



Explorer[®] 4250[™] Home Gateway User's Installation Guide




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Notice for CATV Installers

CATV Installers Notice

If you are a CATV installer, read the information in the box below.

Note to CATV System Installer (U.S.A. and Canada Only)	 <p>CAUTION RISK OF ELECTRIC SHOCK DO NOT OPEN</p> <p>AVIS RISQUE DE CHOC ÉLECTRIQUE NE PAS OUVRIR</p>
<p>This reminder is provided to call the CATV system installer's attention to Article 820-40 of the NEC (Section 54, Part I of the Canadian Electrical Code), that provides guidelines for proper grounding and, in particular, specifies that the CATV cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.</p>	
	<p>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.</p>
	<p>WARNING TO PREVENT FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE.</p>
<p>This symbol is intended to alert you that uninsulated voltage within this product may have sufficient magnitude to cause electric shock. Therefore, it is dangerous to make any kind of contact with any inside part of this product.</p>	
<p>This symbol is intended to alert you of the presence of important operating and maintenance (servicing) instructions in the literature accompanying this product.</p>	

U.S. Patents

U.S. Patents List

A patent notice is affixed to this product. In addition, the product may also be covered by one or more of the following patents:

4,636,852; 4,641,181; 4,651,208; 4,691,353; 4,698,598; 4,719,642; 4,748,667; 4,829,569; 4,866,770; 4,885,775; 4,888,799; 4,890,319; 4,922,532; 4,965,534; 5,012,510; 5,029,207; 5,045,816; 5,053,883; 5,058,160; 5,142,690; 5,146,526; 5,214,390; 5,225,902; 5,225,925; 5,237,610; 5,239,540; 5,241,610; 5,255,086; 5,257,403; 5,267,071; 5,270,809; 5,271,041; 5,272,752; 5,282,028; 5,285,497; 5,287,351; 5,309,514; 5,319,709; 5,341,425; 5,347,388; 5,347,389; 5,361,156; 5,367,571; 5,379,141; 5,379,145; 5,381,481; 5,390,337; 5,400,401; 5,406,558; 5,418,782; 5,428,404; 5,430,568; 5,434,610; 5,436,749; 5,442,472; 5,455,570; 5,471,492; 5,477,199; 5,477,370; 5,481,389; 5,485,221; 5,493,339; 5,500,758; 5,502,499; 5,506,904; 5,519,780; 5,550,825; 5,579,055; 5,579,057; 5,583,562; 5,596,606; 5,600,378; 5,602,933; 5,640,388; 5,657,414; 5,675,575; 5,715,515; 5,724,525; 5,740,300; 5,742,677; 5,754,940; 5,757,416; 5,771,064; 5,774,859; 5,825,829; 5,826,167; 5,850,305; 5,854,703; 5,870,474; 5,892,607; 5,920,626; 5,923,755; 5,930,024; 5,930,515; 5,937,067; 5,963,352; 5,966,163; 5,982,424; 5,991,139; 5,999,207; 6,005,631; 6,005,938; 6,016,163; 6,028,941; 6,029,046; 6,052,384; 6,055,244; 6,072,532; 6,105,134; 6,148,039; 6,157,719; 6,188,729; 6,195,389; 6,212,278; 6,215,530; 6,219,358; 6,240,103; 6,243,145; 6,246,767; 6,252,964; 6,272,226; 6,292,081; 6,292,568; 6,320,131; 6,374,275; 6,405,239; 6,411,602; 6,417,949; 6,424,714; 6,424,717; 6,433,906; 6,438,139; 6,463,586; 6,467,091; 6,476,878; 6,493,876; 6,510,519; 6,516,002; 6,516,412; 6,526,508; 6,538,595; 6,546,013; 6,560,340; 6,567,118; 6,570,888; 6,622,308; 6,629,227; 6,664,984; 6,667,994; 6,671,879; 6,674,967; 6,678,891; 6,714,598; 6,721,352; 6,721,956; 6,725,459; 6,738,982; 6,744,892; 6,744,967; 6,751,271; 6,760,918; 6,795,972; 6,802,077; 6,804,708; 6,811,447; 6,817,028; D348065; D354959; D359737; D363932; D390217; D434753; RE36988

IMPORTANT SAFETY INSTRUCTIONS

Heed Warnings

Adhere to all warnings on the product and in the operating instructions.

Read, Retain, and Follow These Instructions

Read all of the instructions before you operate this product. Follow all operating instructions that accompany this product. Retain the instructions for future use. Give particular attention to all safety precautions. Power Warnings

Comply With Warnings

Avoid electric shock. Comply with all warnings and cautions in the operating instructions, as well as those that are affixed to this product.

Power Warnings

Providing a Power Source

A label on this product indicates the correct power source for this product. Operate this product only from an electrical outlet with the voltage and frequency indicated on the product label.

If you are uncertain of the type of power supply to your home or business, consult your cable service provider or your local power company.

Grounding This Product (U.S.A. and Canada Only)

Overloading



WARNING:

Avoid electric shock and fire hazard! Do not overload mains AC outlets and extension cords. For products that require battery power or other power sources to operate them, refer to the operating instructions for those products.

Do not overload electrical outlets, extension cords, or integral convenience receptacles as this can result in a risk of fire or electric shock. For products that require battery power or other sources to operate, refer to the operating instructions for that product.

Preventing Power Cord Damage

Arrange all power cords so that people or pets cannot walk on the cords. Do not place objects on the cords. Do not lean objects against the cords. Placing objects on or leaning objects against cords can damage the cords. Give particular attention to cords at the point at which the cord connects to plugs, at the electrical outlets, and where the cords exit the product.



WARNING:

To avoid electric shock and fire hazard, match the plug and outlet connections carefully, then fully insert. If the plug and outlet do not match, or you cannot fully insert the plug, contact an electrician to update your power outlets.

If this product is equipped with either a three-prong (grounding pin) safety plug or a two-prong (polarized) safety plug, follow these safety guidelines to properly ground this product:

- For a 3-prong plug (one prong on this plug is a protective grounding pin), insert the plug into a grounded mains, 3-prong outlet.

Note: This plug fits only one way. If you are unable to insert this plug fully into the outlet, contact your electrician to replace your obsolete outlet.

- For a 2-prong plug (a polarized plug with one wide blade and one narrow blade), insert the plug into a polarized mains, 2-prong outlet in which one socket is wider than the other.

Note: If you are unable to insert this plug fully into the outlet, try reversing the plug. If the plug still fails to fit, contact an electrician to replace your obsolete outlet.

IMPORTANT SAFETY INSTRUCTIONS, continued

Providing Ventilation

This product has openings for ventilation that protect it from overheating. To ensure the reliability of this product, do the following:

- Do not block or cover these openings.
- Do not place entertainment devices (such as VCRs or DVDs), lamps, books, vases with liquids, or other objects on top of this product.
- Do not place this product in any of the following locations:
 - On a bed, sofa, rug, or similar surface
 - Near heat sources such as radiators, heat registers, stoves, or other products (including amplifiers) that produce heat
 - In an enclosure, such as a bookcase or rack, unless the installation provides proper ventilation

Selecting a Proper Location



WARNING:

Avoid personal injury and damage to this product! An unstable surface may cause this product to fall.

Place this product in a location that is close enough to an electrical outlet and where the power cord is easily accessible to be disconnected from the wall outlet or from the rear panel of the product.

Important: The power cord is the mains power supply disconnect device.

Place this product on a stable surface. The surface must support the size and weight of this product.

Cleaning This Product



WARNING:

Avoid electric shock! Unplug this product before cleaning.

Before cleaning this product, unplug it from the electrical outlet. Use a damp cloth to clean this product. Do not use a liquid cleaner or an aerosol cleaner. Do not use a magnetic/static cleaning device (dust remover) to clean this product.

Protecting This Product From Foreign Objects and Water or Moisture Damage



WARNING:

Avoid electric shock and fire hazard! Never push objects through the openings in this product. Foreign objects can cause electrical shorts that can result in electric shock or fire. Do not expose this product to rain or moisture. Do not place objects filled with liquid, such as vases, on this product.

Never push objects of any kind into this product through openings as they may touch dangerous voltage points or short out parts that could result in a fire or electric shock.

Do not expose this product to liquids or moisture. Do not place this product on a wet surface. Do not spill liquids on or near this product.

Do not use this product near water (such as a bathtub, washbowl, sink, or laundry tub), in a wet basement, or near a swimming pool.

Accessories Warnings



WARNING:

Avoid any potential for electric shock or fire. Do not use accessories with this product unless recommended by your cable service provider.

Do not use accessories with this product unless recommended by your cable service provider.

IMPORTANT SAFETY INSTRUCTIONS, continued

Service Warnings

Servicing This Product



WARNING:

Avoid electric shock! Opening or removing the cover may expose you to dangerous voltages. This product contains no user-serviceable parts. Refer all servicing to qualified service personnel.

Do not open the cover of this product. If you open the cover, your warranty will be void. Refer all servicing to qualified personnel only. Contact your cable service provider for instructions.

Obtaining Service for Product Damage

For damage that requires service, unplug this product from the AC outlet. Then, contact your cable service provider or qualified service personnel to obtain service for the following conditions:

- If there is damage to the power-supply cord or plug
- If liquid enters this product
- If you expose this product to rain or water
- If you drop this product, a heavy object falls on this product, or damage occurs to the cover of this product
- If this product does not operate normally by following the operating instructions
- If this product exhibits a distinct change in performance

Checking Product Safety

Upon completion of any service or repairs to this product, the service technician must perform safety checks to determine that this product is in proper operating condition.

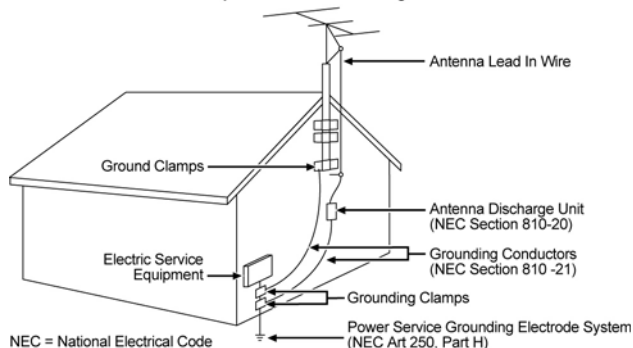
Outdoor Grounding System

If this product connects to an outdoor antenna or cable system, be sure the antenna or cable system is grounded (earthed). This provides some protection against voltage surges and built-up static charges.

Article 810 of the National Electric Code (NEC) ANSI/NFPA No. 70-1990, provides the following information:

- * Grounding of the mast and supporting structure
- * Grounding the lead-in wire to an antenna discharge unit
- * Size of the grounding conductors
- * Location of the antenna-discharge unit
- * Connection to grounding electrodes
- * Requirements for the grounding electrodes (see the following antenna grounding diagram as recommended by NEC ANSI/NFPA 70)

Example Of Antenna Grounding



Lightning

For added protection for this product during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the product due to lightning and power-line surges. Plugging this product into a surge protector may reduce the risk of damage.

Note: Unplugging this product for an extended period of time can result in loss of authorization. For reauthorization, contact your cable service provider.

Power Lines



WARNING:

To avoid electric shock, do not locate an outside antenna system in the vicinity of overhead power lines or power circuits.

Do not locate an outside antenna system in the vicinity of overhead power lines or power circuits. When installing an outside antenna system, take extreme care to keep from touching power lines or circuits, as contact might be fatal.

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Safety First

Before using the Explorer® 4250™ Home Gateway, read the **Important Safety Instructions** section of this guide. Follow the instructions to install the 4250, to become familiar with the buttons on the front panel, and to access your cable services. Then, enjoy the features of the 4250!

Explorer eClub

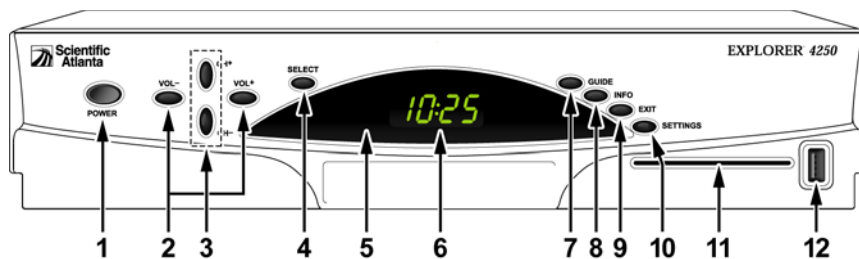
(www.scientificatlanta.com/explorerclub)

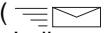

Get more information about the 4250 and see additional connection diagrams on the online Explorer eClub. On the Explorer eClub site you can get “how to” tips on using the 4250, such as setting up your favorite channels, blocking programs that are inappropriate for children, and using the remote control to turn on more than one of your electronic devices. There is also a section with answers to frequently asked questions. To join and access the online Explorer eClub enter the model number shown on the front panel (4250).

Explorer 4250 Home Gateway Serial Number

If the 4250 requires troubleshooting in the future, your cable service provider may ask for the serial number. The serial number is on the back panel; it begins with “SA” and is located in the lower left corner of the bar code. Use the space provided here to record the serial number:

What's on the Front Panel?

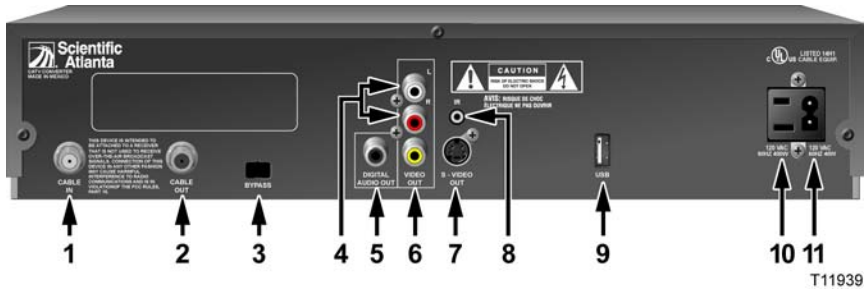


- 1 Power** Provides power to the 4250. A light in the LED area illuminates when the power is on
Note: When not watching TV, turn off the 4250 to help conserve energy.
- 2 VOL-, VOL+** Decreases and increases volume
- 3 CH+, CH-** Scrolls up and down through the channels
- 4 Select** Accesses your on-screen selection
- 5 IR Sensor** Receives the infrared signal from the remote control
- 6 LED Display** Displays the selected channel number and time of day. The LED also displays the following:
- Message ()
 - BYPASS - Indicates when the optional RF Bypass module is activated
 - Power ()
- 7 Guide** Accesses on-screen services, such as the on-screen guide, video-on-demand, or pay-per-view
- 8 Info** Displays a description of the selected program. Available from the on-screen guide and while viewing a program
- 9 Exit** Exits menus, on-screen guide, and program information
- 10 Settings** Accesses list of recorded programs displayed on the TV screen
- 11 Smart Card Slot** Allows smart card access
- 12 USB** Connects to external equipment, such as a keyboard

Safety Tip

Keep the top of the 4250 free of all objects and electronic devices, including your TV.

What's on the Back Panel?

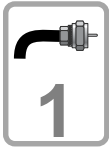


T11939

- 1 Cable In** Connect the coaxial cable that delivers the signal from your cable service provider.
- 2 Cable Out** Connect a coaxial cable to Cable Out to send analog audio and video signals to a TV or VCR. These signals are standard-definition TV (SDTV) video and stereo audio.
- 3 RF Bypass** Connects to an optional RF Bypass module. This module allows you to view one channel while recording another. Contact your cable service provider to see if this service is available.
- 4 Audio Out (LEFT and RIGHT)** Connect RCA cables to Audio Out to send analog audio signals (left and right) to a TV with stereo outputs.
- 5 Digital Audio Out** Connect an RCA cable to send a digital audio signal to a surround-sound receiver or other digital audio device.
- 6 Video Out** Connect to video input of TV or VCR.
- 7 S-Video Out** Connect an S-Video cable to send an S-Video signal to your TV or VCR. This signal is standard definition but higher quality than other SDTV connections.
- 8 IR** Connect to optional VCR Commander service.
- 9 USB Port** Connect to external equipment, such as a keyboard.
- 10 AC Outlet** Connect the AC power cord from another device, such as a TV.
- 11 AC Power Input** Connect the power cord to deliver power to the 4250.

Connecting the 4250

To connect your 4250 to your entertainment devices, complete these steps.



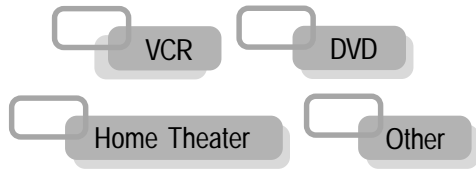
Connect the coaxial cable that carries the signal from your cable service provider to the CABLE IN connector on the back panel of the set-top.



Connect your SDTV to the 4250. Refer to the **Connection Diagrams** section beginning on page 12.



Identify the additional devices you will connect to the 4250 and TV. See pages 12 through 14 and the related user's guides for more information.



Plug the 4250 and the TV into an AC power source.

Important: To protect the set-top from power surge damage, ground (earth) your cable product to provide some protection against voltage surges and built-up static charges. To avoid these voltage surges that can be caused by lightning storms and power outages, plug the set-top into a surge protector to reduce the risk of damage.



Do not turn on the 4250 or TV yet.



It may take several minutes for the 4250 to receive the latest software, programming, and service information. Wait until you see one of the following displays on the front panel of the 4250 that indicates that the update is complete:

- Current time
- Four dashes (- - - -)

Note: If four dashes are displayed, your 4250 is not authorized. Call your cable service provider.



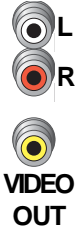


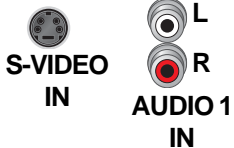


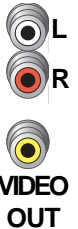
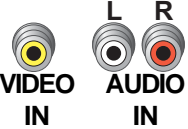


To begin watching TV, turn the TV on, and press POWER on the front panel of the 4250 or on the remote control.

Connections for a Standard-Definition TV and VCR

When using the 4250 with an SDTV, you must make one of the following connections to view content. Some SDTVs may not have all of these connections. In addition, you can make connections to a VCR to archive recordings to a VCR tape. Refer to your TV and VCR user's guide and the cabling diagrams in this guide for more information.

Note: The labeling on your 4250 may vary from the labels shown in the following table.

Required Connections to an SDTV (choose one)			
Cable Out	The Cable Out connection provides both a video and a stereo audio connection to an SDTV. See page 12 for an example.	 CABLE OUT	 CABLE/ANTENNA
Video	The Video Out connection provides video to an SDTV. The left and right audio outputs provide stereo sound. These connections generally provide a higher-quality signal than the standard Cable Out connection. See page 12 for an example.	 VIDEO OUT	 AUDIO 1 IN VIDEO IN
S-Video	The S-Video out connection provides optimal video to an SDTV. The left and right audio outputs provide stereo sound.	 S-VIDEO OUT	 S-VIDEO IN AUDIO 1 IN
Optional Connections		4250 Connections	VCR Connections
VCR	The Cable Out connection provides the video and stereo audio connection to the VCR. See page 13 for an example.	 CABLE OUT	 CABLE/ANTENNA
Stereo VCR	For VCRs that have Video and Left and Right audio connectors, you can use the OUT 2 connectors (Video, Left, and Right) on the 4250. These connections generally provide a higher-quality signal than the standard Cable Out connection. See page 13 for an example.	 VIDEO OUT	 VIDEO IN AUDIO IN

Performance Tips

If the 4250 does not perform as expected, the following tips may help. If you need further assistance, contact your cable service provider.

No Picture

- Verify that the power to your TV is turned on.
- If the 4250 is plugged into a wall switch, verify the wall switch is in the ON position.
Note: You should *avoid* plugging the 4250 into an outlet that is controlled by a wall switch.
- Verify that all cables are properly connected.
- If your system includes a VCR or stereo, verify that you have properly connected them to the 4250.

No Color

- Verify that the current TV program is broadcast in color.
- Adjust the TV color controls.
- Verify that the TV is set to the proper input channel.

No Sound

- If your setup includes a stereo, verify that you have properly connected it to the 4250.
- Verify that the volume is turned up.
- Verify that the mute function is not engaged.
- Check your secondary audio programming (SAP) settings.

Automatic Software Updates

The TV screen may display a message that indicates the 4250 is automatically updating its software. Should this occur, wait for the time to display on the front panel of your 4250 before continuing. When the front panel displays the time, the update is complete.

Frequently Asked Questions

Where Are the Connection Diagrams?

The diagrams are on pages 12 through 14 of this guide. The diagrams show examples of common ways to connect the 4250 to your TV, VCR, and home theater receiver. However, these diagrams do not show every possible combination of devices. Refer to the user's guides that came with your other electronic devices for further information.

The online Explorer eClub also provides connection diagrams for the 4250. See **The Explorer eClub** on page 6 for more information.

What Cables Do I Need?

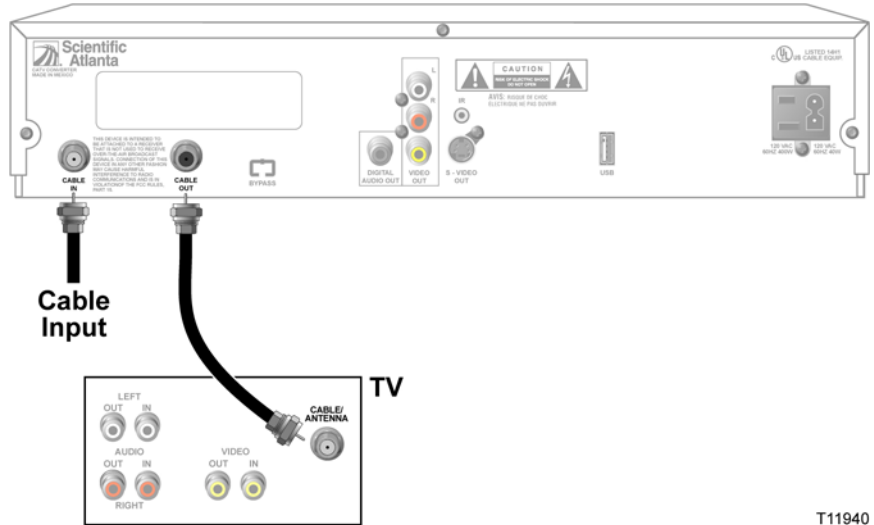
The connection diagrams in this guide indicate which kind of cables are required for each connection. Some of the cables and adaptors shown in the diagrams may not be included with the 4250.

Connection Diagrams

Connecting the 4250 to a TV

WARNING:
Electric shock hazard!
Unplug all electronic
devices before
connecting or discon-
necting any device
cables for the 4250.

Explorer 4250

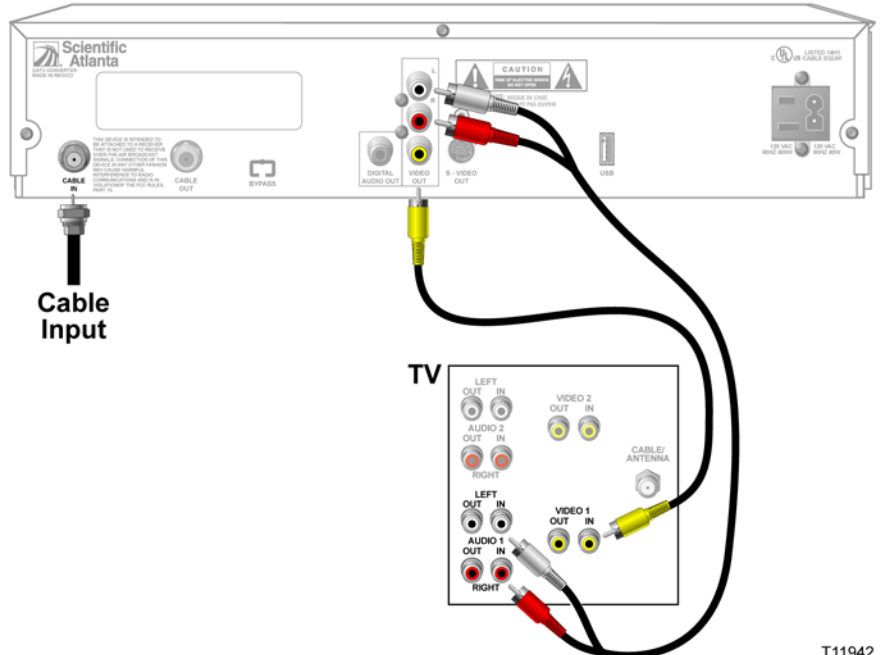


T11940

Connecting the 4250 to a TV Using Video Out and Audio Out

WARNING:
Electric shock hazard!
Unplug all electronic
devices before
connecting or discon-
necting any device
cables for the 4250.

Explorer 4250

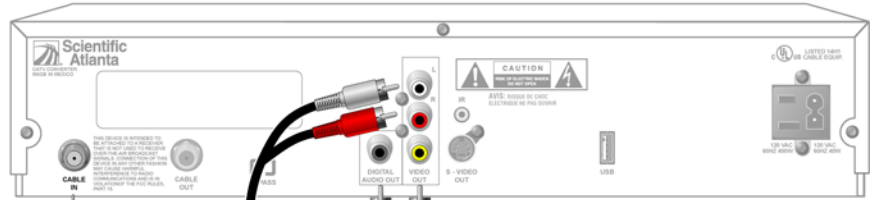


T11942

Connecting the 4250 to a Home Theater Receiver and TV

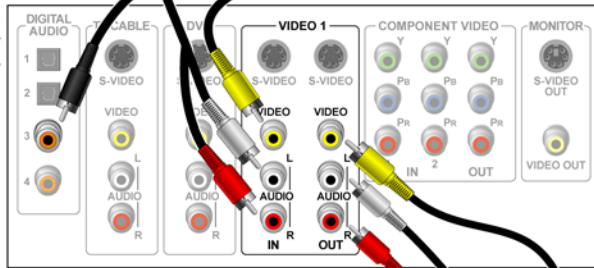
Explorer 4250

 **WARNING:**
Electric shock hazard!
Unplug all electronic
devices before
connecting or discon-
necting any device
cables for the 4250.

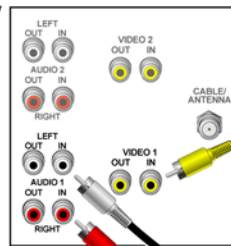


**Cable
Input**

**Home
Theater
Receiver**



TV



T11944

Compliance Information

United States FCC Compliance

This equipment has been tested and found to comply with the applicable limits of 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 or TV 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:

- 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 your cable company or an experienced radio/TV technician for help

Any changes or modifications not expressly approved by Scientific-Atlanta could void the user's authority to operate the equipment.

Important: The information shown in the FCC Declaration of Conformity paragraph below is a requirement of the FCC and is intended to supply you with information regarding the FCC approval of this device.

The phone numbers listed are for FCC-related questions only and not intended for questions regarding the connection or operation for this device. Please contact your cable service provider for any questions you may have regarding the operation or installation of this device.

FCC Declaration of Conformity

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 received, including interference that may cause undesired operation.

EXPLORER® 4250
Digital Home Communications Terminal:
Model 4250
Manufactured by: Scientific-Atlanta, Inc.;
5030 Sugarloaf Parkway;
Lawrenceville, Georgia 30044; USA
Telephone **770-236-1077**

Canada EMI Regulation

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la class B est conforme à la norme NMB-003 du Canada.

Software and Firmware Use

Scientific-Atlanta, Inc. owns copyrights to the software included in your set-top and furnishes the software to your cable service provider under a license agreement. You may only use or copy this software in accordance with the terms of your cable service provider.

Scientific-Atlanta, Inc. owns copyrights to the firmware in this equipment. You may only use the firmware in the equipment in which it is provided. Any reproduction or distribution of this firmware, or any portion of it, without the express written consent of Scientific-Atlanta, Inc. is prohibited.

Trademarks

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Disclaimer

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Lawrenceville, GA 30042

www.scientificatlanta.com

Part Number 4009374 Rev A