Cisco Explorer 1540C and 1542C Digital-Only Interactive Set-Tops with Multi-Stream CableCARD Interface

Notice to Installers

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

Note to System Installer

For this apparatus, the coaxial cable shield/screen shall be grounded as close as practical to the point of entry of the cable into the building. For products sold in the US and Canada, this reminder is provided to call the system installer's attention to Article 820-93 and Article 820-100 of the NEC (or Canadian Electrical Code Part 1), which provides guidelines for proper grounding of the coaxial cable shield.

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.

Ce symbole a pour but d'alerter toute personne qu'un contact avec une pièce interne de ce produit, sous tension et non isolée, pourrait être suffisant pour provoquer un choc électrique. Il est donc dangereux d'être en contact avec toute pièce interne de ce produit.

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN

AVIS
RISQUE DE CHOC ÉLECTRIQUE
NE PAS OUVRIR

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.

Ce symbole a pour but de vous avertir qu'une documentation importante sur le fonctionnement et l'entretien accompagne ce produit.

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Contents

IMPORTANT SAFETY INSTRUCTIONS

1) **Read these instructions.**
2) **Keep these instructions.**
3) **Heed all warnings.**
4) **Follow all instructions.**
5) **Do not use this apparatus near water.**
6) **Clean only with dry cloth.**
7) **Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.**
8) **Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.**
9) **Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding-type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.**
10) **Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.**
11) **Only use attachments/accessories specified by the manufacturer.**
12) **Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.**
13) **Unplug this apparatus during lightning storms or when unused for long periods of time.**
14) **Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as a power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.**

Power Source Warning

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 service provider or your local power company.

The AC inlet on the unit must remain accessible and operable at all times.

Ground the Product

WARNING: Avoid electric shock and fire hazard! If this product connects to coaxial cable wiring, be sure the cable system is grounded (earthed). Grounding provides some protection against voltage surges and built-up static charges.
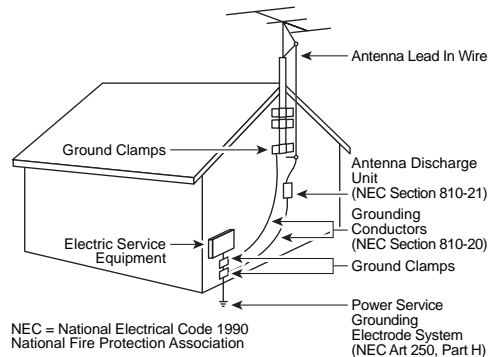
Outdoor Grounding System

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)

WARNING: Avoid electric shock and fire hazard! Do not locate an outside antenna system in the vicinity of overhead power lines or power circuits. Touching power lines or circuits might be fatal.

Antenna Lead In Wire

Ground Clamps

Antenna Discharge Unit (NEC Section 810-21)

Grounding Conductors (NEC Section 810-20)

Ground Clamps

Electric Service Equipment

Power Service Grounding Electrode System (NEC Art 250, Part H)

NEC = National Electrical Code 1990 National Fire Protection Association

TO CATV INSTALLER
This reminder is provided to call the CATV system installer's attention to Article 820-40 of the National Electrical Code (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 entry as practical.

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Protect the Product from Lightning

In addition to disconnecting the AC power from the wall outlet, disconnect the signal inputs.

Verify the Power Source from the On/Off Power Light

When the on/off power light is not illuminated, the apparatus may still be connected to the power source. The light may go out when the apparatus is turned off, regardless of whether it is still plugged into an AC power source.

IMPORTANT SAFETY INSTRUCTIONS, continued

Eliminate AC Power/Mains Overloads

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

Handling Disposable Batteries

This product may contain disposable batteries. Heed the following warning and follow the Battery Safety and Battery Disposal instructions below

⚠ **WARNING: There is danger of explosion if the battery is mishandled or incorrectly replaced. Replace only with the same type of battery. Do not disassemble it or attempt to recharge it outside the system. Do not crush, puncture, dispose of in fire, short the external contacts, or expose to water or other liquids. Dispose of the battery in accordance with local regulations and instructions from your service provider.**

Battery Safety

- Insert batteries correctly. There may be a risk of explosion if the batteries are incorrectly inserted.
- Do not attempt to recharge 'disposable' or 'non-reusable' batteries.
- Please follow instructions provided for charging 'rechargeable' batteries.
- Replace batteries with the same or equivalent type that we recommend.
- Do not expose batteries to excessive heat (such as sunlight or fire).
- Do not expose batteries to temperatures above 100°C (212°F).

Battery Disposal

- The batteries may contain substances that could be harmful to the environment.
- Recycle or dispose of batteries in accordance with the battery manufacturer's instructions and local/national disposal and recycling regulations.

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- The batteries may contain perchlorate, a known hazardous substance, so special handling and disposal of this product might be necessary. For more information about perchlorate and best management practices for perchlorate-containing substance, see **www.dtsc.ca.gov/hazardouswaste/ perchlorate**

Provide Ventilation and Select a Location

- Remove all packaging material before applying power to the product.

- Do not place this apparatus on a bed, sofa, rug, or similar surface.
- Do not place this apparatus on an unstable surface.
- Do not install this apparatus in an enclosure, such as a bookcase or rack, unless the installation provides proper ventilation.
- 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 block ventilation openings.

Operating Environment

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

Protect from Exposure to Moisture and Foreign Objects

⚠ **WARNING: Avoid electric shock and fire hazard! Do not expose this product to dripping or splashing liquids, rain, or moisture. Objects filled with liquids, such as vases, should not be placed on this apparatus.**

⚠ **WARNING: Avoid electric shock and fire hazard! Unplug this product before cleaning. Do not use a liquid cleaner or an aerosol cleaner. Do not use a magnetic/ static cleaning device (dust remover) to clean this product.**

⚠ **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.**

Service Warnings

⚠ **WARNING: Avoid electric shock! Do not open the cover of this product. Opening or removing the cover may expose you to dangerous voltages. If you open the cover, your warranty will be void. This product contains no user-serviceable parts.**

Check 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.

Protect the Product When Moving It

Always disconnect the power source when moving the apparatus or connecting or disconnecting cables.

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Welcome

The Cisco® Explorer® 1540C and 1542C Digital Only Interactive Set-Tops with Multi-Stream CableCARD™ (M-Card™) receive and deliver digital signals and deliver programming in exceptional picture and audio quality. Through the 1540C and 1542C you can also access interactive services, such as video-on-demand and pay-per-view programs. Contact your service provider for information about these and other available services. Use the instructions in this guide to install the 1540C and 1542C and to access your program services.

The consumer support website provides news and information about this product. For more information, please refer to **http://www.cisco.com/web/consumer/support/index.html**.

Safety First

Before using the set-top read the **IMPORTANT SAFETY INSTRUCTIONS** section of this guide.

Record Product Serial Numbers

If the set-top requires troubleshooting in the future, your service provider may ask for the serial numbers of the set-top and M-Card module.

The set-top serial number label is on the back panel above the video and audio connectors; the serial number begins with "STB SN" and is located in the upper left corner of the bar code.

The M-Card serial number label is on the M-Card module slot cover; the serial number begins with "M-CARD SN" and is located in the upper left corner of the bar code.
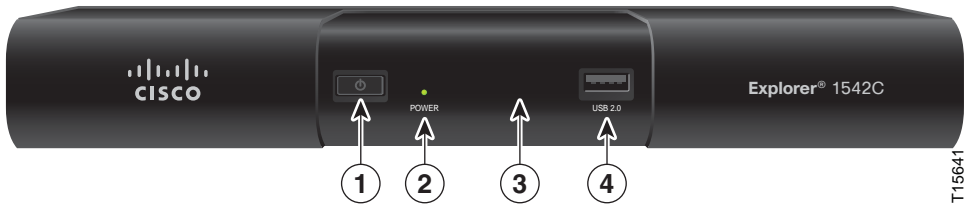
Use this space to record the set-top serial number: _____

Use this space to record the M-Card module serial number: _____

Set-Top Serial Number

STB SN: SABQMDSJQ

eCM MAC: 001CEA53012A

M-Card Module Serial Number

M-CARD SN: PKCPTMFDV

M-CARD MAC: 001BD746C7CB

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Front Panel

1	**Power Button**	Applies power to the set-top
2	**Power LED**	Illuminates when the set-top is powered on. The LED is green
3	**IR Sensor**	Receives the infrared signal from the remote control
4	**USB Port**	Connects to external equipment, such as a keyboard or a mouse, software controlled

Note: This illustration may vary from the actual product.

Back Panel
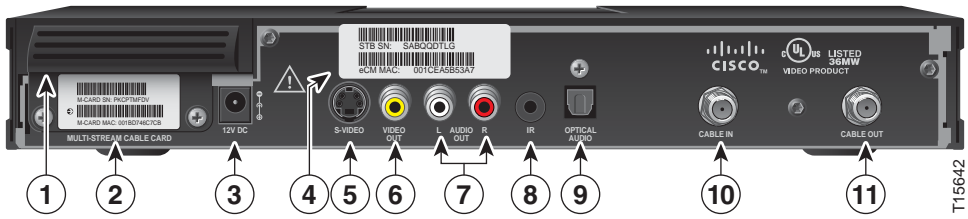
1	**Multi-Stream CableCARD**	Installed by your service provider
2	**M-Card Code Label**	Contains M-Card serial number and MAC address
3	**DC Inlet**	Connects to the external power supply for the set-top
4	**Bar Code Label**	Contains set-top serial number and MAC address
5	**S-Video Out**	Connects to an S-Video cable that sends an S-Video signal to your TV or VCR. This signal is standard definition, but higher quality than other SDTV connections
6	**Video Out**	Connects to composite input on your TV
7	**Audio Out**	Connects to RCA cables that send analog audio signals (left and right) to the stereo inputs on a TV (Left, Right)
8	**IR**	Available to be connected to an approved remote IR receiver (purchased separately). Please contact your service provider for details
9	**Optical Audio**	Connects to an optical cable that sends a digital audio signal to a surround-sound receiver or other digital audio device
10	**Cable In**	Connects to a coaxial cable that delivers the signal from your service provider
11	**Cable Out**	Connects to a coaxial cable that sends analog audio and video signals to a TV or VCR. These signals are standard definition TV (SDTV) video and stereo audio

Note: This illustration may vary from the actual product.

Connecting the Set-Top

To connect your set-top to your entertainment devices, complete these steps.
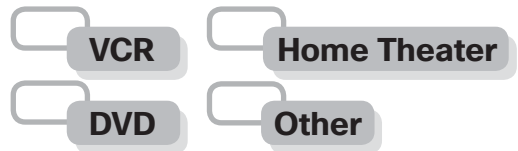
1 Unplug all appropriate electronic devices before connecting the set-top.

2 Connect your SDTV to the set-top. Refer to the **Connection Diagrams** section beginning on page 10.

3 Identify the additional devices you will connect to the set-top and TV. **See pages 10 through 12** and the related user guides for more information.

- VCR
- Home Theater
- DVD
- Other

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

5 Plug the set-top 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.

6 Do not turn on the set-top or TV yet.

7 Wait until the POWER LED on the front panel of the set-top stops blinking to indicate that the update is complete.

Note: If the POWER LED blinks eight times, pauses then repeats, your set-top is not authorized. Call your service provider.
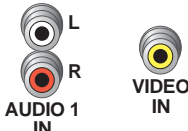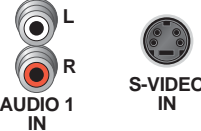
8 To begin watching TV, turn the TV on, and press **POWER** on the front panel of the set-top or on the remote control.

Connections for a Standard-Definition TV and VCR

When using the set-top 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 guides and the cabling diagrams in this guide for more information.

Note: The labeling on your set-top, TV, and VCR may vary from the labels shown in the following table.

		1540C and 1542C Connections	SDTV Connections
Cable Out	The Cable Out connection provides both a video and a stereo audio connection to an SDTV. **See page 10** 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 10** for an example.	VIDEO OUT L R AUDIO	L R 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.	L R AUDIO S-VIDEO OUT	L R AUDIO 1 IN S-VIDEO IN
Optional Connections		**1540C and 1542C Connections**	**VCR Connections**
VCR	The Cable Out connection provides the video and stereo audio connection to the VCR. **See page 11** for an example.	CABLE OUT	CABLE/ ANTENNA
Stereo VCR	For VCRs that have Video and Left and Right audio connectors, you can use the Video Out and Audio connectors on the set-top. These connections generally provide a higher-quality signal than the standard Cable Out connection. **See page 11** for an example.	VIDEO OUT L R AUDIO	VIDEO IN L R AUDIO IN

Performance Tips

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

No Picture

- Verify that the power to your TV is turned on.
- If the set-top is plugged into a wall switch, verify that the wall switch is in the ON position.
  Note: You should avoid plugging the set-top 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 set-top.

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 set-top.
- 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

A message appears on the TV screen when the set-top and the M-Card module are receiving software updates. Should this occur, wait for the POWER LED on the front panel of your set-top to stop blinking before continuing. When the POWER LED stops blinking, the update is complete.

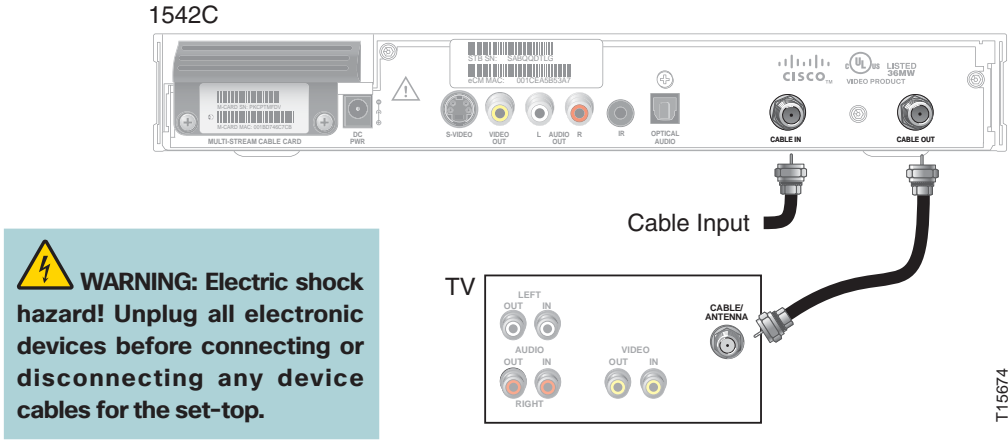# Frequently Asked Questions

Where Are the Connection Diagrams?

The diagrams are on pages 10 through 12 of this guide. The diagrams show examples of common ways to connect the set-top to your TV, VCR, and home theater receiver. However, these diagrams do not show every possible combination of devices. Refer to the user guides that came with your other electronic devices for further information.
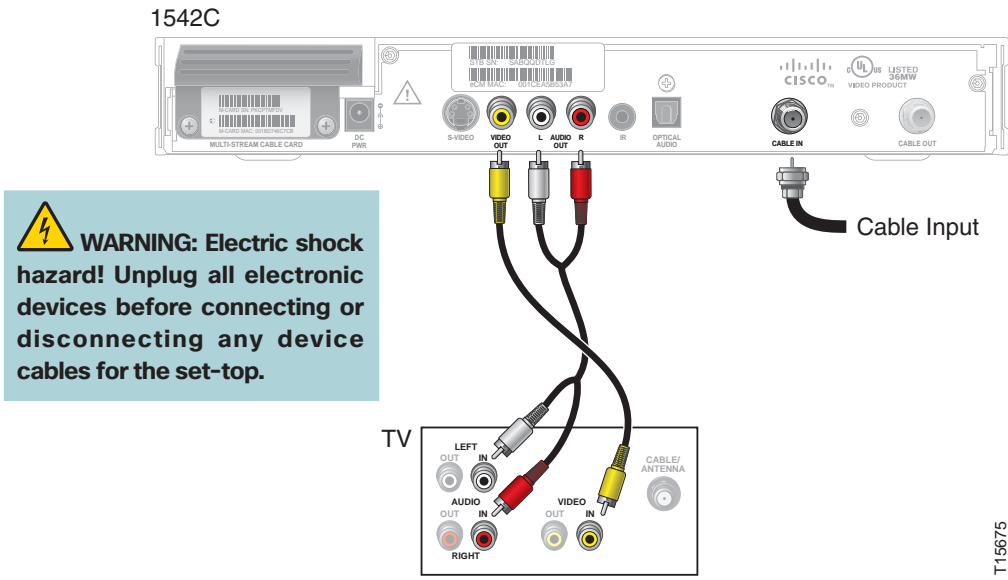
What Cables Do I Need?

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 set-top.
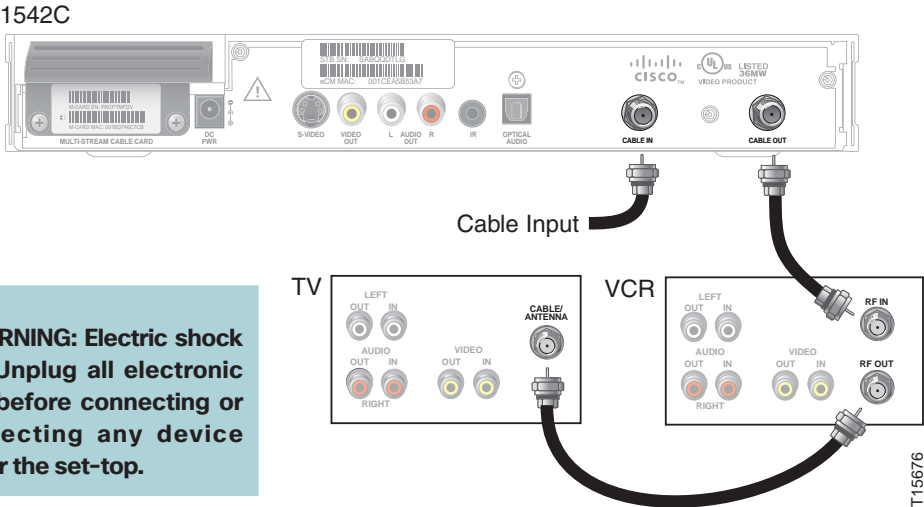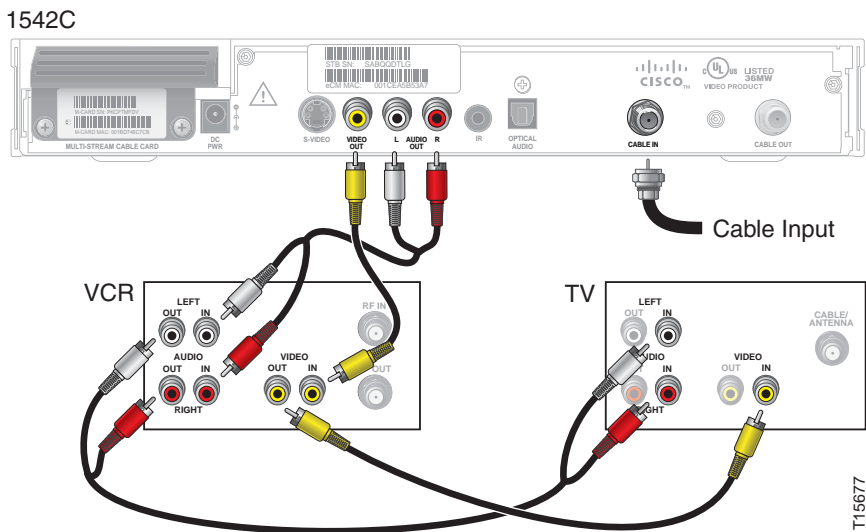
Connection Diagrams

Connecting to a TV

1542C

WARNING: Electric shock hazard! Unplug all electronic devices before connecting or disconnecting any device cables for the set-top.
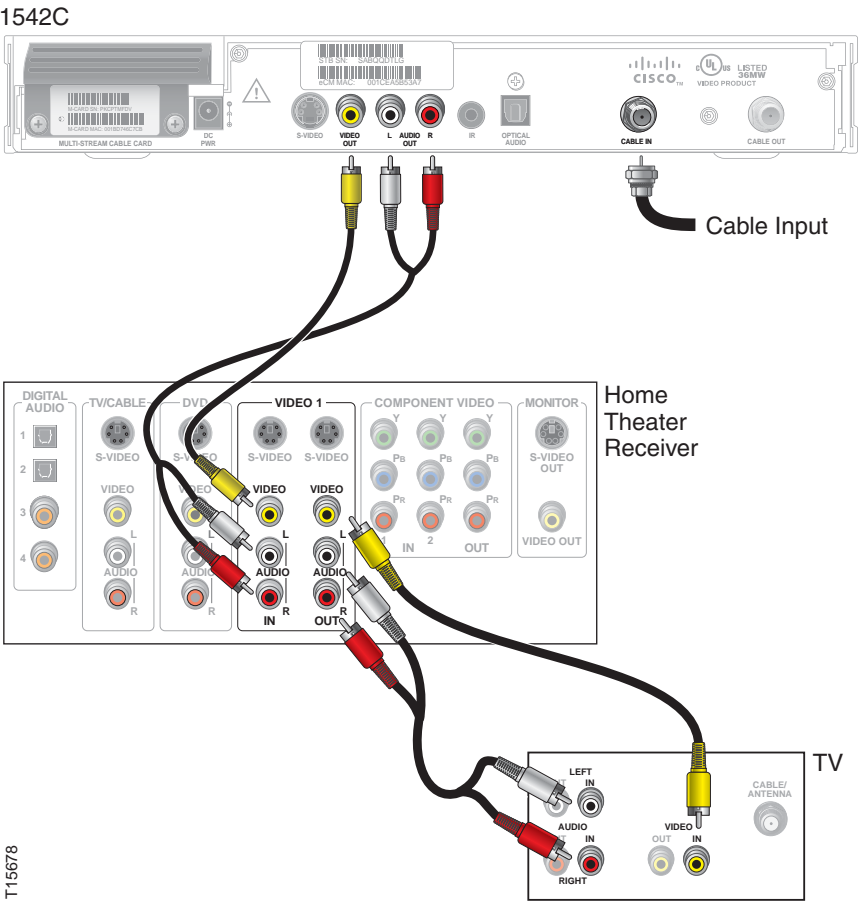
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Connecting to a TV Using Video Out and Audio Out

1542C

WARNING: Electric shock hazard! Unplug all electronic devices before connecting or disconnecting any device cables for the set-top.

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Connecting to a TV and VCR

WARNING: Electric shock hazard! Unplug all electronic devices before connecting or disconnecting any device cables for the set-top.

Connecting to a TV and VCR Using Video Out and Audio Out

WARNING: Electric shock hazard! Unplug all electronic devices before connecting or disconnecting any device cables for the set-top.

Connecting to a Home Theater Receiver and TV

WARNING: Electric shock hazard! Unplug all electronic devices before connecting or disconnecting any device cables for the set-top.

FCC Compliance

United States FCC Compliance

This device 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 such interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy. If not installed and used in accordance with the instructions, it 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 service provider or an experienced radio/television technician for help.
- Any changes or modifications not expressly approved by Cisco Systems, Inc., could void the user's authority to operate the equipment.

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 service provider for any questions you may have regarding the operation or installation of this device.*

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.

> Cisco 1540C and 1542C Digital-Only
> Interactive Set-Tops
> Model: 1540C and 1542C
> 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.

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