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SERVICE DIVISION
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OWNER'S MANUAL

Warning! Important Safety Instructions



CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



This symbol indicates high voltage is present inside. It is dangerous to make any kind of contact with any inside part of this product.



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

Note to CATV system installer: This reminder is provided to call CATV system installer's attention to Article 820-40 of the National Electrical Code (Section 54 of Canadian Electrical Code, Part I), that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building as close to the point of cable entry as practical.

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

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

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


Important: One Federal Court has held that unauthorized recording of copyrighted TV programs is an infringement of U.S. copyright laws. Certain Canadian programs may also be copyrighted and any unauthorized recording in whole or in part may be in violation of these rights.

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

Thank You for Choosing Samsung

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

Important Safety Information

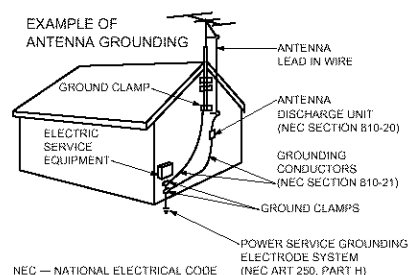
 Always be careful when using your product. To reduce the risk of fire, electrical shock, and other injuries, keep these safety precautions in mind when installing, using, and maintaining your machine.

- Read all safety and operating instructions before operating your product.
- Keep the safety and operating instructions for future reference.
- Heed all warnings on the product receiver and in the operating instructions.
- Follow all operating and use instructions.
- Unplug the product from the wall outlet before cleaning. Use a damp cloth; do not use liquid or aerosol cleaners.
- Never add any attachments and/or equipment without approval of the manufacturer. Such additions can increase the risk of fire, electric shock, or other personal injury.
- Do not use the product where contact with or immersion in water is a possibility, such as near bath tubs, sinks, washing machines, swimming pools, etc.
- Do not place the product on an unstable cart, stand, tripod, bracket, or table where it can fall. A falling product can cause serious injury to a child or adult, and serious damage to the appliance. Use only with a cart, stand, tripod, bracket, or table recommended by the manufacturer or sold with the product. Follow the manufacturer's instructions when mounting the unit, and use a mounting accessory recommended by the manufacturer. Move the product and cart with care. Quick stops, excessive force, and uneven surfaces can make the unit and cart unsteady and likely to overturn.
- Provide ventilation for the product. The unit is designed with slots in the cabinet for ventilation to protect it from overheating. Do not block these openings with any object, and do not place the product on a bed, sofa, rug, or other similar surface. Do not place it near a radiator or heat register. If you place the product on a rack or bookcase, ensure that there is adequate ventilation and that you've followed the manufacturer's instructions for mounting.
- Operate your product only from the type of power source indicated on the marking label. If you are not sure of the type of power supplied to your home, consult your appliance dealer or local power company.
- Use only a grounded or polarized outlet. For your safety, this product is equipped with a polarized alternating current line plug having one blade wider than the other. This plug will fit into the power outlet only one way. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug still does not fit, contact your electrician to replace your outlet.



- Protect the power cord. Power supply cords should be routed so that they won't be walked on or pinched by objects placed on or against them. Pay particular attention to cords at plugs, convenience receptacles, and the point where they exit from the unit.
- Unplug the product from the wall outlet and disconnect the antenna or cable system during a lightning storm or when left unattended and unused for long periods of time. This will prevent damage to the unit due to lightning and power-line surges.
- Avoid overhead power lines. An outside antenna system should not be placed in the vicinity of overhead power lines or other electric light or power circuits or where it can fall into such power lines or circuits. When installing an outside antenna system, be extremely careful to keep from touching the power lines or circuits. Contact with such lines can be fatal.
- Do not overload the wall outlet or extension cords. Overloading can result in fire or electric shock.
- Do not insert anything through the openings in the unit, where they can touch dangerous voltage points or damage parts. Never spill liquid of any kind on the product.

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



- Do not attempt to service the product yourself. Refer all servicing to qualified service personnel. Unplug the unit from the wall outlet and refer servicing to qualified service personnel under the following conditions:
 - when the power-supply cord or plug is damaged
 - if liquid has been spilled on the unit or if objects have fallen into the unit
 - if the product has been exposed to rain or water
 - if the product does not operate normally by following the operating instructions
 - if the product has been dropped or the cabinet has been damaged
 - when the product exhibits a distinct change in performance
- If you make adjustments yourself, adjust only those controls that are covered by the operating instructions. Adjusting other controls may result in damage and will often require extensive work by a qualified technician to restore the product to normal.
- When replacement parts are required, be sure the service technician uses replacement parts specified by the manufacturer or those that have the same characteristics as the original part. Unauthorized substitutions may result in additional damage to the unit.
- Upon completion of any service or repairs to this product, ask the service technician to perform safety checks to determine that the product is in a safe operating condition.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

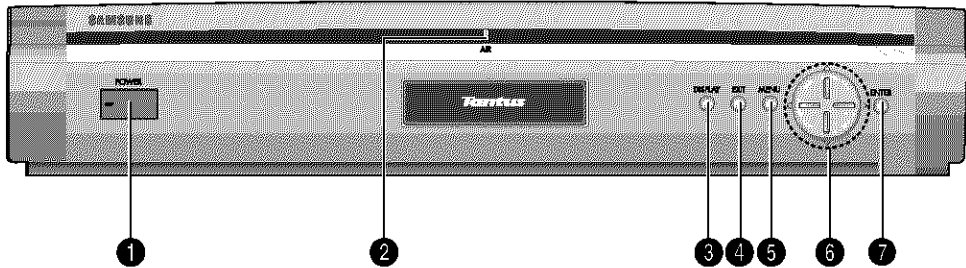
- (1) This device may not cause harmful interference, and
- (2) This device must accept any interference that may cause undesired operation.

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

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Front Panel Controls and LEDs

**1 POWER**

Press to turn the power on or off.

2 AIR (LED)

When a digital signal is received, the LED indicator lights Green. Otherwise, it lights Red.

3 DISPLAY

Press to display information about the current box settings and program: Channel number, Time, Program title, Program duration, Caption, Rating control, Digital picture grade, and MTS language.

4 EXIT

Press to completely exit all the on-screen menus.

5 MENU

Press to display the on-screen menus.

6 Menu Left/Right/Up/Down

Use to change channels or to move the "arrow" pointer (when using the on-screen menus).

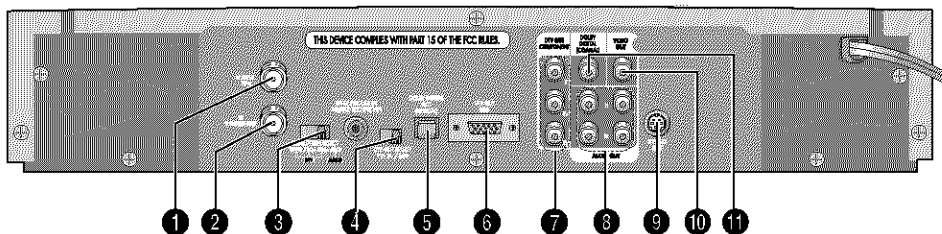
7 ENTER

Press to activate a selection when using the on-screen menus.

NOTES

In this instruction book, the terms "Set-Top Box" and "DTV" are equivalent. Both terms appear in this instruction book, on the remote control markings, and on the On-Screen display.

Rear Panel Jacks



- 1 RF INPUT (75 Ohm)**
Connect the antenna here.
- 2 RF THROUGHOUT**
Connect a coaxial cable between the antenna throughout terminal on the set-top box and the antenna terminal on the TV.
- 3 RESOLUTION SELECT**
Switches between 1080i (interlaced scanning), 720p (progressive scanning), 480p (progressive scanning), and 480i (interlaced scanning) formats. (For HDTV broadcasts, 1080i is usually the best setting.)
- 4 DTV OUT SELECT (Y, Pb, Pr / R, G, B FORMAT)**
Connect to the Y-Pb-Pr/RGB digital video input of a digital-compatible TV set (or the Y-Pb-Pr/RGB inputs of some other video component).
- 5 DOLBY DIGITAL OUT (fiber optic connector)**
Connect this terminal to the digital audio input of a TV set (i.e., to a TV set that has a fiber-optic connector for digital audio). Or, connect this terminal to the digital-audio input of a separate component (i.e., AC3-AMP ...).
- 6 DTV OUT (R, G, B FORMAT)**
Connect to the R, G, B inputs of a TV set, computer monitor, or some other video component.
- 7 DTV OUT COMPONENT (Y, Pb, Pr format)**
Connect to the Y-Pb-Pr digital video input of a digital-compatible TV set (or the Y-Pb-Pr inputs of some other video component).
- 8 Lt/Rt ANALOG-AUDIO OUTPUTS**
Connect these terminals to the analog audio inputs of a TV set (i.e., to a TV that has jacks for L/R inputs). Or, connect these terminals to the L/R inputs of a separate audio component.
- 9 S-VIDEO OUTPUT**
Provides good picture quality. If your TV or monitor has S-Video capability, use this jack along with the Audio/Video jacks to connect the Set-Top Box to your receiver.
- 10 VIDEO OUT**
If your TV or monitor has Audio/Video capability, connect this jack to the AV Input jack on your TV or monitor using an Audio/Video cable.
- 11 DOLBY DIGITAL OUTPUT (Coaxial)**
Connect this terminal to the digital audio input of a TV set.

Connecting the Set-Top Box to a TV Set

1 Connect an Antenna cable to the RF Input jack on the Set-Top Box.

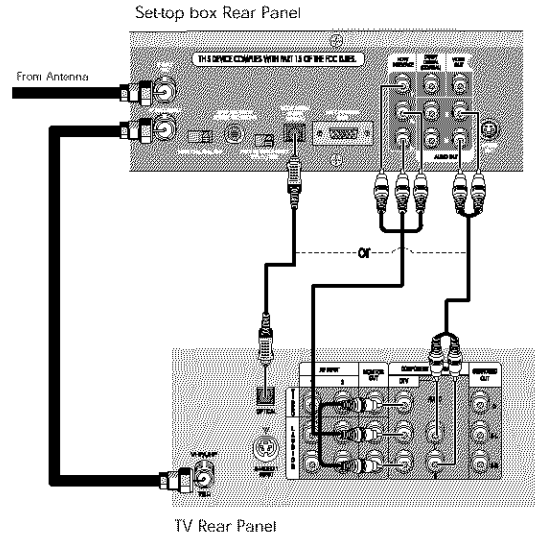
2 Connect a coaxial cable between the antenna throughout terminal on the Set-Top Box and the antenna terminal on the TV.

3 Connect the Video cables
 Digital Ready TV: Connect a Video cable between the HDTV Interlace jacks (Y, Pb, Pb) on the Set-Top Box and the DTV Input jacks on the TV.

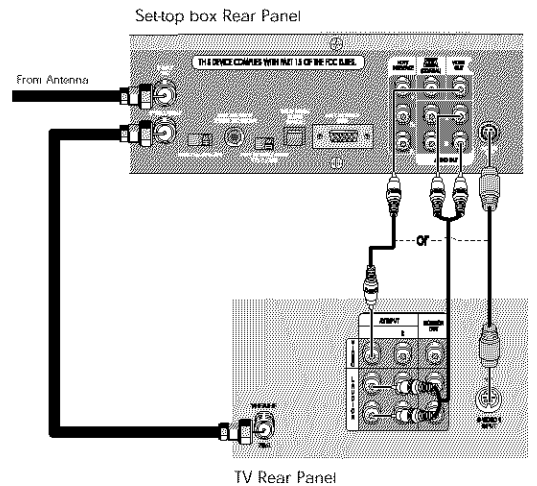
Normal TV: Connect a Audio/Video cable between the Video Out jack on the Set-Top Box and the Video Input jack on the TV. Or, connect a S-video cable between the S-Video Output jack on the Set-Top Box and the S-Video Input jack on the TV.

4 Connect the Audio cables
 Digital Ready TV: Connect an Audio cable between the Dolby Digital Output jack (fiber optic connector) on the set-top box and the Optical jack on the TV. Or, connect an Audio/Video cable between the Lt/Rt Analog Audio Output jacks on the Set-Top Box and the L/R Audio IN jacks on the TV.

Normal TV: Connect an Audio cable between the Audio Out jacks on the Set-Top Box and the Analog Left/Right jacks on the TV.



<DTV Ready TV>



<Normal TV>

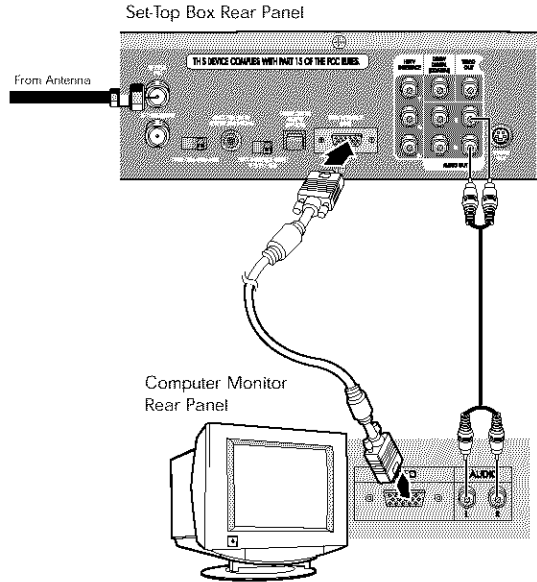
NOTE

The TV set must be "digital compatible" (i.e., it must have the appropriate audio and digital-video terminals).

When 1080i, 720p or 480p (DTV) is selected from the Resolution Select on the rear, the On Screen Displays (MENU, Electronic Program Guide...) are not supported for Video OUT and S-Video OUT. The OSDs (MENU, EPG...) for Video OUT and S-Video OUT are supported only when 480i (Analog) is selected.

Connecting the Set-Top Box to a Computer Monitor

- 1 Connect an Antenna cable to the RF Input jack on the Set-Top Box.
- 2 Connect a Computer Video Monitor cable between the Video Out jack (R,G,B format) on the Set-Top Box and the Video IN jack on the Computer Monitor.)
- 3 Connect an Audio cable between the Lt/Rt Audio Out jacks on the Set-Top Box and the L/R Audio IN jacks on the Computer Monitor.



Reviewing the Remote Control

The Set-Top Box remote control and on-screen menu system work together to make operating the Set-Top Box as simple as possible. Understanding the relationship between the remote control's unique I-Point "joystick" and the menus allow you to operate the Set-Top Box with ease.

If you need some assistance while using the remote control and the menus, Samsung has provided an on-screen help feature. See "Using the On-screen Help" on page 2.5.

1 POWER

Press to turn the power on or off.

2 DISPLAY

Press to display information about the current box settings and program: Channel number, Time, Program title, Program duration, Caption, Rating control, Digital picture grade, and MTS language.

3 MTS (Multitrack Sound)

Press to select among the available "multitracks" (for example, depending on the particular broadcast, one or more foreign-language translations might be available).

4 FAV-CH (Favorite Channel) #1

Press to switch among your favorite channels.

5 +100 #2

Press to select cable-TV channels over 100.

6 VOLUME UP/DOWN #2

Press to increase or decrease the volume.

7 Channel-Number Buttons #1, #2, #3, #4

Press to tune to directly tune to a particular channel.

8 REW (Rewind) #3, #5

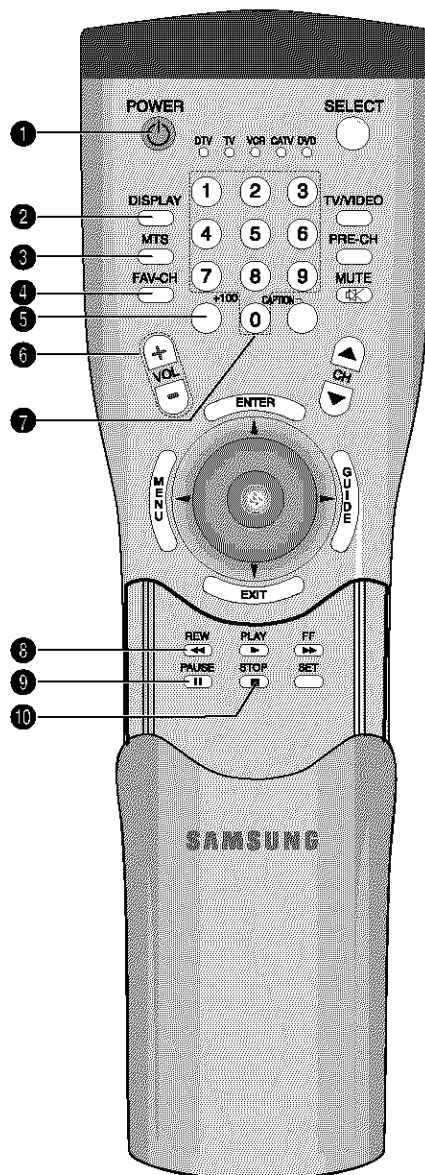
Press to rewind a videocassette or reverse search a DVD.

9 PAUSE #3, #5

Press to temporarily stop a videocassette or DVD. (A freeze-frame is displayed.)

10 STOP #3, #5

Press to stop the videocassette or DVD.



Remote Control

11 SELECT

Press to choose a particular component to be controlled by the remote. When you press SELECT, a green light will blink under the remote. When you press SELECT, a green light will blink under the component that is being controlled (DTV, TV, VCR, CATV, or DVD). See "Programming the Remote Control," below.

12 TV/VIDEO #2

Press to view the signal sources that are available for display on your TV.

13 PRE-CH (Previous Channel) #1

Press to alternate between the current channel and the last channel that was displayed.

14 MUTE #2

Press to temporarily cut off the sound.

15 CAPTION

When a digital signal is received, only available languages can be selected. When an analog signal is received, either CC1, CC2, CC3, CC4 can be selected.

16 CH ▼,▲ (Channel Up and Down) #1, #2, #3, #4

Press to change channels.

17 ENTER

While using the on-screen menus, press ENTER to activate (or change) a particular item.

18 MENU

Press to display the on-screen menus, or to switch back to the previous menu-screen that was displayed.

19 GUIDE

Press to display the on-screen, Electronic Program Guide (EPG).

20 I-Point control

Use to move the on-screen pointer left, right, up or down.

21 EXIT

Press to completely exit all the on-screen menus.

22 PLAY #3, #5

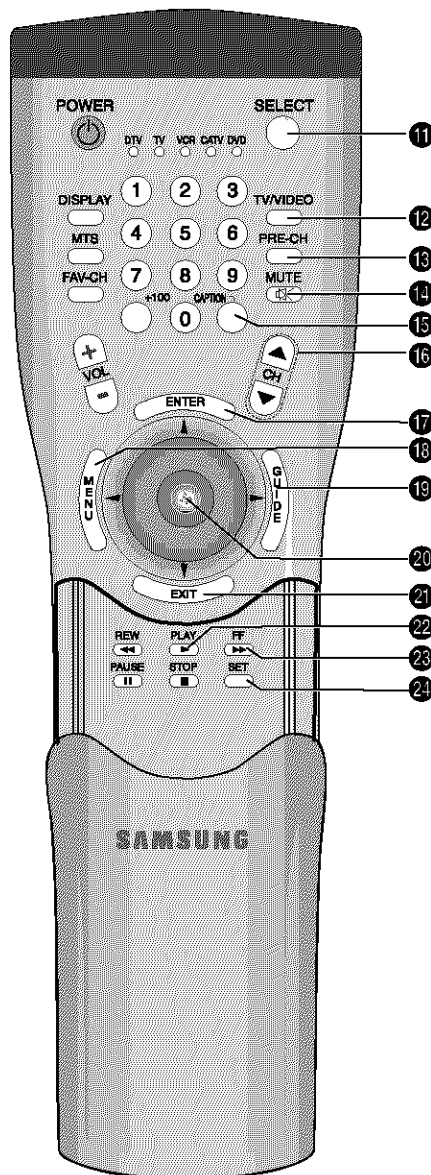
Press to play a videocassette or DVD.

23 FF (Fast Forward) #3, #5

Press to fast forward a videocassette or forward search a DVD.

24 SET

Use to program the remote control for other components. (See to Operate other components, page 4.11)



Special Notes:

#1 The Channel buttons (CH ▲▼, FAV-CH):

To use these buttons, the available channels must first be memorized. (See page 3.1)

#2 The "TV" buttons (VOL +/-, Mute, TV/Video and +100):

To use these buttons, you must first switch the remote control to "TV" mode.
(Use the SELECT button on the remote control to select "TV.")

#3 The "VCR" buttons (FF, REW, PLAY, STOP, PAUSE):

To use these buttons, you must first switch the remote control to "VCR" mode.
(Use the SELECT button on the remote control to select "VCR.")

#4 The "CATV" buttons

To use the CABLE Set-Top Box, you must first switch the remote control to "CATV" mode. (Use the SELECT button on the remote control to select "CATV.")

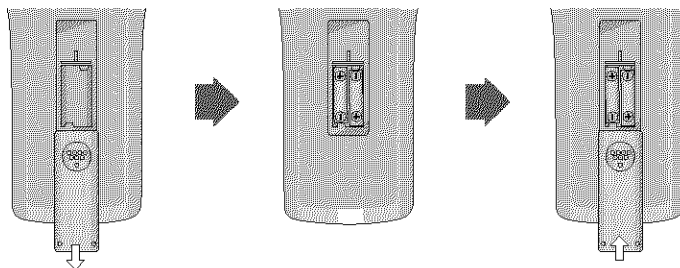
#5 The "DVD" buttons (FF, REW, PLAY, STOP, PAUSE):

To use these buttons, you must first switch the remote control to "DVD" mode.
(Use the SELECT button on the remote control to select "DVD.")

Installing the Batteries

Press and remove the battery cover on the back of the remote control.

Put two AAA batteries into the compartment and replace the battery cover.



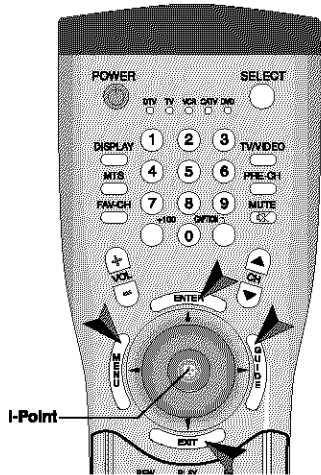
Programming the Remote Control

To program the remote control to operate a VCR, Cable Box, TV or DVD player, see "Programming the Remote Control to Operate Other Components" (See page 4.11).

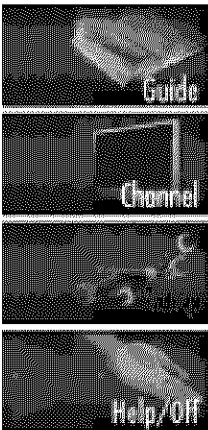
The On-Screen Menu System

The five menu controls are located in the center of the remote control: **MENU**, **ENTER**, **EXIT**, **GUIDE**, and **"I-POINT"** (a joystick-type control that moves the on-screen "arrow" pointer).

Push the I-Point control up, down, left or right to move the arrow-pointer. As the on-screen pointer passes over a particular icon, the icon is highlighted. The menu system has three different levels. The four icons on the left side of the screen are the "first level" menu: Guide, Channel, Setup and Help/On(or Off). When you activate one of these four icons, the on-screen display presents a "second-level" sub-menu (which often leads to a "third-level" sub-menu).



Main Menu, "Level 1"

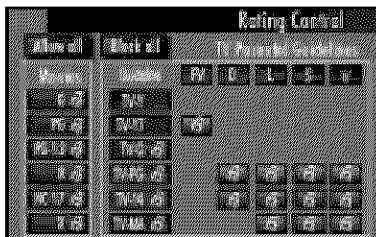


Sub-menu, "Level 2"



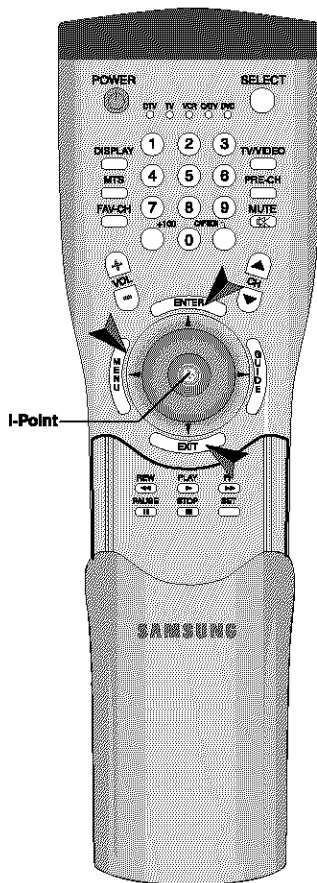
Example: The "Setup" sub menu

Sub-menu, "Level 3"



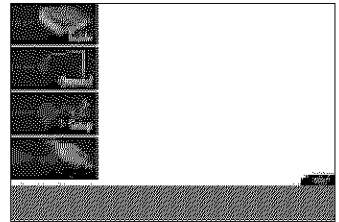
Example: "Rating Control"

Using the On-screen Help



To turn the on-screen help on:

- 1 Press the MENU button on the remote control.
- 2 Push the I-Point control up/down to highlight the Help/Off icon and press ENTER.



- 3 The Help/Off icon changes to Help/On and the on-screen help appears.

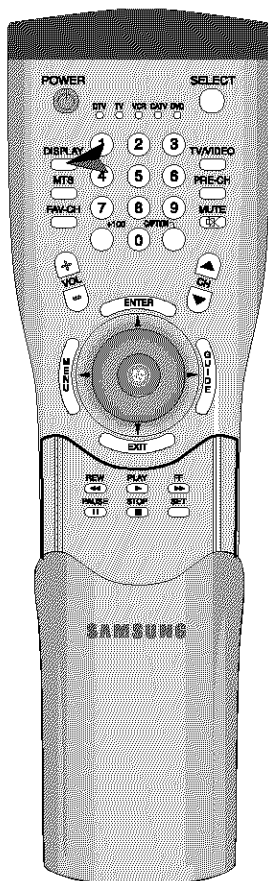
Feel free to take a tour of the menus. Try moving the pointer over each of the icons and reading a description of the features that each icon represents.

Once you are comfortable moving the pointer, highlight any icon and press ENTER. You will see the contents of that icon's menu. You can press EXIT at any time and the menus will disappear from the screen.

To turn the on-screen help off:

Highlight the Help/On icon and press ENTER. The icon changes to Help/Off and the on-screen help disappears.

Viewing the Display



You can quickly check the status of many of the Set-Top Box features and options by using the Display.

The Display shows:

- The major channel number and the minor channel number if you are viewing a digital channel.
- The current time and date. See page 3.6
- Program title.
- Program duration.
- The status of closed captions (if the broadcast includes them, and if you have turned on the closed captions feature). See page 4.5.
- Rating control settings. See page 4.6.
- The digital picture grade, such as HD (High Definition) or SD (Standard Definition).
- The audio track language (English, French, etc.). See page 4.3.



To view the Display:

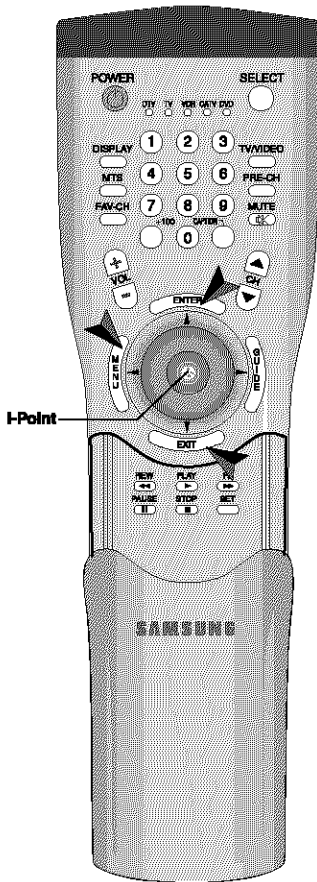
Press DISPLAY on the remote control.

To hide the Display:

Press DISPLAY again or wait 10 seconds and the display will disappear.

Memorizing Channels

Before you can use any of the special channel buttons (CH ▲▼, FAV-CH), the available channels must first be scanned and memorized. This is an easy, automatic process that typically takes two minutes. To memorize channels:



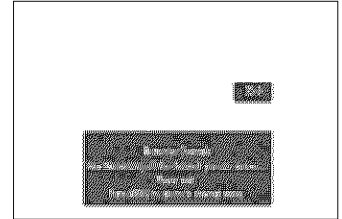
1 Press the MENU button on the remote control.

2 Push the I-point control up or down to highlight the Channel icon and press ENTER.

Push the I-point control up or down to highlight Memorize Channels and press ENTER.



3 That's it! The Set-Top Box will automatically scan and store all of the digital (DTV) channels that are available in your local area.



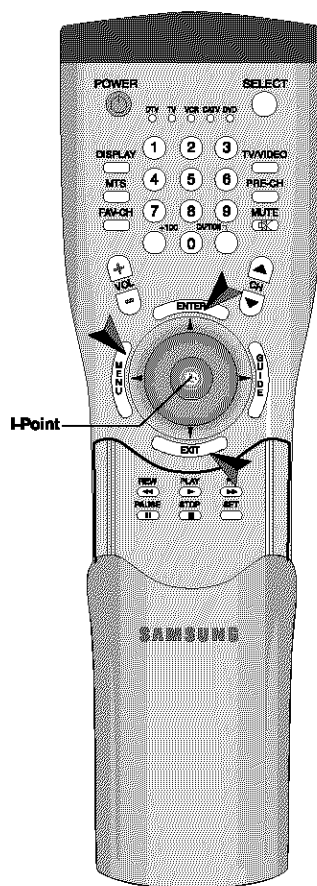
4 Press EXIT when channel memorization is complete.

NOTES

The Set-Top Box **MUST** be connected to an antenna in order to receive digital TV signals. Even if a particular channel is deleted from the memory, you can always tune to that channel directly by using the number buttons on the remote control.

Adding and Deleting Channels

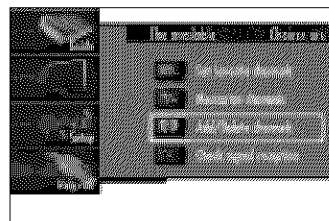
To add channels that were not memorized (or to delete unwanted channels from the memory):



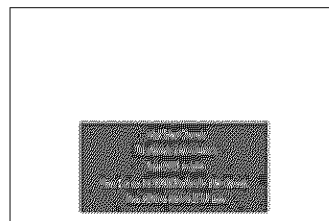
1 Enter the digits of the channel to be added or deleted.

2 Press the MENU button on the remote control. Push the I-point control up or down to highlight the Channel icon and press ENTER.

3 Push the I-point control up or down to highlight Add/Delete Channels and press ENTER.

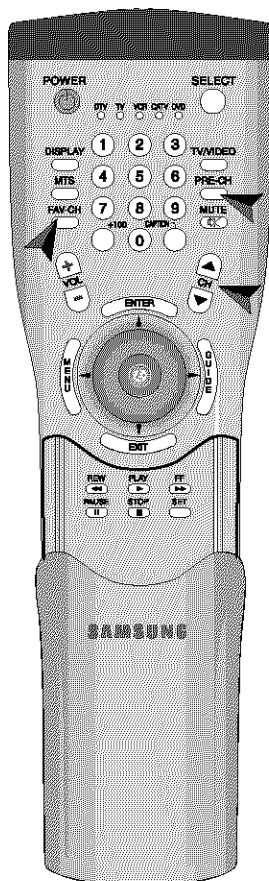


4 Repeatedly pressing ENTER will alternate between Add channel (Message: "the channel is in memory"), and Delete channel (Message: "The channel is not in memory.")



Press the number buttons (or CH ▲▼ buttons) to switch to the appropriate channel, and then repeat step 4. Press EXIT.

Changing Channels



Number buttons

Press the number buttons (0 – 9) to enter channel numbers.

NOTES

When the channel you selected contains one or more "minor" channels, the list of the channels will be displayed on the screen. To select one of them, position the "arrow" on the channel you want using CH ▲, ▼ or I-point and press ENTER.

PRE-CH button

Press to return to the previous channel you viewed. For example, if the box is tuned to channel 55 and then you change to channel 56, pressing PRE-CH will return to channel 55.

FAV-CH button

Press to switch among your favorite channels. (See page 3.4)

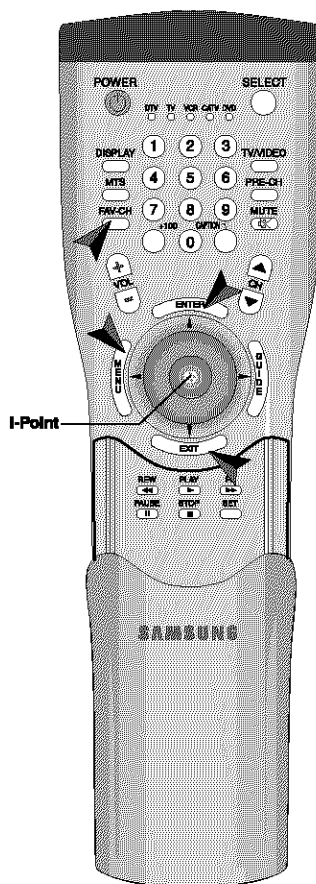
CH ▲ and ▼ button

Press CH ▲ or ▼ to move up or down to the next available channel. Press and hold CH ▲ or ▼ to cycle quickly through the channels.

NOTES

You must first do the "Memorize Channels" procedure (See page 3.1) before you can use the CH ▲ and ▼, FAV-CH buttons.

How to Set Your Favorite Channels



1 Press the MENU button on the remote control.

2 Push the I-Point control up or down to highlight "Channel" icon and press ENTER.

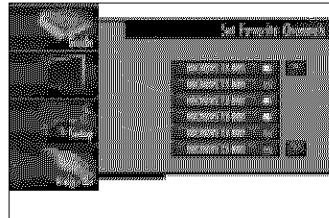
Push the I-Point control up or down to highlight "Set Favorite Channels" and press ENTER.



3 To designate a particular channel as a "Favorite Channel," highlight the channel number and press ENTER.

For each Favorite Channel, a yellow dot icon will appear next to the channel number.

(When more than six favorite channels exist, press the arrow buttons to add channels.)

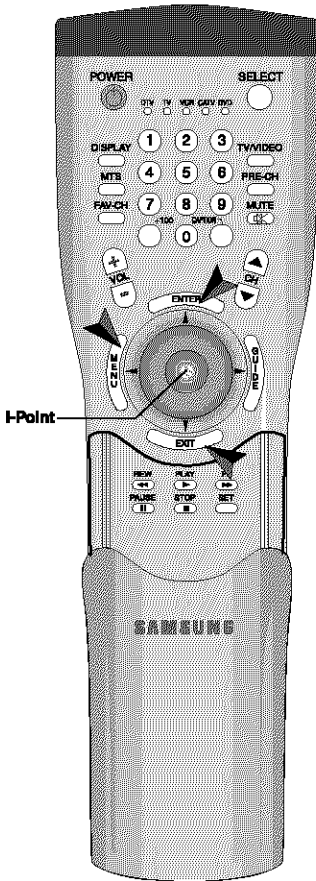


4 Press EXIT.

5 You can now jump from one favorite channel to another by pressing the FAV-CH button.

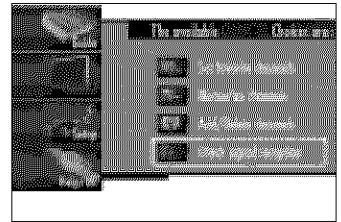
Checking the Digital-Signal Reception

Unlike analog channels, which can vary in reception quality from "snowy" to clear, digital (HDTV) channels have either perfect reception quality or you will not receive them at all. So, unlike analog channels, you cannot fine tune a digital channel. But you can adjust your antenna to improve reception of the available digital channels.



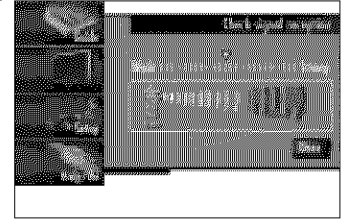
1 Press the MENU button on the remote control.

2 Push the I-Point control to highlight the "Channel" icon and press ENTER.



Push the I-Point control to highlight "Check Signal Reception" and press ENTER.

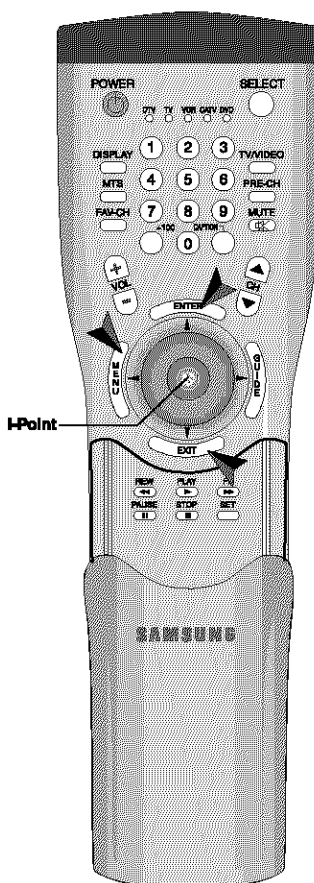
3 If the signal strength meter indicates that the signal is weak, physically adjust your antenna to increase the signal strength. Continue to adjust the antenna until you find the best position with the strongest signal.



4 When you have finished adjusting your antenna, push the I-Point control to highlight "Done" and press ENTER.

Setting the Time and Date

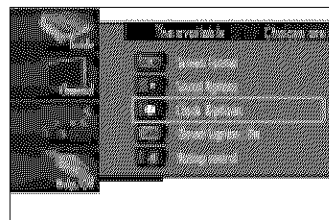
First of all, select a channel that has a Digital Signal.



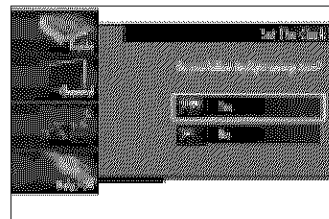
1 Press the MENU button on the remote control.

2 Push the I-Point control to highlight the "Setup" icon and press ENTER.

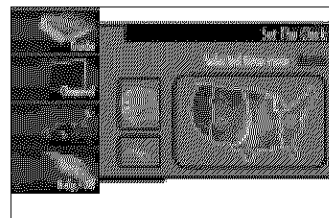
Push the I-Point control to highlight "Clock Options" and press ENTER.



4 You will be asked if your local area observes Daylight Savings Time. Push the I-Point control up or down to highlight Yes or No, as appropriate, and press ENTER.



5 Push the I-Point control right or left to highlight the time zone for your local area (move the arrow-pointer to the appropriate time zone on the map of the United States). Press ENTER.

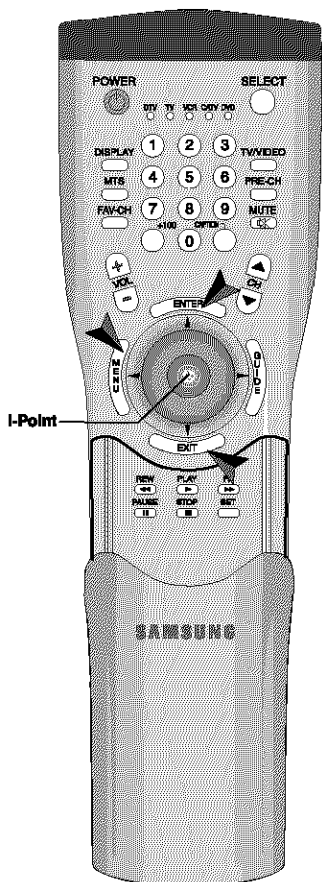


That's it! Because you are receive a digital signal, the time will be set automatically.

6 Press EXIT

Changing the Screen Format

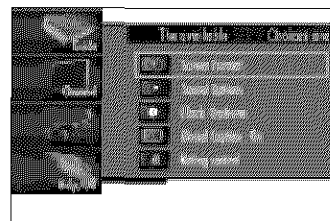
Your selection in the Screen Format menu depends on the type of TV or monitor you are using with your Set-Top Box.



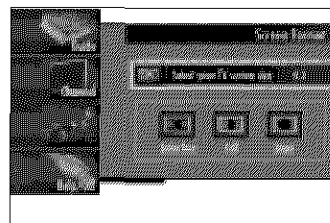
1 Press the MENU button on the remote control.

2 Push the I-Point control up or down to highlight the "Setup" icon and press ENTER.

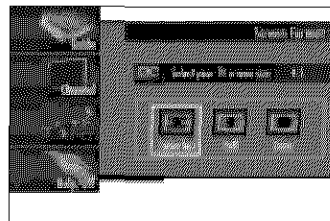
Push the I-Point control up or down to highlight "Screen Format" and press ENTER.



3 Repeatedly press ENTER to select your TV screen size.



4 Push the I-Point control up, down, right or left to highlight the screen format and press ENTER.



5 Press EXIT.

Continued...

With a 4:3 Ratio TV or Monitor

If you are using a 4:3 ratio TV or monitor and receive an image with a 16:9 ratio, you need to specify how the image is displayed.

Letter box

Choose this when receiving a 16:9 image and you want to see the original wide format. Letter boxing shrinks the picture so the entire image will fit on the screen. Blank panels appear at the top and bottom of the screen.

Full

Choose this when you want the television to adjust the 16:9 image vertically so it fills your 4:3 screen. No blank panels will be added, and the image is horizontally unaltered.

Zoom

Choose this when receiving a 16:9 image and you want the wide movie format to fill the entire screen. Left and right portions of the picture are cropped, or cut.

With a 16:9 Ratio TV or Monitor

If you are using a 16:9 ratio TV or monitor and receive an image with a 4:3 aspect ratio, the image will be displayed at the 4:3 ratio on your monitor unless you specify otherwise. The Screen Format menu allows you to adjust the image through the following options:

Pillar box

Choose this when receiving a 4:3 image and you want the on-screen appearance of the video to be a centered picture with blank panels on the right and left sides.

Full

Choose this when you want the television to adjust the 4:3 image horizontally so it fills your 16:9 screen. No blank panels will be added, and the image is vertically unaltered. This setting is especially useful for viewing 4:3 formatted DVDs.

Zoom

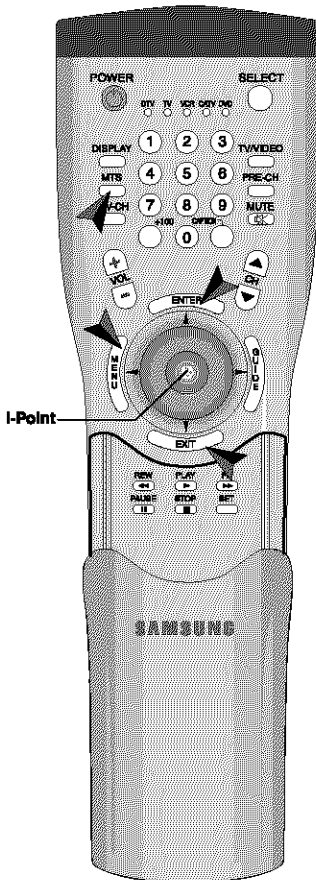
Choose this when receiving a 4:3 image and you want to maintain the correct image proportion. Top and bottom portions of the picture are cropped, or cut.

NOTE

The availability of the Changing the Screen Format feature depends on the Resolution Select and current broadcasting signal format.

Choosing a Sound "Multitrack"

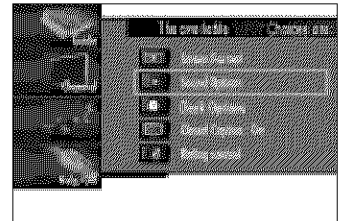
The digital-TV transmission system is capable of simultaneous transmission of many audio tracks (for example, simultaneous translations of the program into foreign languages). The availability of these additional "multitracks" depends upon the particular program. To select a sound multitrack:



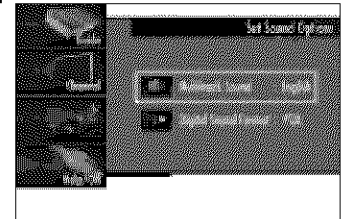
1 Press the MENU button on the remote control.

2 Push the I-Point control up or down to highlight the "Setup" icon and press ENTER.

Push the I-Point control up or down to highlight "Sound Options" and press ENTER.



3 Push the I-Point control up or down to highlight "Multi Track Sound".



4 Repeatedly press enter until the appropriate language appears (the available languages will vary, depending on the particular program).

5 Press EXIT.

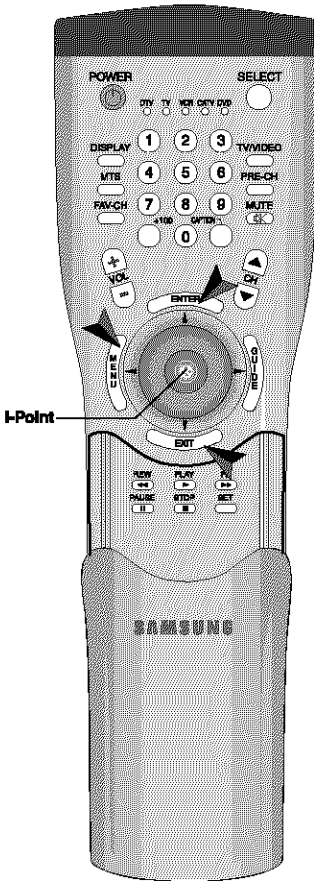
NOTES

The Multitrack Sound Selection feature on the menu allows you to select any of available languages on your preference. But you can switch only between the current receiving multitrack sounds by using the MTS button on the remote control.

ex) When 'French' is selected from the menu during the English and Spanish broadcasting: Press the MTS button on the remote control and only English ↔ Spanish will be available.

Choosing a Digital Sound Format (AC3 or PCM)

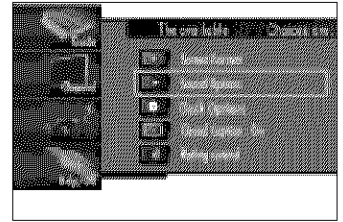
Both audio and digital sound are available from the rear-panel connectors of the Set-Top Box. The digital audio output is an optical connector labeled "Dolby Digital Output." After connecting the optical digital-audio component, you must specify the transmission format (PCM or AC-3, as appropriate to your particular equipment).



1 Press the MENU button on the remote control.

2 Push the I-Point control up or down to highlight the "Setup" icon and press ENTER.

Push the I-Point control up or down to highlight "Sound Options" and press ENTER.



4 Push the I-Point control up or down to highlight "Dolby Digital Output".

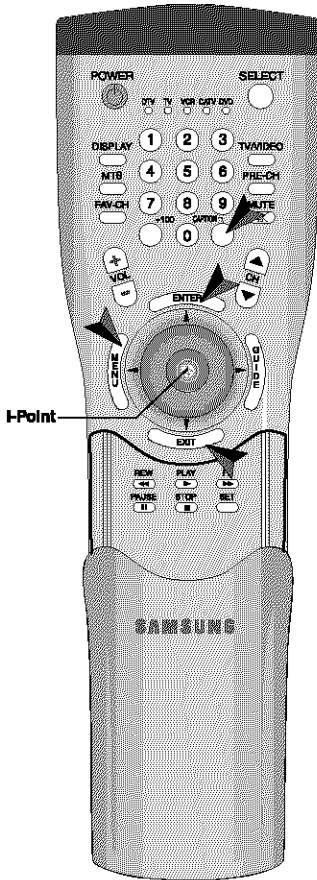


5 Repeatedly press ENTER until the appropriate format appears (PCM or AC3).

6 Press EXIT.

Setting Up Captions (On-Screen Text Messages)

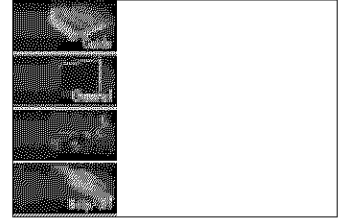
A "caption" is text that is sometimes broadcast with a digital TV program. (Example: A printed version of the dialogue, additional narration, or a translation into a foreign language.)



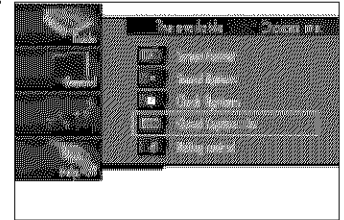
How to Activate or Deactivate the On-screen Captions

1 Press the MENU button on the remote control.

2 Push the I-Point control up or down to highlight the "Setup" icon and press ENTER.



3 Push the I-Point control up or down to highlight "Closed Caption" and press ENTER. Repeatedly press enter to alternate between "On" and "Off".



4 Press EXIT.

(Note: Availability of captions depends on the particular program being broadcast.)

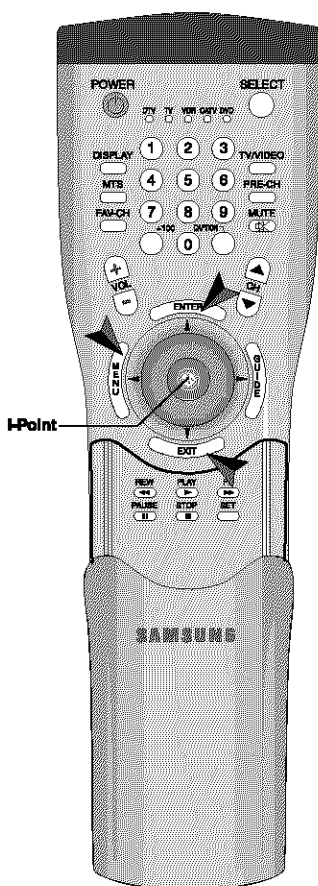
NOTES

In Caption On, press the CAPTION button on the remote control to choose an available language or CC1, CC2, CC3, or CC4. (See page 2.2).

Rating Control Menu

Access to channels and programs is controlled by a password (i.e., a 4-digit secret code that is defined by the user). The on-screen menu will instruct you to assign a password (Later on, if necessary, you can change it.)

How to Change Your Password



1 Press the MENU button on the remote control.

2 Push the I-Point control up or down to highlight the "Setup" icon and press ENTER.

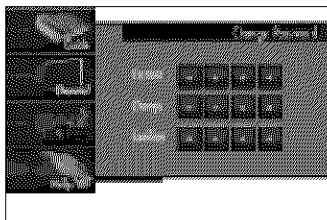
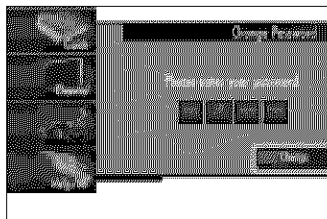
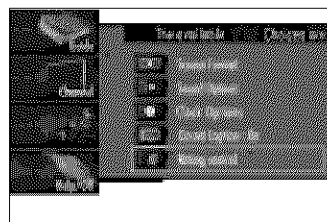
Push the I-Point control up or down to highlight "Rating Control" and press ENTER.

3 Push the I-Point control up or down to highlight "Change" and press ENTER. Use the number buttons on the remote control (0 - 9) to enter your current secret code.

4 Use the number buttons on the remote control to enter a changed password.

5 Re-enter the new password when prompted by the on-screen menu.

6 Your new password is active. Press EXIT.

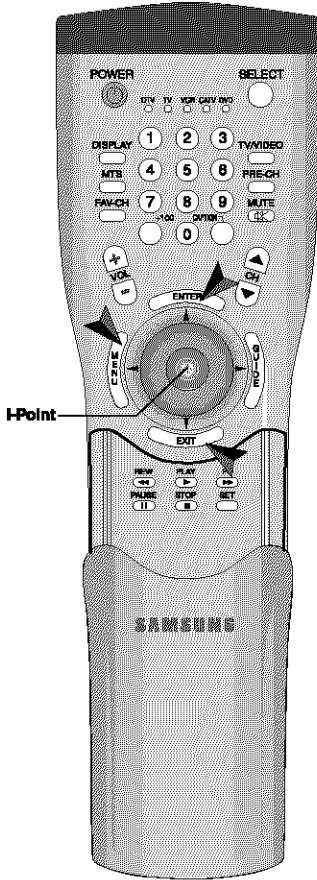


NOTES

Password Error

- If you forget the password, re-do steps 1-3. At step 3 when the display asks you to enter the current password, press DISPLAY, 1, 8, and 2. Enter a new password, and proceed with steps 5-6.

How to Lock Programs Using the TV (FCC) or MPAA Ratings



1 Press the MENU button on the remote control.



2 Push the I-Point control up or down to highlight the "Setup" icon and press ENTER.



Push the I-Point control up or down to highlight "Rating Control" and press ENTER.

3 Enter a correct password when prompted by the on-screen display.

4 After you enter your password, the screen will display the rating control menu.

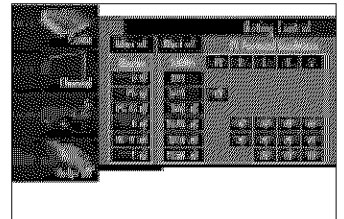
This menu lists both MPAA and TV (FCC) Parental Ratings. You can independently lock the MPAA and TV Ratings

* The MPAA ratings that are unlocked disappear as the symbol . (Ratings that are locked are indicated by the symbol .)

* TV (FCC) ratings that are unlocked are indicated by the symbol . (Ratings that are locked are indicated by the symbol .)

5 Use the on-screen "arrow" pointer and the ENTER button to activate the appropriate restrictions for either the MPAA or TV ratings systems.

6 Press EXIT.



Some Important Notes About Parental Locks ("P.Locks")

Explanation of the MPAA and TV (FCC) Rating Codes:

TV (FCC) Age Categories

TV-MA Mature audiences only. This program may contain mature themes, profane language, graphic violence and explicit sexual content.

TV-14 Parents strongly cautioned. This program may contain sophisticated themes, sexual content, strong language and more intense violence.

TV-PG Parental guidance suggested. The program may contain infrequent coarse language, limited violence, some suggestive sexual dialogue and situations.

TV (FCC) Sub-categories for content:

- V** Violence.
- S** Sexual content.
- L** Offensive language.
- D** Dialogue...sexual innuendo.
- FV** Fantasy or cartoon violence.

TV-G General audience. It contains little or no violence, no strong language, and little or no sexual dialogue or situations.

TV-Y7 Directed to older children. Themes and elements in this program may include mild physical or comedic violence, or may frighten children under the age of seven.

TV-Y All children. The themes and elements in this program are specifically designed for a very young audience, including children from ages two – six.

The MPAA Rating System (Movies)

- G** General audience. No restriction.
- PG** Children under 13 should be accompanied by an adult.
- PG-13** Parental guidance suggested. Children under 13 should be accompanied by an adult.
- R** Restricted. Viewers should be 17 or older.
- NC-17** Not classified. Viewers should be 17 or older.
- X** Adults only.

* TV (FCC) Guidelines: The particular rating that you select will be locked (indicated by a red "L" on a blue background). Also, within the particular group (i.e., "group 1" or "group 2") all of the more-restrictive ratings will also be locked.

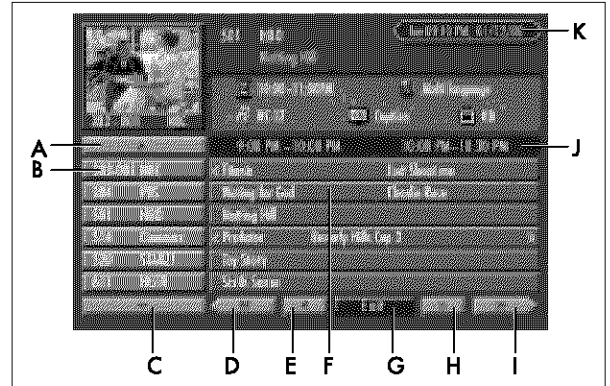
Suppose, for example, the TV-G rating and all of its V, S, L, and D sub-categories are locked. In that case, all of the "more restrictive" ratings (TV-PG, TV-14 and TV-MA) and all of their V, S, L, and D sub-categories are automatically locked out as well.

* MPAA ratings: The particular rating that you select will be locked (field changes to red color). In addition, any ratings that are more restrictive will also be blocked.

* Neither the TV (FCC) nor MPAA ratings apply to news broadcasts.

Electronic Program Guide

Your Set-Top Box has an Electronic Program Guide (EPG) to help you navigate through all the possible viewing options. The Program Guide supplies information such as program listings and start and end times for all available channels. In addition, detailed information about the program is often available in the EPG (the availability and amount of these program details will vary, depending on the particular broadcaster).



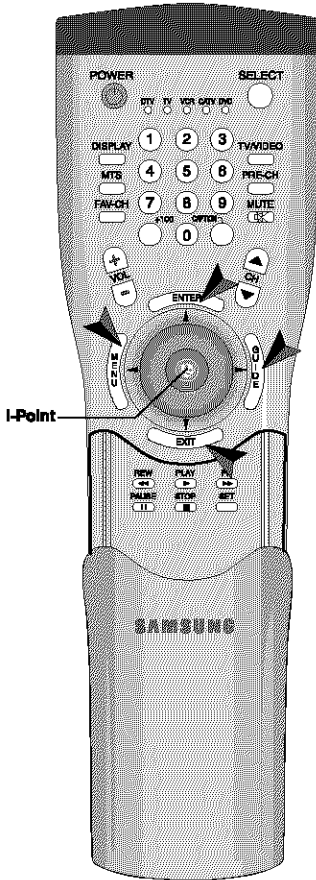
Viewing the Electronic Program Guide (EPG)

- A** Scrolls up through all the available channels. Highlight ▲ and repeatedly press ENTER until the appropriate channel is displayed.
- B** Displays which channel is currently selected to show program information in the Channel Guide.
- C** Scrolls down through all the available channels. Highlight ▼ and repeatedly press ENTER until the appropriate channel is displayed.
- D** Scrolls backwards quickly (2-hour jumps) through the program times. Highlight ◀◀ and repeatedly press ENTER until the appropriate time is displayed.
- E** Scrolls back through program times in 1-hour jumps. Highlight ◀ and repeatedly press ENTER until the appropriate time is displayed.
- F** Displays titles and other details about upcoming programs for particular channels. Highlight the program and press ENTER to see additional, detailed information (availability of this additional detail depends on the particular broadcaster).
- G** Exits the Program Guide and returns to normal viewing mode.
- H** Scrolls forward in 1-hour jumps. Highlight ▶ and repeatedly press ENTER until the appropriate time is displayed.
- I** Scrolls forward quickly 2-hour jumps. Highlight ▶▶ and repeatedly press ENTER until the appropriate time is displayed.
- J** Displays the program times (arranged in 1-hour time blocks).
- K** Displays the current time and date.

NOTES

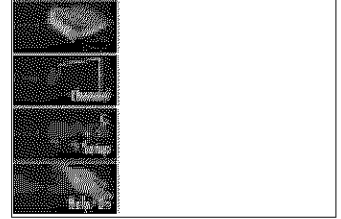
• When you press the GUIDE button, the Set-Top Box displays the Electronic Program Guide (EPG). Also, the EPG begins its list with the particular channel that is currently active. **4.9**

Using the EPG (Electronic Program Guide)

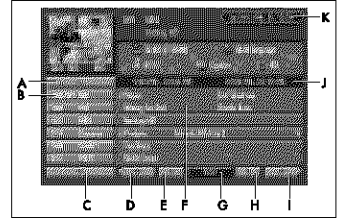


1 Press MENU on the remote control.

2 Push the I-Point control up or down to highlight the "Guide" icon and press ENTER.



3 Push the I-Point control up or down to highlight ▲ or ▼ on the EPG screen (see "A" and "C," to the right) and repeatedly press ENTER until the appropriate channel is displayed.



4 Push the I-Point control up or down to highlight ◀◀, ◀, ▶, ▶▶ and repeatedly press ENTER until the appropriate time is displayed.

5 You may now:

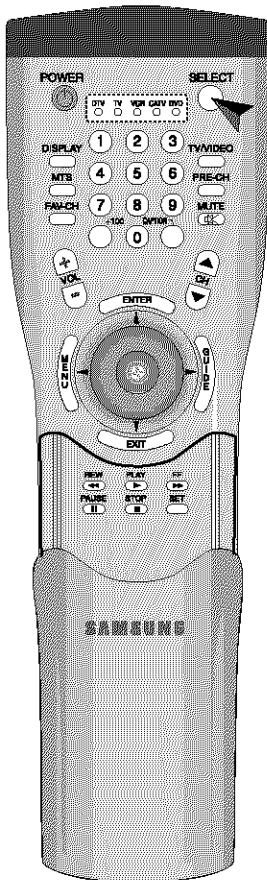
- Jump directly to a channel. Push the I-Point control up or down to highlight the channel number (in the left-most column) and press ENTER.
- Obtain additional program details: Push the I-Point control up, down, right or left to highlight a program title and press ENTER.
- Exit the Program Guide and return to normal viewing mode: Push the I-Point control up, down, right or left to highlight the EPG on-screen EXIT button and press ENTER.

NOTES

You can quickly switch to a GUIDE mode by pressing the GUIDE button on the remote control. When you display EPG after selecting DTV (1080i, 720p, 480p) from Resolution Select, no video is output through the Video Out jack, S-Video jack.

Programming the Remote Control for Other Components

The remote control is pre-programmed to operate your Set-Top Box. However, you can also program the remote control to operate other components, such as a cable TV box, a VCR or a DVD (even if they are made by a manufacturer other than Samsung).



1 Press the SELECT button on order to activate the appropriate component (VCR, TV, Cable, DVD, etc.)

For example, if you are programming the remote control to operate your VCR, press SELECT on the remote control so that the VCR indicator is illuminated.

2 Press the SET button on the remote control. The LED for the active component will light for 30 seconds. While the LED is illuminated, use the number buttons to enter the code number for the particular manufacturer (see table, on page 4.12~4.14).

Each code numbers must be three digits long. For example, to enter the code "6," press 0, 0 and 6. To enter the code "76," press 0, 7 and 6.

If the number is correct, the indicator will blink three times. If the indicator does not blink three times, repeat step 1, 2 and try another code number.

Refer to the remote-control code tables on the following pages to find the appropriate code for your particular component. If more than one number is listed, try each one separately until you find the one that works.

CATV Remote Control Codes

Anvision	7, 8	RCA	0, 27, 66
Cable Star	7, 8	Regal	3, 12, 13
Eagle	7, 8	Regency	2, 33
Eastern International	12	SA	70, 71, 72
General Instrument	46	Samsung	44, 3, 22, 63, 64
GI	4, 5, 15, 23, 24, 25, 30, 36, 67, 68, 69	Scientific Atlanta	70, 71, 72
Hamlin	3, 12, 13, 34, 48	Signature	46
Hitachi	37, 43, 46	Sprucer	27
Jerrold	4, 5, 15, 23, 24, 25, 30, 36, 46, 62, 65	Starcom	46
Macom	37, 43	Stargate 2000	58
Magnavox	7, 8, 19, 21, 26, 28, 29, 32, 33, 40, 41	Sylvania	11, 59
NSC	9	Texscan	11, 59
Oak	16, 38	Tocom	17, 21, 49, 50, 55, 73
Osk Sigma	16	Unika	31, 32, 41
Panasonic	3, 27, 39, 61, 73, 74	Universal	51, 52
Philips	7, 8, 19, 21, 26, 28, 29, 32, 33, 40, 41	Viewstar	7, 8, 19, 21, 26, 28, 29, 32, 33, 40, 41
Pioneer	18, 20, 44, 74, 77	Warner Amex	44
Randtek	7, 8	Zenith	14, 42, 57, 61, 75, 76

DVD Remote Control Codes

Philips	0	ProScan	5
Sony	2	RCA	5
Samsung	1	Toshiba	8
Panasonic	9		

VCR Remote Control Codes

Admiral	6, 79	MTC	7, 15
Aiwa	15	Multitech	7, 15, 31, 32
Akai	17, 22, 23	NEC	2, 14, 16, 30, 46, 61, 64
Audio Dynamics	14, 16	Optimus	6
Bell & Howell	2	Panasonic	8, 53, 75, 77
Broksonic	10	Pentax	5, 35
Candle	7, 9, 13, 45, 46, 52	Pentex Research+	46
Canon	8, 53	Philco	8, 29, 53, 56
Citizen	7, 9, 13, 45, 46, 52	Philips	8, 29
Colortyme	14	Pioneer	5, 16, 33, 50
Craig	7, 12	Portland	44, 45, 52
Curtis-Mathes	0, 7, 8, 14, 15, 46, 53, 64, 67	ProScan	0
Daewoo	13, 45, 76	Quartz	2
DB	14, 16	Quasar	8, 53
Dimensia	0	Radio Shack/Realistic	2, 6, 8, 9, 12, 15, 19, 27, 43, 53
Dynatech	15	RCA	0, 5, 7, 8, 28, 35, 37, 54, 69
Electrohome	27	Samsung	7, 13, 22, 32, 42
Emerson	8, 9, 10, 13, 15, 20, 23, 27, 34, 41, 42, 47, 49, 57, 62, 65, 67, 68, 70	Sansui	16
Fisher	2, 12, 18, 19, 43, 48, 58	Sanyo	2, 12
Funai	15	Scott	13, 41, 49, 68
General Electric	0, 7, 8, 32, 53	Sears	2, 5, 9, 12, 18, 19, 35, 43, 48
Go Video	7	Sharp	6, 27, 39, 45
Goldstar	9, 14, 46, 60	Shintom	17, 26, 31, 55
Harman Kardon	14	Signature	15
Hitachi	5, 15, 35, 36	Sony	17, 26, 38
Instant Replay	8	Sylvania	8, 15, 29, 53, 56
JC Penney	2, 5, 7, 8, 14, 16, 30, 35, 51, 53	Symphonic	15
JCL	8, 2, 14, 16, 30, 46	Tandy	2, 15
Kenwood	2, 14, 16, 30, 46	Tashiko	9
KLH	73	Tatung	30
Lloyd	15	Teac	15, 30, 69
Logik	31	Technics	8
LXI	15	Teknika	8, 9, 15, 21
Magnavox	8, 29, 53, 56	TMK	67
Marantz	2, 8, 14, 16, 29, 30, 46, 61	Toshiba	5, 13, 19, 48, 49
Marta	9	Totevision	7, 9
MEI	8	Unitech	7
Memorex	8, 9, 12, 15	Vector Research	14, 16
MGA	27	Victor	16
Midland	32	Video Concepts	14, 16
Minolta	5, 35	Videosonic	7
Mitsubishi	5, 27, 35, 40	Wards	5, 6, 7, 8, 9, 12, 13, 15, 27, 31, 35
Montgomery Ward	6	Yamaha	2, 14, 16, 30, 46
		Zenith	11, 17, 26, 79

TV Remote Control Codes

A-Mark	88, 37, 90	MTC	26, 15, 6, 49, 93, 20, 8, 75
Admiral	55	NEC	25, 75, 20, 8, 6, 5, 1, 1
Akai	20, 6	Nikei	50
Anam	37, 47, 64, 41, 50	Onking	50
Aoc	6, 37, 20, 56	Onwa	50
Bell & Howell	67	Optonica	69
Broksonic	68	Panasonic	64, 72, 58, 82
Candle	6, 12, 20, 46, 50	Penney	61, 6, 49, 66, 18, 90, 50, 77, 25
Centrion	45	Philco	1, 8, 88, 61, 6, 90, 50, 12, 98, 92, 100, 82, 20
Citizen	20, 46, 6, 50, 12, 90, 45, 9, 10	Philips	88, 1, 61, 6, 90, 12, 98, 92, 82, 20, 5, 57
Classic	50	Pioneer	65, 26
Concerto	6	Portland	88, 6, 90
Contec	50, 78, 83, 81	Proton	1, 31, 6, 90, 77, 78
Coronado	88, 90	Quasar	72, 58
Craig	7, 49, 50	Radio Shack	50, 92, 25, 90
Croslex	30	RCA	61, 6, 71, 66, 87, 20, 90, 1, 62
Crown	50	Realistic	8, 49, 50, 25
Curtis-Mathes	1, 6, 20, 90, 17, 31	Sampo	1, 20, 90, 6, 19, 26, 49
CXC	50	Samsung	88, 1, 61, 28, 43, 29, 81, 48, 49, 90, 92, 51
Daewoo	88, 1, 93, 31, 32, 33, 38, 52, 2, 3, 92, 34, 46, 50, 35, 36, 4, 5, 6, 8	Sanyo	89, 80, 62, 78, 13, 14
Daytron	1, 6, 20	Scott	1, 50, 19, 90, 6
Dynasty	50	Sears	88, 61, 6, 8, 90, 91, 89, 80, 15, 19
Emerson	88, 1, 90, 50, 83, 19, 30, 81, 20, 6, 25, 55, 23, 36	Sharp	88, 90, 85, 24, 25, 69
Fisher	8, 80, 61, 15, 125	Signature	84, 6, 114
Funai	50, 19, 69, 6	Sony	77, 74
General Electric	1, 61, 72, 50, 58, 17, 18, 6, 49, 19, 90	Soundesign	1, 50, 12, 6, 19
Goldstar	88, 27, 1, 37, 10, 11, 42, 90, 39, 40, 92, 99	Spectricon	37
Hitachi	88, 6, 90, 71, 77, 70, 21, 22, 23, 25	SSS	6, 50
Infinity	82	Sylvania	1, 61, 6, 12, 98, 92, 20, 100, 82
JBL	82	Symphonic	2, 6, 90, 12, 20
JC Penney	91, 92, 17, 20	Tatung	72, 69
JVC	60, 16, 128, 129	Techwood	6, 59
Kloss	92	Teknika	88, 46, 6, 90, 50, 12, 19, 94, 84
KMC	88, 90, 13	Telefunken	96, 97
KTV	88, 90, 50, 61, 20	Telerent	84
		TMK	1, 6, 90

Troubleshooting

Before you call a service technician, please scan this list of problems and possible solutions. It may save you time and money.

Problem	Possible Solution
Poor picture quality.	<ul style="list-style-type: none"> Try another channel. Adjust the antenna. Check all wire connections.
Poor sound quality or no sound.	<ul style="list-style-type: none"> Try another channel. Adjust the antenna. Make sure the "MUTE" button is off.
No picture or sound.	<ul style="list-style-type: none"> Try another channel. Make sure the Set-Top Box is plugged in. Check the antenna connections.
No color or wrong colors.	<ul style="list-style-type: none"> Make sure the program is broadcasted in color.
Picture rolls vertically.	<ul style="list-style-type: none"> Adjust the antenna. Check all wire connections.
Remote control failure.	<ul style="list-style-type: none"> Press the "SELECT" button to put your remote control into "DTV" mode. Make sure the remote has batteries.
Set-Top Box won't switch on.	<ul style="list-style-type: none"> Make sure the wall outlet is working. Make sure the remote has batteries.

Care and Maintenance

With proper care, your Set-Top Box will give you many years of service. Please follow these guidelines to get the maximum performance.

Placement

- Do not put the Set-Top Box near extremely hot, cold, humid or dusty places.
- Do not put the Set-Top Box near appliances that create magnetic fields.

Liquids

- Do not handle liquids near or on the Set-Top Box.

Cabinet

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

Temperature

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

Specifications

General Specifications

BroadCasting standard	DTV (ATSC)
Power requirement	AC 120 V, 60 Hz
Power consumption	40 watts / In standby 2 watts
Dimensions (W x D x H)	16.54 x 14.21 x 3.07 in
Weight	1.72 lbs

RF Specification

Tuning system type	F / S
Band coverage	VHF 2 ~ 13 UHF 14 ~ 69
Antenna	75-ohm external antenna terminal for VHF / UHF
Number of inputs / outputs	75-ohm V / UHF In / Out DTV Out component (Y P P _s) DTV Out (RGB) Video Out S-Video Out Dolby Digital Out (Optical) Dolby Digital Out (Coxial) 2 Analog Audio Out (Rt / Lt) Resolution Select Switch DTV Out Select Switch