

EXPLORER® 2100 or 3100

Digital Home Communications Terminals



IMPORTANT RULES FOR SAFE OPERATION

Note to the Installer

Note to System Installer (U.S.A. and Canada Only)

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.



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.



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.

WARNING

TO PREVENT FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE.



This symbol is intended to alert you of the presence of important operating and maintenance (servicing) instructions in the literature accompanying this product.

Read and Retain These Instructions

- Read all of the instructions before you operate this equipment. Give particular attention to all safety precautions. Retain the instructions for future reference.
- Comply with all warning and caution statements in the instructions. Observe all warning and caution symbols that are affixed to this equipment.
- Comply with all instructions that accompany this equipment.

IMPORTANT RULES FOR SAFE OPERATION, continued

Cleaning the Equipment

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

Placement

Place this equipment in a location that is close enough to an electrical outlet to accommodate the length of the power cord. Place this equipment on a stable surface. The surface must support the size and weight of this equipment.



WARNING: Avoid personal injury and damage to this equipment. An unstable surface may cause this equipment to fall.

Accessories

Do not use accessories with this equipment unless recommended by your cable company.

Ventilation

This equipment has openings for ventilation that protect it from overheating. To ensure the reliability of this equipment, do not obstruct the openings.

- Do not place other equipment, lamps, books, or any other object on the top of this equipment.
- Do not place this equipment in any of the locations that follow:
 - On a bed, sofa, rug, or similar surface
 - Over a radiator or a heat register
 - In an enclosure, such as a bookcase or equipment rack, unless the installation provides proper ventilation



WARNING: Avoid electric shock and fire hazard. Never push objects through the openings in this equipment. Objects can touch dangerous voltage points or cause electrical shorts that can result in electric shock or fire.

IMPORTANT RULES FOR SAFE OPERATION, continued

Operating Environment

This product is designed for operation indoors with a temperature range from 32° to 104° F (0° to 40° C). Each product should have adequate spacing on all sides so that the cooling air vents on the chassis are not blocked.

Liquid or Moisture

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

Lightning and Power Surges

Ground (earth) your cable system to provide some protection against voltage surges and built-up static charges. If you have questions, call your cable company.

Servicing

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

Power Cord Protection

Arrange all power cords so that people cannot walk on the cords, place objects on the cords, or place objects against the cords, which can damage the cords. Pay particular attention to cords that are at plugs, at electrical outlets, and at the places where the cords exit the equipment.

Power Sources

A label on this equipment indicates the correct power source for this equipment. Operate this equipment only from an electrical outlet that has the voltage and frequency that the label indicates.

If you are unsure of the type of power supply to your residence, consult Cisco Systems, Inc., or your local power company.



WARNING: Avoid electric shock and fire hazard. Do not overload electrical outlets and extension cords. For equipment that requires battery power or other sources to operate, refer to the operating instructions for that equipment.

IMPORTANT RULES FOR SAFE OPERATION, continued

Grounding

This equipment has a two-prong plug. Properly ground (earth) this equipment by inserting the plug into a grounded electrical, two-socket outlet. If this plug is polarized it has one wide prong and one narrow prong. This plug fits only one way.



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

If you are unable to insert this plug fully into the outlet, contact an electrician to replace your obsolete outlet.

Damage that Requires Service

For damage that requires service, unplug this equipment from the electrical outlet. Refer service to qualified service personnel when any of the following occurs:

- There is damage to the power cord or plug
- Liquid enters the equipment
- A heavy object falls on the equipment
- There is exposure to rain or water

- Operation is not normal (the instructions describe the proper operation)
- If you drop this equipment, or damage the cabinet of this equipment
- If this equipment exhibits a distinct change in performance

Upon completion of any service or repairs to this equipment (home terminal), ask the service technician to perform safety checks to determine that the equipment is in proper operating condition.

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Using This Guide

Important Messages

Please read this entire guide before you install or operate this equipment. Look for the following safety symbol throughout this guide:



Read the caution or warning that appears with each safety symbol throughout this guide.



CAUTION: Do not place a magnet, or any type of magnetic/static dust removal device on or near this equipment. Magnetic/static devices may affect the operation of this equipment.

Introducing the Explorer 2100 and 3100 DHCTs

The Explorer® 2100 and 3100 Digital Home Communications Terminals (DHCTs) are converters that can view analog and digital signals. The Explorer 2100 and 3100 DHCTs provide exceptional picture quality and an Interactive Program Guide (IPG)—an interactive, on-screen browsing and program-selecting menu.

This guide provides diagrams of the front and back panels of the DHCT, diagrams for connecting the DHCT to other electronic devices, basic instructions for using the DHCT, and troubleshooting tips for proper operation.

Getting Started

Installation Overview

The following list provides an overview of the installation process.

1. Determine the electronic devices you must connect using the information on page 9.
2. Connect the DHCT and your electronic devices using the diagrams in this guide, based upon the information on page 9.
3. Plug in the DHCT to an AC power source, but do not press the Power key on the DHCT.
4. Set the input channel (3 or 4) on your TV and VCR.
5. Wait for the time to display on the front-panel display. Then, press the **Power** on the DHCT. **See page 28** for detailed instructions.
6. Program your remote control to operate your TV and VCR. (See your remote control user's guide.)
7. Use the IPG to browse and view your program preferences. (See the IPG user's guide.)

Installation Tips

Follow these tips for proper DHCT operation:

- Do not plug the DHCT into a wall outlet that is controlled by a wall switch. The IPG data does not update when the outlet is switched to the off position.
- You can plug your TV into the AC Switched Outlet on the back of the DHCT.
- To ensure proper ventilation, do not place any objects on top of the DHCT, including devices such as your TV.
- If your TV is equipped with a picture-in-picture (PIP) feature, see the connection diagram on page 13.

Selecting Your Connection Diagrams

Introduction

This section provides a list of electronic devices that connect to your DHCT. The **Optional Devices** list includes devices that may be required for specific combinations of viewing and listening preferences. The **TV and VCR Setup** table includes the audio and video options (non-stereo, stereo, and S-Video) on your TV and VCR. Identify all of your devices, then go to the page number shown and use the diagrams and instructions to connect your devices to the DHCT.

Optional Devices

Some optional devices must be installed to provide specific sound and viewing preferences. Review the list and go to the page shown for instructions on connecting the device in your system.

- VHF Transformer for non-cable-ready TV 12
- Connecting a VCR Commander Module 12
- RF Splitter for PIP viewing 13
- RF Bypass Module for viewing cable programming while recording premium programming 14

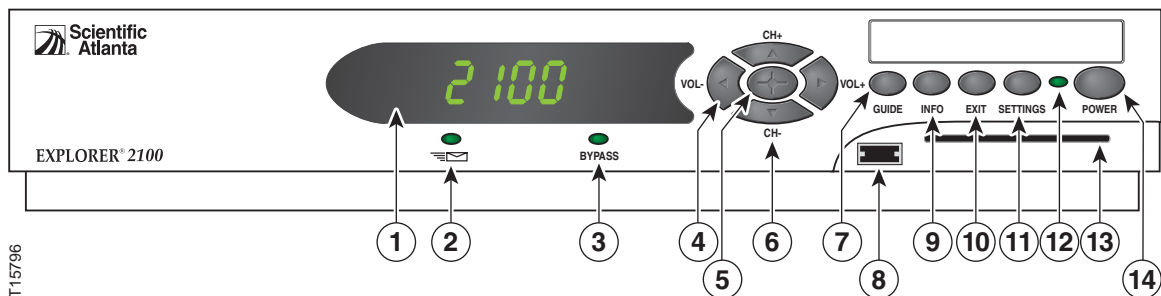
- Digital Audio Decoder for surround sound 16
- Stereo Receiver or Amplifier for using external speakers 25 or 26
- Home Theatre Receiver for using external speakers 27

TV and VCR Setup

Use the table below to find the page number of the connection diagrams for your style of TV and VCR. Find your TV style in the left column and find your VCR style across the top row. The intersection of the row and column contains the page number of the connection diagram for your specific TV and VCR.

	VCR None	VCR Stereo	VCR Non-Stereo	VCR with S-Video Input
TV Stereo	18	22	21	n/a
TV Non-Stereo	17	20	19	n/a
TV with S-Video Input	23	n/a	n/a	24

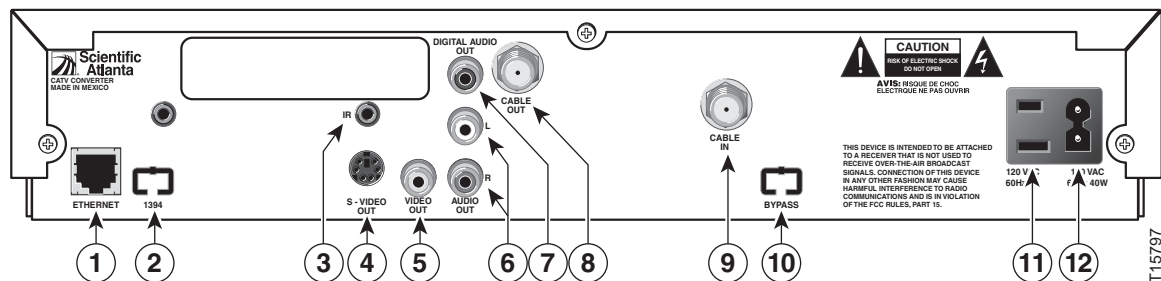
Explorer 2100 or 3100 DHCT Front Panel



- | | |
|----------------------------|--|
| 1 Display | Displays the channel numbers and time of day |
| 2 Message indicator | Indicates a message is waiting blinking or illuminated |
| 3 Bypass indicator | Indicates optional bypass feature is on when illuminated |
| 4 VOL- and VOL+ | Increases or decreases volume |
| 5 Select | Confirms or accesses on-screen options |
| 6 CH- or CH+ | Scrolls up or down through the channels |
| 7 Guide | Accesses on-screen, Interactive Program Guide (IPG) |

- | | |
|----------------------|---|
| 8 USB | Connects to external equipment (Universal Serial Bus) |
| 9 Info | Accesses program information |
| 10 Exit | Exits menus, guide, or program information |
| 11 Settings | Accesses Settings menu |
| 12 Power LED | Illuminates when power is on |
| 13 Smart card | Allows smart card access slot |
| 14 Power | Activates the functions of the DHCT |

Explorer 2100 or 3100 DHCT Back Panel



Note: The back panel of your DHCT may vary slightly.

1 Ethernet

Connect an Ethernet-equipped computer, optional

2 1394

Connect optional 1394-equipped devices

3 IR Port

Connect optional VCR Commander™ module

4 S-Video Out

Connect to S-Video input of TV or VCR

5 Video Out

Connect to video input of TV or VCR

6 Audio Out

Connect to left/right (L/R) audio channels of a stereo receiver or a TV with stereo sound

7 Digital Audio Out

Connect external digital surround-sound receiver

8 Cable Out

Connect to cable input of TV or VCR

9 Cable In

Connect to cable signal from cable service provider

10 Bypass

Connect an optional RF Bypass module

11 AC Switched Outlet

Connect the AC power cord from another device, such as a TV

12 AC Power Input

Connect the DHCT to an AC electrical outlet

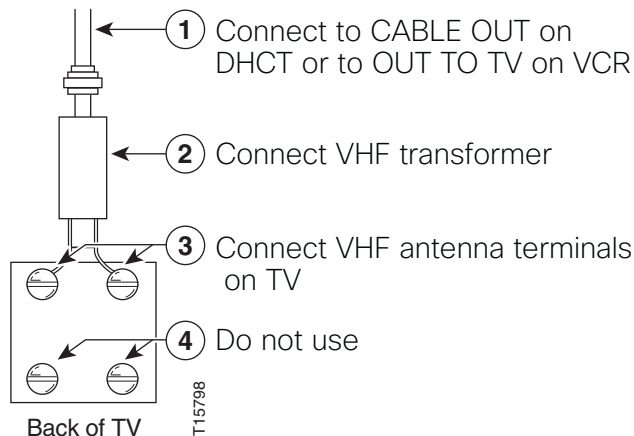
Optional Devices

Connecting a VHF Transformer for Non-Cable-Ready TV

If your TV is not cable ready, follow these steps to connect a VHF transformer.

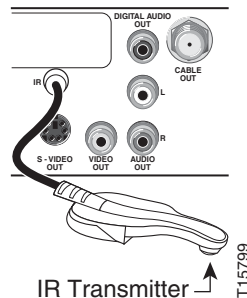
After you connect the transformer, your TV is considered “cable ready” and you can connect additional electronic devices to your TV and the DHCT.

Continue with connecting your TV to the DHCT and any other devices in system.

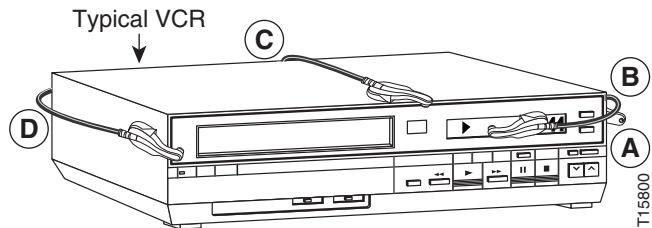


Connecting a VCR Commander Module

The VCR Commander Module is a device consisting of an infrared (IR) transmitter and cable that allows you to use the IPG (on-screen menu) for selecting the programs you want to record. You do not have to set your VCR separately. Your VCR automatically begins recording the program you selected at the set time and channel.



After connecting the VCR Commander Module to your DHCT, place the IR transmitter in one of the four locations shown in the following diagram.



Contact your cable service provider for additional information about the VCR Commander Module.

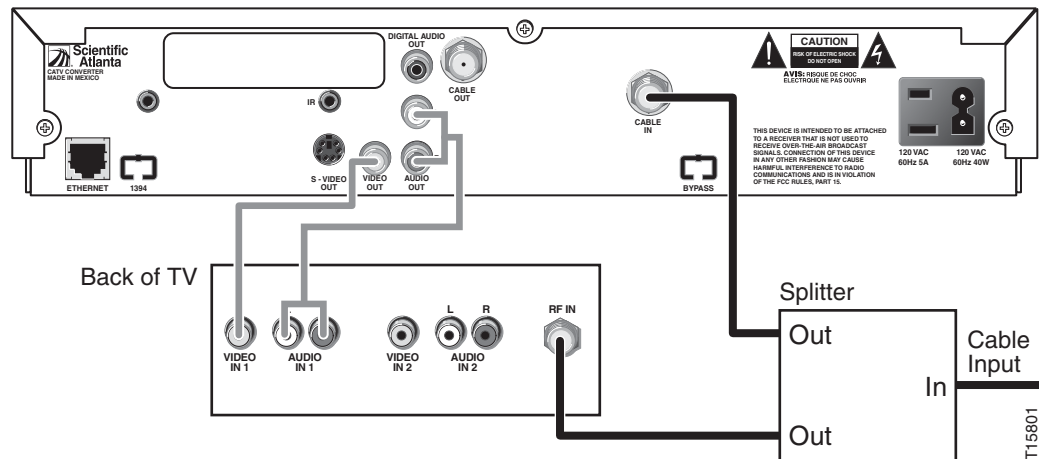
Optional Devices, continued

Connecting a TV with the PIP Feature to a Signal Splitter

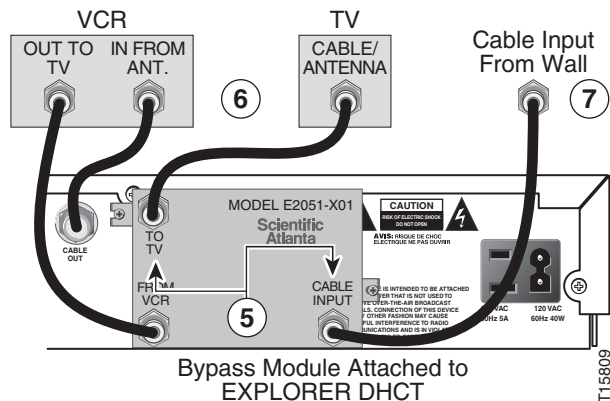
Required Cables

- 1 — Set of Video/
Stereo Audio Cables
- 2 — 75 Ω Coaxial Cables

Explorer 2100 or 3100 DHCT



Optional Devices, continued



- 5** Align the mounting tabs with the screw holes. Tighten the screws; do not overtighten.
- 6** Connect to your TV and VCR.
- 7** Connect your cable input from the wall.
- 8** Connect any additional devices, if applicable.
- 9** Do you have other devices to connect?
 - If **yes**, see **page 9** to locate other connection diagrams appropriate for your system.
 - If **no**, plug in the power cord to an AC power outlet.

Activating and Deactivating RF Bypass

If your remote control includes a Bypass key, follow these instructions to use the Bypass feature.

To activate the Bypass feature, press the **Bypass** key. The Bypass indicator illuminates on the DHCT.

Notes:

- You can only view *analog* channels; digital channels are not available while the Bypass feature is active. (Verify with your cable service provider which channels are analog and which channels are digital.)
- Use the Bypass key to toggle the feature on and off.

To *deactivate* the Bypass feature:

1. Press the **Bypass** key on the remote control. The Bypass indicator no longer illuminates on the Explorer DHCT.
2. Tune your TV using one of the following methods:
 - If the TV/VCR switch on your VCR is in the **VCR** position, you must tune your TV to the VCR output channel (channel 3 or 4). You can view a tape, or you can view the channel to which the Explorer DHCT is tuned.
 - If the TV/VCR switch on your VCR is in the **TV** position, you must tune your TV to the Explorer DHCT's output channel (channel 3 or 4). You can *only* view programs from the Explorer DHCT, regardless of what your VCR is playing.

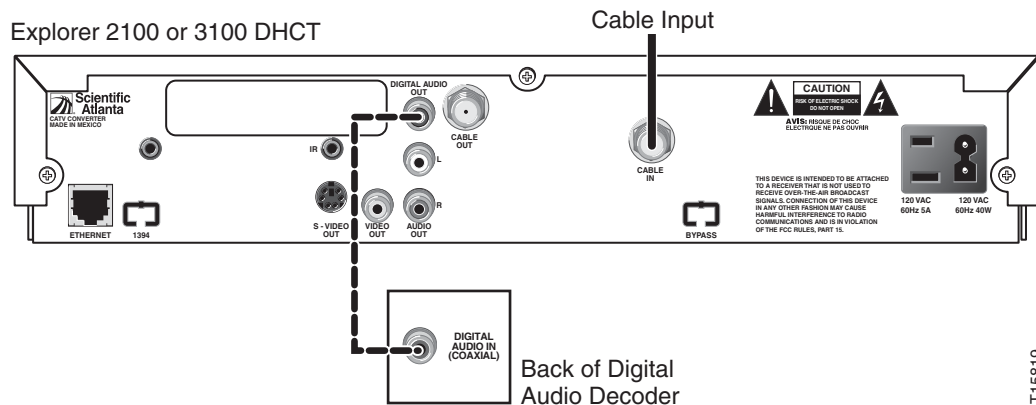
Optional Devices, continued

Connecting a Digital Audio Decoder

Required Cables

- 1 --- 75 Ω Digital Audio Coaxial Cable

Note: See page 9 to locate additional connection diagrams appropriate for your system.



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Connection Diagrams

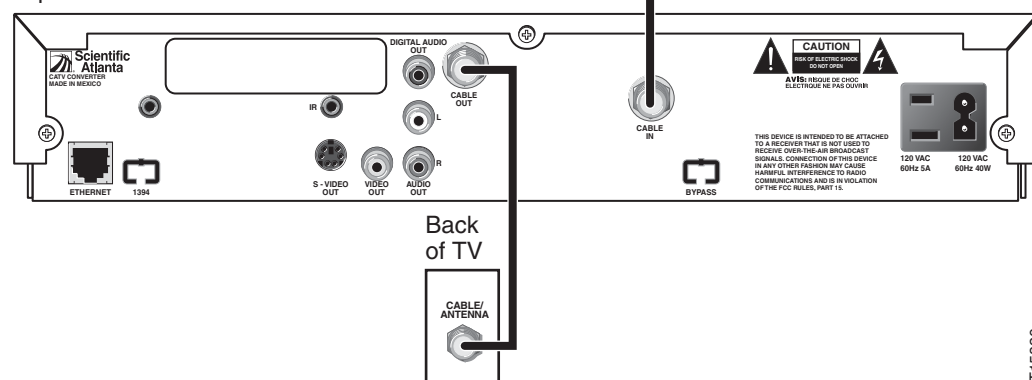
Connecting a Non-Stereo TV

Required Cables

1 — 75 Ω Coaxial Cable

Note: Audio output from the DHCT CABLE OUT is monaural (non-stereo).

Explorer 2100 or 3100 DHCT



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Connection Diagrams, continued

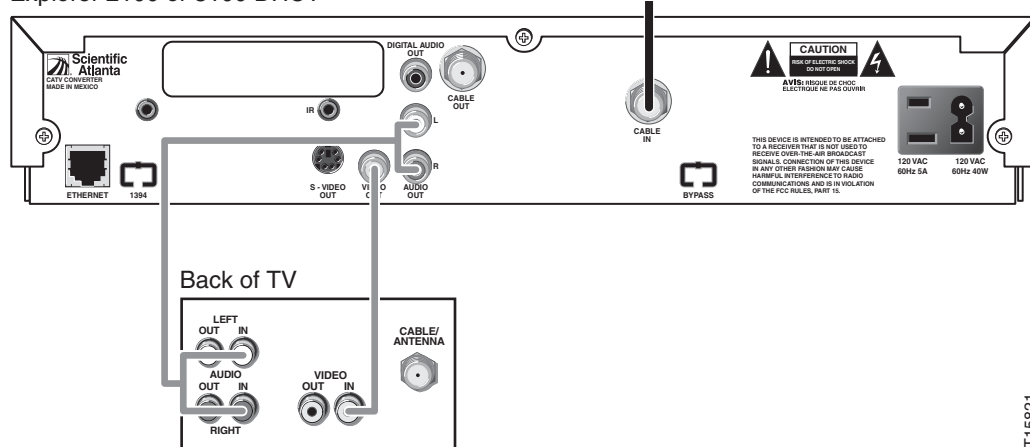
Connecting a Stereo TV

Required Cables

- 1 — Set of Video/
Stereo Audio Cables

Explorer 2100 or 3100 DHCT

Cable Input



T15821

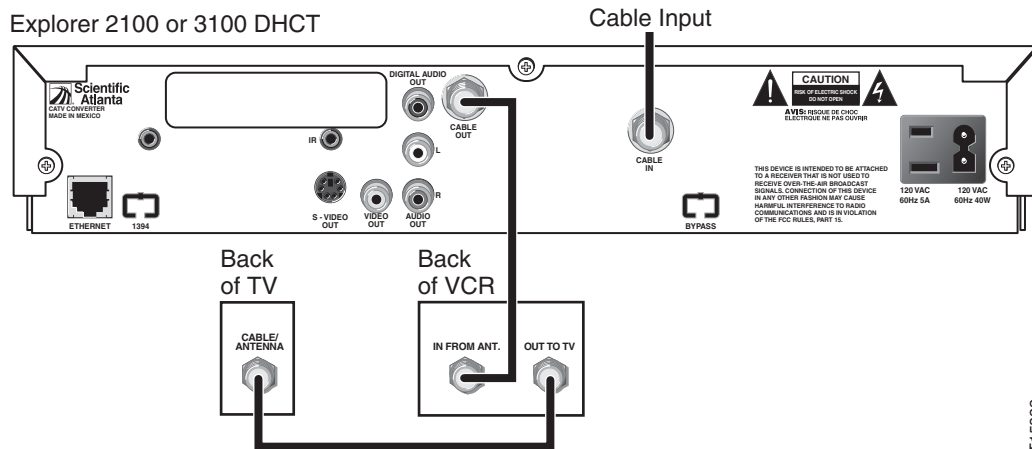
Connection Diagrams, continued

Connecting a Non-Stereo TV and a Non-Stereo VCR

Required Cables

2 — 75 Ω Coaxial Cables

Notes: Audio output from the DHCT CABLE OUT is monaural (non-stereo).



T15822

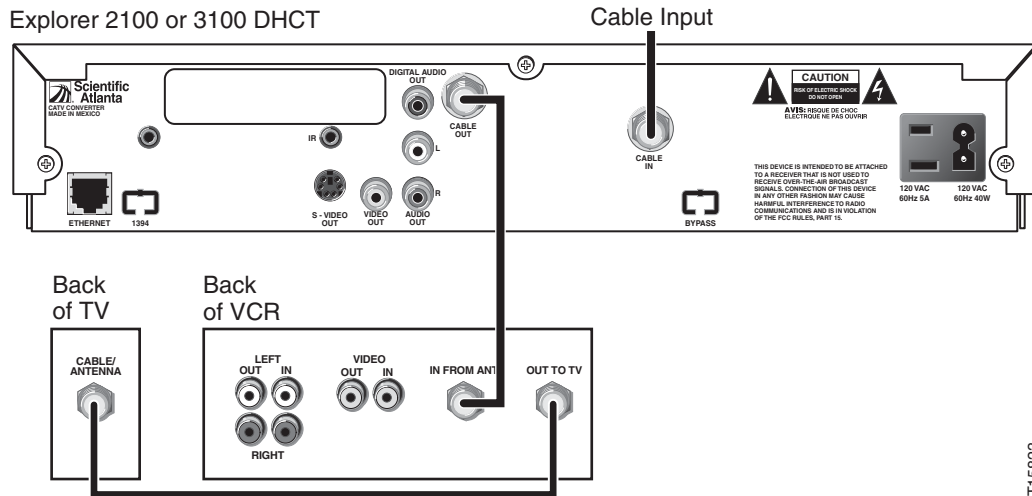
Connection Diagrams, continued

Connecting a Non-Stereo TV and Stereo VCR

Required Cables

2 — 75 Ω Coaxial Cables

Note: This setup provides monaural (non-stereo) sound only. To listen to stereo sound, you must add a device with stereo speakers.



T15823

Connection Diagrams, continued

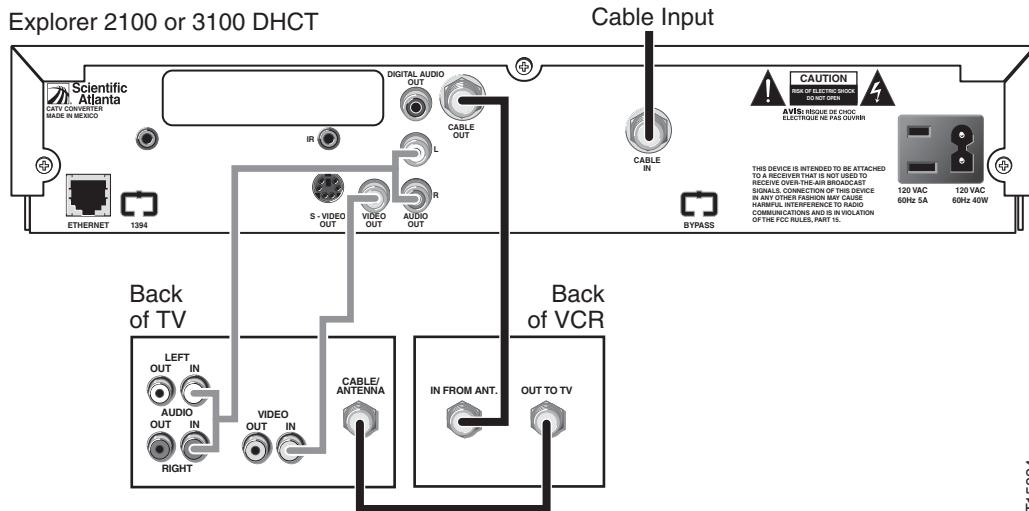
Connecting a Stereo TV and Non-Stereo VCR

Required Cables

- 1 — Set of Video/
Stereo Audio Cables
- 2 — 75 Ω Coaxial Cables

Notes:

- If you connect to S-VIDEO OUT, you must connect the LEFT and RIGHT AUDIO OUT on the DHCT to the LEFT and RIGHT AUDIO IN connectors on your TV, VCR, or stereo. (This diagram shows a stereo TV connection.)
- Audio output from the DHCT CABLE OUT is monaural (non-stereo).
- Audio output from the DHCT AUDIO OUT LEFT and RIGHT is stereo.



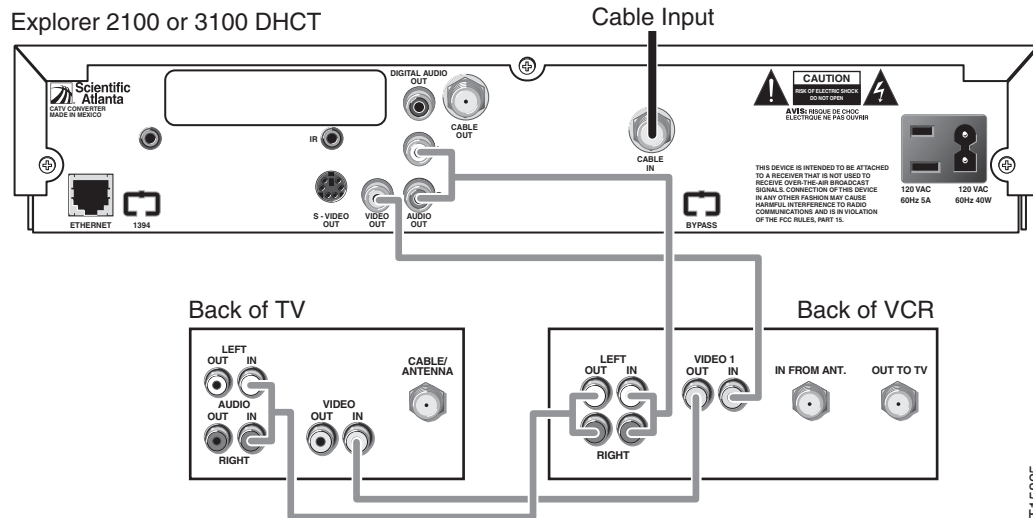
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Connection Diagrams, continued

Connecting a Stereo TV and Stereo VCR

Required Cables

2 — Sets of Video/
Stereo Audio Cables



T15825

Connection Diagrams, continued

Connecting a Stereo TV with S-Video Input

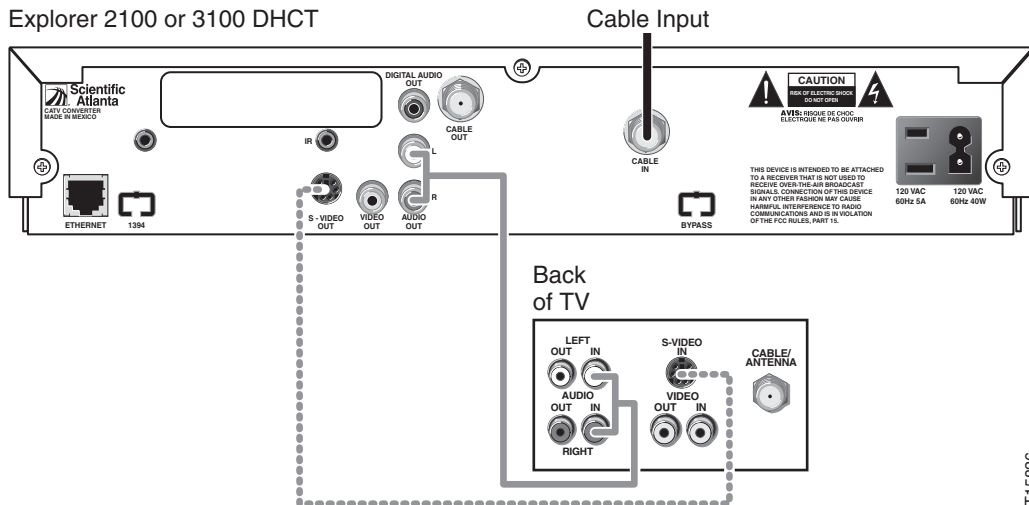
Required Cables

- 1 S-Video Cable
- 1 — Stereo/Audio Cable

Notes:

- If you connect to S-VIDEO OUT, you must also connect the LEFT and RIGHT AUDIO OUT on the DHCT to the LEFT and RIGHT AUDIO IN connectors on your TV, VCR, or stereo.
- **See page 9** to locate other connection diagrams appropriate for your system.

Explorer 2100 or 3100 DHCT



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Connection Diagrams, continued

Connecting a Stereo TV and Stereo VCR with S-Video Input

Required Cables

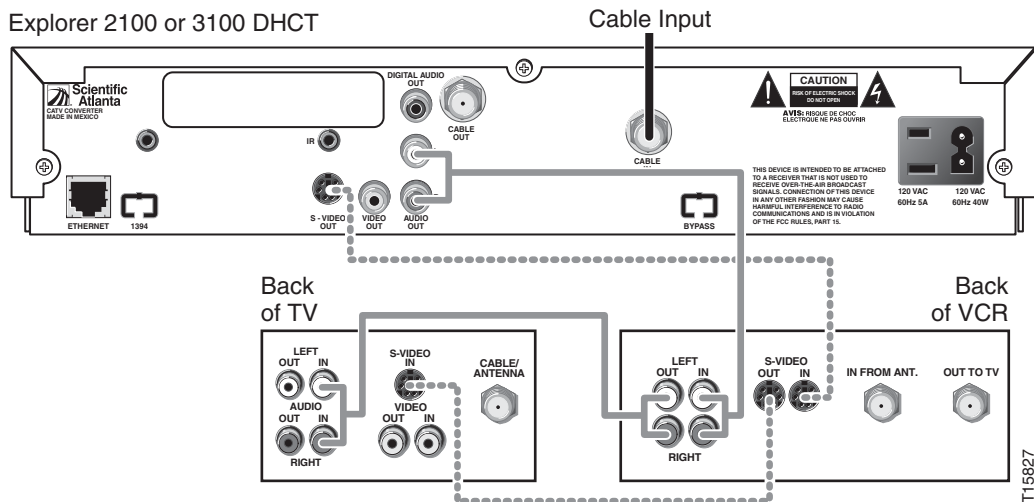
2 S-Video Cables

2 — Stereo/Audio Cables

Notes:

- If you connect to S-VIDEO OUT, you must connect the LEFT and RIGHT AUDIO OUT on the DHCT to the LEFT and RIGHT AUDIO IN connectors on your TV, VCR, or stereo.
- **See page 9** to locate other connection diagrams appropriate for your system.

Explorer 2100 or 3100 DHCT

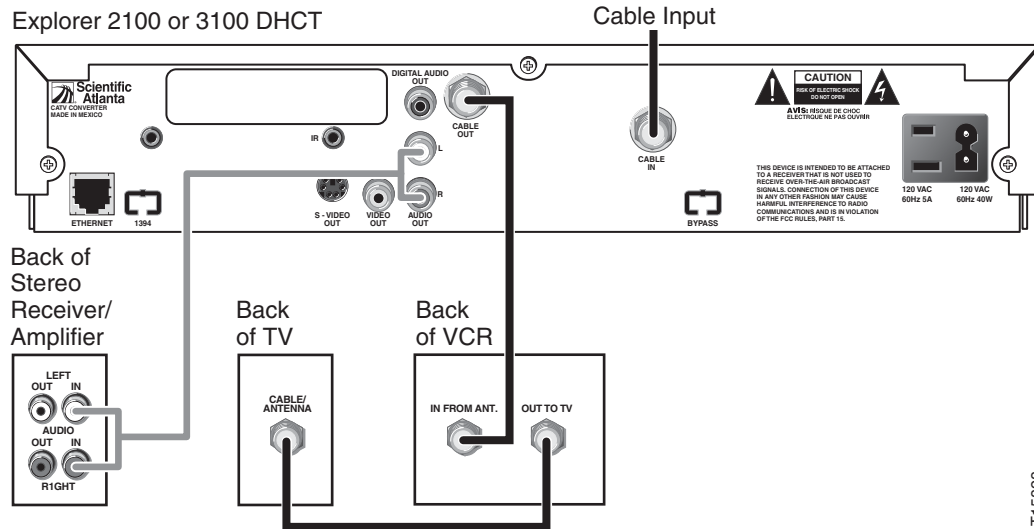


Connection Diagrams, continued

Connecting a Non-Stereo TV, Non-Stereo VCR, and Stereo Receiver or Amplifier

Required Cables

- 1 — Stereo/Audio Cable
- 2 — 75 Ω Coaxial Cables



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Connection Diagrams, continued

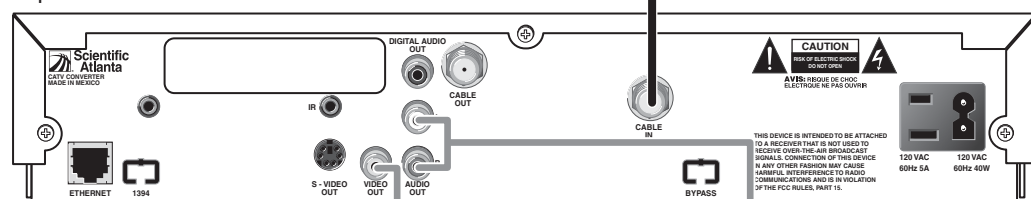
Connecting a Stereo TV, Stereo VCR, and Stereo Receiver or Amplifier

Required Cables

- 2 — Sets of Video/
Stereo Audio Cables
- 1 — Stereo/Audio Cable_

Explorer 2100 or 3100 DHCT

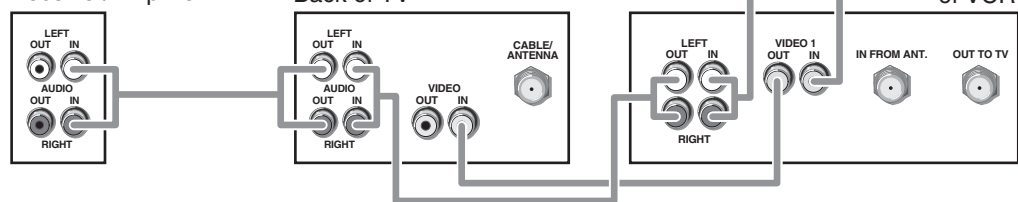
Cable Input



Back of Stereo
Receiver/Amplifier

Back of TV

Back
of VCR



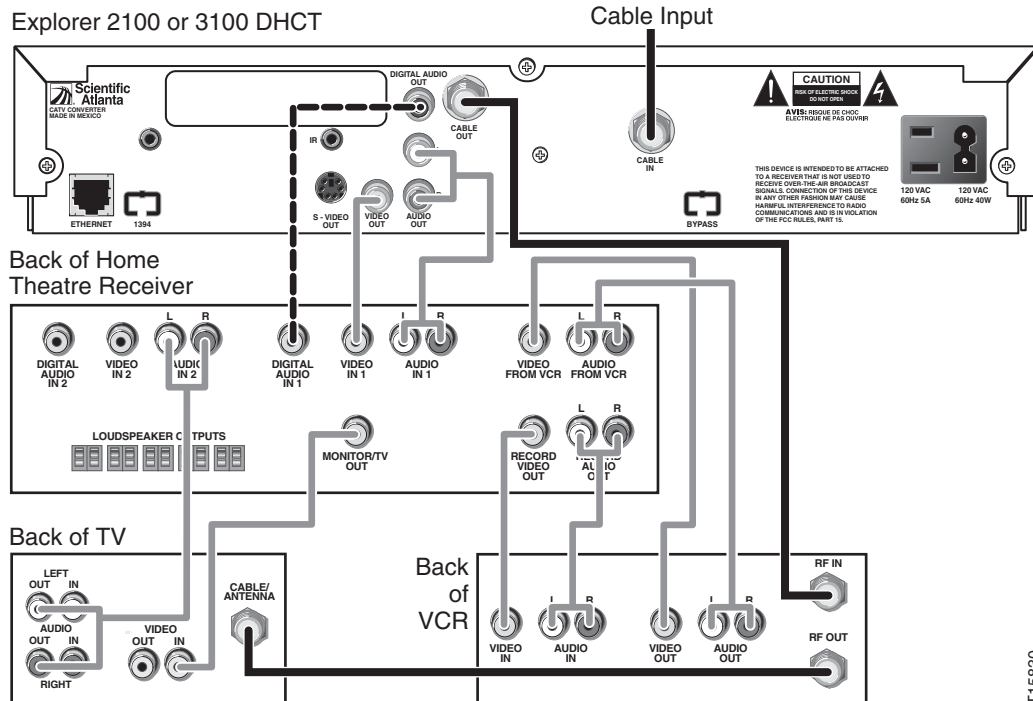
T15829

Connection Diagrams, continued

Connecting a Stereo TV, Stereo VCR, and Home Theatre Receiver

Required Cables

- 4 — Sets of Video/
Stereo Audio Cables
- 1 — 75 Ω Digital Audio
Coaxial Cable
- 2 — 75 Ω Coaxial Cables



Using the DHCT

Connecting the DHCT

After you connect the DHCT and any additional electronic devices in your system, follow these steps:

1. Verify that the DHCT is connected to the 75 Ω coaxial cable coming from the wall.
2. Plug the DHCT and other devices into your AC power source.
Important: Do *not* press the Power key on the DHCT.
3. Turn on the power to your TV and VCR, and tune your TV and VCR to the input channel assigned by your cable service provider (channel 3 or 4).
4. Wait for the time to display on the LED.
5. Press the **Power** key on the DHCT.
6. Program your remote control to operate your TV and VCR. (For instructions see your remote control user's guide.)

Operating the DHCT

Choose one of the following options to operate the DHCT:

- Press the **Power** key on the front panel of the DHCT.
- Use your remote control keys. (Refer to your remote control user's guide for instructions on which key or combination of keys to press.)

Control the volume, select channels, select on-screen functions, and change settings using the keys on the front panel of the DHCT or the remote control keys.

Using the IPG, Remote Control, and VCR Commander Module

Read the users' guides that your cable service provider included with the DHCT installation package. These guides provide the set-up and operating instructions for the IPG (on-screen menu), your remote control, and the VCR Commander Module (if available).

Tips for Improved Performance

Check and Correct

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

No picture

- Plug your TV and DHCT into an electrical outlet that is not controlled by a wall switch.
- Verify that all cables are properly connected.
- Verify that the power to your TV is turned on.
- If your system includes a VCR and/or stereo, verify that you have properly connected them to the DHCT.
- Verify that your TV is tuned to the proper output channel (3 or 4).
- Verify that the Bypass feature is disabled. See **Using an RF Bypass Module** for more information.

Distorted picture

- Verify that all cables are properly connected.
- Adjust the TV to channel 3 or 4.

No sound

- Verify that the plug to your TV and DHCT is properly inserted into an electrical outlet.
- Verify that all cables are properly connected.
- Verify that the power to your TV is on.
- If your setup includes a VCR and/or stereo, verify that you have properly connected them to the DHCT.
- Verify that your TV is tuned to the proper output channel (3 or 4).
- Verify that the volume is turned up.
- Verify that the Bypass feature is disabled. See **Using an RF Bypass Module** for more information.

No color

- Make sure the current TV program is broadcast in color.
- Adjust the TV color controls.

Tips for Improved Performance, continued

DHCT does not work

- Verify that the DHCT is properly plugged into an electrical outlet that is not controlled by a wall switch.
- Verify that all cables are properly connected.
- If the electrical outlet is controlled by a wall switch, make sure the switch is in the ON position.

Channel banner displays ??? (question marks) instead of the channel number

- Press the **INFO** key on the remote control. You may have pressed the Power key before all of the data for the IPG was received by the DHCT.

TV screen displays a message indicating that the DHCT is automatically updating its software

- Wait for the time to display on the LED before continuing with your installation process.

Notices

Disclaimer

Cisco Systems, Inc. assumes no responsibility for errors or omissions that may appear in this guide. Cisco reserves the right to change this guide at any time without notice.

Software and Firmware Use

The software described in this document is protected by copyright law and furnished to you under a license agreement. You may only use or copy this software in accordance with the terms of your license agreement.

The firmware in this equipment is protected by copyright law. 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 our express written consent is prohibited.

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 Cisco 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 FCC Rules*.

Operation is subject to the following two conditions:

- 1) the device may not cause harmful interference, and
- 2) the device must accept any interference received, including interference that may cause undesired operation.

EXPLORER® Digital Home Communications Terminal
Models: E2100 and E3100

Manufactured by: Cisco Systems, Inc.
5030 Sugarloaf Parkway
Lawrenceville, Georgia 30044 USA
Telephone: **678 277-1120**

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.



Cisco Systems, Inc.

5030 Sugarloaf Parkway, Box 465447
Lawrenceville, GA 30042

678 277-1120
800 722-2009
www.cisco.com

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