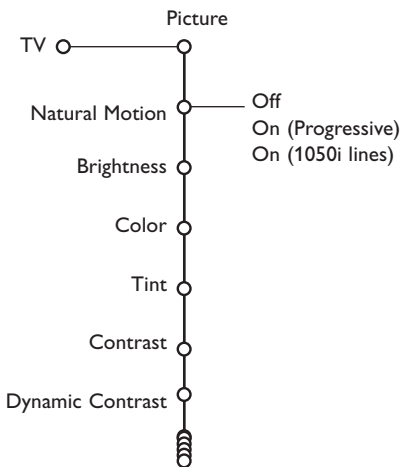


- 1 Press the **MENU**  button on the remote control to summon the main menu.



*Note: Should your remote control be lost or broken you can still use the buttons on top of the TV. E.g. press the **M** button to summon the main menu. The **M** button functions both as Menu and OK on the remote control. The Main menu contains the item **Exit** to dismiss the menu, only when you turn on your TV for the first time, or when the Main menu is summoned with the **M** button on top of the TV.*

- 2 Use the cursor in the up/down direction to select the **TV**, **Install** or **Settings** menu.
- 3 Use the cursor in the left/right direction to select the menu item.
- 4 Use the cursor up/down again to select the control you want to select or to adjust. For instance, see Picture menu.
- 5 Press the **MENU**  button again to turn off the main menu.



The menu system

Pipes, balls and a puck

The hierarchy of menus and controls is represented by an animated visual mechanism of pipes, balls and a puck.

Unlike a map, however, the animated mechanism constantly shows the current whereabouts, continually expands the view of the immediate neighborhood, and preserves a view of places left behind.

The puck represents the users' point of focus, by surrounding the ball indicating the user's current position in the menu hierarchy.

The puck is always present when the menu system is displayed.

The puck is divided into 4 wedge-shaped regions. They correspond to the directional controls (up/down, left/right) on the remote control.

In this way users can navigate through the menu hierarchy to arrive at the control they wish to adjust.

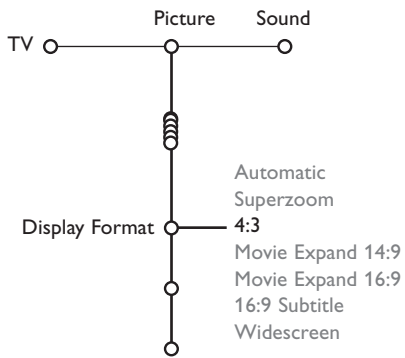
Pressing a valid button on the remote control shifts focus from the current ball to the next one connected by a pipe in that direction.

Balls represent a branch of the menu hierarchy.

All menu items are represented by balls. Each ball is identified with an identifying text label.

When items (balls) of a menu level are more numerous than can fit comfortably on the TV display, only a portion of the items are shown as balls along the pipe. Those omitted are indicated by a cluster of balls which indicates that there are 'more'.

Pipes connect balls together and show the path the user can traverse through the menu structure. Pipes represent individual branches of the menu hierarchy.



Interaction bars

Every pathway in the menu structure leads eventually to a bar, where users can set levels, change values or adjust some aspect of system performance.

List controls

A list control is used to select one or more items from a list of options. For instance, the Display Format option list with 4:3, Movie Expand 14:9, etc. Press the right button to move the puck into the list. At least one item is the current value and is highlighted as such.

Moving the puck up or down with the up/down button causes the list to move down or up.

A single-value list allows only one item to be selected at one time and de-selects another.

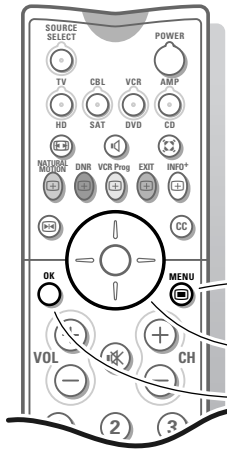
In a multi-value list any number of items can be selected, even allowing more to be selected. They are represented by a checkmark in the box next to the label. E.g. TV Ratings lock.

Confirmation prompt or OK buttons

A confirmation prompt is a puck and ball with a task label on the left and sometimes additional text info on the right.

Press the **OK** button to proceed.

Installation



return or switch main menu on/off

cursor to select adjustments

OK button to activate

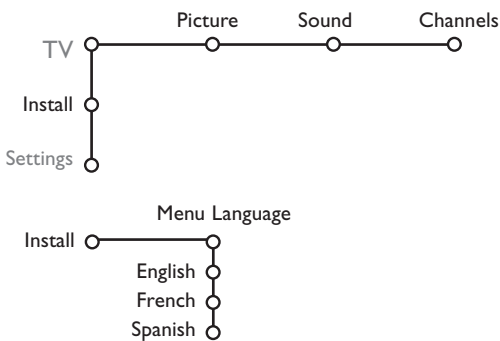
Select the menu language

- 1 Press the **MENU** button on the remote control.

When you turn on your TV for the first time and no channels are stored so far, the TV displays a menu nearly identical to the Install menu, but disconnected from the rest of the menu system. This menu also has an additional item **exit** with which the menu can be dismissed.

The menu Menu Language automatically appears on the screen. The explanation appears in different languages one at a time next to each language. Choose your preferred language and press the OK button on the remote control. Proceed with the Install menu.

- 2 Use the cursor down to select **Install**.
- 3 Use the cursor right to select **Menu Language**.
- 4 Use the cursor up/down to select your preferred language and press the **OK** button to confirm your selection.
- 5 Proceed with the Install menu.



Store TV channels

- 1 Select **Autoprogram** in the Install menu.
- 2 Press the cursor down to select **Automatic, Antenna or Cable**.

*Note: It is recommended to choose for the **Automatic** way of autoprogramming. In case of difficulties in autoprogramming with the automatic method, choose for Antenna or Cable whether antenna or cable signals are present.*

When **Automatic** is selected, the TV will automatically detect whether or not cable signal input is present.

When **Antenna** is selected, the TV will detect antenna signals and will search for all antenna TV channels available in your local area.

When **Cable** is selected, the TV will detect cable signals and will search for all cable TV channels available in your local area.

- 3 Press the cursor right.
- Note: All channels must be unlocked in order to autoprogram. If requested, enter your PIN code to unlock all channels. (See Channels in the TV menu, p. 17.)*
- 4 The message **Searching** appears and the progress of autoprogramming is displayed.
- When Autoprogramming is complete, the puck navigates to Stop. A message appears confirming the completion together with the total number of channels found.

Note: when you navigate to Stop before autoprogramming is complete, you are given the option to continue.

Available channels: with cable: max. from 1 to 125 - off air: max. from 2 to 69

Note: In case a particular channel is too weak for the autoprogramming to identify, after installation is complete, you should tune to that channel by using the digit keys on the remote control.

If the channel is not acquired, a message will appear that the channel is not available.

Operation

Use of the remote control

Source Select

Press this button repeatedly to select **AV1, AV2, AV3, AV4** or **SIDE** when in TV mode, according to where you connected the peripherals (p. 37).

TV CBL VCR AMP HD SAT DVD CD

Press one of these buttons to use the remote control in the TV, CBL, VCR or Amplifier mode as indicated above the button. A green indicator lights up. Press the same button again more than 1 second to use the remote control in the mode indicated below the button (HD, satellite, DVD or CD). A red indicator lights up. Press the button again to return to the function named above the button.

POWER

Press to turn on/off the TV.
The TV is never powered off completely unless it is physically unplugged.

Sound Mode

Press this button to summon a list of available sound modes: Pro Logic, 3D Surround, 3 Stereo, Stereo or Hall. See p. 15.

Alternate audio

When you tune a channel where SAP (Second Audio Program) is available, you can toggle between **Main** and **SAP**. If not available, only Main can be selected.

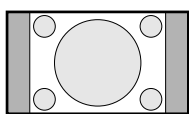
CC Closed Caption

On/Off/On with Mute see p. 24

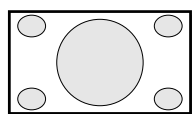
Main menu on/off see p. 12

Display Format

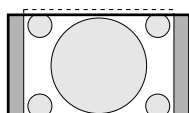
Press this button to summon a list of **available** display formats for showing video images in the traditional 4:3 proportions. Press this button repeatedly or press the cursor up/down to select another display format: Automatic, Superzoom, 4:3, Movie Expand 14:9, Movie Expand 16:9, 16:9 Subtitle, Widescreen. Automatic makes the picture fill the screen as much as possible. Superzoom removes the black bars on the sides of 4:3 programs with minimal distortion. When in Movie Expand 14:9, 16:9 or Superzoom display format, you can make subtitles visible with the cursor up/down.



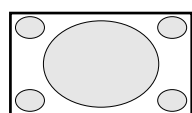
4:3



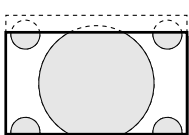
Superzoom



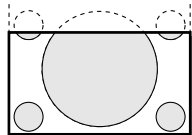
Movie Expand 14:9



Widescreen







Movie Expand 16:9

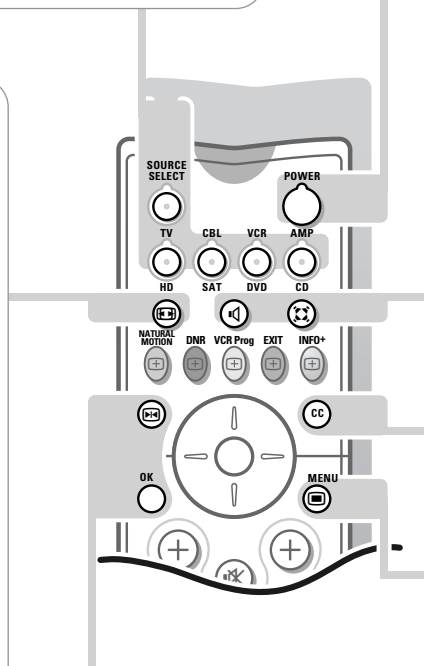


16:9 Subtitle

Freeze Format

See Settings menu, General, Freeze format, p. 23 where you can select among three modes to be displayed when the freeze button is pressed on the remote control: Freeze, Replay, Photo Finish. When the mode is **Freeze**: press the  button to activate/de-activate a frozen picture. The audio continues to play. When the mode is **Replay**: press the  button to redisplay a few seconds of stored video in a single PIP window. Press the **OK** button to display a few seconds of a new stored video picture. When the mode is **Photo Finish**: press the  button to display 12 PIP windows of stored video pictures. Press the **OK** button to display a new series of frozen pictures.
Note: Continuing to hold the  button down will cycle the TV through the various modes (Freeze, Replay, Photo Finish).

OK Press this button to activate your choice or to confirm when in the menus.



NATURAL MOTION

Press this button repeatedly to select Off, On (Progressive) or On (1050i lines). See TV menu, Picture menu, p. 12.

DNR Digital Noise Reduction

Press this button repeatedly to select Off, Minimum, Medium or Maximum. See TV menu, Picture menu, p. 13.

VCR Prog (Only functional in VCR mode.)

Many VCRs have an automatic programming function. If your VCR has this function, the universal code set will assign it to this button.

VOL Volume

Press + or - to adjust the volume.



Mute

Temporarily interrupt the sound or restore it.

CH Channel selection

To browse through the TV channels or sources stored.




Surf


With this feature you can easily switch between different TV channels/sources that currently interest you.

In the menu system, you can set surf to two- or nine-channel. (See Settings, General Surf, p. 22.)


Press this button to select the previously viewed TV channel or source in case of a Two channel surf, or to select the surf ring in case of a Nine channel surf.

In case of a Nine channel surf, a list appears at the right side of the screen. On top, the most recently added. The puck is on the channel number currently viewed.

Press the  button to turn to the next channel in the list or press cursor up/down to immediately select the desired TV channel of the list.

To add a new channel or source: tune to the channel or source you wish to add. Press the  button. Press the cursor right to add.

If there are already nine channels/sources in the list, the one at the bottom of the list will be removed.

To remove a channel or source: select the channel number you want to remove. Press the  button. Press the cursor right to remove. Press the **OK** button or wait for the time out to dismiss the Surf display.

EXIT

Press this button to exit the menus provided by universal devices like VCR, SAT, DVD,...

INFO + Display information

Press this button to display (when available) information about the current channel and program or source.

The information display is divided in two zones.

The upper zone may present the local time and information on the current program: number, name, video and audio formats of the incoming signal, CC availability, availability of alternate or secondary audio programs (a plus sign appears if you have more than one


11	WPIX	12:47
4:3	Stereo	
(cc)	MAIN+	
TV-PG-DLSV		
Kids with Guns		
Widescreen		
Surround		
05:22		

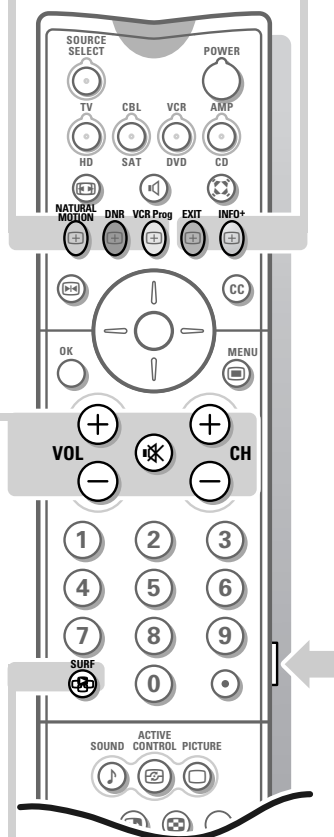
choice), ratings and program title if available.

The lower zone presents information about the currently selected settings: display format, sound mode and (if

on) the Sleep Timer icon and the minutes remaining.


Backlighting button

Press this button on the right side of the remote control. The backlighting of the buttons **VOL**, **CH**,  and the digit buttons stays on for 5 seconds after pressing the button.



Active Control

Active Control is a pro-active and automatic system. The TV continuously measures and corrects all incoming signals in order to provide the best picture possible. Thanks to the Ambient Light Sensor which measures the light conditions of the room in which the TV is situated, the contrast, dynamic contrast, brightness and color picture settings are adjusted automatically. The light sensor is active when the Active Control function is switched to Medium or Maximum.

Press the  button repeatedly to show the Active Control menu with values Off, Minimum, Medium or Maximum.

Off Sharpness and Dynamic Contrast are controlled automatically

Minimum Sharpness, Dynamic Contrast and Noise Reduction are controlled automatically.

Medium Dynamic Contrast, Color, Sharpness and Noise reduction are controlled automatically.

Maximum Contrast, Dynamic Contrast, Color, Sharpness and Noise reduction are controlled automatically.

Press the cursor in the right direction while the selected Active Control setting information is on top of the screen.

The Active Control Demo appears.

The picture settings are being adapted continuously and automatically.

The Demo items cannot be selected.

The sliders will be moving, showing how the TV is tweaking the current picture and dependent of the selected Auto Picture setting which is displayed above the sliders.

None of the sliders is user controllable.

Press the **OK** button to switch off the Demo.

Note: Active Control is not available for digital signals via AV4.

Dual Screen/PIP on/off

See Settings, General menu, p. 22 and Dual Screen/PIP, p. 28.

Switching screens in Dual Screen or PIP

See Settings, General menu, p. 22 and Dual Screen/PIP, p. 28.

Auto Buttons

To select predefined picture and sound settings.

Sound

Press this button to show a list of predefined sound settings, each corresponding with specific factory settings of treble and bass. You can also use the cursor up/down.

Picture

Press this button to show a list of predefined picture settings, each corresponding with specific factory settings of Contrast, Color, Sharpness, Dynamic Contrast and Color enhancement. You can also use the cursor up/down.


Personal refers to the personal preference settings of picture and sound selected in the picture and sound menu.


Remark: the moment you are in a predefined auto sound or picture setting and you modify a setting in the picture or sound menu, all values of the menu will overwrite the previously made personal settings.

Multi-PIP

Press  to turn on/off Multi-PIP.

The Multi-PIP format that launches on the button press is determined by the selection you made in the Multi-PIP Format list in the General menu, see Settings, General, p. 23 and Multi-PIP Format, p. 29.

Note: Continuing to hold the  button down will cycle the TV through the various formats (PIP3, PIP8, PIP12), launching a new format after each second the button is held down.

Press the  button again to return to a full main screen picture.

ZOOM


Press the **ZOOM**  button to activate the zoom function.

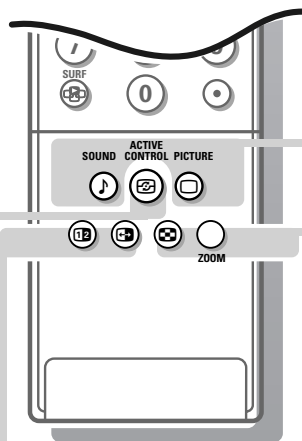
Press the **OK** button repeatedly to select one of the zoom magnifications (x1, x4, x9, x16).

Additionally you can shift the selected zoom window over the screen with the cursor buttons up/down, left/right or in a diagonal way.

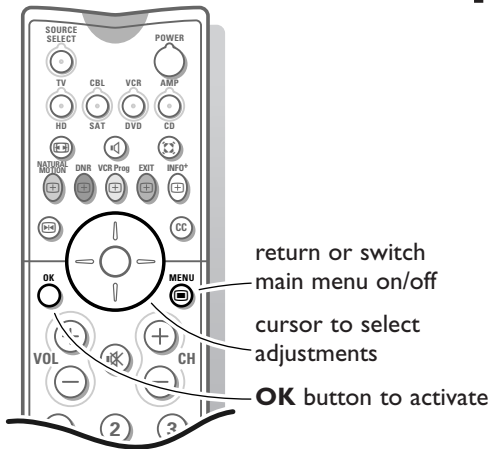
The zoom window is reset after selecting another TV channel, another display format or when another display format is selected automatically.


Zooming is disabled in Dual Screen mode.

Press the **ZOOM**  button again to deactivate the zoom function.



Operation



Press the **MENU**  button on the remote control to summon the main menu.

Note: When the main menu is accessed from the keypad on top of the TV, it has an additional Exit item, which lets you dismiss the menu.

TV menu

Picture menu

Select the menu item with the cursor up/down and adjust the settings with the cursor left/right.

Natural Motion *(not available for digital signals via AV4)*

- **Off:** the TV displays video in interlaced mode without motion compensation. It reduces line flicker.
- **On (Progressive):** 60 Hz Progressive Scan + Natural Motion Line doubling eliminates line flicker, motion compensation reduces jitter and offers smooth, yet sharp motion reproduction;
- **On (1050i lines):** provides a further doubling of vertical resolution (of Progressive scan) which adds astonishing sharpness.

*Note: When you have selected **Off**, the setting will be reset to **On (Progressive)**, the next time you turn on the TV.*

Brightness

This control allows you to adjust the brightness level of the picture.

Color

This control allows you to adjust the color saturation of the picture.

Tint *(not available for digital signals via AV4 and Y-Pb-Pr via AV3)*

This control allows you to adjust the color mix (hue) of the picture.

Contrast

This control allows you to adjust the contrast levels of the picture.

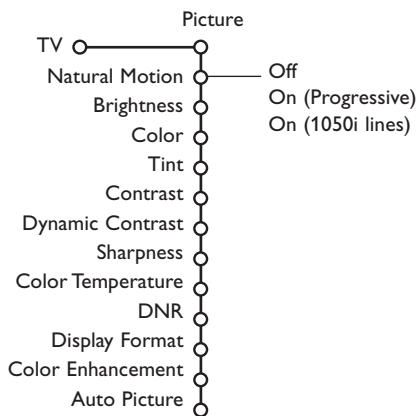
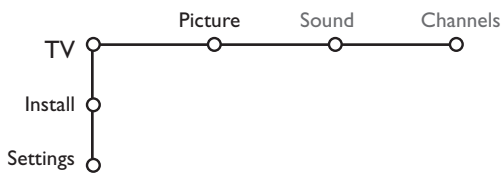
Dynamic Contrast *(not available for digital signals via AV4)*

This feature automatically makes the contrast in the darker and the brighter picture areas more noticeable as the image on screen changes. Normally, select **Medium**. In certain circumstances it may be preferred to select **Minimum**, **Maximum** or **Off**.

- 1 Press the cursor right to enter the list.
- 2 Select one of the settings with the cursor up/down.
- 3 Press the cursor left or the **OK** button to return to the picture menu.

Sharpness *(not available for digital signals via AV4)*

This control allows you to adjust the edge definition of a picture.





Color temperature

This control allows you to select from TV channels, the color temperature of the TV picture.


- 1 Press the cursor right to enter the list.
- 2 Select **Normal**, **Warm** or **Cool** with the cursor up/down.
- 3 Press the cursor left or the **OK** button to return to the picture menu.

DNR (Digital Noise Reduction) *(not available for digital signals via AV4)*

This feature automatically filters out and reduces the image noise and improves picture quality when receiving weak analog video signals.

- 1 Press the cursor right to enter the list.
- 2 Select **Off**, **Minimum**, **Medium** or **Maximum** according to the image noise present, with the cursor up/down.
- 3 Press the cursor left or the **OK** button to return to the picture menu.

Display Format *(not selectable for digital signals via AV4)*


This menu item performs the same as the  button on the Remote Control. See Use of the Remote Control, p. 9.

Color Enhancement *(not available for digital signals via AV4)*


When activated, this feature automatically controls green enhancement and blue stretch. It makes the colors more vivid.

- 1 Press the cursor right to enter the list.
- 2 Select **On** or **Off** in order to activate/de-activate Color Enhancement with the cursor up/down.
- 3 Press the cursor left or the **OK** button to return to the picture menu.

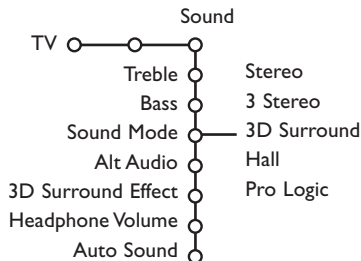
Auto Picture

This menu item performs the same as the **PICTURE**  item on the remote control. See Use of the Remote Control, p. 11.

- 1 Press the cursor right to enter the list.
- 2 Select a predefined picture setting with the cursor up/down.
- 3 Press the cursor left to return to the picture menu.

To exit the picture menu branch, press the diagonal cursor button upright or upleft or press the  menu button.

Note: the picture menu settings for AV4 are independent of the normal menu settings.



Sound menu

Select the menu items with the cursor up/down and adjust the settings with the cursor left/right. Remember, control settings are at normal mid-range levels when the bar scale is centered.

Treble

Treble attenuates or amplifies the high-frequency response of the audio output signal.

Bass

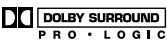
Bass attenuates or amplifies the low-frequency response of the audio output signal.


Sound Mode

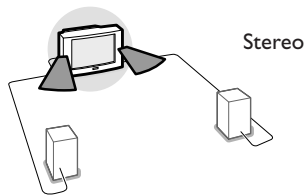
The Sound mode feature allows you to select the way that your TV plays audio that it receives from broadcast signals or from external inputs. Each mode plays the audio in different configurations, depending on the speaker configuration and the sound signal being broadcast. The graphical representation of the TV speakers is displayed and updated according to the selected Sound Mode. Speakers which are active are highlighted. Refer to the Main Menu, Settings, Speakers menu, see p. 20 for the settings of the speaker-related controls, and to Connect Accessory Devices, Connect external speakers, p. 35 for the speaker configuration.

In order to receive the full reproduction capability of true Dolby Pro Logic* Sound you should include the proper use and arrangement of surround speakers (not supplied). When item Surround speakers in the speakers menu is set to **No**, the Sound Modes Hall and Pro Logic are grayed out and can not be selected.

- 1 Select **Sound Mode** with the cursor up/down.
- 2 Enter the list of Sound modes with the cursor right. As you select an item of the list, a graphic appears to the right, illustrating the speakers configuration. The illustration is updated according to the chosen speaker setup and the selected sound mode.
- 3 Select the sound mode according to the sound signal being broadcast.

*  DOLBY SURROUND
PRO • LOGIC

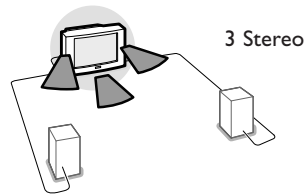
'Dolby' 'Pro Logic' and the double-D symbol  are trademarks of Dolby Laboratories Licensing Corporation. Manufactured under license from Dolby Laboratories Licensing Corporation.



Stereo

Stereo

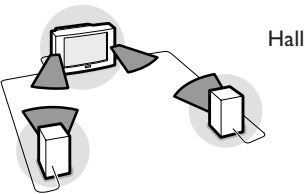
This mode reproduces only the left and right front sound signals. You only hear a stereo sound if the broadcast which you are receiving is transmitted in stereo.



3 Stereo

3 Stereo

The sound signal is now distributed over the front left, the front right and the center TV speakers. The rear speakers do not produce any signal.



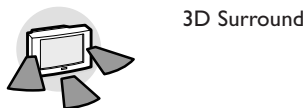
Hall

Hall

The special sound signal is distributed over the rear speakers which creates a hall effect from the rear.

The center speaker does not reproduce any signal.

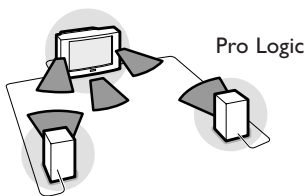
This mode is recommended when you wish to add surround sound to a broadcast which is not encoded Dolby Surround or to a mono signal.



3D Surround

3D Surround


3D Surround enables you to experience the effect of Dolby Surround Pro Logic without the need of having rear speakers connected or activated. Select the level of 3D Surround Effect in the Sound menu.



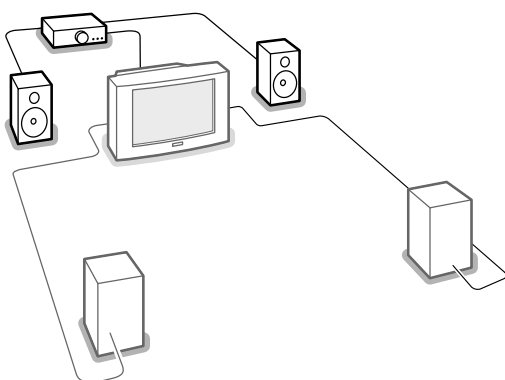
Pro Logic

Pro Logic (with Dolby Surround broadcasting)

In addition to the left and right internal speakers, the center and the rear surround speakers reproduce the Dolby Surround Pro Logic sounds.

This 4-channel sound is always present in the movie or program marked with  Dolby Surround.

This mode is especially recommended for such programs or movies.

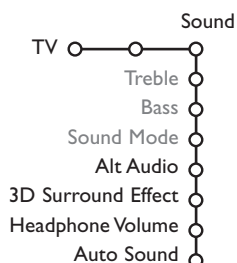


With two extra front speakers connected

To enhance the sound reproduction of your TV you may connect two extra front speakers via an external amplifier. (See Connect Accessory Devices, External speakers/Amplifier, p. 35.)

In the Sound modes, Hall and Stereo the internal TV speakers do not produce any sound if your amplifier is turned off.

Note: If extra front speakers are connected, the external amplifier has been turned on, and Center Mode Yes is selected in the Speakers menu, all internal TV speakers produce center sound in the surround modes Pro Logic, 3 Stereo and 3D Surround.



Alt Audio

When you tune a channel where SAP (Second Audio Program) is available, you can toggle between **Main** and **SAP**.

Press the cursor right to enter the list and make your preferred audio selection with the cursor up/down.

If SAP is not available, only Main is selected.


3D Surround Effect

When you have selected 3D Surround as Sound mode, the menu item **3D Surround Effect** appears in which the level of the 3D effect can be selected: **Maximum, Medium, Minimum** or **Off**.


Headphone Volume

See Connect Accessory Devices, p. 34 for the connection of the headphone.

Auto Sound

This menu item performs the same as the **SOUND** item  on the remote control. See Use of the Remote Control, p. 11.

- 1 Press the cursor right to enter the list.
- 2 Select a predefined sound setting with the cursor up/down.
- 3 Press the cursor left to return to the sound menu.

To exit the sound menu branch, press the diagonal cursor button upright, or upleft or press the  menu button.

Channels menu

Channel Lock

This feature provides the ability to prevent the viewing of a selected channel. Blocked channels can still be tuned with the digit buttons only, but the picture is blanked and the audio is muted.

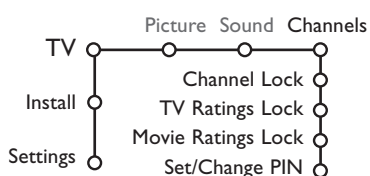
- 1 Select **Channel Lock** with the cursor down.
- 2 Press the cursor right.
A list with all stored channel numbers appears.
- 3 Select the channel you want to lock/unlock with the cursor down.
- 4 Press **OK**.

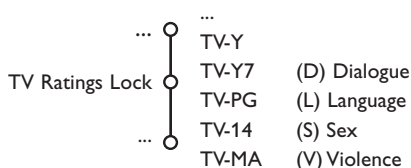
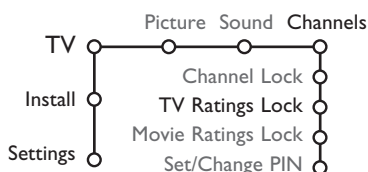
This summons a message that prompts you to enter your PIN. (See Set/Change Pin below.) Follow the instructions on screen.

If the PIN is correct, the channel list reappears, and the color of the box-graphic of the selected channel changes from blue to yellow to indicate the channel is currently locked.

You only have to enter your PIN code once while the menu is active.

- 5 Repeat to lock other channels.





Age-based Rating	Content-based Rating
All	none
No Rating	none
TV-Y	none
TV-Y7	(FV) Fantasy Violence
TV-G	none
TV-PG	(D) Dialog (L) Language (S) Sex (V) Violence
TV-PG-14	(D) Dialog (L) Language (S) Sex (V) Violence
TV-MA	(L) Language (S) Sex (V) Violence

TV Ratings Lock

Your TV is equipped with a V-chip. This allows you to control access to individual programs based on their movie and TV ratings. All settings apply to all AV inputs, except AV4, TV and external sources.

The program content advisory data are sent by the broadcaster or program provider.

- 1 Select **TV Ratings Lock** with the cursor down. A list appears, showing the age-based TV ratings and a corresponding content-based ratings list.
- 2 Press the cursor right to enter the list.
- 3 Select an age-based TV rating with the cursor up/down, and enter, if present, the list with content-based ratings with the cursor right, and select one content-based rating.
- 4 Press **OK** to activate/de-activate the selected rating. You are asked to enter your PIN. (See Set/Change, p. 19) If the PIN is correct, the TV Ratings Lock menu reappears.
- 5 Select another content-based rating if you like and press **OK** again. You need only enter your PIN once while the menu is active. You can lock/unlock any number of ratings on the list without re-entering your PIN.

Each ratings item has a box-graphic in front of it to indicate whether or not programs carrying that rating are currently locked:

- a yellow-colored box: all items in the contents-based list are locked as well;
- a blue-colored box: the item is unselected;
- a half blue, half yellow-colored box: some content-based ratings are selected/unselected.

When **All** has been selected, all items in the age-based and in the contents-based lists are locked.

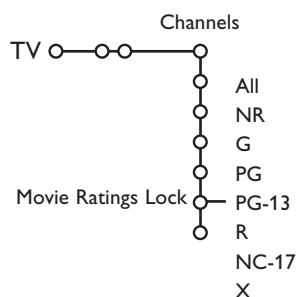
If, while **All** is selected, any other item, either an age-based or content-based item, is unselected, then **All** is automatically unselected.

No Rating is the selection for items that either have no rating information or have a rating of None. When this is selected, programs without a rating will be locked.

When an item on the age-based list is selected, all items below that item of the same group are locked as well.

When you select a content-based rating, all identical content-based ratings in the younger age-based categories are also selected.

- | | |
|----------|---|
| TV-Y | appropriate for children of all ages with themes and elements suitable for children aged 2-6 |
| TV-Y7 | programs designed for children age 7 and older |
| TV-Y7-FV | programs include fantasy violence more intense than other programs in the TV-Y7 category |
| TV-G | programs suitable for all ages. These programs contain little or no violence, no strong language and little or no sexual dialogue or situations |
| TV-PG | programs contain elements that some parents may find unsuitable for younger children and which may need parental guidance. The program may contain moderate violence, sexual dialogue and/or situations and some strong language. |
| TV-14 | programs contain elements that may not be suitable for children under 14 years of age. These programs include one or more of the following: intense violence, intense sexual situations, suggestive dialogue and strong language. |
| TV-MA | programs are designed to be viewed by adults and may be unsuitable for children under the age of 17. These programs may contain graphic violence, explicit sexual activity and/or crude or indecent language. |



Movie Ratings Lock

This function allows you to control access to individual movies based on their MPAA ratings (Motion Picture Association of America).

- 1 Select **Movie Ratings Lock** with the cursor down.
A list appears, showing all valid MPAA content ratings.
- 2 Press the cursor right to enter the list.
- 3 Select a movie rating with the cursor up/down.
- 4 Press **OK** to activate/de-activate the selected rating.
You are asked to enter your PIN. (See Set/Change PIN, p. 19.)
If the PIN is correct, the Movie Ratings Lock menu reappears.

Each rating item has a box-graphic in front of it to indicate whether or not programs carrying that rating are currently locked:

- a yellow-colored box: movies with this rating are locked;
- a blue-colored box: movies with this rating are unlocked.

When **All** has been selected, all items on the movie ratings list become selected. (All movies are locked.)

If, while **All** is selected, any other item is unselected, then **All** is automatically unselected.

When **NR** has been selected, no other item is selected.

When any other item has been selected, all ratings below are selected as well, thus all movies with those ratings will be locked.

NR	not rated
G	movies with a mild content, suitable for all ages
PG	movies for which parental guidance is recommended. They may contain a few racy or violent scenes or maybe some bad language
PG-13	movies for which parental guidance may be recommended if under age 13
R	restricted. The movies usually contain offensive sex or bad language and may be unsuitable for children under the age of 17. Parental guidance or permission needed.
NC-17	even with parental permission, forbidden under age 17. More offensive sex, violence or bad language.
X	movies which generally focus on sex, violence and/or bad language. Also known as pornography.

Set/Change PIN

This function allows you to create or change a Personal Identification Number (PIN) in the menu.

- 1 Select **Set** or **Change PIN** with the cursor down.
- 2 If no PIN exists yet, the menu item is set to **Set PIN**. Follow the instructions on screen.
If a PIN has previously been entered, the menu item is set to **Change PIN**. Follow the instructions on screen.
All number combinations from 0000 to 9999 are valid numbers.
- 3 The Channels menu reappears with a message confirming that the PIN has been created.

Important: You have forgotten your PIN !

- 1 Select **Change PIN** in the Channels menu.
- 2 Press **OK**.
- 3 Press the cursor right.
- 4 Enter the overriding code 0-7-1-1.
- 5 Press the cursor again and enter a new personal 4-digit PIN code. The previous PIN is erased and the new PIN is stored.

Note: The overriding PIN code only works in the Set/Change PIN menu.

If you have entered the overriding code incorrectly, return to the Channels menu. Select Change PIN again, and enter the overriding code correctly.

Settings menu

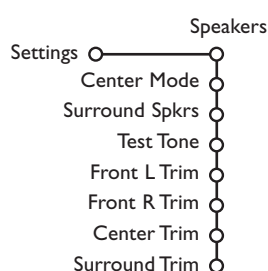


This menu allows you to access to settings that are typically set only once or are changed rarely and which are not related to the installation of the TV channels.

The **Speakers** menu reflects the speaker-related controls.

The **General** menu allows you to change settings that will typically be accessed only occasionally.

The **Source** menu allows you to select a source and/or to name each input source.



Speakers

In order to receive the full reproduction capability of true Dolby Surround Sound you should include the proper use and arrangement of the speakers:

- via the TV and its internal Front Right, Center and Left speakers and two amplified rear surround speakers connected to the back of the TV;
- or via the Variable Line Out connectors and an external Dolby amplifier.

See External Speakers/Amplifier, p. 35.

Select the various Speakers menu controls to setup the configuration of the TV's speakers system for Dolby audio playback.

Each trim control can be adjusted to match test tone levels.

Depending on the output mode and sound mode (see Main Menu, TV, Sound, Sound mode, p. 14) selected, some menu items may be grayed out and are not selectable.

Availability of Speaker menu items

Center Mode	•	•	•	•	•
Surround Spkrs				•	•
Test tone	•	•	•	•	•
Front L Trim	•	•	•	•	•
Front R Trim	•	•	•	•	•
Center Trim		•	•	•	•
Surround Trim				•	•
	Stereo	3 Stereo	3D Surround	Hall	Pro Logic

Center Mode

See Connect Accessory Devices, External Speakers, Amplifier, p. 35.

If no External Front Speakers are connected, do not change the predefined factory settings which is **Center Mode No**.

If External Front Speakers are connected, select **Center Mode Yes**.

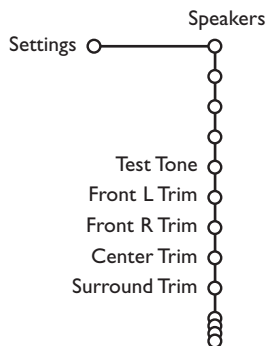
In this setting, the center channel in surround mode is directed to all three internal TV speakers (left, center and right).

Surround Speakers

See Connect Accessory Devices, External Speakers, p. 35.

If no Surround Speakers are connected do not change the predefined factory settings which is **No**.

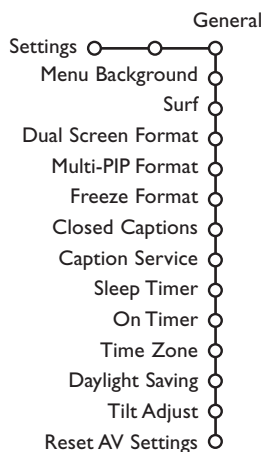
If Surround Speakers are connected select **Yes**.



Test Tone and Trim Controls

The menu item **Test Tone** enables you to have a reference of the speakers loudness and to adjust the level of each until they are balanced in loudness. The speakers activated light up in the screen graphic.

- 1 Select **Test tone** with the cursor down.
- 2 Press the cursor right.
- 3 Select **On** or **Off** with the cursor up/down.
When turned **On**, the Test Tone control generates a sound test signal that circulates through the individual active speakers in a clockwise direction, and is meant to be used with the adjustable trim controls.
Once turned on, the Test Tone will continue to circulate through the Left, Center, Right and both Rear speakers (if present).
- 4 Press the cursor left.
- 5 Press the cursor up/down to select the desired speaker for individual volume level adjustment.
- 6 Press the cursor left/right to adjust the trim level.
- 7 Continue and select the other speakers for adjustment as desired.
- 8 Press the cursor up to return to the **Test Tone** menu item when speaker adjustments are complete and turn the control **Off**.



General

This menu allows you to change various settings that are presumably adjusted less frequently than most other settings.

Menu Background

- 1 Select **Menu Background** with the cursor down.
- 2 Press the cursor right.
- 3 Select **On** or **Off** to turn the Menu Background on or off.

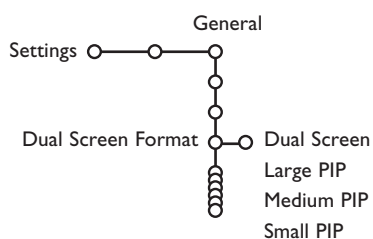
Surf

With this feature you can switch between Two-channel and Nine-channel surf behavior.

- 1 Select **Surf** with the cursor down.
- 2 Press the cursor right.
- 3 Select **Two Channels** or **Nine Channels** with the cursor up/down.

Select **Two Channels** if you want the surf button to toggle between the current and the previously selected channel.

Select **Nine Channels** if you want the surf button to summon a list of up to 9 channels which can be selected. (See Use of the Remote Control, p. 10.)



Dual Screen Format *(not available for digital signals via AV4)*

The Dual Screen and Single PIP functions allow you to view two TV channels or sources at one time, hearing audio from the main screen through the speakers and audio from the other screen through the headphones.

This menu allows you to select the preferred format which can then be displayed toggling the **12** button on and off.

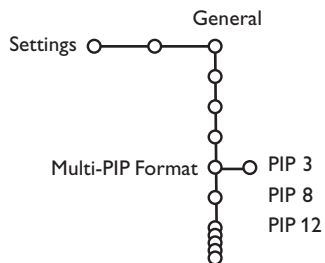
See Dual Screen/PIP, p. 28.

- 1 Select **Dual Screen Format** with the cursor down.
- 2 Press the cursor right.
- 3 Select **Dual Screen**, **Large PIP**, **Medium PIP** or **Small PIP** with the cursor up/down.


When **Dual Screen** is selected, and Dual Screen mode is activated from the remote control **12** button, the TV splits the screen into two equally sized screens.

When a **PIP mode** is selected, and Dual Screen mode is activated from the remote control **12** button, the TV shows a full screen of video with a small, medium or large window of video on top of it.

*Note: Continuing to hold the **12** button down will also cycle the TV through the Dual Screen and the various PIP sizes.*



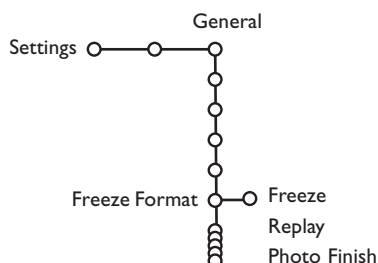
Multi-PIP Format (not available for digital signals via AV4)

Multi-PIP format allows you to view multiple channels or sources at one time, hearing audio from the main screen through the speakers. In this menu you can select which format you prefer to see in Multi-PIP: PIP 3, PIP 8 or PIP 12, referring to the number of PIP screens being displayed pressing the  button on the remote control.


Note: Continuing to hold the  button down will also cycle the TV through the various formats.

- 1 Select **Multi-PIP Format** with the cursor down.
- 2 Press the cursor right.
- 3 Select **PIP 3**, **PIP 8** or **PIP 12** with the cursor up/down.

See Multi-PIP, p. 29 how to operate.



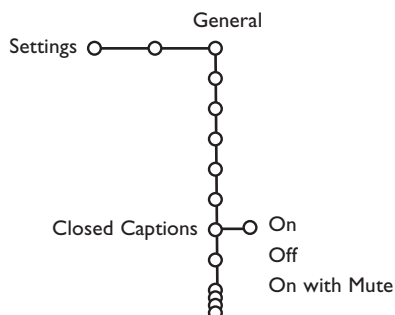
Freeze Format (not available for digital signals via AV4)

Freeze Format allows you to select among three options: Freeze, Replay, Photo Finish, to be activated when you press the  button on the remote control. See p. 9.

In this menu you can select which option you prefer. In Dual Screen or PIP mode, the highlighted screen is frozen, and cycling through the options is not possible.

Note: Continuing to hold the  button down will also cycle the TV through the various formats.

- 1 Select **Freeze Format** with the cursor down.
- 2 Press the cursor right.
- 3 Select **Freeze**, **Replay**, **Photo Finish** with the cursor up/down.



Closed Captions

Closed Captioning allows you to read the voice content of television programs on the TV screen. Designed to help the hearing impaired, this feature uses on-screen 'text boxes' to show dialogue and conversations while the TV program is in progress. Captions will appear on the screen during captioned broadcasts.

Note: The captions do not always use correct spelling and grammar.

Not all TV programs and product commercials are made for broadcast with Closed Caption information included. Refer to your area's TV program listings for the TV channels and times of Closed Caption shows. The captioned programs are usually noted in the TV listings with service marks such as 'CC'.

- 1 Select **Closed Captions** with the cursor down.
- 2 Press the cursor right.
- 3 Select **On**, **Off** or **On with Mute**.

When **On** is selected, the TV will display the currently displayed Caption Service, assuming that the service is available in the broadcast.

When **Off** is selected, the TV will not display Closed Captions information.

When **On with Mute** is selected, the TV will display the currently selected Caption Service when the mute function is active. When the mute function is not active, the TV will not display Closed captions information.

Note:

- When Dual Screen Format is selected, Closed Captioning (if activated) appears for the main screen only, and it covers the full screen;
- When Multi-PIP 12 is activated, Closed Caption is disabled.

Caption Service

- 1 Select **Caption Service** with the cursor down.
- 2 Press the cursor right.
- 3 Select the desired **Caption Service**

- **CC 1, 2, 3 or 4**

Dialogue (and descriptions) for the action on the captioned TV program shows on screen.

Usually CC 1 is the most used.

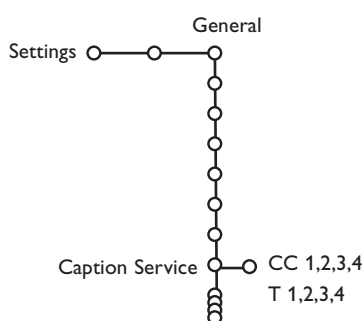
CC 2 may be used for alternate languages if they are being transmitted.

- **T 1, 2, 3 or 4**

Often used for channel guide, schedules, bulletin board information for Closed Caption programs, news, weather informations or stock market reports.

Not all Caption Services are necessarily being used by a TV channel during the transmission of a Closed Caption program.

Note: This television receiver provides display of television closed captioning conforming with the EIA-608 standard and in accordance with Sections 15.119 of the FCC rules.



Sleep Timer

With the Sleep Timer function you can set a time period after which the TV will turn itself off.

- 1 Select **Sleep Timer** with the cursor down.
- 2 Press the cursor right to set the time.
The counter runs from 0 up to 180 mins (in 5-min increments). When set to 0, the sleep timer is turned off.
*One minute before the sleep timer expires, a message appears that the TV will turn off in 60 seconds or you may cancel the sleep timer by pressing the **OK** button. You can always turn off your TV earlier or change the set time.*

On Timer

Note: The On Timer function is only available if time information is available via the local PBS channel.

The On Timer function allows you to set a time to power your TV on automatically at a certain time of day. It can be set to work once, or daily at the same time.

The TV will turn on at the channel which was tuned when it was turned off.

- 1 Select **On Timer** with the cursor down.
- 2 Press the cursor right.
- 3 Select **Once**, **Daily** or **Off** to set the On Timer for one-time operation, daily operation or Off.
- 4 When you have selected **Once** or **Daily**, press the cursor right.
- 5 Enter the time with the digit buttons or with cursor up/down.
Also enter **AM** (A) or **PM** (P) with the cursor up/down. Invalid digits can not be entered.
- 6 Press the **OK** button to return to the On Timer menu item.
If a valid hour has been entered, and the minutes are left blank, 00 is automatically entered for the minutes spaces.

Note: If the On Timer has never been set, then the number-entry spaces are dash marks.

If the On Timer has been set at any time previously, then the time last saved is shown, even if the On Timer is set to Off.

Time Zone

This function allows you to select your local time zone. Broadcasted time information will correct the clock display for your local time.

- 1 Select **Time Zone** with the cursor right.
- 2 Select your local time zone.

Daylight Saving

Daylight saving time is automatically set by specially broadcasted signals. This menu item allows you to disable the automatic setting of daylight saving time. This is useful if you live in an area or state where daylight saving is not applied, but you receive channels from other areas where daylight saving signals are broadcasted.

- 1 Select **Daylight Saving** with the cursor right.
- 2 Select **Automatic** for automatic clock correction for daylight saving time, based on specially broadcasted signals.
- 3 Select **Off** to disable automatic clock correction based on the specially broadcasted signals.

Tilt Adjust

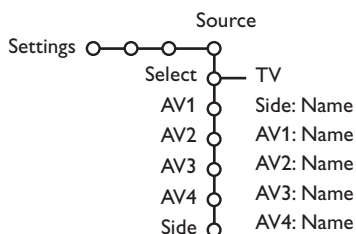
This function allows you, if necessary and to compensate for the Geomagnetic field, to rotate the picture shown on the screen, clockwise or counterclockwise.

- 1 Select **Tilt Adjust** with the cursor down.
- 2 Press the cursor left or right to adjust the rotation of the picture.

Reset AV Settings

This function allows you to reset most of the picture and sound settings to their predefined factory states.

- 1 Select **Reset AV Settings** with the cursor down.
- 2 Press **OK** to erase settings and reset them to their default values.



Source

This menu allows you to select and/or name the accessory device you connect to one of the AV inputs.


- 1 Select **Source** with the cursor right. The Source menu items appear.
- 2 Press the cursor down to select the menu items..

When you select **Select**, a list appears, showing the available sources. Selecting a source causes the TV to begin showing video and playing audio from the selected source.

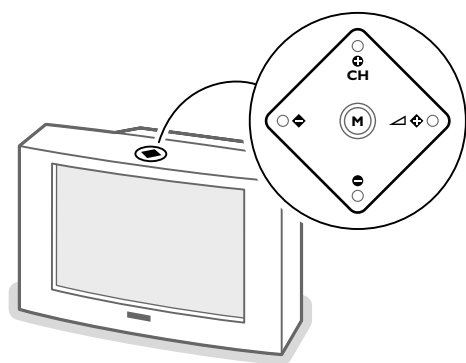
When you select **AV1, AV2, AV3, AV4** or **SIDE**, a list appears allowing you to identify which type of peripheral is attached to this input.

The name selected is automatically added to the source in the Select list.


Once you have named the source, e.g.VCR, this source will automatically be selected when your remote control is in VCR mode, see p.9, and when you press the **SOURCE SELECT** button on the remote control.

- 3 Press the menu  button on the remote control to turn off all menus on screen.
- 4 Press the **SOURCE/SELECT** button on the remote control. The Source Select menu appears in which you may select a source or peripheral connected to be displayed on screen.

Keypad on top of the TV



Should your Remote Control be temporarily unavailable, or lost or broken, the keypad on top of the TV allows you to summon and to navigate the Main Menu, to tune TV channels, and to control the volume.

When the Main Menu is not displayed, the **CH-** or **+** buttons enable you to select the TV channels, the  - or **+** buttons to adjust the volume.

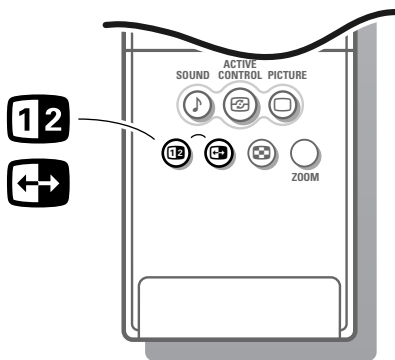
Press the **M** button to summon the Main Menu and to confirm the selection made (same function as the **OK** button)

Press the  - or **+** buttons to navigate left/right in the menu items.

Press the **CH-** or **+** buttons to navigate up/down in the menus.

Navigate to **Exit** to dismiss the Main Menu.

Dual Screen/PIP



Press the **12** button to turn on or off Dual Screen or Single PIP, according to the format selection made in the Dual Screen Format list in the General menu. See Settings, General, p. 22.

Audio from the main screen (the left screen in Dual Screen and the full size screen in single PIP) plays to the speakers;
Audio from the right screen or from the single PIP plays to the headphones.

*Note: Continuing to hold the **12** button down will cycle the TV through the various formats (Dual Screen, Large PIP, Medium PIP, Small PIP), launching a new format after each second the button is held down.*

Making the PIP screen movable

When a single PIP format is selected, press the **OK** button to make the PIP screen movable.
Press the cursor up/down, left/right to move the PIP screen in the direction of the cursor press.

Switching screens

Press the **↔** button to swap the main screen and the auxiliary screen.

On-Screen information

The On-Screen information, which appears when changing channels, always refers to the highlighted screen.

To highlight a screen

Pressing the cursor left/right will toggle the highlight between the main screen and the auxiliary screen.

Change TV channels in main screen, auxiliary screen and PIP screen

Press the channel up/down button, the digit buttons or the **↔** button in order to change the TV channels in the highlighted screen.

Deactivating Dual Screen mode

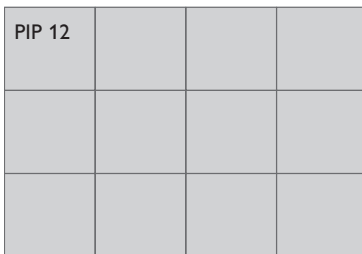
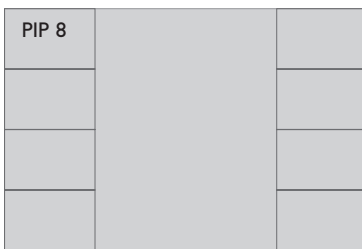
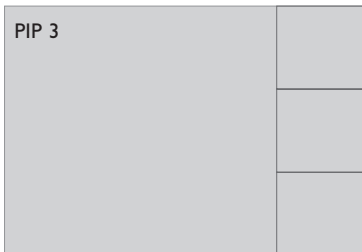
Press the **12** button again to return to a full main screen picture.
The TV tunes to the picture which was highlighted in Dual Screen mode.


Notes:

- *TV or Movie ratings: When Dual Screen mode is activated, a message with a PIN entry is summoned as TV and Movie ratings locks do not apply in Dual Screen. Select with the cursor button up/down whether you want to suspend V-chip blocking as long as Dual Screen mode is activated, or until the TV is turned off. If **Cancel** is selected, you return to normal TV viewing.*
- *Channel Lock: When Dual Screen mode is activated, and a channel or source is locked, the next channel or source is displayed;*
- *Display formats: When Single PIP is selected but not highlighted, the Display Format control works normally for the Main Screen only. When Single PIP is highlighted the Display Format control in the menu is grayed and the **↔** button has no effect.*
When Dual Screen mode is selected, two Display formats are supported: Full Screen or 4:3 Letterbox (4:3 format with black bars above and below the picture).
- *Dual Screen or Single PIP is not available when a peripheral is selected connected to AV4.*

Multi-PIP

In the Settings menu, General, p. 23 you selected which Multi-PIP format you prefer to see in Multi-PIP.



- 1 Press the  button on the remote control to toggle the selected format on or off.

Notes:

- TV or Movie ratings: when Multi-PIP is activated, a message with a PIN entry is summoned as TV and Movie Ratings locks do not apply in Multi-PIP. Select with the cursor button up/down to indicate whether you want to suspend V-chip blocking as long as Multi-PIP is activated, or until the TV is turned off. If Cancel is selected, you return to normal TV viewing.
- Channel Lock: When Multi-PIP is activated, and a channel or source is locked, this channel or source will not appear.


The main screen displays the channel or source tuned before Multi-PIP was activated and the highlight is on the main screen.

The first PIP screen displays the last channel selected. The following PIP screens display the channels or sources selected in the Surf list (from top to bottom) followed by the channels from the channel map from the lowest to the highest numbered.

- 2 Press the cursor left/right, up/down or in case of PIP 12, also cursor diagonal to highlight a PIP screen. When the highlight is on one of the PIP screens, it begins playing video and the other PIPs freeze. The main screen always continues playing audio and video.

Note:

- Multi-PIP is disabled when a picture is being displayed from the AV4 source;
- Pictures from an AV4 source will never be displayed in Multi-PIP;
- Display Format is disabled when Multi-PIP is active.

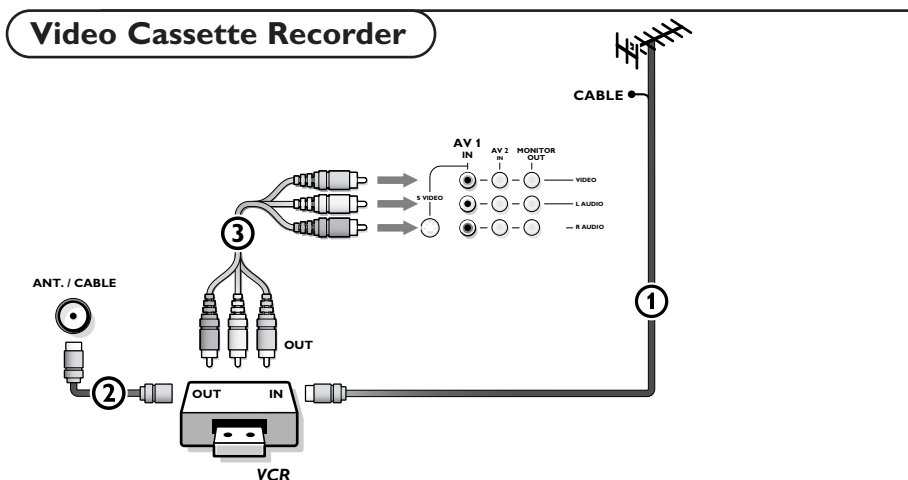
- 3 Pressing the **CH +/-** or the  button or the digit buttons changes the channel or source for the currently highlighted screen. If the currently highlighted screen is tuned to a channel or source already in the surf list, then the next channel or source in the surf list is displayed.

Note: channels cannot be added or deleted from the Surf list when Multi-PIP is activated.

- 4 Press the  button or the **OK** button to view the highlighted screen full screen. Multi-PIP is dismissed.

Connect Accessory Devices

There is a wide range of audio and video devices that can be connected to your TV. The following connection diagrams show you how to connect them.



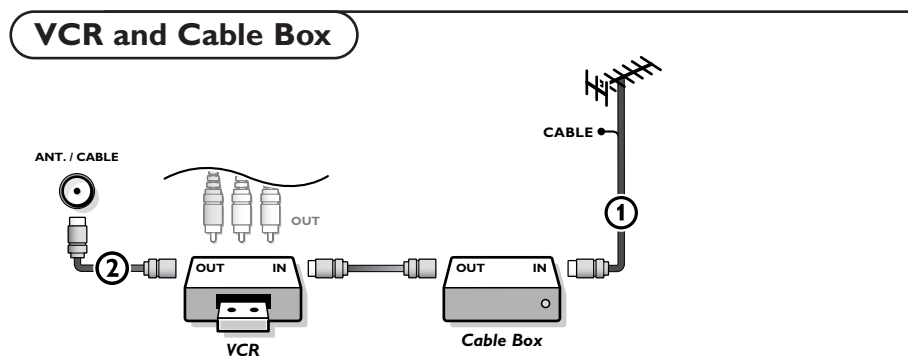
- 1 Connect the cable TV cable 1 to the **RF IN** socket of your VCR.
- 2 Connect another RF cable 2 from the output **OUT** of your VCR to the TV's **ANT./CABLE** jack.
- 3 Better playback quality can be obtained if you also connect the Video, Audio Left and Right (only for stereo devices) AV cables 3 to the **VIDEO**, **L** and **R AUDIO** input **AV1 IN** jacks.

The **MONITOR OUT** connectors can be used for daisy chaining or to record programs from your TV. See Record with your VCR, p. 38.

If your VCR has an S-VHS video jack:

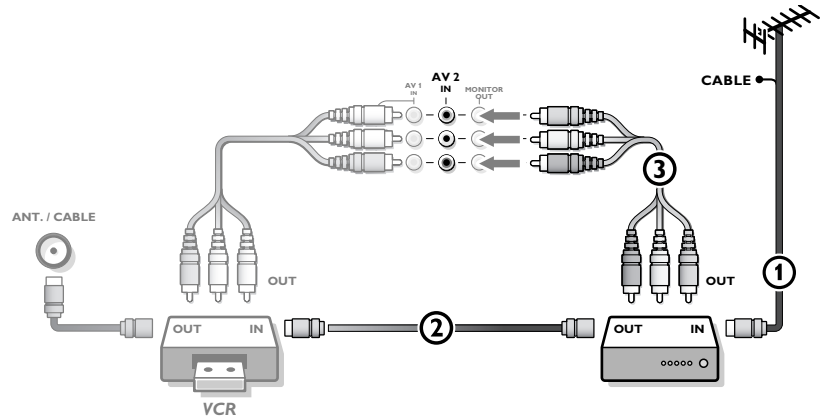
For improved picture quality, connect a S-video cable with the **S-VIDEO** input instead of connecting the VCR to the **VIDEO** jack of **AV1 IN**.

S-Video does not provide audio, so audio cables must still be connected to provide sound.



- 1 Connect the cable TV antenna 1 to the cable box's **IN** jack.
- 2 Connect the cable box's **OUT** jack to the VCR's **RF IN** socket.
- 3 Proceed with the as above described procedure for Video recorder, starting with step 2.

VCR with other AV peripherals

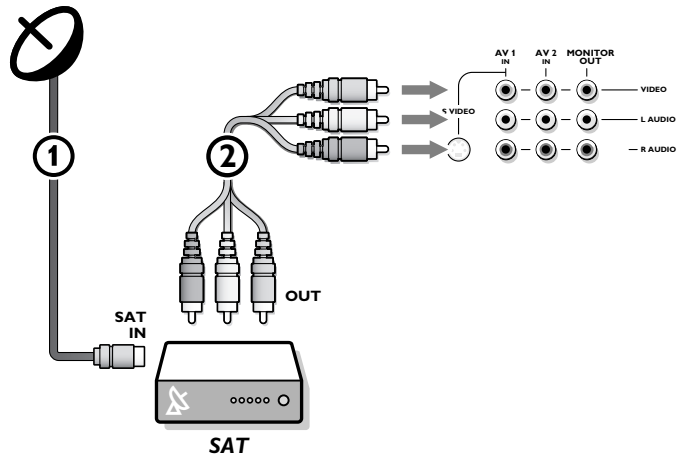


- ① Interconnect your VCR with an extra RF cable ②.
- ② To obtain better picture quality, also connect the Video, Audio left and Audio right (only for stereo devices) cables ③ to the **VIDEO, L and R AUDIO** input **AV2 IN** jacks.

Note: See Connect Video Cassette Recorder on previous page.

*Note: AV1 IN can handle CVBS and YIC;
 AV2 IN CVBS;
 AV3 IN CVBS and Y-Pb-Pr and YIC;
 AV4 IN digital signals of a digital HD receiver;
 SIDE can handle CVBS and YIC.*

Satellite Receiver

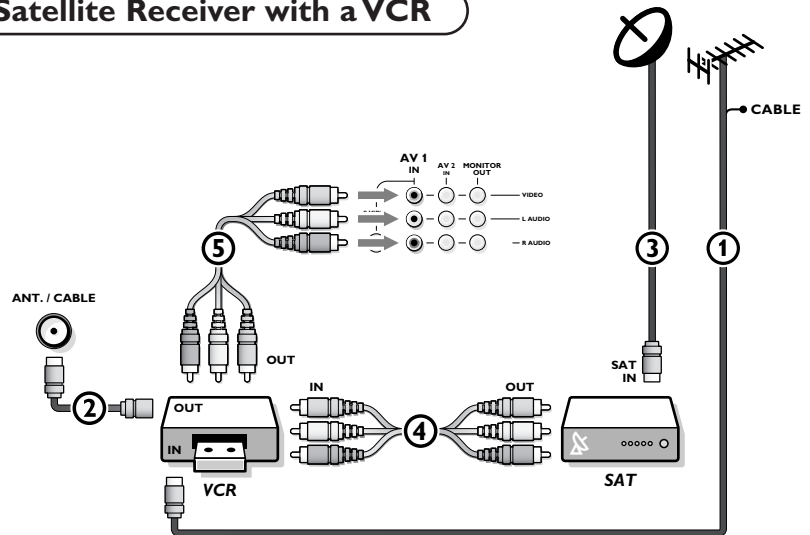


- ① Connect the satellite antenna cable ① to the satellite receiver's **SATELLITE IN** jack.
- ② Connect the Video, Audio left and right (only for stereo devices), AV cables ② to the **VIDEO, L and R AUDIO** input **AV1 IN** or **AV2 IN** jacks.

If your satellite receiver has an S-VHS video jack:

For improved picture quality, connect a S-VHS video cable with the **S-VIDEO** input instead of connecting the satellite receiver to the **VIDEO** jack of **AV1 IN**.

Satellite Receiver with a VCR



- 1 Connect the cable TV cable ① to the **RF IN** socket of your VCR.
- 2 Connect another RF cable ② from the output of your VCR to the TV's **ANT./CABLE** jack.
- 3 Connect the satellite antenna cable ③ to the satellite receiver's **SATELLITE IN** jack.
- 4 Connect the AV cables ④ to the satellite receiver's **AV OUT** jacks and to the VCR's **AV IN** jacks.
- 5 Connect the VCR's **AV OUT** jacks ⑤ to the TV's **AV1** or **AV2 IN** jacks.

DVD Player

DVD player with AV connectors

Connect the AV cables to the DVD player's **AV OUT** jacks and to the TV's **AV2 IN** jacks.

If your DVD player has an **S-VIDEO OUT**(put) jack:

Connect the AV cables to the DVD player's **AV OUT** jacks and to the TV's **AV3 IN** jacks.

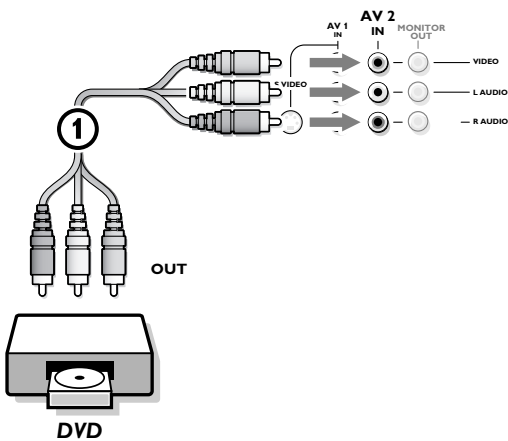
Connect an **S-VIDEO** cable with the **S-VIDEO** input instead of connecting the DVD player to the video jack.

DVD player with Component Video Output Connectors

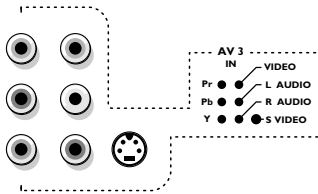
- 1 Connect the three separate component video cables to the DVD player's **Y, Pb** and **Pr** jacks and to the **Y, Pb** and **Pr AV3 IN** jacks on the TV.
- 2 Connect the audio cable to the DVD player's audio **L** and **R** jacks and to the **L** and **R** audio **AV3** jacks on the TV.

DVD player with Progressive scan output (480p 2 Fh)

Connect the DVD player to the **AV4 IN** jacks on the TV.
See AV4 Digital HD input, p. 33.



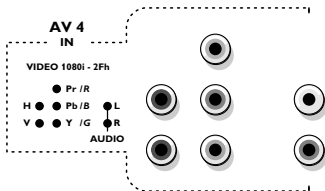
Peripherals connected to AV3



There are three possible ways to connect your Accessory Devices to the **AV3** input.

- 1
 - In case of a peripheral with CVBS output, connect the video cable to the video input of the TV.
 - In case of a peripheral with S-VHS output, connect the video cable to the **S-VIDEO** input of the TV.
 - In case of a peripheral with component video cables, connect them to the **Pb, Pr** and **Y** inputs **AND** also connect a video cable to the video input (in order to have correct picture reproduction).
- 2 Always connect the audio cables to the peripheral's **AUDIO L** and **R** jacks and to the **L AUDIO** and **R AUDIO AV3** jacks on the TV.

AV4 Digital High Definition input



When you have a Digital Antenna cable connected to a digital Set top Box, connect the Set top Box to the **AV4 IN VIDEO 2 Fh** input.

Connect a Set top Box with 2 Fh RGB output to the **H, V, R, B** and **G** jacks and to the **L** and **R AUDIO** jacks.

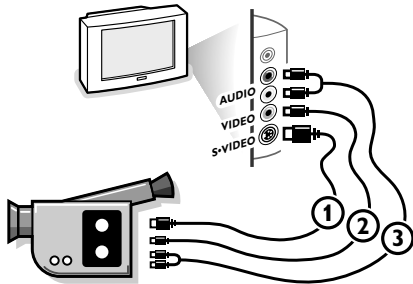
Connect a Set top Box with 2Fh Pr, Pb, Y output to the **Pr, Pb** and **Y** jacks and to the **L** and **R AUDIO** jacks.

See also the manual of your High Definition Set top Box.

Note: This television is designed to accept high definition signal standards 480p and 1080i, as specified by the Electronic Industries Association standard EIA770.3. Set-top boxes from different manufacturers have the possibility of differing output standards which may cause difficulties for the television to properly display.

Warning: in case you notice scrolling images, wrong colors or no color, no picture, or even combinations of these on your screen, check if the connections are done in the right way:

- for Y, Pb, Pr 2Fh: check if the cable colors match with the input connector colors
- for RGB-HV 2Fh: check additionally if the H and V cables are connected to the respective H and V input connectors, and if necessary exchange both connections.

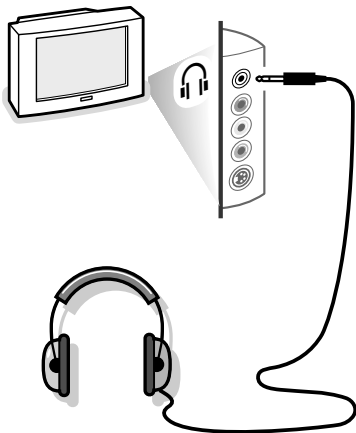


Camera and Camcorder



- 1 Connect your camera or camcorder to the AV inputs at the right side of your TV.
- 2 Connect the device to **VIDEO** ② and **AUDIO L** ③ for mono devices.
- 3 For stereo devices also connect **AUDIO R** ③.

S-Video quality with an S-VHS, Hi-8 or Digital camcorder is obtained by connecting the S-Video cables with the **S-VIDEO** input ① (instead of **VIDEO** ②) and **AUDIO** inputs ③.

Note: If you prefer, you can also connect the camcorder to one of the TV's rear AV IN jacks.

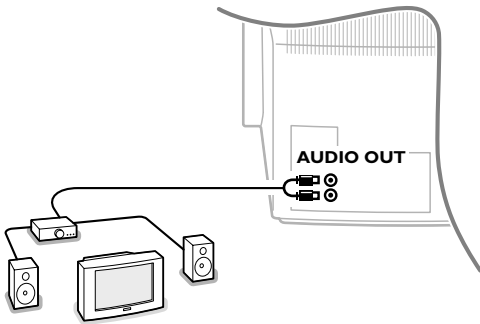


Headphones

- 1 Insert the plug into the headphone socket  at the right side of the TV.
- 2 Press  on the remote control to switch off the internal speakers of the TV.
*The headphone impedance must be between 8 and 4000 Ohms.
The headphone socket has a 3.5 mm mini stereo jack.*

In the **SOUND** menu select **Headphone volume** to adjust the headphone volume.

Connect External Speakers / Amplifier



Stereo amplifier and two extra FRONT speakers

To enhance the sound reproduction of your TV you can connect two extra speakers via an external amplifier.

- 1 Connect the audio cables to the audio input of your amplifier and to the **AUDIO OUT L** and **R** jacks at the back of your TV.

The output level is controlled by the volume control of your TV.

Note: Turn off the TV and your audio amplifier before connecting them.

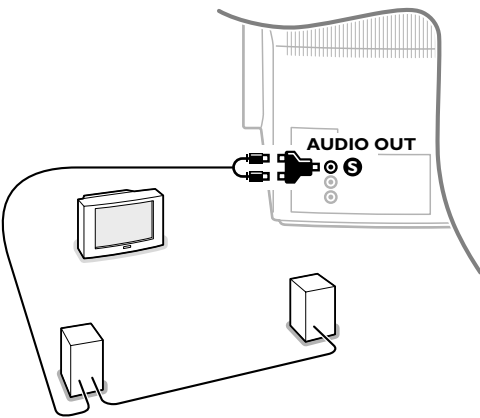
Set the audio amplifier's volume to minimum.

- 2 Select **Center Mode Yes** in the Settings menu, Speakers, see p. 20. See Sound menu, Sound Mode, p. 15 for the available Sound modes.

- 3 Adjust the volume of the audio amplifier.

You may make use of the Test Tone function in the Settings menu, see p. 21, to have a reference of the loudness of the separate speakers.

Note: Once you have adjusted the volume of the amplifier, do not change it while watching TV as the whole configuration operates with the volume adjustment of your TV.



Surround speakers

To enjoy Dolby Pro Logic Surround sound, you can connect two rear speakers with built in amplifiers (or an audio amplifier with rear speakers).

- 1 Connect the audio cables to the rear speakers and to the Dolby surround output **S** in the **AUDIO OUT** grouping at the rear of your TV as shown opposite.

There is only one cinch output for both speakers. Use a mono to stereo adapter to connect two surround speakers.

Note: Turn off the TV and the rear speakers before connecting them.

Rear Surround speakers should always be located behind or to either side of the listener at about 1 yard above the seated listener's head.

- 2 Adjust the volume of the rear speakers.


You can use the Test Tone function in the Settings menu, Speakers, see p. 21, to have a reference of the loudness of the surround speakers in relation to the other speakers.

Note: Once you have adjusted the volume of the rear speakers, do not change it while watching TV, as the whole configuration operates with the volume adjustment of your TV.

Dolby Pro Logic Surround amplifier

- 1 Connect the Dolby Pro Logic Surround amplifier to the **AUDIO OUT L** and **R** at the back of your TV.

- 2 Select **Center Mode No** in the Settings menu, Speakers, see p. 20. The audio output is now independent of volume, bass, treble and Sound Mode settings.

- 3 Turn off the volume of the TV with the mute button . All volume settings, tone control and speaker connections have to be done via the external Dolby Pro Logic amplifier.

If you want to connect more devices to your TV, consult your retailer.

Setting the remote control to work accessory devices

Your remote control is set to work your TV and many infrared remote (IR) control VCRs, Cable TV Converter Boxes, DVD players, Satellite Receivers, etc.

Press the **VCR, DVD, SAT, HD, CD, CBL** or **AMP** button according to the accessory device you want to operate with this remote control.

Toggle if needed by pressing more than one second until the correct colored LED lights up. See Use of the Remote control of your main instruction booklet, p. 9.

If the function buttons on the remote control also work the selected accessory device, then the remote is ready and no further steps are needed.

If the functions buttons do not work the selected accessory device

According to the device(s) you own, you may make your remote control ready for them by a direct entry code. Proceed as following.

Code Setup

- 1 Press the desired mode button (toggle if needed by pressing more than one second) to select the device, which you need to setup.
- 2 Press the **digit buttons 1 and 3 at the same time**, for about 5 seconds, and until the backlighting buttons and the selected mode button light up.
- 3 Enter with the digit buttons and within 30 seconds, the 4 digit remote code no. for your brand of accessory device. See pages 39 and 40.

Note: If no code or an incomplete code is entered within 30 seconds, the backlight and selected mode button will turn off and give a long blink before returning to the previous programmed code.

If a valid 4 digit code is entered the backlight and the selected mode button, will turn off and then blink twice. The remote control will assign that code no. to the mode selected.

Remark: If more than one number is listed for your device, you may have to try the other codes until your device operates with the remote.

If after repeated attempts the code number method does not work for your accessory device, try the Auto Search method following.

Auto Search method

- 1 Turn on the desired device (VCR, Cable box, etc.).
- 2 Press the desired mode button to select the device which you need to search. Point the remote control toward the accessory device. Stand at least six feet away from the front of the device. Make sure you are in the line of sight of the IR receiving eye of your device.
- 3 Press the **digit buttons 1 and 3 at the same time**, for about 5 seconds, and until the backlighting buttons and the selected mode button light up.
- 4 Press and release the red **POWER** button.

The backlighting button and the selected mode button will turn off. The remote control will automatically start stepping to the next code in the library simultaneously sending the code for channel up for that particular ID. The backlighting buttons and the selected mode buttons will give a short blink after each search. Watch the channel number indicator on your device. Channel numbers will scan up when the unit has been identified. This may take some minutes.

Note: For devices DVD and CD, insert a disc and press PLAY on the device. The remote control will send the command next track. Switch AV receivers to TUNER function.

- 5 Press and release the red **POWER** button as soon as the channel numbers start to scan up.

The remote control will assign that code no. to the mode selected.

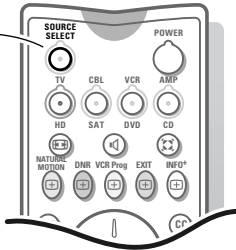
The backlight and the selected mode button will blink twice to indicate the code setup has been completed.

The remote control is ready to operate with the accessory device.

Note: If any other button is pressed, or no button is pressed during Auto Search, the Search will be ended. The backlighting and selected mode button will give a long blink. The remote keeps its previous code.

To select connected devices

SOURCE
SELECT



Devices connected to the rear or on the right side of the TV

Press the **SOURCE SELECT** button repeatedly to select **AV1, AV2, AV3, AV4** or **SIDE**, according to where you connected your devices at the rear or on the right side of your TV.

If you want to change to TV channels?

Enter the channel number of the TV channel which you want to watch with the digit buttons.

VCR Control buttons

Most of the audio and video devices from our range of products can be operated with the remote control of your TV.

Press the **VCR, DVD, SAT, HD, CD, CBL** or **AMP** button according to the devices you want to operate with this remote control. See Use of the remote control, p. 9.

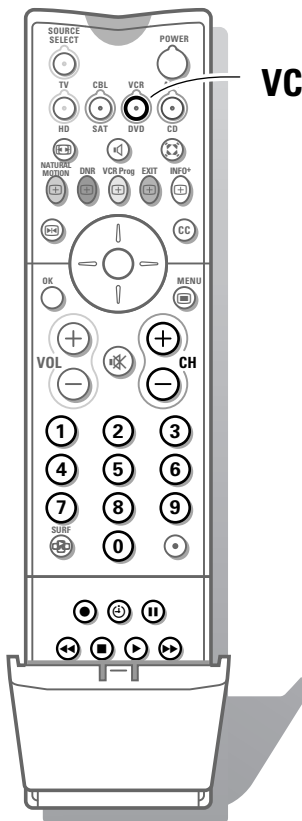
VCR buttons

After you pressed the **VCR** button, press one of the VCR buttons under the door of the remote control:

- for record,
- ⌚ VCR timer,
- || for pause,
- ◀◀ for rewind,
- for stop,
- ▶ for play,
- ▶▶ for fast forward,
- CH + for sequential channel selection from the video recorder tuner,
- 0 to 9 to select a channel number from your video recorder tuner,

These buttons function with devices that uses the RC5 signalling standard.

VCR



Record with your VCR

To record S-VHS quality, connect an S-VHS peripheral directly to the VCR.

Record a TV program

You can record a TV program using your VCR's tuner without affecting your TV.

- 1 Select the channel number on your VCR.
- 2 Set your VCR to record.
See the handbook for your VCR.

Switching channel numbers on your TV does not disturb recording !

Record to VCR from MONITOR OUT

You can record a program on your VCR from the TV tuner via **MONITOR OUT**.

- 1 Switch on the device.
- 2 Select the correct channel on your TV and the correct input on your VCR.
- 3 Set your VCR to record.
You record the tuner channel of the TV, even when you switch to an AV input using the **SOURCE SELECT** button on the remote control.

*Do not switch channels or turn off your TV when you are recording through **MONITOR OUT**.*

Remote Control Direct Entry Codes for Accessory Devices

Amplifiers Remote Code No.

Aiwa	.0433
Carver	.0296
Curtis Mathes	.0327
Denon	.0187
GE	.0105
Harman/Kardon	.0919
JVC	.0358
Linn	.0296
Magnavox	.0296
Marantz	.0296, 0348
Nakamichi	.0348
Optimus	.0422
Panasonic	.0335
Philips	.0296, 0919
Pioneer	.0040, 0327
Realistic	.0422
Sansui	.0348
Sony	.0716, 0247
Soundesign	.0105
Technics	.0335
Victor	.0358
Wards	.0040, 0105
Yamaha	.0381

Cable Remote Code No.

ABC	.0030, 0028, 0034, 0035, 0038, .0040, 0041, 0044
Allegro	.0180, 0342
Americast	.0926
Antronix	.0049
Archer	.0049, 0180, 0824
Belcor	.0083
Bell & Howell	.0041
Cable Star	.0083
Cabletenna	.0049
Cableview	.0049
Century	.0180
Citizen	.0180, 0342
Colour Voice	.0052
Comtronics	.0067
Contec	.0046
Eastern	.0029
Emerson	.0824
Everquest	.0042, 0067
Focus	.0427
GC Electronics	.0083
Garrard	.0180
Gemini	.0042
General Instrument	.0303, 0503, 0038, 0837
GoldStar	.0067, 0171
Goodmind	.0824
Hamlin	.0047, 0036, 0286, 0061
Hitachi	.0038
Hytex	.0034
Jasco	.0042, 0180, 0342
Jerrold	.0030, 0039, 0303, 0041, 0038, 0503, .0042, 0837
Memorex	.0027
Movie Time	.0090
NSC	.0090
Oak	.0046, 0034
Optimus	.0048
Panasonic	.0048, 0134, 0027
Paragon	.0027
Philips	.0052, 0180
Pioneer	.0171, 0560, 0904
Popular Mechanics	.0427
Pulsar	.0027
Quasar	.0027
RCA	.0048

Radio Shack	.0042, 0342, 0910, 0824
Recoton	.0427
Regal	.0047, 0286
Regency	.0029
Rembrandt	.0038
Runco	.0027
SL Marx	.0067
Samsung	.0067, 0171
Scientific Atlanta	.0035, 0044, 0504, 0904
Signal	.0042, 0067
Signature	.0038
Sprucer	.0048
Starcom	.0030, 0042
Stargate	.0067, 0042, 0824
Starquest	.0042
Sylvania	.0028
TV86	.0090
Tandy	.0285
Televue	.0067
Texscan	.0028
Tocom	.0039, 0040
Toshiba	.0027
Tusa	.0042
Unika	.0180, 0049
United Artists	.0034
Universal	.0049, 0083, 0180, 0218
Viewstar	.0285, 0090
Zenith	.0027, 0552, 0926
Zentek	.0427

CD Players Remote Code No.

Aiwa	.0184
Burmester	.0447
California Audio Labs	.0056
Carver	.0184, 0206, 0464
DKK	.0027
Denon	.0030, 0900
Emerson	.0332
Fisher	.0201, 0206
Garrard	.0420, 0447
Genexxa	.0059, 0332
Harman/Kardon	.0200, 0184
Hitachi	.0059
JVC	.0099
Kenwood	.0055, 0217, 0853, 0064, .0653, 0708
Krell	.0184
LXI	.0332
Linn	.0184
MCS	.0056
MTC	.0447
Magnavox	.0184, 0332
Marantz	.0184, 0056, 0207
Mission	.0184
NSM	.0184
Nikko	.0201
Onkyo	.0128, 0895
Optimus	.0447, 0059, 0206, 0495, .0464, 0332, 0027, 0064, 0172
Panasonic	.0056, 0330
Parasound	.0447
Philips	.0184, 0653
Pioneer	.0059, 0495, 0271, 0332
Proton	.0184
QED	.0184
Quasar	.0056
RCA	.0080, 0332, 0206, 0791
Realistic	.0206, 0207, 0447
Rotel	.0184, 0447
SAE	.0184
Sansui	.0184, 0332

Sanyo	.0206
Scott	.0332
Sears	.0332
Sharp	.0064, 0207, 0888
Sherwood	.0207
Sony	.0027, 0212, 0517
Soundesign	.0172
Tascam	.0447
Teac	.0420, 0447, 0201, 0207
Technics	.0330, 0056
Victor	.0099
Wards	.0080, 0184
Yamaha	.0214, 0063
Yorx	.0488

Receivers Remote Code No.

ADC	.0558
Adcom	.0643
Aiwa	.0148, 0432, 0185, 0216
Akai	.0251, 0103
Capetronic	.0558
Carver	.0035, 0216, 0387, 0069
Casio	.0222
Clarinette	.0222
Curtis Mathes	.0107
Denon	.0031, 0798, 0300
Emerson	.0451
Fisher	.0069, 0246, 0387
Garrard	.0451, 0490
Harman/Kardon	.0137, 0216, 0918
Inkel	.0089
JBL	.0137
JVC	.0101
Kenwood	.0054, 0341, 0104, 0069, .0213, 0340
Koss	.0451
LXI	.0208
Linn	.0216
Lloyd's	.0222
MCS	.0066, 0373
Magnavox	.0216, 0418, 0558, 0155, 0222
Marantz	.0216, 0155, 0066
Modulaire	.0222
NAD	.0347
NEC	.0262
Nakamichi	.0374, 0124
Onkyo	.0162, 0407, 0127
Optimus	.0208, 0204, 0213, 0246, .0558, 0765, 0828, 0069, 0697
Panasonic	.0066, 0336, 0545
Penney	.0222
Philips	.0216, 0418
Pioneer	.0107, 0041, 0177, 0558, 0657
Quasar	.0066
RCA	.0081, 0373, 0558, 0387, 0557
Realistic	.0208, 0222, 0190
Sansui	.0216, 0220, 0373
Sanyo	.0246, 0828
Scott	.0190, 0349
Sharp	.0213
Sherwood	.0529, 0518, 0089
Sony	.0185, 0195, 0501
Soundesign	.0697
Teac	.0490, 0190
Technics	.0336, 0066, 0235, 0545
Victor	.0101
Wards	.0081, 0041, 0107, 0185, 0216
Yamaha	.0203, 0213
Yorx	.0222
Zenith	.0884

Remote Control Direct Entry Codes for Accessory Devices

Satellite	Remote Code No.
AlphaStar	.0799
Amplica	.0099
Amway	.0102
Astro Industries	.0122
BSR	.0122
Capetronic	.0122
Channel Master	.0045, 0239
Chaparral	.0080, 0236, 0243
Curtis Mathes	.0088, 0099
DX Antenna	.0068
Drake	.0091, 0272, 0045, 0176
Echostar	.0307, 0802, 0175, 0186, 0296
Expressvu	.0802
General Instrument	.0388, 0896, 0654
HTS	.0802
Hitachi	.0846
Homecable	.0265
Hughes Network Systems	.0776
HYTEK	.0122
IQ	.0237
IQ Prism	.0237
JVC	.0802
Janeil	.0179
Jerrold	.0388, 0654
Legend	.0296
Macom	.0088, 0045
Magnavox	.0749, 0751
Memorex	.0296, 0751
Next Level	.0896
Panasonic	.0179, 0728
Philips	.0227, 0749, 0751
Pico	.0102
Primestar	.0654, 0388
RCA	.0593, 0170, 0882
Radio Shack	.0896
Ramsey	.0102
Realistic	.0079
STS	.0237, 0068
Sony	.0666
Star Choice	.0896
Star Trak	.0207
Toshiba	.0109, 0817, 0088
Uniden	.0265, 0079, 0101, 0397, 0751, 0103, 0749
Zenith	.0091, 0883, 0088

VCR	Remote Code No.
Admiral	.0075, 0236
Adventura	.0027
Aiko	.0305
Aiwa	.0334, 0027, 0064
Akai	.0133, 0068, 0088
America Action	.0305
American High	.0062
Asha	.0267
Audiovox	.0064
Beaumarck	.0267
Bell & Howell	.0131
Brocksonic	.0236
Broksonic	.0148, 0211, 0029, 0236, 0506
CCE	.0099, 0305
Calix	.0064
Canon	.0062
Caphart	.0047
Carver	.0108
Cineral	.0305
Citizen	.0305, 0064
Colt	.0099
Craig	.0064, 0099, 0074, 0267, 0298
Curtis Mathes	.0062, 0068, 0087, 0189
Cybernex	.0267


Daewoo	.0305, 0588, 0047, 0072
Daytron	.0047
Denon	.0069
Dynatech	.0027
Electrohome	.0064
Electroponic	.0064
Emerex	.0059
Emerson	.0211, 0029, 0236, 0305, 0148, 0235, 0506, 0588, 0088, 0239, 0027, 0064, 0070
Fisher	.0074, 0131, 0081
Fuji	.0060, 0062
Funai	.0027
GE	.0062, 0087, 0075, 0229, 0267
Garrard	.0027
Go Video	.0459, 0553
GoldStar	.0064, 0065
Gradiente	.0035, 0027
HI-Q	.0074
Harley Davidson	.0027
Harman/Kardon	.0065, 0108
Harwood	.0099
Headquarter	.0073
Hitachi	.0069, 0132, 0027, 0068
Hughes Network Systems	.0069
JVC	.0094, 0035, 0068
Jensen	.0068
KEC	.0064, 0305
KLH	.0099
Kenwood	.0068, 0094, 0065
Kodak	.0062, 0064
LXI	.0064
Lloyd's	.0027, 0235
Logik	.0099
MEI	.0062
MGA	.0070, 0088, 0267
MGN Technology	.0267
MTC	.0027, 0267
Magnasonic	.0305
Magnavox	.0062, 0108, 0027, 0066, 0176
Magnin	.0267
Marantz	.0108, 0062
Marta	.0064
Matsushita	.0062, 0189, 0481
Memorex	.0131, 0074, 0027, 0064, 0075, 0062, 0073, 0267, 1064, 0334, 0066, 0236, 1189, 1289
Minolta	.0132, 0069
Mitsubishi	.0070, 0088, 0075, 0094
Motorola	.0062, 0075
Multitech	.0027, 0099
NEC	.0065, 0068, 0094, 0131
Nikko	.0064
Nikon	.0061
Noblex	.0267
Olympus	.0062
Optimus	.1089, 1189, 0075, 1289, 0064, 1075, 0131, 0189, 0459, 0481
Optonica	.0089
Orion	.0506, 0029, 0211, 0236
Panasonic	.0062, 1189, 0189, 0252, 0481, 0643
Penney	.0062, 0267, 0064, 0069, 0065, 0081
Pentax	.0069, 0132
Philco	.0062, 0236, 0506
Philips	.0108, 0062, 0089, 0645, 1108, 1208
Pilot	.0064
Pioneer	.0094
Portland	.0047
Profitronic	.0267
Proscan	.0087, 0229
Protec	.0099
Pulsar	.0066
Quarter	.0073

Quartz	.0073
Quasar	.0062, 0189, 0481, 1189
RCA	.0087, 0176, 0229, 0069, 0132, 0062, 0075, 0133, 0267
Radio Shack	.0027, 1064
Radix	.0064
Randex	.0064
Realistic	.0027, 0131, 0074, 0075, 0064, 0062, 0089, 0073
ReplayTV	.0641, 0643
Ricoh	.0061
Runco	.0066
STS	.0069
Samsung	.0072, 0267
Sanky	.0066, 0075
Sansui	.0068, 0506, 0027, 0094, 0236, 0298
Sanyo	.0074, 0073, 0131, 0267
Scott	.0211, 0148, 0070, 0072, 0239
Sears	.0081, 0132, 0064, 0069, 0027, 0062, 0073, 0074, 0131
Semp	.0072
Sharp	.0075, 0089
Shintom	.0099
Shogun	.0267
Singer	.0099
Sony	.0060, 0061, 0059, 0027, 0062
Sylvania	.0062, 0108, 0027, 0070
Symphonic	.0027
TMK	.0235, 0267
Tatung	.0068
Teac	.0027, 0068
Technics	.0062, 0189
Teknika	.0027, 0062, 0064
Thomas	.0027
Tivo	.0645
Toshiba	.0072, 0239, 0070
Totevision	.0064, 0267
Unitech	.0267
Vector	.0072
Vector Research	.0065
Video Concepts	.0072, 0088
Videosonic	.0267
Wards	.0062, 0087, 0089, 0027, 0074, 0239, 0267, 0069, 0075, 0099, 0108, 0176
White Westinghouse	.0305, 0236
XR-1000	.0099, 0027, 0062
Yamaha	.0065
Zenith	.0066, 0027, 0060, 0061, 0236, 0506

Digital Video Disc Remote Code No.	
Harman/Kardon	.0609
JVC	.0650, 0585
Kenwood	.0561
Magnavox	.0530
Mitsubishi	.0548
Onkyo	.0654, 0530
Panasonic	.0517, 0659
Philips	.0530, 0566
Pioneer	.0598, 0552, 0659
Proscan	.0549
RCA	.0549
Samsung	.0600
Sharp	.0657
Sony	.0560
Technics	.0517
Theta Digital	.0598
Toshiba	.0530
Yamaha	.0517, 0572
Zenith	.0618, 0530

Before Calling Service

Please make these simple checks before calling service. These tips may save you time and money since charges for television installation and adjustments of customer controls are not covered under your warranty.

Symptoms	Items to Check and Actions to follow
"Ghost" or double images	<ul style="list-style-type: none"> This may be caused by obstruction to the antenna due to high rise buildings or hills. Using a highly directional antenna may improve the picture.
No power	<ul style="list-style-type: none"> Check that the television's AC power cord is plugged into the mains socket. Unplug the television, wait for 60 seconds. Then re-insert plug into the mains socket and turn on the television again.
No picture	<ul style="list-style-type: none"> Check antenna connections at the rear of the television to see if it is properly connected to the television input terminal. Is it properly secured to the appropriate antenna plug on the TV? Possible broadcast station trouble. Try another channel. Adjust the contrast and brightness settings. Try another auto picture setting. Check the Closed Captions control. Some TEXT modes could block the screen.
Good picture but no sound	<ul style="list-style-type: none"> Increase the VOLUME. Check that the television is not muted, press the  button on the remote control. When no signal is detected, the television automatically switches off the sound. This is proper operation and does not indicate a malfunction. Check the transmission system's sound settings of this set. Check if your speaker configuration corresponds with the selections made in the Speakers Setting, p. 20. No sound from the rear speakers or the center speakers? Select an appropriate Sound mode, according to the broadcasted sound signal or adjust the volume (see Sound Modes, p. 15)
Good sound but poor color or no picture	<ul style="list-style-type: none"> Adjust the contrast and brightness setting. Try another auto picture setting. Check the transmission system's color settings of this set.
Poor picture	<ul style="list-style-type: none"> Sometimes, poor picture quality occurs when having activated an S-VHS camera or camcorder connected to the right side of of your TV and another peripheral is connected to AV1 or AV2 at the same time. In this case, switch off one of the other peripherals.
Snowish picture and noise	<ul style="list-style-type: none"> Check the antenna connection.
Horizontal dotted line	<ul style="list-style-type: none"> This may be caused by electrical interference (e.g. hairdryer, nearby neon lights, etc.) Turn off the device.
One white line across the screen	<ul style="list-style-type: none"> Turn off the television immediately and consult a qualified service personnel.
Television not responding to remote control	<ul style="list-style-type: none"> Check whether the batteries are working. Replace if necessary. Clean the remote control sensor lens on the television. Operating range between television and the remote control should not be more than 240". You can still use the M button and the -/+ buttons at the top of your TV. Press the TV button to be sure your remote control is in the TV mode.

If your problem is not solved

Turn your TV off and then on again once.

Never attempt to repair a defective TV yourself.

Check with your dealer or call a TV technician.

**Telephone number Philips Customer Care Center
800-531-0039**

Tips

Care of the screen

Clean the TV with a slightly damp soft cloth. Do not use abrasive solvent as it can damage the TV screen.

End of life directives

We are paying a lot of attention to using environmentally-friendly production methods. Your new TV contains materials which can be recycled and reused. At the end of its life specialized companies can dismantle the discarded TV to concentrate the reusable materials and to minimize the amount of materials that must be disposed. Please ensure that you dispose of your old TV according to local regulations.

How to dispose of batteries?

The batteries supplied do not contain the heavy metals mercury and cadmium. Nevertheless in many areas batteries may not be disposed of with your household waste. Please ensure you dispose of batteries according to local regulations.

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Regulatory Notices - Federal Communications Commission Notice

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
Reorient or relocate the receiving antenna.
Increase the separation between the equipment and the receiver.
Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
Consult the dealer or an experienced radio or television technician for help.

Modifications -

The FCC requires the user to be notified that any changes or modifications made to this device that are not expressly approved by Philips Consumer Electronics may void the user's authority to operate the equipment.

Cables -

Connections to this device must be made with shielded cables with metallic RFI/EMI connector hoods to maintain compliance with FCC Rules and Regulations.

Canadian notice -

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

Avis Canadien -

Cet appareil numérique de la classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

Glossary

Active Control

A set of automatic picture improvement algorithms applied to the video image.

Aspect Ratio

The proportions of a rectangular display screen. NTSC television has a 4:3 ratio; HDTV is 16:9.

Audio/Video Inputs

Located on the rear of the TV these connectors (RCA phono type plug) are used for the input of audio and video signals. Designed for use with VCRs (or other accessories) in order to receive higher picture resolution and offer sound connection options.

Audio Output

An adjustable audio output which allows for volume variations at the source.

Auto Picture and Sound Controls

Buttons on the remote control to select predefined picture and sound settings.

Coaxial Cable

A single solid antenna wire normally matched with a metal plug (F-type) end connector that screws (or pushes) directly onto a 75 Ohm input found on the Television or VCR.

CVBS

Stands for Composite Video Blanking Sync. At this level, the color, luminance and synchronization information are combined in one signal. The audio signal is transferred separately.

Display

An on screen message or graphics that help the user operate and adjust TV feature controls. See On Screen Displays (OSD).

LED

Light Emitting Diode or indicator.

Menu

An on-screen listing of feature controls shown on the TV screen that are made available for user adjustments.

MPAA

Motion Picture Association of America

Multichannel Television sound (MTS)

The broadcast standard that allows for stereo sound to be transmitted with the TV picture.

Natural Motion

Philips Technology that makes movement on television less jerky and appear more natural.

NTSC (analog video signals)

National Television Standards Committee format devised for TV broadcasting signals in the 1940s (525 lines: 60 Hz.)

On Screen Displays (OSD)

Refers to the wording or messages generated by the TV to help the user with specific feature controls (color adjustment, programming, etc.)

Picture Freeze

TV mode which allows you to "freeze" a certain image in order to study a specific detail at ease, e.g. to make notes of certain program information like phone numbers.

Programming

The procedure of adding or deleting channel numbers into the TV's memory circuits. In this way the TV 'remembers' only the locally available or desired channel numbers and skips over any unwanted channel numbers.

RF

Radio Frequency or modulated signal design used as the carrier for television broadcasts.

Second Audio Program (SAP)

Another or additional audio channel provided for in the Multichannel Television Sound (MTS) broadcast standard. A monaural soundtrack included within the recorded or video signal (usually containing a second language translation for the displayed programming).

Sleep Timer

Function with which you can set a time period after which the TV should switch itself to standby.

Subwoofer

A speaker designed for audio playback of only the lowest-frequency notes (under 100 Hz).

Surround Pro Logic

Literally wraps you in 4-channel sound. It brings your favorite movies to life with all the realism and impact of cinema sound as though you are part of the action.

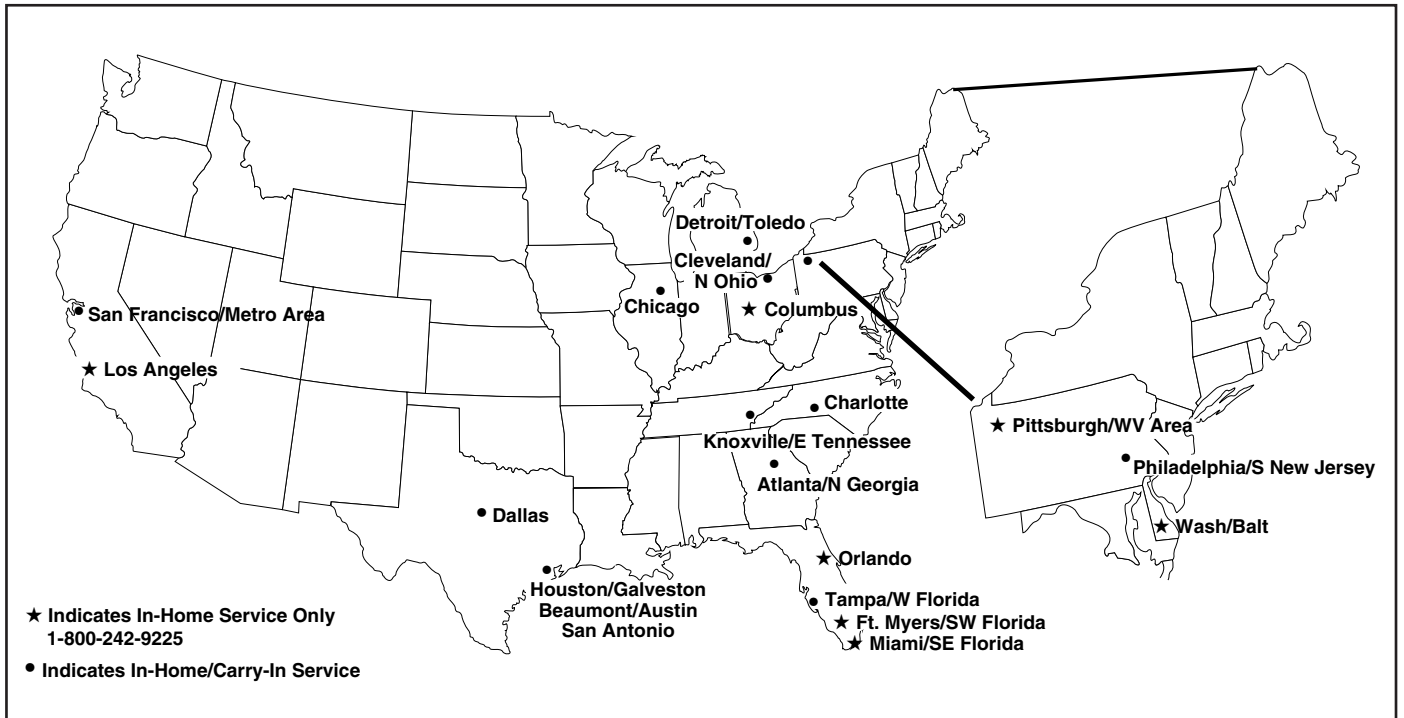
S-Video Input

Allows direct connection of high-resolution video sources, such as a Super VHS videocassette recorder, Laser Disc player, etc. Provides improved picture resolution, sharpness, and clarity.

Tint

TV-function to modify the general color balance between cool and warm and to adjust it according to your personal preference.

Philips Consumer Electronics Company Factory Service Center Locations



Note: If you reside in one of our Philips Factory Service Branch areas (see directory on back), you can contact the nearest Service Branch to obtain efficient and expedient repair for your product. If your product is In-Warranty, you should have proof-of-purchase to ensure No Charge Service. For Out-of-Warranty service, call the location nearest you.

Nota: Si vous résidez dans une des régions desservies par une succursale de service après vente du fabricant Philips (voir liste ci-dessous), vous pourrez contacter la branche de service après vente la plus près de chez vous pour obtenir un service après vente rapide et efficace. Si le produit est sous garantie, il suffira de présenter une preuve d'achat pour bénéficier d'un service sans frais. Pour les produits non couverts par la garantie, contactez le center le plus près de chez vous.

Nota: Si Ud. reside en una de nuestras zonas para sucursales Philips de servicio al de fábrica (ver directorio más abajo), Ud. puede comunicarse con la sucursal de servicio más cercana para obtener una reparación oportuna y eficaz de su producto. Si su producto está todavía bajo garantía, Ud. debe presentar comprobante de compra para no ocasionar ningunos cargos por servicio. Para servicio después del vencimiento de la garantía, llame al lugar más cercano de los abajo indicados.

In Canada

How you can obtain efficient and expedient carry-in, mail-in, or in-home service for your product

Please contact Philips at 1-800-661-6162 (French speaking)
1-800-363-7278 (English speaking)

Au Canada

Comment obtenir le service après-vente pour les produits apportés ou envoyés par la poste à notre center de service ou le service à domicile

Veuillez contacter philips á: 1-800-661-6162 (Francophone)
1-800-363-7278

En el Canadá

Cómo recibir servicio eficiente para su producto, en persona, por correo o a domicilio

Favor de comunicarse con Philips al: 1-800-661-6162 (francófono)
1-800-363-7278 (anglófono)

Quality service is as close as your telephone! Simply look over the list below for the number of a Factory Service Center near you. Your product will receive efficient and expedient carry-in, mail-in, or in-home service, and you will receive peace of mind, knowing your product is being given the expert attention of Philips' Factory Service. And, if the phone number listed for your area is long distance, call **1-800-242-9225** for Factory Service.

Comment obtenir notre service après vente rapide et efficace soit par courrier, à domicile, ou en se présentant à un center de service Philips. Plus de 600 centers de réception de produits à Réparer à travers le pays: contacter le center de service aux consommateurs le plus proche pour savoir l'emplacement de ces dépôts dans un rayon de 50 à 75 miles (80 km à 120 km) du center de service local.

Cómo obtener un servicio oportuno y eficiente por correo, en casa o en persona para su producto a través de un centro Philips de servicio. Mas de 600 sitios por todo el país para la recepción de productos necesitados de reparaciones: comunicarse con el centro de servicio de fabrica mas cercano para estos lugares dentro de un radio de 80 a 120 km (50 a 75 millas) del centro de servicio local.

GEORGIA

Philips Factory Service of Georgia
200 N. Cobb Pkwy., Suite 120
Marietta, GA 30062
(770) 795-0085

FLORIDA

Philips Factory Service of Florida
1911 US Highway 301 North
Tampa, FL 33619
(813) 621-8181

WESTERN U.S.A.

Philips Factory Service Western Region
681 East Brokaw Rd.
San Jose, CA 95112
(408) 436-8566

NORTH CAROLINA

Philips Factory Service of N. Carolina
520 G Clanton Rd.
Charlotte, NC 28217
(704) 529-6330

TEXAS

Philips Factory Service of Texas
1110 N. Post Oak Rd., Suite 100
Houston, TX 77055
(713) 682-3990

CENTRAL U.S.A.

Philips Factory Service Central US
950 Buttonnote Circle
Brooklyn Heights, OH 44131
(216) 741-3334

MICHIGAN

Philips Factory Service of Michigan
25173 Dequindre
Madison Heights, MI 48071
(248) 544-2110

DALLAS AREA

Philips Factory Service of Dallas
415 N. Main Street, #107
Euless, TX 76040
(713) 682-3990

ILLINOIS

Philips Factory Service of Illinois
1279 W. Hamilton Pkwy.
Itasca, IL 60143
(630) 775-0990

TENNESSEE

Philips Factory Service of East Tennessee
6700 D Papermill Rd.
Knoxville, TN 37919
(423) 584-6614

MID-ATLANTIC

Philips Factory Service Mid-Atlantic
352 Dunks Ferry Rd.
Bensalem, PA 19020
(215) 638-7500

LIMITED WARRANTY

One Year Free Labor One Year Free Service on Parts

WHO IS COVERED?

You must have proof of purchase to receive warranty service. A sales receipt or other document showing that you purchased the product is considered proof of purchase.

WHAT IS COVERED?

Warranty coverage begins the day you buy your product. For one year thereafter, all parts will be repaired or replaced and labor is free. After one year from the day of purchase, you pay for the replacement or repair of all parts, and for all labor charges. All parts, including repaired and replaced parts, are covered only for the original warranty period. When the warranty on the product expires, the warranty on all replaced and repaired parts also expires.

WHAT IS EXCLUDED?

Your warranty does not cover:

- labor charges for installation or setup of the product, adjustment of customer controls on the product, and installation or repair of antenna systems outside of the product.
- product repair and/or part replacement because of misuse, accident, unauthorized repair or other cause not within the control of Philips Consumer Electronics Company.
- reception problems caused by signal conditions or cable or antenna systems outside the unit.
- a product that requires modification or adaptation to enable it to operate in any country other than the country for which it was designed, manufactured, approved and/or authorized, or repair of products damaged by these modifications.
- incidental or consequential damages resulting from the product. (Some states do not allow the exclusion of incidental or consequential damages, so the above exclusion may not apply to you. This includes, but is not limited to, prerecorded material, whether copyrighted or not copyrighted.)
- a product used for commercial or institutional purposes.

WHERE IS SERVICE AVAILABLE?

Warranty service is available in all countries where the product is officially distributed by Philips Consumer Electronics Company. In countries where Philips Consumer Electronics Company does not distribute the product, the local Philips service organization will attempt to provide service (although there may be a delay if the appropriate spare parts and technical manual(s) are not readily available).

MAKE SURE YOU KEEP ...

Please keep your sales receipt or other document showing proof of purchase. Attach it to this owner's manual and keep both nearby. Also keep the original box and packing material in case you need to return your product.

BEFORE REQUESTING SERVICE ...

Please check your owner's manual before requesting service. Adjustments of the controls discussed there may save you a service call.

TO GET WARRANTY SERVICE....

Repair must be performed by an authorized service center or a factory service center. If you do not live near a factory service center, contact your dealer. If your dealer is an authorized service center, he will arrange repair. If your dealer is not an authorized service center he will direct you to the authorized service center engaged by him to service the products he sells.

(In U.S.A., Puerto Rico and U.S. Virgin Islands, all implied warranties, including implied warranties of merchantability and fitness for a particular purpose, are limited in duration to the duration of this express warranty. But, because some states do not allow limitations on how long an implied warranty may last, this limitation may not apply to you.)

(In Canada, this warranty is given in lieu of all other warranties. No other warranties are expressed or implied, including any implied warranties of merchantability or fitness for a particular purpose. Philips is not liable under any circumstances for any direct, indirect, special, incidental or consequential damages, howsoever incurred, even if notified of the possibility of such damages.)

IF YOU HAVE QUESTIONS IN CANADA

Please contact Philips at:

1-800-661-6162 (French speaking)

1-800-363-7278 (English speaking)

REMEMBER...

Please record the model and serial numbers found on the product below. Also, please fill out and mail your warranty registration card promptly. It will be easier for us to notify you if necessary.

MODEL # _____

SERIAL # _____

This warranty gives you specific legal rights. You may have other rights which vary from state/province to state/province.

Philips Service Company, P.O. Box 2976, Longview, Texas 75606 (903) 242-4800.