

HP MR4000N HDTV Tuner User's Guide

you + hp



Regulatory model: HSTND-3X01



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WARNING: Text set off in this manner indicates that failure to follow directions could result in bodily harm or loss of life.



CAUTION: Text set off in this manner indicates that failure to follow directions could result in damage to equipment or loss of information.

NOTE: Text set off in this manner indicates additional information.



DANGEROUS VOLTAGE: Text set off in this manner indicates the presence of uninsulated voltages within the product enclosure that may be of sufficient magnitude to constitute a risk of electrical shock to persons.

Important Safeguards

WARNING: TO PREVENT FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.



**CAUTION: RISK OF ELECTRIC SHOCKS
DO NOT OPEN**



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



THIS SYMBOL IS INTENDED TO ALERT THE USER TO THE UNINSULATED "DANGEROUS VOLTAGE" WITHIN THE PRODUCT'S ENCLOSURE THAT MAY BE SUFFICIENT REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



THIS SYMBOL IS INTENDED TO ALERT THE USER TO THE PRESENCE OF IMPORTANT OPERATING AND MAINTENANCE (SERVICING) INSTRUCTIONS IN THE LITERATURE ACCOMPANYING THE APPLIANCE.

CAUTION

TO PREVENT ELECTRIC SHOCK, DO NOT USE THIS POLARIZED AC PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

LASER SAFETY

THIS UNIT EMPLOYS A LASER. ONLY QUALIFIED SERVICE PERSONNEL SHOULD REMOVE THE COVER OR ATTEMPT TO SERVICE THIS DEVICE DUE TO POSSIBLE EYE INJURY.

CAUTION: USE OF ANY CONTROLS, ADJUSTMENTS, OR PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

CAUTION: TO PREVENT ELECTRIC SHOCK, MATCH WIDE BLADE OF PLUG TO WIDE SLOT, FULLY INSERT.

ATTENTION: POUR EVITER LES CHOCs ELECTRIQUES, INTRODUIRE LA LAME LA PLUS LARGE DE LA FICHE DANS LA BORNE CORRESPONDANTE DE LA PRISE ET POUSSER JUSQU'AU FOND.

Important Safety Instructions

- All operating and use instructions should be followed.
- All warnings on the appliance and in the operating instructions should be adhered to.
- The safety and operating instructions should be retained for future reference.
- All the safety and operating instructions should be read before the appliance is operated.
 - 1 Water and Moisture** — The appliance should not be used near water; for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, and the like.
 - 2 Carts and Stands** — The appliance should be used only with a cart or stand that is recommended by the manufacturer.
 - 3 An appliance and cart combination should be moved with care.** Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.
 - 4 Wall or Ceiling Mounting** — The appliance should be mounted to a wall or ceiling only as recommended by the manufacturer.
 - 5 Ventilation** — The appliance should be situated so that its location or position does not interfere with its proper ventilation. For example, the appliance should not be situated on a bed, sofa, rug or similar surface that may block the ventilation openings; or placed in a built-in installation such as a bookcase or cabinet that may impede the flow of air through the ventilation openings.
 - 6 Heat** — The appliance should be situated away from heat sources such as radiators, heat registers, stoves, or other appliances (including amplifiers) that produce heat.
 - 7 Power Sources** — The appliance should be connected to a power supply only of the type described in the operating instructions or as marked on the appliance.
 - 8 Grounding or Polarization** — The precautions that should be taken so that the grounding or polarized means of an appliance is not deleted.
 - 9 Power Cord Protection** — Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords or plugs, convenience receptacles, and the point where they exit from the appliance.
 - 10 Protective Attachment Plug** — The appliance is equipped with an attachment plug having overload protection. This is a safety feature. See Instruction Manual for replacement or resetting of protective device. If replacement of the plug is required, be sure the service technician has used a replacement plug specified by the manufacturer that has the same overload protection as the original plug.
 - 11 Cleaning** — The appliance should be cleaned only as recommended by the manufacturer.
 - 12 Power Lines** — An outdoor antenna should be located away from power lines.
 - 13 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 build-up static charges. Article 810 of the National Electric Code, ANSI/NFPA 70, provides information with regard to 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 electrodes. See figure.

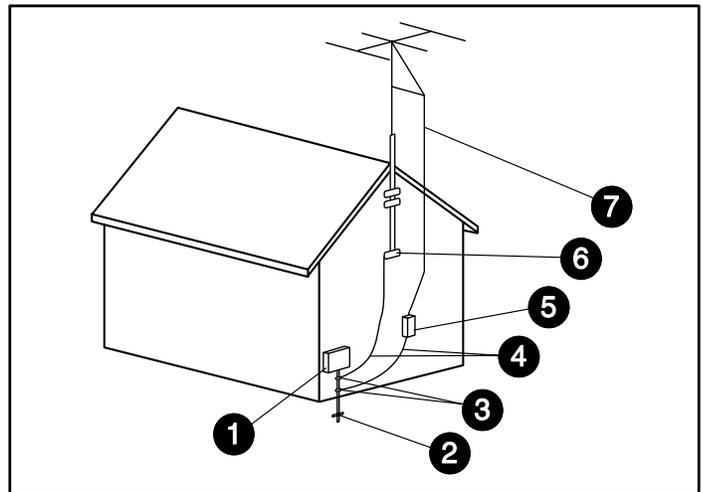
PORTABLE
CART
WARNING



- 14** Nonuse Periods — The power cord of the appliance should be unplugged from the outlet when left unused for a long period of time.
- 15** Object and Liquid Entry — Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.
- 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** Servicing — The user should not attempt to service the appliance beyond that described in the operating instructions. All other servicing should be referred to qualified service personnel.

NOTE TO CATV SYSTEM INSTALLER:

THIS REMINDER IS PROVIDED TO CALL THE 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.



Antenna Grounding

Antenna Grounding

Reference	Grounding Component
1	Electric Service Equipment
2	Power Service Grounding Electrode System (NEC Art 250, Part H)
3	Ground Clamps
4	Grounding Conductors (NEC Section 810-21)
5	Antenna Discharge Unit (NEC Section 810-20)
6	Ground Clamp
7	Antenna Lead in Wire

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Safety

First:

- Read all instructions before installing and operating the product.
- Keep this *User's Guide* in a safe place for future reference.
- Observe all warnings in this *User's Guide*.
- Follow all instructions in this *User's Guide*.
- Do not use attachments that are not recommended by HP with this product. Use of inadequate attachments may result in damage to the product or personal injury.

Installing the HP HDTV Tuner:



WARNING: To reduce the risk of fire or electrical shock, do not expose this HDTV Tuner to rain or moisture.

- Install the HP HDTV Tuner on a flat surface to avoid tipping. Leave some distance between the back of the HDTV Tuner and the wall for proper ventilation. Never install the unit where the ventilation on the top of the HDTV Tuner is covered. Otherwise, fire or damage to the unit may occur.
- Avoid installing HDTV Tuner in the kitchen, the bathroom, or any other area with high humidity. Damp conditions may shorten the service life of the electronic components, or may cause fire or electrical shock.
- Route power and signal cords appropriately to avoid stepping or tripping on them.
- Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding-type plug has two blades and a third grounding prong. The wide blade, or the third prong, is provided for your safety. If the provided plug does not fit your outlet, consult an electrician for replacement of the obsolete outlet.
- Do not install the HDTV Tuner in a ship or a vessel; seawater damages the unit and may start a fire.
- Do not use this HDTV Tuner near water.
- Do not install HDTV Tuner near any heat sources such as radiators, heat registers, stoves, or any other apparatus (including amplifiers) that produces heat.
- Install the HDTV Tuner horizontally; any installation 90 degrees clockwise or counterclockwise may induce poor ventilation and subsequent component damage.
- Do not install the HDTV Tuner where it has a protruding edge. For example, do not place the HDTV Tuner where an edge overhangs a table. Do not install the product on a column, where it may accidentally fall.
- If moving the HDTV Tuner from a cold place to a warm place, condensation may occur inside the unit. Allow the condensation to dry before turning on the unit.
- Unplug this HDTV Tuner during lightning storms or when unused for long periods of time.
- Clean only with a soft dry cloth.



CAUTION: Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type.

Precautions:



DANGEROUS VOLTAGE: Do not attempt to repair your HDTV Tuner yourself. Removing the top cover of the HDTV Tuner may cause fire or electric shock.

If any of the following conditions occur, unplug the HDTV Tuner from the wall and contact a qualified service professional:

- The power cord or plug is damaged.
- Liquid is spilled on the product, or objects have fallen into the product.
- The product does not operate as described in the instructions.
- The product has been damaged or dropped.
- The product displays an abnormal condition.
- The power cord or plug is damaged.

Use the correct external power source: The product should be operated only from the type of power source indicated on the electrical ratings label. If you are not sure of the type of power source required, consult your HP authorized service provider or local power company.

Overloading: Do not overload an electrical outlet, power strip, or convenience receptacle. The overall system load must not exceed 80% of the power strip input rating.

Observe extension cord ratings: If an extension cord or power strip is used, make sure that the cord or strip is rated for the product and that the total ampere ratings of all products plugged into the extension cord or power strip do not exceed 80% of the extension cord or strip ampere ratings limit.



WARNING: Do not place any objects on top of the HDTV Tuner. Spilled water or metal objects may cause short circuit, fire, or electric shock if they penetrate into the housing of the HDTV Tuner.

Never use a damaged power cord. Do not place power cords in areas where they can be pinched, stepped on, or otherwise compromised. Heavy objects, heat, chemicals, or tensile force may damage the power cord and cause fire or electric shock.

Do not change or open the back cover. Removing the back cover of the HDTV Tuner may cause fire or electric shock. Contact the manufacturer when inspection or adjustment is required.

Do not use the HDTV Tuner if any abnormality occurs. If any smoke or odor becomes apparent, unplug the power cord and contact the manufacturer immediately. Do not try to repair the HDTV Tuner on your own.



CAUTION: These servicing instructions are for use by qualified service personnel only. To reduce the risk of electrical shock, do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so.

Introduction

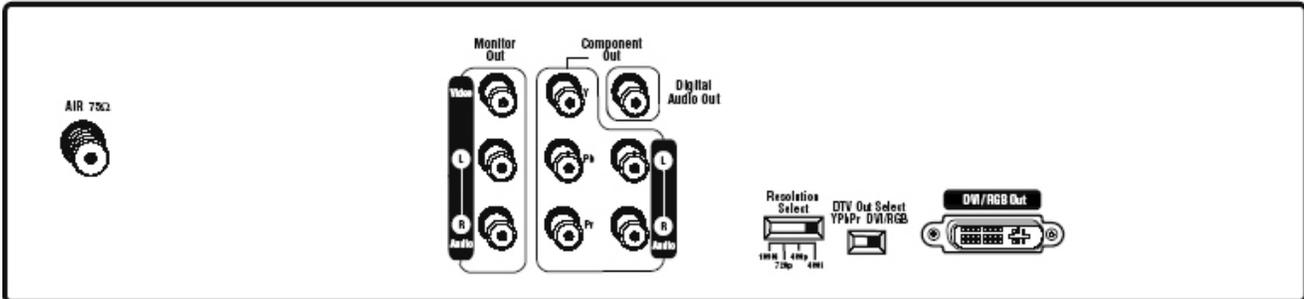
The HP High-Definition Tuner receives digital high-definition and standard definition ATSC broadcasts right off of the air. A digital on-screen guide enables you to conveniently locate your favorite shows using an intuitive interface. DVI output enables the transmission of pure digital signal for the best picture available today. A digital coaxial link is also available, enabling Dolby Digital® audio signals to be sent to an Audio receiver for pure and impressive sound.

What's in the Box

- HP HDTV Tuner
- Remote control with two AAA batteries
- Component cables
- DVI cable
- Left and right audio cable
- *User's Guide*
- *Warranty and Support Guide*

Setup

Rear Panel Connectors



RF Input (labeled AIR 75 ohm)

Connect an outdoor or indoor antenna.

Monitor Out

Connect composite cables to your TV or monitor. Insert the yellow video cable into the Video connector and the white and red cables into the Audio L and R connectors, respectively.

Component Out

Connect component cables to your TV or monitor. Insert the green, blue, and red video cables into the Y, Pb, and Pr connectors and the white and red cables into the Audio L and R connectors, respectively.

Digital Audio Out

Connect a cable from the digital audio input of your audio receiver.

Resolution Select

Choose a resolution setting that corresponds with the TV or monitor you are using.

- **1080i (interlaced scanning):** Use this setting if you have an HDTV-ready 16:9 (wide screen) aspect ratio TV monitor with HDTV-ready component video inputs that can handle the 1080i video output format.
- **720p (progressive scanning):** Use this setting for an HDTV-ready 16:9 (wide screen) aspect ratio TV monitor with HDTV-ready component video inputs that can handle the 720p video output format.
- **480p (progressive scanning):** Use this setting for a digital-ready 4:3 aspect ratio TV monitor with progressive scan DTV-ready component video inputs that can handle the 480p video output format. The TV monitor may be labeled as "enhanced definition" or "progressive scan."
- **480i (interlaced scanning):** Use this setting for a conventional TV with composite video.

DTV Out Select (YPbPr/DVI)

- Use YPbPr when you use the component connectors to a TV, monitor, or other video component input. This is compatible with resolution settings 1080i, 720p, and 480p.
- Use DVI when you use the DVI connector to a TV, monitor, or other video component input. This is compatible with resolution settings 1080i, 720p, and 480p.

DVI/RGB Out

Use to connect a DVI input on an HDTV or monitor. Use a VGA-to-DVI adapter (not included) to connect a VGA monitor.

NOTE: Not all monitors with a DVI input are compatible.

Identifying Your Component's Cables

Where you connect your component into the connectors depends on the type of component and cables you are using. Your HDTV Tuner is compatible with composite, component, DVI-D, or VGA cables. Use the following chart to determine your component type:

Type of Component	Description of Cable(s)	Where to Connect
Composite	One three headed cable: <ul style="list-style-type: none">• One yellow for video• One red for audio• One white for audio	<ul style="list-style-type: none">• Insert the yellow cable into the yellow Video connector in the Monitor Out section.• Insert the white and red cables into the white and red (L and R) audio connectors in the Monitor Out section.
Component	Three or five headed cable: <ul style="list-style-type: none">• One red for red video• One green for green video• One blue for blue video Some component cables come with white and red audio cables attached.	<ul style="list-style-type: none">• Insert the red cable into the red Y connector in the Component Out section.• Insert the green cable into the green Pb connector in the Component Out section.• Insert the blue cable into the blue Pr connector in the Component Out section.• Insert the white and red audio cables into the white and red (L and R) audio inputs in the Component Out section.
DVI-D	One cable with 3 rows of 8 pins.	Insert the cable into the DVI/RGB Out.
VGA	One cable with 3 rows of 5 pins.	Insert the cable into the DVI/RGB Out connector. VGA-to-DVI adapter (not included) is necessary.

Connecting the HP HDTV Tuner

This section explains how to connect your HP HDTV Tuner. It explains the following types of connections:

- Connecting an indoor/outdoor antenna
- Connecting to a TV with component connectors (YPbPr)
- Connecting to an analog TV with composite connectors
- Connecting to a PC monitor
- Connecting audio equipment

Connecting an indoor/outdoor antenna

Connect your indoor or outdoor antenna to the RF Input (labeled AIR 75 ohm). If your antenna has separate leads for VHF/UHF signals, you need a combiner (not included).

NOTE: The HP HDTV Tuner is able to receive DTV and analog signals from your local cable provider when transmitted in the 8VSB modulation format approved by the FCC for DTV transmission.

Connecting to a TV with a DVI connector

Using a DVI connector to connect your HDTV Tuner to your TV provides the best picture. This is a digital connection as opposed to the other connection options in this guide that are analog.

- 1** Connect your indoor or outdoor antenna to the RF Input (labeled AIR 75 ohm).
- 2** Insert the DVI cable from your TV into the DVI/RGB Out connector.
- 3** Make sure the DTV Out Select switch has DVI selected.
- 4** Select a Resolution setting that gives you the best picture (1080i, 720p, or 480p).

Connecting to a TV with a component connector (YPbPr)

- 1** Connect your indoor or outdoor antenna to the RF Input (labeled AIR 75 ohm).
- 2** Insert the red, green, and blue cables into the Y, Pb, and Pr connectors (respectively) in the Component Out section.
- 3** Insert the white and red audio cables into the L and R Audio connectors (respectively) of the Component Out section.
- 4** Insert the other ends of the red, green, and blue cables into the YPbPr Component In connectors of your TV.
- 5** Insert the other ends of the white and red audio cables into the L and R In connectors of your TV or audio receiver. Make sure they correspond with your YPbPr inputs.
- 6** Make sure the DTV Out Select switch has YPbPr selected.
- 7** Select a Resolution setting that gives you the best picture (1080i, 720p, or 480p, 480i).

Connecting to an analog TV (composite)

- 1** Connect your indoor or outdoor antenna to the RF Input (labeled AIR 75 ohm).
- 2** Insert the yellow cable into the Video connector in the Monitor Out section.
- 3** Insert the white and red audio cables into the L and R Audio connectors of the Monitor Out section.
- 4** Insert the other end of the yellow cable into the Composite In connector of your TV.
- 5** Insert the other ends of the white and red audio cables into the L and R In connectors of your TV or audio receiver. Make sure they correspond with your composite input.
- 6** Select 480i for your Resolution setting.

Connecting a splitter for Picture-In-Picture TVs

To use the Picture-in-picture feature on your TV, use a splitter (not included) to connect your HDTV Tuner.

- 1** Connect your indoor or outdoor antenna to the splitter.
- 2** Connect one cable from the splitter to the RF Input (labeled AIR 75 ohm) on the HDTV Tuner.
- 3** Connect another cable from the splitter to the RF connector on your TV.

Connecting audio equipment

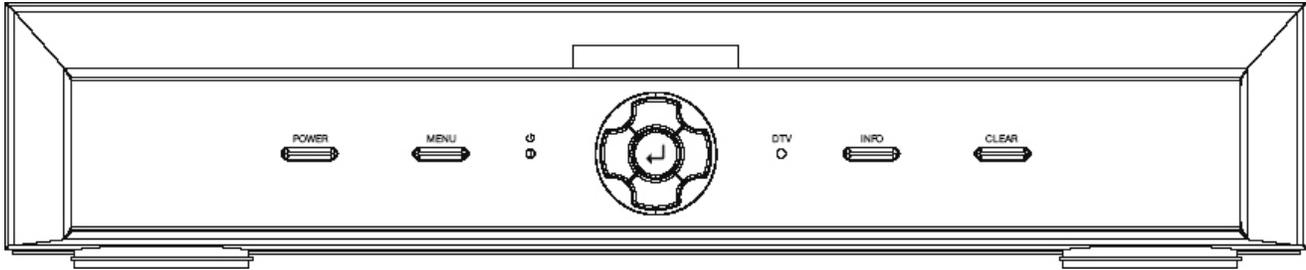
This connection enables Dolby Digital* quality sound, when available. Use with an external digital audio receiver decoder. See "Digital Output" on page 20 for configuring your HDTV Tuner to output the appropriate audio format for your receiver.

Insert the cable from the Digital Audio Input of the audio receiver into the Digital Audio Out connector on your HDTV Tuner. Refer to your TV documentation to locate the Digital Audio Input connector.

*Manufactured under license from Dolby Laboratories. "Dolby" and the Double-D symbol are trademarks of Dolby Laboratories.

Using the HP HDTV Tuner

Front Panel Controls



- **Power button:** Press to turn the power on and off.
- **Menu button:** Press to display the On-Screen Menu.
- **Power LED:** A red light appears when the power is on.
- **Arrow and Enter buttons:** Press to navigate the On-Screen Menu.
- **DTV LED:** A green light appears when you are on a channel receiving a digital signal.
- **Info button:** Press to display the following information: current HDTV Tuner settings, the channel number, captioning settings, the program title, the time, the program duration, the picture grade, MTS settings, and ratings.
- **Clear button:** Press to remove the On-Screen Menu from your display.

Using the Remote Control

Identifying the remote control buttons



Button	Description
Power	Press Power once to turn the HDTV Tuner on or off.
Number keys	Use the keypad numbers (0–9) to directly select channels.
Help	Press when inside the On-Screen Menu. Displays a help window describing the current feature.
Pre-CH	Press Pre-CH (previous channel) once to recall the last channel.
Fav-CH	Press Fav-CH (favorite channel) once to view the next channel assigned as a favorite channel.
MTS	Press MTS to select stereo, mono, or SAP (second audio program) for the TV sound.
Caption	Press Caption to scroll through and select the CC 1 to CC4 (analog) or Service 1 to Service 6 (digital) caption options.
Guide	Press Guide to display the Electronic Program Guide (EPG).
Info	Press Info to display current HDTV Tuner settings, the channel number, captioning settings, the program title, the time, the program duration, the picture grade, MTS settings, and ratings.
CH	Use CH+ (or CH–) to select the next higher (or lower) channel.
Arrow buttons	Use the arrow buttons to move the cursor in a program guide or in menu screens.
(Select) ↵	Press (Select) once after entering a channel number. Use (Select) in the On-Screen Menu to choose your selection.
Menu	Press Menu to access the On-Screen Menu (OSM). Inside the OSM, pressing the Menu button takes you back one screen.
Exit	Press Exit to exit out of the selected OSM and return to your current channel.
Aspect	Press the Aspect button to select one of three screen formats.
Still	Press the Still button to pause a frame. The audio continues. Press Still again to undo the image pause.
Signal	Press the Signal button to view the signal strength or weakness of the current channel.

Installing or replacing the remote control batteries

When the remote control becomes less responsive or unresponsive, the batteries are low. Insert two AAA non-rechargeable batteries into the remote control, and ensure that you match them to their proper polarities.

- 1 Push down the tab and pull back the cover on the back of the remote control.
- 2 Insert the batteries into the remote control, and make sure that you match polarities.
- 3 Close the cover.



CAUTION: Use only the size and type of batteries specified.

Be sure to follow the correct polarity when installing the batteries as indicated in the battery compartment. Reversed batteries may cause damage to the device.

Do not mix different types of batteries together (e.g., alkaline and carbon-zinc) or old batteries with fresh ones.

When not using the remote for a long period of time, remove the batteries to prevent damage or injury from possible battery leakage.

Do not try to recharge batteries that are not intended to be recharged; they can overheat and rupture. (Follow the battery manufacturer's directions for the batteries you are using.)

Always remove batteries as soon as they become weak. Weak batteries can leak and severely damage the unit.

Replace batteries when the remote control operation becomes erratic.

Do not take apart the batteries, heat them, or throw them into a fire.

Using the Electronic Program Guide (EPG)

Use the Electronic Program Guide (EPG) to view the listing of current and future programs. Press the Guide button on your remote control to display the EPG. There are two different styles of the EPG:

Current Guide: Displays programs that are currently on air.

All Guide: Displays the same information as the Current Guide, plus a schedule of future programs.

For information on changing between Current Guide and All Guide, see "Electronic Program Guide (EPG)" on page 21.

Use the arrow buttons on the remote control to scroll through the programs listed in your guide. Highlighting a program gives you the following information:

- Time the program begins and ends.
- Channel the program is on.
- Name of the program.
- Closed captioning availability.
- Format of the program broadcast (high definition or standard definition).
- Language of the program.
- TV rating or MPA rating of the program.

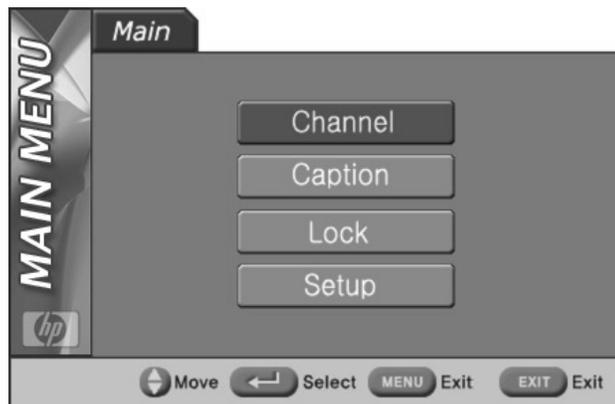
Using the On-Screen Menu

The On-Screen Menu (OSM) provides an easy way to customize your HP HDTV Tuner. Use it to customize channels, enable captioning, adjust screen format, and sound.

NOTE: When 1080i, 720p, or 480p (DTV) is selected with the Resolution Select switch on the rear panel, the OSM and Electronic Program Guide are not supported for Monitor Out (composite). The OSM for Monitor Out is supported only when 480i (analog) is selected.

Using the Main Menu

To display the OSM, press the Menu button on your remote control or the Menu button on the front panel of the HDTV Tuner.



- **Channel:** Use to set channel memorization, select favorite channels, add or delete channels, fine-tune channels, and display the signal strength of the current channel.
- **Caption:** Use to turn captions on or off and to customize the font, style, and color of the captions.
- **Lock:** Use to block channels from use; the viewer must know a code to see locked channels.
- **Setup:** Use to change the screen format, set your time zone, adjust the sound, and display the Electronic Program Guide.

Using the Channel Menu

To display the Channel menu, press the Menu button on your remote control, select (highlight) the **Channel** option, and press the Select button.

Using auto memorizing to set up your channels

Auto memorizing scans for a signal for all of the VHF and UHF channels in your area. If a signal is found, it adds the channel to your channel list. Follow these steps to set auto memorizing for your channels:

- 1 Press the Menu button on your remote control.
- 2 Highlight **Channel**, and press the Select button.
- 3 Highlight **Auto Memorizing**, and press the Select button.
- 4 Highlight **AIR, STD, HRC, or IRC** (whichever is in your broadcast area), and press the Select button.
- 5 Highlight **Confirm**, and press the Select button to begin the auto memorizing process.
- 6 A list of channels that were detected is displayed when the auto memorizing is complete. Press the Exit button to leave the OSM, or use the Up and Down arrow buttons to scroll through your channels.

Programming favorite channels

You can assign the channels you watch most often as your favorite channels. Then you can use the Fav-CH button on your remote control to access them easily. Follow these steps to assign your favorite channels:

- 1 Press the Menu button on your remote control.
- 2 Highlight **Channel**, and press the Select button.
- 3 Highlight **Favorite Channel**, and press the Select button.
- 4 Use the Up and Down arrow buttons on your remote control to highlight each channel.
- 5 Press the Select button on your remote control to assign a channel as a favorite channel. A yellow dot appears next to the channel number.
- 6 Press the Exit button on your remote to leave the OSM.
- 7 Press the Fav-CH button on your remote control to access your favorite channels.

Adding and deleting channels

You can customize your channel list by adding channels that were not initially detected and by deleting channels you do not ever watch. Follow these steps to add and delete channels:

- 1 Press the Menu button on your remote control.
- 2 Highlight **Channel**, and press the Select button.
- 3 Highlight **Channel Add/Delete**, and press the Select button.

- 4 Use the remote control number keys to enter the channel you want to add or delete.
Or
Use the Up and Down arrow buttons to go to the channel you want to add or delete.

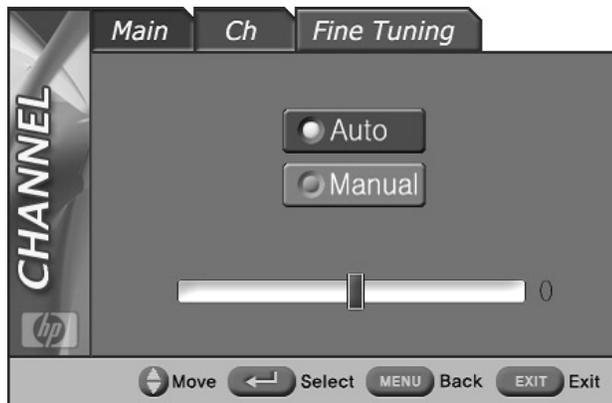


- 5 Press the Select button on your remote control to add or delete the channel.

Fine tuning channels

Fine tuning manually adjusts the TV's tuner. Follow these steps to fine tune a channel:

- 1 Press the Menu button on your remote control.
- 2 Highlight **Channel**, and press the Select button.
- 3 Highlight **Fine Tune Channel**, and press the Select button.
- 4 Highlight **Manual**, and press the Select button.



- 5 Use the Up and Down arrows on your remote control to adjust the tuning.

Adjusting the signal strength

Follow these steps to view the signal strength of your current channel:

- 1 Press the Menu button on your remote control.
- 2 Highlight **Channel**, and press the Select button.
- 3 Highlight **Signal Strength**, and press the Select button.
- 4 To increase the signal strength, adjust your antenna.

Using the Caption Menu

Turning captions on and off

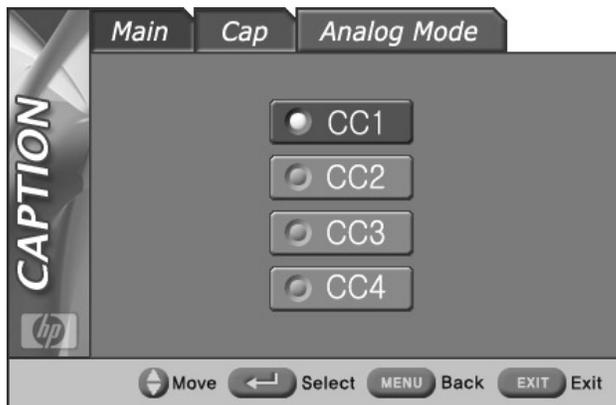
You can view captions for the dialog. Follow these steps to turn on the captions:

- 1 Press the Menu button on your remote control.
- 2 Highlight **Caption**, and press the Select button.
- 3 Highlight **On/Off**, and press the Select button.
- 4 Highlight **On**, and press the Select button to turn on the captions. Highlight **Off**, and press the Select button to turn off the captions.

Analog mode

Analog captions are displayed in analog RF channel mode. It is compatible with some digital channels. Follow these steps to choose a type of analog caption:

- 1 Press the Menu button on your remote control.
- 2 Highlight **Caption**, and press the Select button.
- 3 Highlight **Analog Mode**, and press the Select button.
- 4 Use the Up and Down arrow buttons on the remote control to highlight an analog mode, and press the Select button.



Digital service

Digital captions are displayed on digital channels. Follow these steps to choose a type of digital service:

- 1 Press the Menu button on your remote control.
- 2 Highlight **Caption**, and press the Select button.
- 3 Highlight **Digital Service**, and press the Select button.
- 4 Use the arrow buttons on the remote control to highlight a digital service, and press the Select button.



Digital service info

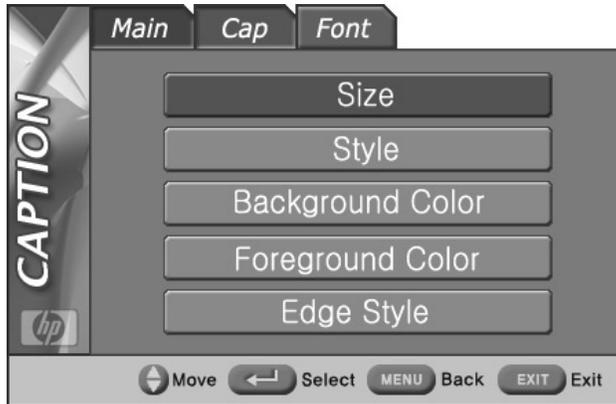
The Digital Service Info screen displays the language assigned to each service. When “Yes” appears in the Easy Reader column, it indicates the captions have been edited to an easier reading level.



Digital service font

You can customize the appearance of your captions. Follow these steps to change the size, style, and color of your caption fonts:

- 1 Press the Menu button on your remote control.
- 2 Highlight **Caption**, and press the Select button.
- 3 Highlight **Digital Service Font**, and press the Select button.
- 4 Use the Up and Down arrow buttons on the remote control to highlight a format, and press the Select button.



Using the Lock Menu

The lock feature enables you to set a password to view movies and TV programs with unsuitable ratings for some viewers who share the TV. Follow these steps to lock movies and TV programs:

- 1 Press the Menu button on your remote control.
- 2 Highlight **Lock**, and press the Select button.
- 3 Use the remote control number keys to enter a PIN. If this is your first time using this feature, enter the default password, 0, 0, 0, 0, to gain access.
- 4 To create your own PIN, highlight **Changing PIN**, and press the Select button.

5 Highlight **Rating Setting**, and press the Select button.



6 Use the arrow buttons on the remote control to move your cursor into the block you would like to lock. Press the Select button to lock the rating.

NOTE: If you forget your PIN and would like to reset it, enter the following key sequence on your remote control: MTS, 3, 5, 9.

Important notes about parental locks

Following are explanations of the MPAA and TV (FCC) rating codes.

TV (FCC) age categories

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

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

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

TV-G: General audience. The program contains little or no violence, no strong language, and little or no sexual dialogue or situation.

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 to six.

TV (FCC) subcategories for content

V: Violence.

S: Sexual content.

L: Offensive language.

D: Dialogue (sexual innuendo).

FV: Fantasy or cartoon violence.

The MPAA rating system (movies)

- G:** General audience. No restriction.
 - PG:** Parental guidance suggested. Some material may be unsuitable for children.
 - PG-13:** Parents strongly cautioned. Some material may be unsuitable for children under the age of 13.
 - R:** Restricted. Viewers should be 17 or older.
 - NC-17:** Not classified. Viewers should be 17 or older.
 - X:** Adults only.
- TV (FCC) guidelines: When you lock a rating such as the TV-PG rating and all of its V, S, L, and D subcategories, the “more restrictive” ratings (TV-14 and TV-MA) and all of their V, S, L, and D subcategories are automatically locked out as well. Two groups (TV-Y/TV-Y7 and TV-G/TV-PG/TV-14/TV-MA) are controlled independently.
 - MPAA ratings: The particular rating that you select will be locked. In addition, any ratings that are more restrictive will also be blocked.
 - Neither the TV (FCC) nor MPAA ratings apply to news broadcasts.

Using the Setup Menu

You can use the setup menu to change your screen format, set daylight saving, set the sound system, reduce video noise, and set the Electronic Program Guide (EPG).

Screen format

Your screen format options depend on the type of TV or monitor you are using with your HP HDTV Tuner. Follow these steps to change your screen format:

- 1** Press the Menu button on your remote control.
- 2** Highlight **Setup**, and press the Select button.
- 3** Highlight **Screen Format**, and press the Select button.
- 4** Highlight either **4:3** or **16:9**, and press the Select button.

4:3 ratio

When using a 4:3 aspect ratio TV and receiving an image with a 16:9 aspect ratio, you need to specify how the image is displayed. Choose one of the three following options:

Letter box

Letter box shrinks the picture so the entire image fits on the screen. Blank panels appear at the top and bottom of the screen (1080i does not support letter box mode; full mode is automatically selected).

Full

Full vertically adjusts the 16:9 image so it fills your 4:3 screen. No blank panels are added, and the image is not horizontally altered.

Zoom

Zoom adjusts to a wide movie format that fills the entire screen. Left and right portions of the picture are cropped.

NOTE: If the input source signal is set to 16:9, the default mode is letter box. If the input source signal is set to 4:3, the default mode is full.

16:9 ratio

When using a 16:9 aspect ratio, and receiving an image with a 4:3 aspect ratio, you need to specify how the image is displayed. Choose one of the three following options:

Pillar box

Pillar box centers the picture with blank panels on the left and right sides. This option can be set when receiving a 16:9 image.

Full

Full horizontally adjusts the 4:3 image so it fills your 16:9 screen. No blank panels are added, and the image is not altered vertically. This setting is useful for viewing 4:3 formatted DVDs.

Zoom

Zoom maintains the correct image proportion when receiving a 4:3 image. Top and bottom portions of the picture are cropped.

NOTE: If the input source signal is set to 4:3, the default mode is pillar box. If the input source signal is set to 16:9, the default mode is full.

Time

You can set the time zone and daylight saving for your Electronic Program Guide.

Daylight Saving

Follow these steps to set daylight saving:

- 1 Press the Menu button on your remote control.
- 2 Highlight **Time**, and press the Select button.
- 3 Highlight **Daylight Saving**, and press the Select button.
- 4 Highlight **Yes**, and press the Select button if you live in an area with daylight saving.

Time zone

Follow these steps to select your time zone:

- 1 Press the Menu button on your remote control.
- 2 Highlight **Time**, and press the Select button.
- 3 Highlight **Time Zone**, and press the Select button.
- 4 Use the arrow buttons to highlight the time zone you live in, and press the Select button.

Sound

A digital TV transmission can receive simultaneous audio tracks. It can receive simultaneous translations of a program into foreign languages called *multitracks*.

Analog Multi-Channel Television Sound (MTS)

Follow these steps to choose your analog MTS setting:

- 1 Press the Menu button on your remote control.
- 2 Highlight **Setup**, and press the Select button.
- 3 Highlight **Sound**, and press the Select button.
- 4 Highlight **Analog MTS**, and press the Select button.
- 5 Use the arrow buttons to highlight your choice of **Mono**, **Stereo**, or **SAP**, and press the Select button.
- 6 Press the Exit button to return to your current channel.

Digital language

Follow these steps to choose your digital language setting:

- 1 Press the Menu button on your remote control.
- 2 Highlight **Setup**, and press the Select button.
- 3 Highlight **Sound**, and press the Select button.
- 4 Highlight **Digital Language**, and press the Select button.
- 5 Use the arrow buttons to highlight your choice of **English**, **Spanish**, or **French**, and press the Select button.
- 6 Press the Exit button to return to your current channel.

Digital output

Follow these steps to choose your digital output setting:

- 1 Press the Menu button on your remote control.
- 2 Highlight **Setup**, and press the Select button.
- 3 Highlight **Sound**, and press the Select button.
- 4 Highlight **Digital Output**, and press the Select button.
- 5 Use the arrow buttons to highlight **Dolby Digital** (not available with analog broadcasts) or **PCM**, and press the Select button.
- 6 Press the Exit button to return to your current channel.

Dynamic range compression

Dynamic range compression (DRC) sets up the optimal volume automatically, according to the current channel. Follow these steps to choose your DRC setting:

- 1** Press the Menu button on your remote control.
- 2** Highlight **Setup**, and press the Select button.
- 3** Highlight **Sound**, and press the Select button.
- 4** Highlight **DRC**, and press the Select button.
- 5** Use the arrow buttons to highlight **On**, and press the Select button.
- 6** Press the Exit button to return to your current channel.

Video noise reduction (analog channels only)

Video noise reduction (NR) helps reduce any static and ghosts that may appear on your screen. Follow these steps to turn on video NR:

- 1** Press the Menu button on your remote control.
- 2** Highlight **Setup**, and press the Select button.
- 3** Highlight **Video NR**, and press the Select button.
- 4** Use the arrow buttons to highlight **On**, and press the Select button.
- 5** Press the Exit button to return to your current channel.

Electronic Program Guide (EPG) (digital channels only)

The EPG displays program listings, start times, and program information. The Current Guide setting displays programs that are currently on air. The All Guide setting displays the same information as the Current Guide, plus a schedule of future programs. Follow these steps to set your EPG:

- 1** Press the Menu button on your remote control.
- 2** Highlight **Setup**, and press the Select button.
- 3** Highlight **Program Guide Setting**, and press the Select button.
- 4** Use the arrow buttons to highlight **Current Guide** or **All Guide**, and press the Select button.
- 5** Press the Exit button to return to your current channel.

Troubleshooting

Problem	Remedy
The HP HDTV Tuner is not receiving power and the Power LED on the front does not light up.	Plug the power cord into a different power outlet. Make sure the power outlet works by plugging in another item such as a lamp.
There is no picture or sound.	Use your remote control to enter a channel number that worked the last time you used your HDTV Tuner. Double-check all cable connections. Check your Resolution Select setting. Check your DTV Out selection. Adjust your antenna.
There is no picture, but there is sound.	Double-check your cable connections. For Monitor Out connections, double-check the yellow composite cable. For Component Out connections, double-check the green, blue, and red cable connections. For PC connections, double-check your DVI/RGB Out connection.
There is a picture, but there is no sound.	Double-check your audio cable connections.
The picture quality is poor.	Adjust your antenna. Double-check your cable connections. You may need to adjust the signal strength. Press the Signal button on your remote control to view the signal strength.
The channel will not change with the remote control.	Replace the batteries in your remote control. Check for a direct path from the remote control to the HDTV Tuner.

Specifications

General Specifications

Broadcasting Standard	Digital TV (ATSC), analog TV (NTSC)
Power Requirement	120V \sim , 60 Hz
Power Consumption	20W (standby 1.5W)
Dimensions (W x D x H)	35.8 x 30 x 6.9 cm (14.1 x 11.8 x 2.7 in.)
Weight	2.4 kg (5.3 lb.)

RF Specifications

Tuning System Type	F/S
Band Coverage	Air (VHF: 2–13, UHF: 14–69) Cable (VHF: 1–64, UHF: 65–125)
Antenna	75 ohm external antenna terminal for VHF/UHF
Number of Inputs/outputs	75 ohm air/cable (VHF/UHF) Monitor output DTV output (YPbPr/DVI (RGB), Lt, Rt) Dolby digital out (coaxial) Resolution select switch (1080i, 720p, 480p, 480i) DTV output select switch (YPbPr/DVI (RGB))

Agency Regulatory Notice

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 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 Hewlett-Packard Company may void the authority to operate the equipment.

Cables

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

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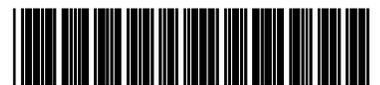
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