



Installation Guide

SERIES **2** Digital Video Recorder
TM

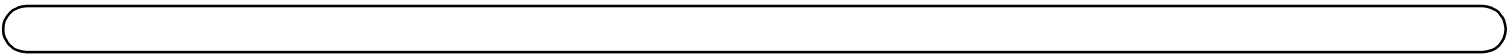
Welcome to TiVo®!

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Remember, always connect cables from the OUT connector of one device to the IN connector of the next.

Never connect an IN to an IN or an OUT to an OUT.



▶▶ Using This Guide

▶ Step 1: Understanding the basics

TVs used to be so simple: no color, no digital video, no stereo sound, no choices. All you needed was an antenna and a TV. The antenna captured audio and video signals. A wire, connected from the antenna to the TV, brought these signals to your TV as sounds and pictures.

As TVs have acquired more features, and new devices have been created to work with your TV, it may seem that everything has become more complex. You may have a VCR, a DVD player, and a game system connected to your TV, in addition to your TiVo® Digital Video Recorder (DVR). However, one thing has remained the same: you still need to get the sounds and pictures from their source (your antenna, or your cable or satellite service) to your TV.

You get the sounds and pictures to your TV by using cables. These make a path over which the pictures and sounds travel to your TV. The choice of cables may seem overwhelming, but they all perform the same function: they transfer sounds and pictures to your TV at varying levels of quality.

All of your equipment has connectors, or places where cables can be connected. Some connectors are labeled “In” and some are labeled “Out.” The pictures and sounds enter a piece of equipment through an IN connector and leave through an OUT connector.

When you connect your TiVo DVR to your TV and other audio/video (A/V) equipment, you are simply creating a path that starts at the wall, or your cable or satellite box, and goes in (through IN connectors) and out (through OUT connectors) of your equipment until it reaches your TV.

► **Step 2: Finding your setup example**

This guide provides specific examples of connecting the TiVo Digital Video Recorder (DVR) to an existing antenna, cable, or satellite system and other A/V equipment. Choose your setup example from the ones below:

You use either antenna or cable without a cable box. You may also have a VCR.	Setup 1: No cable or satellite box (optional VCR)	p. 12
You have either a cable or satellite box (if you have both, see Setup 7, instead). You may also have a VCR.	Setup 2: Cable or satellite box (optional VCR)	p. 14
Your TV only has one input; also a good setup to try if you're having trouble.	Setup 3: TV with only an RF Coaxial input	p. 18
Your TV only has one input, and you have a VCR.	Setup 4: VCR and a TV with only an RF Coaxial input	p. 20
You use cable and want to watch one channel while recording another.	Setup 5: Watching one channel while recording another (antenna or cable only)	p. 22
You have both a satellite box and antenna, or both a satellite box and cable without a cable box.	Setup 6: Both a satellite box and an RF program source (antenna or cable).	p. 24
You have both a satellite box and cable with a cable box.	Setup 7: Both a satellite and a cable box	p. 26
You have an advanced home entertainment system with several components.	Setup 8: A/V receiver, DVD player, game console, and VCR	p. 28

► **What's next?**

After connecting your TiVo DVR, the last steps are to activate the TiVo service and complete Guided Setup. See the *TiVo Service Viewer's Guide* for help with these steps.



The TiVo DVR is not designed to support a heavy load, such as a TV.

Your TiVo DVR is only capable of supporting the weight of one or two common A/V components such as VCRs, DVD players, or A/V receivers (provided they have four good, broad, padded feet that distribute the weight near the corners of the TiVo DVR).

Also, avoid stacking your TiVo DVR on top of other electronic components—such as DVD players, A/V receivers—or the vents of your TV.

►► Cables and Accessories

1. These are the basics:



TiVo DVR



Power Cord

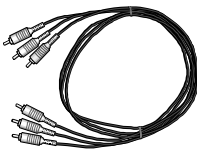


25' Phone Cord



Phone Line Splitter

2. See page 5 to choose a video cable:



Composite A/V Cables



RF Coaxial Cable

3. If your DIRECTV satellite receiver has a Data connector, use this cable:



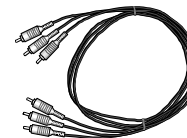
Serial (Data) Control*

If you have a satellite box and can't use the Serial Control cable above, or if you have a cable box, use this cable instead:



IR Control Cable*

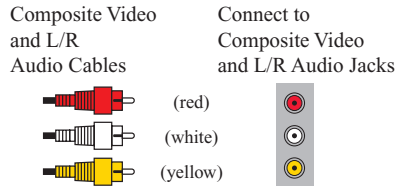
4. You may need to purchase these additional items for some setups:

RF Coaxial Cable Splitter
(Setup 5 on page 22)Extra Composite A/V Cables
(Setup 7 on page 26 and Setup 8 on page 28)Extra RF Coaxial Cable
(Setup 4 on page 20 and Setup 6 on page 24)

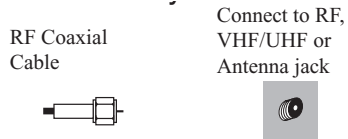
*See page 7 for more information and tips about Serial and IR Control.

► Choosing a video cable

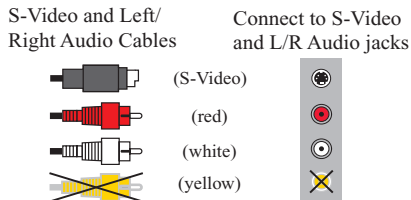
Many TVs and VCRs have connectors for Composite A/V cables. If your equipment has them, use the Composite A/V cables:




Alternative: Some TVs only have connectors for RF Coaxial cable. If your TV only has an RF connector, use the RF Coaxial cable and see Setup 3 on page 18 (or see Setup 4 on page 20 if you also have a VCR):



If you have S-Video connectors on your equipment, and you want the highest quality video, you can purchase an S-Video cable (available at store.tivo.com) to use along with the L/R Audio cables (leaving the yellow Composite Video cable disconnected):



 If your TV has only one audio connector, connect just the white cable, instead of both the red and the white cables.

▶▶ Connecting the Phone Line

You don't need to install a new phone jack or phone number—simply use the phone line you already have. The following information applies to all setups described in this guide:

- **Phone line.** Almost every household phone line is a standard analog line, which is what the TiVo DVR requires. Do not connect the TiVo DVR to a digital PBX phone system (these allow many phones to share a single telephone number and are usually used in hotels and office buildings). Doing so may permanently damage your TiVo DVR's modem and will void your warranty.
- **Phone jack.** If the phone jack isn't close to the TiVo DVR, you can use the 25-foot phone cord that comes with the TiVo DVR to connect it to a phone jack. Phone cords longer than 25 feet are readily available at most hardware or electronics stores.

Your cable or satellite box may require a connection to your phone line, too. To connect both the TiVo DVR and your cable or satellite box to the same phone jack, use the provided phone line splitter in the phone jack.

We recommend leaving the phone cord plugged in continuously. If this is inconvenient, use one of the following solutions:


- **Plug in the cord and make the TiVo DVR call manually.** Do this once or twice a week. (See page 42 for details.)
- **Purchase a wireless modem jack.** Many of our customers report success when using wireless modem jacks. If you purchase one, make sure it is a wireless *modem* jack, not merely a wireless phone jack. We cannot guarantee that a wireless modem jack will work with all phone and electrical systems. (See page 41 for more information.)

▶▶ Using Your TiVo DVR with a Cable or Satellite Box



Your TiVo DVR needs to be able to change the channel in order to record programs and display live TV. If you are using a cable or satellite box, the DVR must send it signals to change the channel. (If you use antenna or cable without a cable box, the TiVo DVR does not need a Control cable to change channels.)

These signals can be sent through either an IR (infrared) or a Serial (data) Control cable connection. The setup examples in Chapters 2 and 3 explain how to connect the IR and Serial Control cables. You may find the following additional tips helpful:

Serial/Data Control

If you have DIRECTV satellite service and your DIRECTV satellite receiver has a 9-pin data connector like this: , you can connect the Serial Control cable. If you don't have DIRECTV, or there is no data connector, you can use the IR Control cable (described on the next page).

However, some DIRECTV satellite receivers have alternative connections that you may be able to try. You will need to purchase an additional cable or accessory (available from store.tivo.com) for these types of connections:

- If your DIRECTV satellite receiver has a 15-pin connector like this: , you can connect the Serial Control cable by using a 15-pin adapter.
- Some RCA satellite receivers for the DIRECTV service have a **Home Control** connector like this:  (similar to a phone jack, but slightly smaller).

Home Control is the fastest and most reliable form of Control cable connection. To connect the Home Control cable, plug one end of the cable into the **Home Control** jack on your DIRECTV satellite receiver. (If the cable doesn't fit, don't force it in. You could be trying to force a **Home Control** cable into a phone jack!) Plug the other end into the **Control Out/Serial** jack on the DVR.



After setting up your TiVo DVR, including the Control cable connection, change channels with your TiVo DVR's remote control only.

1



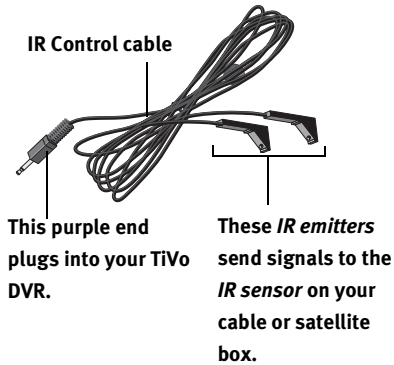
Serial Control Cable




15-pin adapter
(not included)



Home Control cable
(not included)



 The small “bulbs” on the IR emitters do not visibly light up when they send an IR signal. If you find that channels are not changing, see page 45 for troubleshooting help. If channels change unreliably or inconsistently, try the tips on optimizing the IR Control connection (right).

IR (infrared) Control

Finding the IR sensor: To correctly position the IR Control cable, you need to find your cable box or satellite box’s IR sensor (connection is fully described in the examples in Chapters 2 and 3). To locate the IR sensor, look for a tiny round bulb behind the dark, translucent plastic “window”—the IR window—on the front of your cable or satellite box. A flashlight might help you see it. Position the IR emitters so they are centered on the IR sensor and stick out about 1.5 inches.

Choosing an IR code in Guided Setup: After setting up your TiVo DVR, you’ll complete Guided Setup (see the *TiVo Service Viewer’s Guide* for more information). During Guided Setup, you’ll be asked to test and select an IR code. Each IR code signals a particular cable or satellite box model to change channels. If none of the codes changes the channel on your particular cable or satellite box, see page 45 for troubleshooting tips. If you find a code or codes that work, but none of the codes is reliable or consistent, try optimizing the IR Control connection (see below).

Optimizing the IR Control connection: The IR Control cable works better if its emitters and the IR window on the cable or satellite box are shaded from other infrared signals. You can create an IR cover to decrease the interference from other signals. This solution may help if changing channels with an IR Control cable is unreliable or inconsistent, but not if channels don’t change at all.

Test whether an IR cover might be effective simply by draping a magazine, a towel, or a dark cloth over the front of cable or satellite box, including the IR emitters. (See the diagram on page 9.) Do not block the TiVo DVR’s IR window. Try changing channels several times with the TiVo remote. If channels change more reliably this way, you may want to make an IR cover.

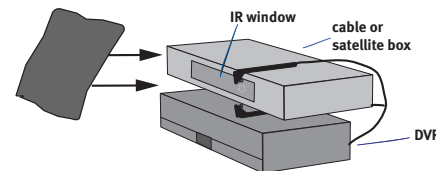
The exact methods and materials you use to build the IR cover will depend on the shape of your cable or satellite box's IR window and the materials you have available. However, the general procedure described below will guide you.

1. Cover the area around the IR emitters and the cable or satellite box's IR window with a piece of thick fabric, such as black flannel. You could create a cover using cardboard or opaque tape instead. The important point is that the material you use fits snugly over the area around the translucent IR window and the IR Control cable's emitters.

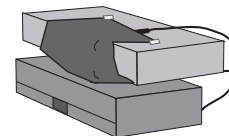
If possible, cover the entire IR window on the cable or satellite box, because signal interference can enter from anywhere in the window. For some cable and satellite boxes, covering the entire IR window will include covering the controls on the front. In that case, you won't be able to use the controls, nor will you be able to control the cable or satellite box with its remote. However, we recommend using only your TiVo remote to change the channel. If you still need to access your cable or satellite box, use materials that are relatively easy to remove.

2. Secure the cloth, tape, or other material (with tape or by another method), making sure that it fits closely around the IR window and the IR Control cable's emitters.

1. Place a piece of opaque material—for example, cloth or tape—over the IR emitters (shown on opposite page) and the IR window of the cable or satellite box.



2. Secure the material, making sure that it fits snugly.



Common Setup Examples

Setup 1: Antenna or Cable (No Cable Box) & Optional VCR	12
Setup 2: Cable or Satellite Box & Optional VCR	14



Before you begin:

- Be sure to refer to the information in Chapter 1 of this guide.
- Make sure that all your equipment is turned off and that the DVR is unplugged.



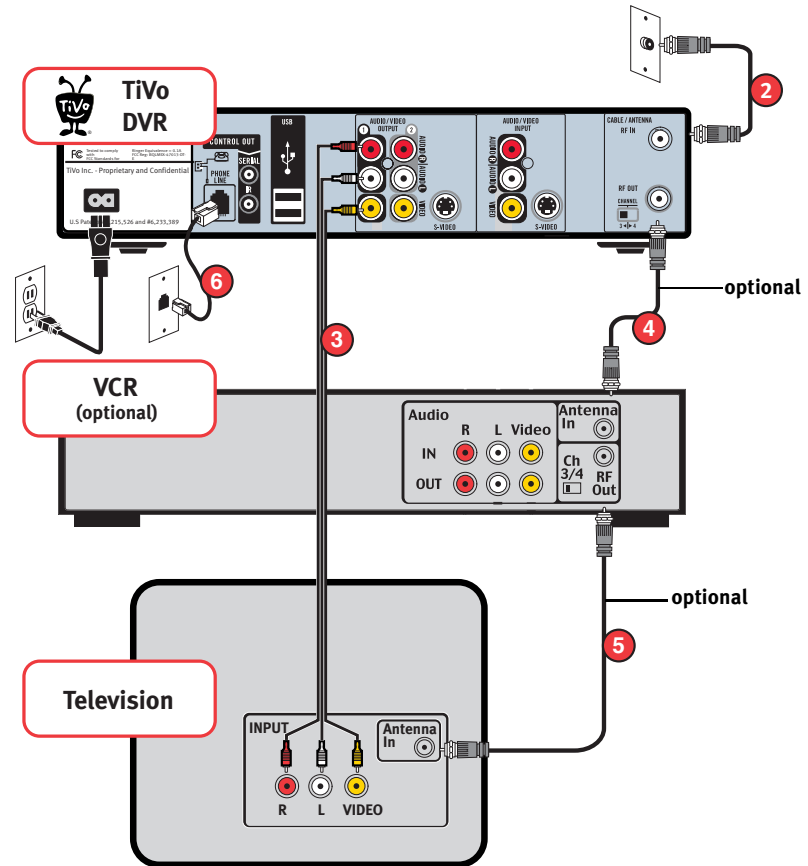
The audio/video cables shown here are for example only. For help choosing cables, see page 5.




To add a DVD player or game console instead of a VCR, use the audio/video cable that came with your DVD player to connect from the audio/video output on the DVD player to an audio/video input on the TV. You do not need to connect your DVD player to your DVR.

To add both a DVD player (or a game console) and a VCR, see Setup 8 on page 28.

Setup 1: Antenna or Cable (No Cable Box) & Optional VCR



- 1 Check your TV for Composite A/V connectors (). If it doesn't have them, see page 18 for an alternative setup using RF Coaxial cables only, or page 20 for an example that uses RF Coaxial cables and includes a VCR.
- 2 Connect the RF Coaxial cable currently coming from the wall to the connector labeled **Cable/Antenna-RF In** on the DVR.
- 3 Connect the Composite A/V cables from the **Audio/Video Output** connectors on the DVR to the **Audio/Video Input** connectors on the TV.
- 4 If you have a VCR, connect an RF Coaxial cable from the **Cable/Antenna-RF Out** connector on the DVR to the **Antenna In** connector on the VCR. Set the 3/4 switch on the back of the DVR to 3 (or 4, if a channel is broadcast on 3).
- 5 If you have a VCR, connect an RF Coaxial cable from the **RF Out** connector on the VCR to the **Antenna In** connector on the TV. Set the 3/4 switch on the back of the VCR to 3 (or 4, if set to 4 in step 4 above).
- 6 Connect a phone line (see page 6 for help). Plug in all power cords.
- 7 Turn on your TV (and VCR), then tune to channel 3 (or 4, if set to 4 in step 4 above). If you see the Welcome screen, you're ready for the next step, below. If not, you need to find the correct input settings by pressing the Input or TV/Video button on your TV's remote control until you see the Welcome screen. (For more help, see page 42.)
- 8 Once you see the Welcome screen, the final steps are to activate the TiVo service and complete Guided Setup (see the *TiVo Service Viewer's Guide* for details).



VCR tip: When you want to watch a VCR tape, press the Input, Source, or TV/Video button on your TV until you see channel numbers displayed. Then tune your TV to channel 3 (or 4, if set to 4 in step 4). (After setup, you can program the TV INPUT button on your DVR's remote to control your TV's input setting. See page 33 for details.)



Before you begin:

- Be sure to refer to the information in Chapter 1 of this guide.
- Make sure that all your equipment is turned off and that the DVR is unplugged.



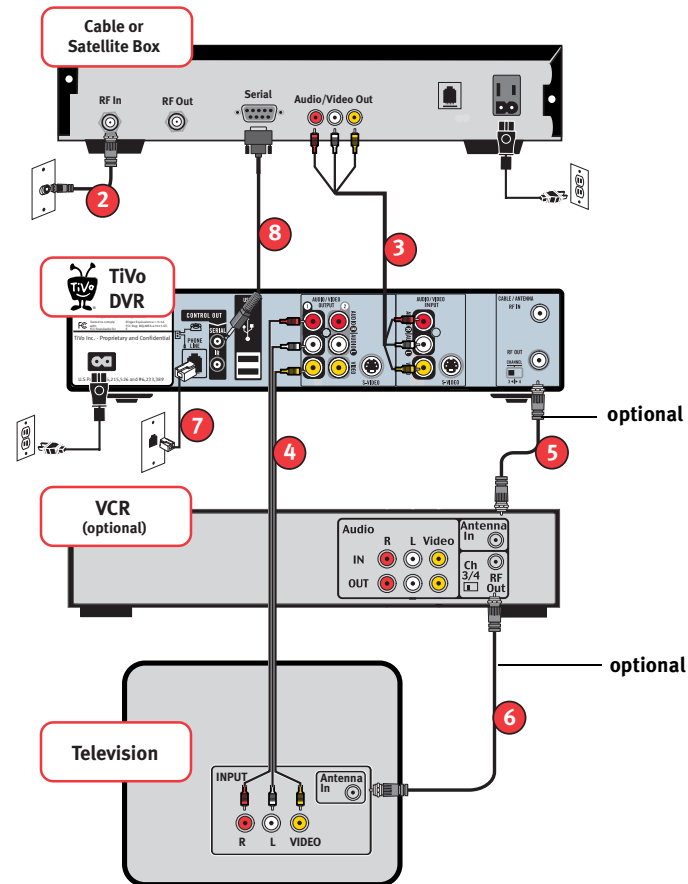
The audio/video cables shown here are for example only. For help choosing cables, see page 5.




To add a DVD player or game console instead of a VCR, use the audio/video cable that came with your DVD player to connect from the audio/video output on the DVD player to an audio/video input on the TV. You do not need to connect your DVD player to your DVR.

To add both a DVD player (or a game console) and a VCR, see Setup 8 on page 28.

▶▶ Setup 2: Cable or Satellite Box & Optional VCR



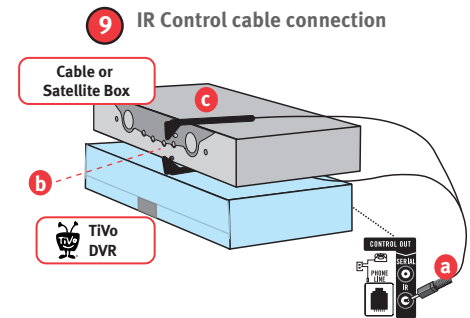
- 1 Check your TV for Composite A/V connectors (). If it doesn't have them, see page 18 for an alternative setup using RF Coaxial cables only, or page 20 for an example that includes a VCR.
- 2 Check that the cable from the wall is connected to the cable or satellite box.
- 3 Connect Composite A/V cables from the **Audio/Video Output** connectors on the cable or satellite box to the **Audio/Video Input** connectors on the DVR.
- 4 Connect Composite A/V cables from the **Audio/Video Output** connectors on the DVR to the **Audio/Video Input** connectors on the TV.
- 5 If you have a VCR, connect an RF Coaxial cable from the **Cable/Antenna-RF Out** connector on the DVR to the **Antenna In** connector on the VCR.
- 6 If you have a VCR, connect an RF Coaxial cable from the **RF Out** connector on the VCR to the **Antenna In** connector on the TV.
- 7 Connect a phone line (see page 6 for help). Plug in all power cords.

- 8 Connect the Serial Control cable (DIRECTV only). If your DIRECTV satellite receiver has a 9-pin Data connector as shown at the right, plug one end of the Serial Control cable into the Data connector. Plug the other end into the **Control Out-Serial** connector on the DVR. Then skip to step 10.



If you don't have a Data connector, see page 7 for Serial control alternatives. If you still can't use a Serial connection or if you don't have DIRECTV service, go to step 9.

- 9 Connect the IR Control cable. (Skip this step if you completed step 8 above.)
 - (a) Plug the purple end of the IR Control cable into the **Control Out-IR** connector (the lower mini-jack) on the DVR. (b) Locate the IR sensor (see page 7 for help).



For tips on the IR Control cable connection, see page 7.



VCR tip: When you want to watch a VCR tape, press the Input, Source, or TV/Video button on your TV until you see channel numbers displayed. Then use the buttons on the front of your TV to go to channel 3 or 4. (After setup, you can program the TV INPUT button on your DVR's remote to control your TV's input setting. See page 33 for instructions.)

(c) Mount the IR emitters. Place one emitter on top of the cable box and the other underneath it. Be sure both emitters stick out about 1.5 inches directly in front of the IR sensor. (Use the provided adhesive strips to hold the emitters in place.)

- 10 Turn on your TV (and VCR). Check which channel your TV is currently tuned to (either 3 or 4) and set the 3/4 switch on the back of the DVR to the same channel. If you see the Welcome screen, you're ready for the next step, below. If not, you need to find the correct input settings by pressing the Input, Source, or TV/Video button on your TV's remote control until you see the Welcome screen. For more help, see page 42.

Once you see the Welcome screen, the final steps are to activate the TiVo service and complete Guided Setup (see the *TiVo Service Viewer's Guide* for details).

Additional Setup Examples

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Setup 4: VCR and TV with Only RF Coaxial Input	20
Setup 5: Watching One Channel While Recording Another	22
Setup 6: Both a Satellite Box and an RF Program Source	24
Setup 7: Both a Cable and a Satellite Box	26
Setup 8: A/V Receiver, DVD Player or Game Console, and VCR	28



Before you begin:

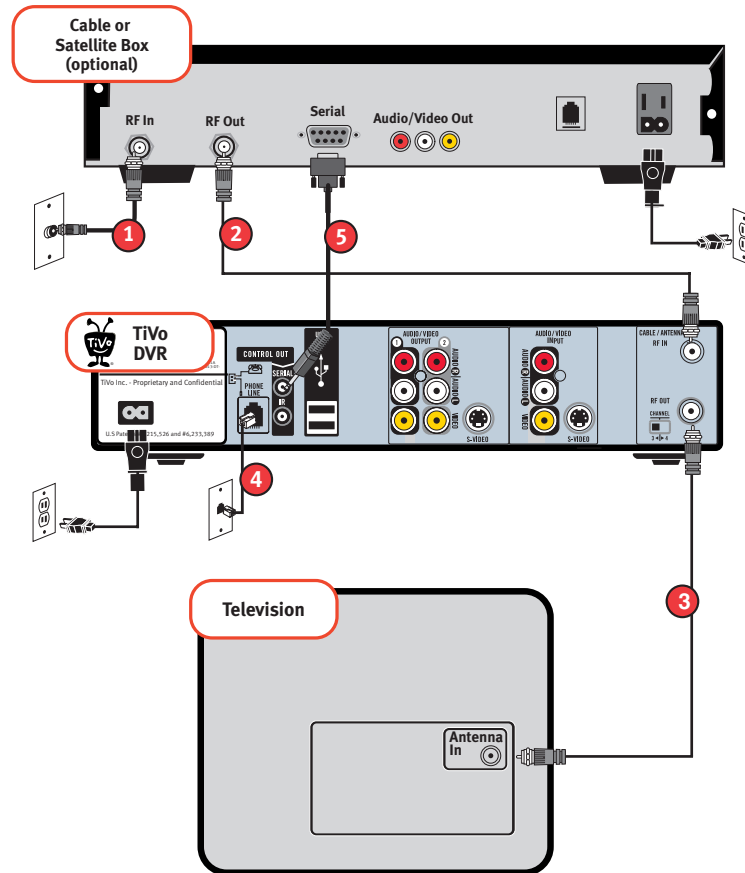
- Be sure to refer to the information in Chapter 1 of this guide.
- Make sure that all your equipment is turned off and that the DVR is unplugged.



This setup example describes using RF Coaxial cables to connect your DVR and TV, with or without a cable or satellite box (the diagram includes a cable or satellite box). This is the simplest setup and is probably the easiest way for an A/V novice to start hooking things up.

If you have a VCR, see Setup 4 on page 20 instead.

►► Setup 3: TV with Only an RF Coaxial Input



- 1 Make sure the cable from the wall is connected to your cable or satellite box if you have one.
- 2 Connect an RF Coaxial cable from the **RF Out** connector on the cable or satellite box to the **Antenna/Cable-RF In** connector on the DVR. If don't have a cable or satellite box, connect the RF Coaxial cable from the wall to **Antenna/Cable-RF In** instead.
- 3 Connect an RF Coaxial cable from the **Cable/Antenna-RF Out** connector on the DVR to the **Antenna In** connector on the TV.
- 4 Connect a phone line (see page 6). Plug in all power cords.
- 5 Connect the Serial Control cable (DIRECTV only). If your DIRECTV satellite receiver has a 9-pin Data connector as shown at the right, plug one end of the Serial Control cable into the Data connector. Plug the other end into the **Control Out-Serial** connector on the DVR. Then go on to step 7.



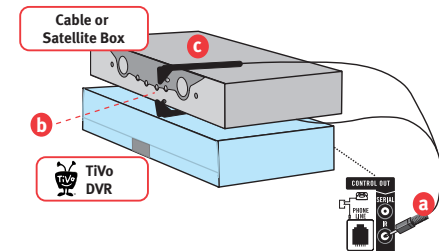
If you don't have a Data connector, see page 7 for Serial control alternatives. If you still can't use a Serial connection or if you don't have DIRECTV service, go to step 6.

- 6 Connect the IR Control cable. (Skip this step if you completed step 5 above or if you do not have a cable or satellite box.) (a) Plug the purple end of the IR Control cable into the **Control Out-IR** connector (the lower mini-jack) on the DVR. (b) Locate the IR sensor (see page 7 for help). (c) Mount the IR emitters. Place one emitter on top of the cable box and the other underneath it. Be sure both emitters stick out about 1.5 inches directly in front of the IR sensor. (Use the provided adhesive strips to hold the emitters in place.)
- 7 Tune the TV: If you have a cable or satellite box, check which channel your TV is currently tuned to (either 3 or 4) and set the 3/4 switch on the back of the DVR to the same channel. You should see the Welcome screen. If you don't, see page 42 for more help.
- 8 Once you see the Welcome screen, the final steps are to activate the TiVo service and complete Guided Setup (see the *TiVo Service Viewer's Guide* for details).



If you don't have a cable or satellite box, skip steps 1, 5, and 6.

6 IR Control cable connection



For tips on the IR Control cable connection and for alternatives to the Serial Control cable, see page 7.



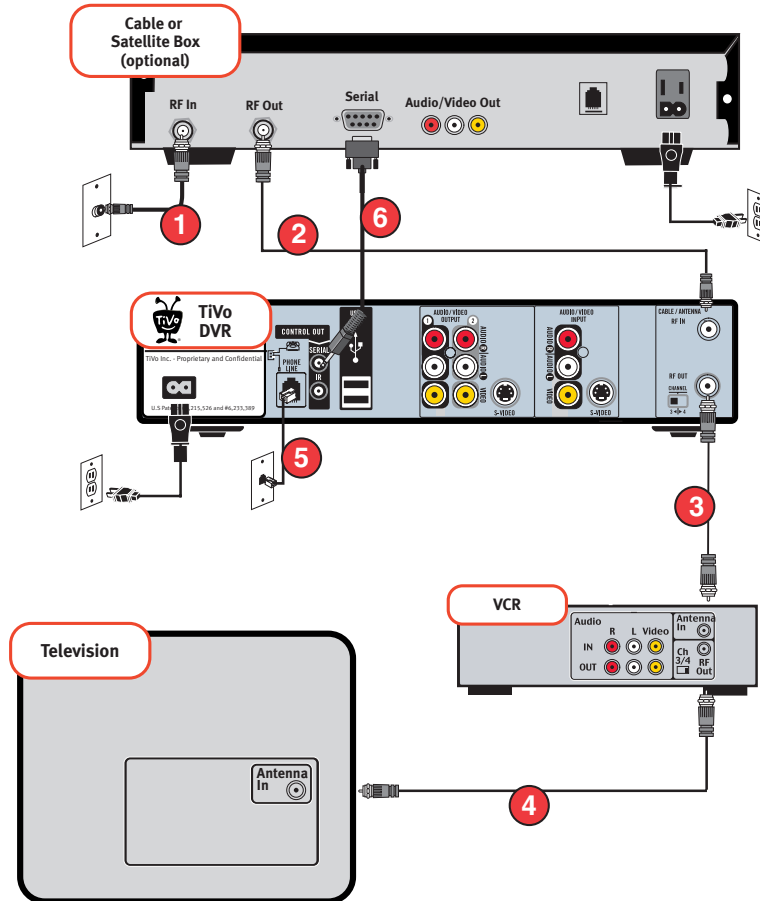
Before you begin:

- Be sure to refer to the information in Chapter 1 of this guide.
- Make sure that all your equipment is turned off and that the DVR is unplugged.



Some TVs have only one input. If you have both a TiVo DVR and a VCR, you'll need to connect them in a single chain, as described here. If you don't have a VCR, see Setup 3 on page 18.

▶▶ **Setup 4: VCR and TV with Only RF Coaxial Input**



- 1 Make sure the cable from the wall is connected to your cable or satellite box. If you don't have one, skip this step.
- 2 Connect an RF Coaxial cable from the **RF Out** connector on the cable or satellite box to the **Antenna/Cable-RF In** connector on the DVR. If don't have a cable or satellite box, connect the RF Coaxial cable from the wall to **Antenna/Cable-RF In** instead.
- 3 Connect an RF Coaxial cable from the **Cable/Antenna-RF Out** connector on the DVR to the **Antenna In** connector on the VCR.
- 4 Connect an RF Coaxial cable from the **RF Out** connector on the VCR to the **Antenna In** connector on the TV.
- 5 Connect a phone line (see page 6). Plug in all power cords.
- 6 Connect the Serial Control cable (DIRECTV only). If your DIRECTV satellite receiver has a 9-pin Data connector, plug one end of the Serial Control cable into the Data connector. Plug the other end into the **Control Out-Serial** connector on the DVR. Then skip to step 8.

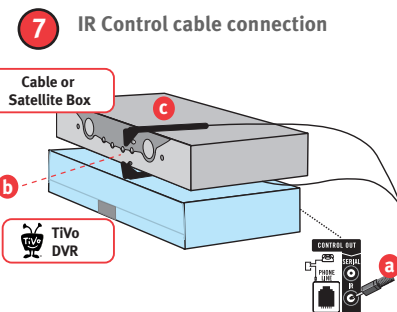


If you don't have a Data connector, see page 7 for Serial control alternatives. If you still can't use a Serial connection or if you don't have DIRECTV service, go to step 7.

- 7 Connect the IR Control cable. (Skip this step if you completed step 6 above or if you do not have a cable or satellite box.) (a) Plug the purple end of the IR Control cable into the **Control Out-IR** connector (the lower mini-jack) on the DVR. (b) Locate the IR sensor (see page 7 for help). (c) Mount the IR emitters. Place one emitter on top of the cable box and the other underneath it. Be sure both emitters stick out about 1.5 inches directly in front of the IR sensor. (Use the provided adhesive strips to hold the emitters in place.)
- 8 Turn on your TV and VCR. If you have a cable or satellite box, check which channel your TV is currently tuned to (either 3 or 4) and set the 3/4 switch on the back of the DVR to the same channel. You should see the Welcome screen. If you don't, find the correct input setting on your VCR by pressing the Input, Source or TV/Video button on your VCR's remote until you see it. For more help, see page 42.
- 9 Once you see the Welcome screen, the final steps are to activate the TiVo service and complete Guided Setup (see the *TiVo Service Viewer's Guide* for details).



If you don't have a cable or satellite box, skip steps 1, 6, and 7.



For tips on the IR Control cable connection, see page 7.



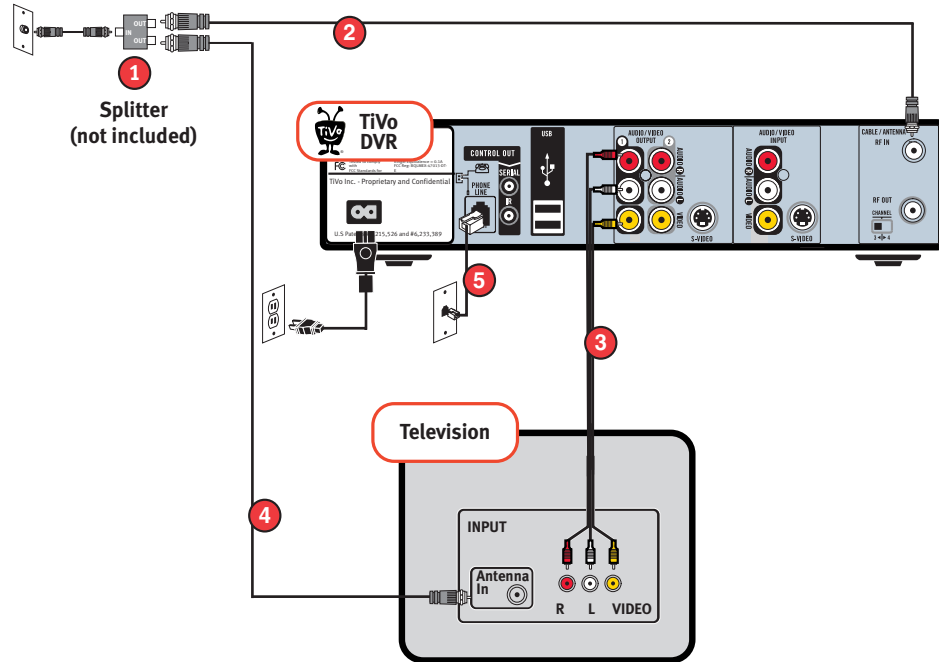
Before you begin:

- Be sure to refer to the information in Chapter 1 of this guide.
- Make sure that all your equipment is turned off and that the DVR is unplugged.



If you use this setup, you'll need an RF splitter. You can purchase an RF splitter at your local electronics store.

▶▶ Setup 5: Watching One Channel While Recording Another



You can only use this setup if you have antenna or cable without a cable box.

- 1 Attach the RF splitter (not included) to the RF Coaxial cable coming out of the wall (before it connects to any equipment).
- 2 Attach one end of an RF Coaxial cable to the splitter, then attach the other end to the **Cable/Antenna-RF** connector on the DVR.
- 3 Connect Composite A/V cables from the **Audio/Video Output** connectors on the DVR to the **Audio/Video Input** connectors on the TV.
- 4 Attach one end of an RF Coaxial cable to the splitter, then attach the other end directly to the **Antenna In** connector on the TV.
- 5 Connect a phone line (see page 6 for help). Plug in all power cords.
- 6 Turn on your TV. If you see the Welcome screen, you're ready for the next step, below. If not, you need to find the correct input settings by pressing the Input, Source, or TV/Video button on your TV's remote control until you see the Welcome screen. For more help, see page 42.
- 7 Once you see the Welcome screen, the final steps are to activate the TiVo service and complete Guided Setup (see the *TiVo Service Viewer's Guide* for details).

To watch one channel while the DVR records another, use the number buttons on the front of your TV (or your TV's remote) to change the channel. Keep in mind that you don't have TiVo service functionality on those channels, so you can't pause or rewind live TV.

To watch video from your DVR again: First, press the TiVo button, so that the DVR displays TiVo Central[®]. Then press the Input, Source, or TV/Video button on your TV until you see TiVo Central.

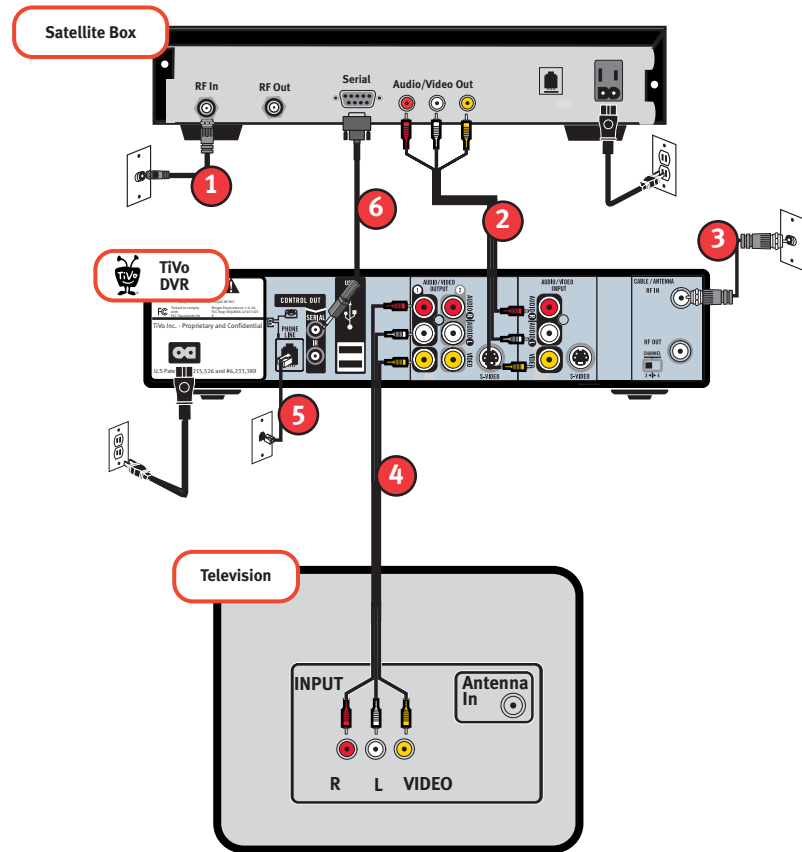


You can also split the signal if you have a cable box. After step 1, connect one of the RF Coaxial cables coming from the splitter to your cable box. Then, instead of step 2, connect Composite A/V cables from the Audio/Video Output connectors on the cable box to the Audio/Video Input connectors on the DVR. Then continue with step 3.

Keep in mind that you can only receive basic channels on the cable that goes directly from the splitter to your TV. Also, you will not have TiVo service functionality on those channels.

**Before you begin:**

- Be sure to refer to the information in Chapter 1 of this guide.
- Make sure that all your equipment is turned off and that the DVR is unplugged.

▶▶ Setup 6: Both a Satellite Box and an RF Program Source (Antenna or Cable)

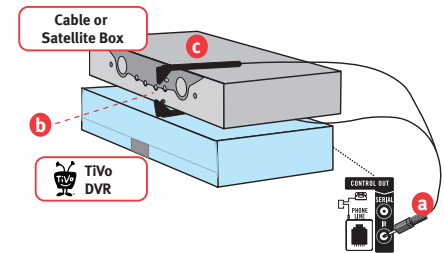
- 1 Make sure the satellite cable from the wall is connected to the satellite box.
- 2 Connect a Composite A/V cable from the **Audio/Video Output** connectors on the satellite box to the **Audio/Video Input** connectors on the DVR.
- 3 Connect the RF Coaxial cable from the antenna or cable source to the connector labeled **Cable/Antenna-RF In** on the DVR.
- 4 Connect Composite A/V cables from the **Audio/Video Output** connectors on the DVR to the **Audio/Video Input** connectors on the TV.
- 5 Connect a phone line (see also page 6). Plug in all power cords.
- 6 Connect the Serial Control cable (DIRECTV only). If your DIRECTV satellite receiver has a 9-pin Data connector, plug one end of the Serial Control cable into the Data connector, and other end into the **Control Out-Serial** connector on the DVR. Then skip to step 8.



If you don't have a Data connector, see page 7 for Serial control alternatives. If you still can't use a Serial connection or if you don't have DIRECTV service, go to step 7.

- 7 Connect the IR Control cable. (Skip this step if you completed step 6 above.)
 - (a) Plug the purple end of the IR Control cable into the **Control Out-IR** connector (the lower mini-jack) on the DVR.
 - (b) Locate the IR sensor (see page 7).
 - (c) Mount the IR emitters. Place one emitter on top of the satellite box and the other underneath it. Be sure both emitters stick out about 1.5 inches directly in front of the IR sensor. (Use the provided adhesive strips to hold the emitters in place.)
- 8 Turn on your TV. If you see the Welcome screen, you're ready for the next step, below. If not, you need to find the correct input settings by pressing the Input, Source, or TV/Video button on your TV until you see the Welcome screen. For more help, see page 42.
- 9 Once you see the Welcome screen, the final steps are to activate the TiVo service and complete Guided Setup (see the *TiVo Service Viewer's Guide* for details).

7 IR Control cable connection



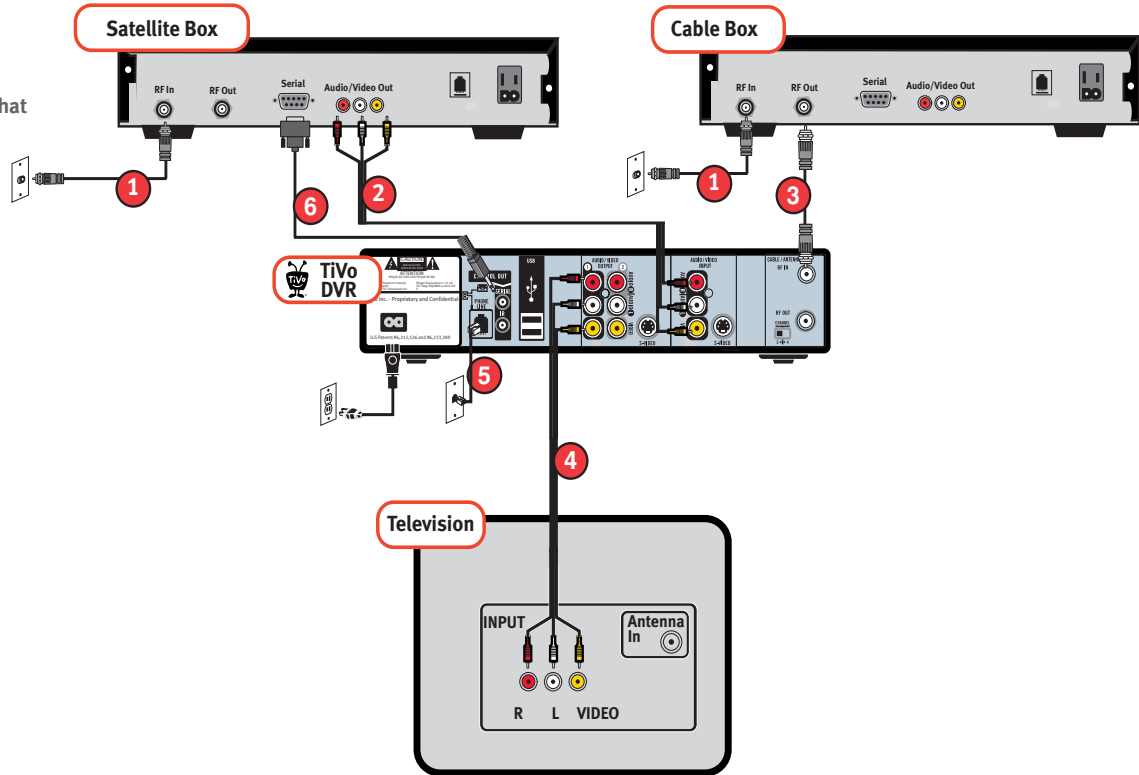
For tips on the IR Control cable connection, see page 7.



Before you begin:

- Be sure to refer to the information in Chapter 1 of this guide.
- Make sure that all your equipment is turned off and that the DVR is unplugged.

▶▶ Setup 7: Both a Cable and a Satellite Box

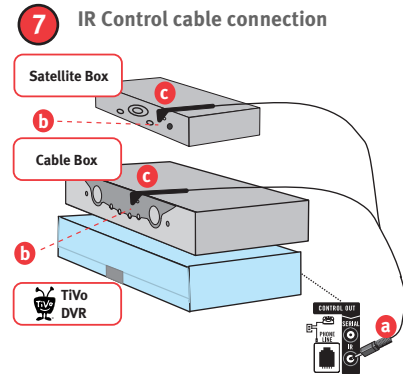


- 1 Make sure the cables from the wall are connected to your cable and satellite boxes.
- 2 Connect a Composite A/V cable from the **Audio/Video Output** connectors on the satellite box to the **Audio/Video Input** connectors on the DVR.
- 3 Connect an RF Coaxial cable from the **RF Out** connector on the cable box to the **Cable/Antenna-RF In** connector on the DVR.
- 4 Connect Composite A/V cables from the **Audio/Video Output** connectors on the DVR to the **Audio/Video Input** connectors on the TV.
- 5 Connect a phone line (page 6). Plug in all power cords.
- 6 Connect the Serial Control cable (DIRECTV only). If your DIRECTV satellite receiver has a 9-pin Data connector, plug one end of the Serial Control cable into the Data connector, and the other end into the **Control Out-Serial** connector on the DVR. Then skip to step 8.



If you don't have a Data connector, see page 7 for Serial control alternatives. If you still can't use a Serial connection or if you don't have DIRECTV service, go to step 7.

- 7 Connect the IR Control cable. (a) Plug the purple end of the IR Control cable into the **Control Out-IR** connector (the lower mini-jack) on the DVR. (b) Locate your cable box's (and satellite box's, if you didn't connect the Serial Control cable) IR sensors (see page 7). (c) Mount the IR emitters. Place one emitter on top of the cable box. If you connected the Serial Control cable in step 6, mount the other IR emitter underneath the cable box. If you didn't connect the Serial Control cable in step 6, mount the other IR emitter on top of the satellite box. Be sure both emitters stick out about 1.5 inches directly in front of the IR sensors. (Use the provided adhesive strips to hold the emitters in place.)
- 8 Turn on your TV. If you see the Welcome screen, you're ready for the next step, below. If not, press the Input, Source, or TV/Video button on your TV until you see the Welcome screen. For more help, see page 42.
- 9 Once you see the Welcome screen, the final steps are to activate the TiVo service and complete Guided Setup (see the *TiVo Service Viewer's Guide* for details).



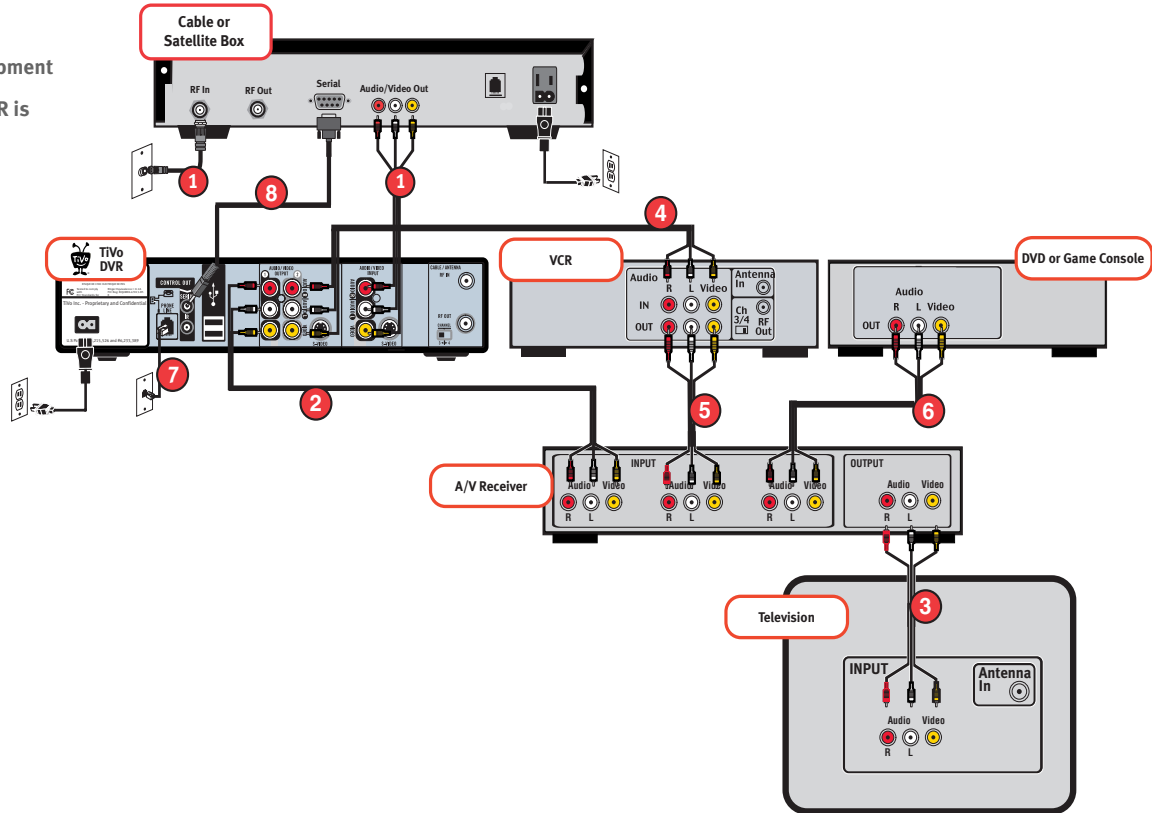
For tips on the IR Control cable connection, see page 7.



Before you begin:

- Be sure to refer to the information in Chapter 1 of this guide.
- Make sure that all your equipment is turned off and that the DVR is unplugged.

▶▶ Setup 8: A/V Receiver, DVD Player or Game Console, and VCR

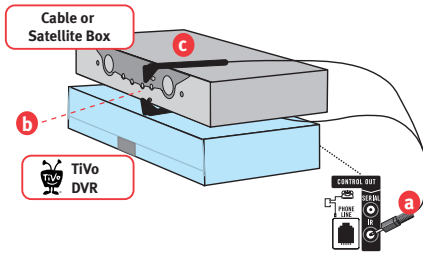


- 1** Cable or Satellite Box to DVR
Make sure the cable from the wall is connected to your cable or satellite box. Connect a Composite Video and Left/Right Audio cable from the **Audio/Video Out** connectors on the cable or satellite box to the **Audio/Video Input** connectors on the DVR. (If you have cable, but don't have a cable or satellite box, connect the RF Coaxial cable currently coming from the wall to the connector labeled **Antenna/Cable-RF** on the DVR.)
- 2** DVR to A/V Receiver
Connect Composite A/V cables from the **Audio/Video Output** connectors on the DVR to the **Audio/Video Input** connectors on the A/V receiver.
- 3** A/V Receiver to TV
Connect Composite A/V cables from the **Audio/Video Output** connectors on the A/V receiver to the **Audio/Video Input** connectors on the TV.
- 4** DVR to VCR
Connect Composite A/V cables from the **Audio/Video Output** connectors on the DVR to the **Audio/Video Input** connectors on the VCR.
- 5** VCR to A/V Receiver
Connect Composite A/V cables from the **Audio/Video Output** connectors on the VCR to the **Audio/Video Input** connectors on the A/V receiver.
- 6** DVD to A/V Receiver
Connect Composite A/V cables from the **Audio/Video Output** connectors on the DVD to the **Audio/Video Input** connectors on the A/V receiver.
- 7** Connect a phone line (see page 6). Plug in all power cords.
- 8** Connect the Serial Control cable (DIRECTV only). If your DIRECTV satellite receiver has a 9-pin Data connector, plug one end of the Serial



**Data
Connector**

9 IR Control cable connection



For tips on the IR Control cable connection and for alternatives to the Serial Control cable, see page 7.

Control cable into the Data connector. Plug the other end into the **Control Out-Serial** connector on the DVR. Then skip to step 10.

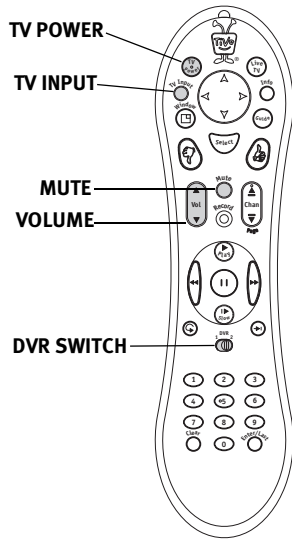
If you don't have a Data connector, see page 7 for Serial control alternatives. If you still can't use a Serial connection or if you don't have DIRECTV service, go to step 9.

- 9 Connect the IR Control cable. (Skip this step if you completed step 8 above.)
 - (a) Plug the purple end of the IR Control cable into the **Control Out-IR** connector (the lower mini-jack) on the DVR. (b) Locate the IR sensor (see page 7). (c) Mount the IR emitters. Place one emitter on top of the cable box and the other on top of the satellite box. Be sure both emitters stick out about 1.5 inches directly in front of the IR sensor. (Use the provided adhesive strips to hold the emitters in place.)
- 10 Select the input for the DVR. If you do not currently see the Welcome screen, you'll need to select the input for your DVR on your A/V receiver. (See the manual that came with your A/V receiver for instructions on how to choose an input. Some A/V receivers have one Input button that cycles through the inputs. Others have multiple input buttons, one for each input.) If you still don't see the Welcome screen, press the TV/Video, Source, or Input button on your TV until you see the Welcome screen. For more help, see page 42.

Once you see the Welcome screen, the final steps are to activate the TiVo service and complete Guided Setup (see the *TiVo Service Viewer's Guide* for details).

Setting Up the Remote Control

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The **TV INPUT** button can control the video signal—or “input”—your TV displays. Changing the input will change the source of the video displayed on your TV. TV inputs can include video from a VCR, DVD player, TiVo DVR, or a camcorder.

▶▶ Introduction

Before programming the TiVo remote control, you must first:

1. **Insert batteries.** See the remote control card for instructions.
2. **Complete Guided Setup.** See the *TiVo Service Viewer’s Guide* for instructions.

Using the Remote with a TV and A/V Stereo System

The TiVo remote will already work with your TiVo DVR. You can also set it up to control your TV and A/V stereo system. For example:

- **Control TV power, volume, mute, and input settings:** Complete the instructions on pages 33–35 using the first column in each of the tables (TV power, volume, and mute). Then repeat the instructions using the second column (TV input).
- **Control TV and A/V receiver power; A/V stereo system volume and mute:** Complete the instructions on pages 33–35 using the first column in each of the tables. Then repeat the instructions using the third column (A/V receiver power, volume, and mute). In this case, the TV POWER button turns on/off the TV and the A/V receiver at the same time. The VOL and MUTE buttons control only the A/V receiver.
- **Control TV power and A/V stereo system volume and mute:** Complete the instructions on pages 33–35 using the first column in each of the tables. Then repeat the instructions using the fourth column (A/V receiver volume and mute). The VOL and MUTE buttons control only the A/V receiver.

Using the DVR Switch to Control Two DVRs

If you have two TiVo DVRs in the same room, setting up the DVR SWITCH will prevent the remote control from changing channels on both DVRs, and prevent you from accidentally deleting programs you want to keep. See page 36 for instructions.

▶▶ Instructions: TV Power, Volume, and TV Input

1. Go to the Remote Control Setup screen.

Press the TiVo button; then highlight and select Messages & Setup, then Recorder & Phone Setup, then Remote Setup. Choose which device/functions you want to control:

To Control:	TV power, volume, and mute	TV input	A/V system power, volume, and mute	A/V system volume and mute only
Choose:	Remote Control-TV (power, volume, mute)	Remote Control-TV (TV Input)	Remote Control-A/V Stereo Receiver	Remote Control-A/V Stereo Receiver

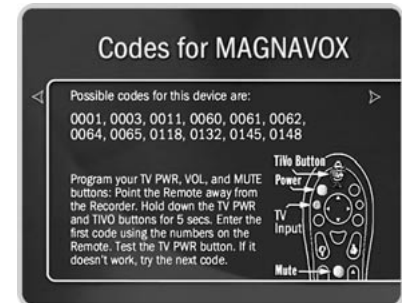
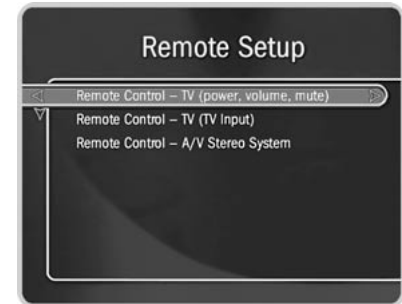
2. Select the brand of your device.

Using the UP/DOWN arrows, highlight the brand of the device you wish to control, then press SELECT. (If you have been using a universal TV remote control, select your TV or A/V receiver's brand, not the brand of the universal remote.) Next you'll see a screen with four-digit codes.

3. Prepare the remote control.

Point the remote away from your DVR and cover the front end with your hand. Refer to the table below and determine which two buttons to press to prepare the remote. Press and hold the buttons simultaneously for about 5 seconds (until the red light at the end of the remote control lights up and stays on when you release the buttons).

To Control:	TV power, volume, and mute	TV input	A/V system power, volume, and mute	A/V system volume and mute only
Press the:	TV PWR and TiVo buttons	TV INPUT and TiVo buttons	TV PWR and TiVo buttons	MUTE and TiVo buttons



4. Enter a code.

Use the number buttons on the remote control to enter a four-digit code (starting with the first code in the list on the screen). After you press the fourth digit of the code, the red light on the end of the remote control should flash. If it doesn't, try the next code.

5. Test the code. Point the remote towards the TV and test the button (refer to the table):

To Test the:	TV power, volume, and mute	TV input	A/V system power, volume, and mute	A/V system volume and mute
Press the:	TV PWR button	TV INPUT button	TV PWR button	MUTE button

If pressing the button works (e.g., turns the TV or A/V stereo system off, or changes the TV input), the code is correct. If it does not work, repeat steps 3 and 4 using the next code on the list. If none of the codes works, perform a code search (see below).

► Performing a Code Search

If none of the codes listed allows you to control your device, a code search may detect the correct code. Performing a code search can take up to 20 minutes.

1. Prepare the remote control. Point the remote away from your DVR and cover the front end with your hand.

Refer to the table below and determine which two buttons to press to prepare the remote. Press and hold the buttons simultaneously for about 5 seconds (until the red light at the end of the remote lights up and stays on when you release the buttons).

To Control:	TV power, volume, and mute	TV input	A/V system power, volume, and mute	A/V system volume and mute only
Press the:	TV PWR and TiVo buttons	TV INPUT and TiVo buttons	TV PWR and TiVo buttons	MUTE and TiVo buttons

- 2. Enter the search code.** Refer to the table below and use the number keys on your remote control to enter the appropriate code.

To Test:	TV power, volume, and muting	TV input	A/V system power, volume, and mute	A/V system volume and mute only
Enter:	0999	0999	1999	1999

After you press the fourth digit of the code, the red light on the end of the remote control will flash twice, then remain on.

- 3. Test the remote control.** Point the remote control at the TV or A/V stereo system. Press CHAN UP to test the first code. Did the TV or A/V stereo system turn off? If not, wait two or three seconds, then press CHAN UP again. Continue doing this until the TV or A/V stereo system responds.

When the TV or A/V receiver does turn off, press ENTER to select the current code. The red light at the end of the remote control will flash three times to indicate that the remote control is properly coded to control your device.

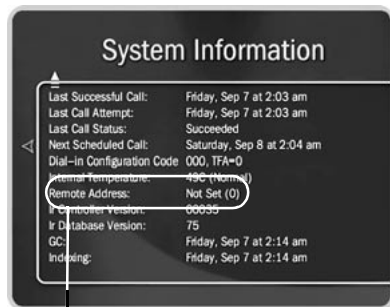
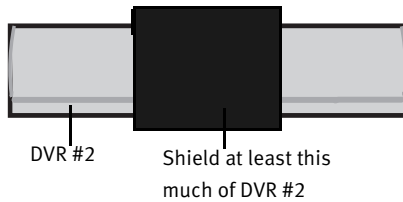
When the red light on the end of the remote control turns off, you have reached the end of the available codes.

Unfortunately, due to the great variety of TVs and A/V stereo systems, some makes and models are not compatible with your DVR's remote control. If you reach the end of the available codes without finding a code that works with your device, you will need to use your TV or A/V stereo system's remote to turn it on and off, and control the volume.



TiVo DVRs from some manufacturers don't respond to

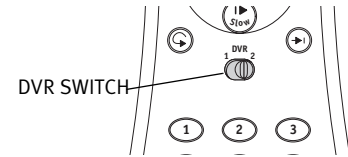
other manufacturers' remotes. If you have two TiVo DVRs from different manufacturers, their remotes may not conflict—and you may not need to set up the DVR SWITCH.



▶▶ Instructions: DVR Switch

If you have two DVRs, you can set up the remote so that it will only send signals to one of them at a time. If you don't, when you delete programs on one DVR, you may accidentally delete programs on the other DVR. Or you may change channels on both DVRs, when you want to change the channel on only one.

To avoid sending commands to both DVRs, you can set up each side of the DVR SWITCH to send signals to only one DVR.



1. Prepare the DVRs.

Cover the area around the shiny, dark plastic window on the front of either DVR (call this one DVR #2). You can use a dark piece of cloth or a magazine—or anything else thick and opaque. This prevents DVR #2 from receiving signals.

Point the remote control at the other DVR (DVR #1) and go to TiVo Central by pressing the TiVo button. Select Messages & Setup, then System Information. Press the DOWN arrow until you see the item “Remote Address.”

2. Prepare the remote control.

Move the DVR SWITCH to 1.

Point the remote away from DVR #1 and cover the front end of the remote with your hand.

Press and hold the PAUSE and TiVo buttons simultaneously (for about 5 seconds) until the red light at the end of the remote control comes on, remains steady, then stays on when you release the buttons.

3. Assign side 1 on the DVR SWITCH to DVR #1.

Point the remote control at DVR #1. Use the number buttons on the remote control to enter a number “1.” Press the RIGHT arrow. On the screen, the “Remote Address” updates from “0” to “1.”

Press the TiVo button and go to TiVo Central. Side 1 now controls DVR #1 only. Continue to the next step and set up side 2 of the DVR SWITCH. If you don’t, side 2 will still control both DVRs.

4. Prepare the DVRs again.

Press the input, source, or TV/Video button you normally use, until your TV displays DVR #2. Then remove the cover from the plastic window of DVR #2 and cover the plastic window of DVR #1. Finally, go to the System Information screen of DVR #2, and press DOWN arrow until you see “Remote Address” displayed.

5. Assign side 2 on the DVR SWITCH to DVR #2.

Move the DVR SWITCH to 2. Repeat steps 2 and 3, above. Assign the number “2” to DVR #2, then press the TiVo button and go to TiVo Central.

Now when you set the DVR SWITCH to 1, it will only control DVR #1—and when you set it to 2, it will only control DVR #2.

► Resetting the DVR SWITCH

1. Move the DVR SWITCH to 1.
2. Press and hold the PAUSE and TiVo buttons simultaneously for about three seconds, until the red light at the end of the remote control comes on and remains steady.
3. Using the number buttons on the remote control, enter 0. The red light at the end of the remote control will flash to indicate that the DVR SWITCH (either 1 or 2) is reset.
4. To complete the reset, move the DVR SWITCH to 2 and repeat steps 2 and 3.



By default, all DVRs and remote controls have a Remote Address of 0. A remote control with a Remote Address of 0 will control any DVR, even one with an assigned code. A DVR set to 0 will respond to any remote control, even one with an assigned code. This prevents you from becoming accidentally “locked out” of controlling your DVRs.

Resetting the Programmable Buttons

If you make a mistake, or are having difficulty, you can reset the programmable buttons. All the remote's buttons (including the DVR SWITCH) will return to the unprogrammed state of a new remote.

- 1. Prepare the remote control.** Point the remote away from your TiVo DVR and cover the front end with your hand.

Press and hold the TV PWR button and TiVo button simultaneously until the red light at the end of the remote control comes on, remains steady, then stays on when you release the buttons.

- 2. Press THUMBS DOWN™ three times, then press ENTER.** (To cancel, press CLEAR before you press ENTER.)

Troubleshooting

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▶▶ Customer Support

TiVo is dedicated to providing you with quality support and customer service. When you have a question:

- 1. Use this chapter.**
- 2. Use the troubleshooting in the *TiVo Viewer's Guide*.** It contains troubleshooting on the following topics:
 - The DVR's Phone Calls
 - Channels
 - Live TV
 - Recording Programs
 - Conflicts
 - Parental Controls
 - Audio/Video
 - The TiVo Service
- 3. Use online support.** Go to www.tivo.com/support. You'll find Frequently Asked Questions, step-by-step troubleshooting, and the ability to get interactive help from expert users.
- 4. Call Customer Support.** After checking Troubleshooting and online Customer Support for assistance, call Customer Support at 1-877-367-8486.

▶▶ Troubleshooting

Why does the DVR have to be connected to a phone line?

- The DVR needs to be connected to the phone line to make an automatic daily call to the TiVo service. This call downloads program information, which tells the DVR when programs are scheduled to air and on what channel. The call also downloads additional information from the TiVo service, such as service updates.

My phone jack isn't near the DVR.

- The DVR comes with a 25 foot phone cord. Phone cords longer than 25 feet are readily available at most hardware or electronics stores.
- Many of our customers report success when using wireless modem jacks. However, we cannot guarantee that using one will solve all phone call problems. Make sure you are using a wireless *modem* jack, not merely a wireless phone jack.

The wireless modem jack plugs into your phone line and a standard AC outlet. The wireless modem jacks are specifically designed for sending and receiving data transmissions. If you use the wireless modem jack, be sure it is connected to an electrical socket that has continuous power (not a socket controlled by a manual switch). We cannot guarantee that a wireless modem jack will work with all phone and electrical systems.

Wireless modem jacks are available at your local electronics store or at the TiVo Store (store.tivo.com). We suggest the following models of wireless modem jacks:

- RCA RC930
- Phonex PX 441
- GE 965967
- Radio Shack 43001600

- Another solution is to connect the phone line once or twice a week and make a daily call. See the next troubleshooting item for details.

Do I need to keep the phone connected all the time?


- Unless it is an inconvenience, we recommend that you leave the phone line connected all the time. It will not interfere with your other needs for the phone line, and daily calls will keep the DVR's program information fully up to date.

However, the DVR does not need to be connected all the time. After Guided Setup, you only need to connect the phone line about once or twice a week. If you do this, you should also manually start a daily call each time you connect the DVR to your phone line. To start a daily call, from TiVo Central, select Messages & Setup, then Recorder & Phone Setup, then Phone Connection, then "Make Daily Call Now."

What if I need to use the phone while the TiVo DVR is making a daily call?



- It's unlikely that you'll notice the TiVo DVR's phone calls, because the daily call typically lasts only about 10 minutes and will occur during evening hours. However, if you do need to use the phone while a daily call is in progress, simply pick up the phone. You will hear a sound like that of a modem dialing. Wait 5 to 10 seconds, then hang up. When you pick up the phone again, the line should be free. If it is not, just pick up and hang up again. The DVR will attempt another daily call later.

I don't see the Welcome Screen when I turn on my DVR for the first time.

- Make sure cables are connected from the OUT jack of one device to the IN jack of another. Cables should never be connected from OUT to OUT or IN to IN.
- If you used an RF Coaxial cable  to connect your DVR, make sure your TV (and VCR, if the DVR's signal passes through the VCR) is tuned to the same channel (3 or 4) that you selected on the back of your DVR. You may also need to press the

Input, Source, or TV/Video button on your TV's remote to change the input (i.e., the video signal your TV is displaying).



- If you're using Composite Video and L/R Audio cables  or S-Video cables , make sure your TV is displaying the appropriate video source. You may need to use the "Input," "Source," "Select," or "TV/Video" button on your TV's remote to change video sources. If you are having trouble changing the video source, refer to the instructions that came with your TV.
- If you are passing the signal through your VCR (as in Setup 4 in this guide), tune your TV the way you would to watch your VCR. Also, try turning your VCR on or off. If your VCR has multiple inputs, you may need to select the correct input on the VCR as well.
- If your DVR is connected to an A/V receiver or switch box, and you are having trouble finding the correct input, try connecting it directly to the TV instead.
- The cables you are using to connect your DVR to your TV or other equipment may be damaged or defective. Try exchanging the cables connected to the DVR with other cables that you know are working properly.

My TiVo DVR remote control doesn't control my TV's power, volume, etc.

- You must first program the DVR's remote control to turn your TV on and off and control its volume and mute functions. You can also program it to control volume and mute on an A/V receiver or stereo. For more information, see Chapter 4.

My TiVo DVR remote control doesn't work with my DVR.

- Be sure that you are using the DVR's remote and that you hold it so that the TiVo button points toward the DVR.

- Press any button on the remote. Does the red light above the TiVo button flash? If not, make sure that the batteries are positioned correctly in the remote. If they are correctly positioned, try a new set of batteries. See the remote control card that came with the *TiVo Service Viewer's Guide* for instructions on installing batteries.
- If the red light does flash, does the green light on the front of the DVR change to yellow when you press any button on the remote? If it does not, restart your DVR by unplugging it, waiting 15 seconds, then plugging it back in.
- You may not have the correct input selected on your TV. Use the “Input,” “Source,” “Select,” or “TV/Video” button on your TV’s remote to change the input. If you are passing the signal through your VCR (as in Setup 4 in this guide), you may need to select the correct input on the VCR as well.

I accidentally changed channels with my cable or satellite box’s remote control.

- After you have connected the TiVo DVR, you should use the DVR’s remote control to change channels. If you use your cable or satellite box’s remote to change the channel, the TiVo service won’t register that the channel has changed. If you accidentally change channels with another remote, press CHAN UP or CHAN DOWN on the DVR’s remote once. The DVR will then be able to register the channel.

I accidentally changed channels with my TV or VCR’s remote control.

- If you use your TV’s or VCR’s remote to change the channel, the TV will no longer display the video signal from the TiVo DVR. To return to viewing video from the TiVo DVR, return to the channel that your TV or VCR was tuned to. You may also need to press the Input, Source, or TV/Video button on your TV’s remote to change the input (i.e., the video signal your TV is displaying).

I can't get the channel to change.**If you have cable without a cable box:**

- Be sure that you are using the DVR's remote and that you hold it so that the TiVo button points toward the DVR.
- Press any button on the remote. Does the red light above the TiVo button flash?
If not, make sure that the batteries are positioned correctly in the remote. If they are correctly positioned, try a new set of batteries.
- If the red light does flash, does the green light on the front of the DVR change to yellow when you press any button on the remote? If it does not, restart your DVR by unplugging it, waiting 15 seconds, then plugging it back in.
- You may not have the correct input selected on your TV. Use the "Input," "Source," "Select," or "TV/Video" button on your TV's remote to change the input. If you are passing the signal through your VCR (as in Setup 4 in this guide), you may need to select the correct input on the VCR as well.

If you have a cable or satellite box and used the IR Control cable:

- Make sure the cable or satellite box is turned on.
- Make sure you are using the DVR's remote control, and that you hold it so that the TiVo button points toward the DVR, not at the cable or satellite box.
- Refer to page 8 to verify that the IR Control cable is positioned correctly in front of the IR sensor. Also, make sure that the purple end of the cable is plugged into the **Control Out-IR** connector on the back of the DVR.
- You may consider optimizing the IR Control connection as described on page 9.

- Press the TiVo button to go to TiVo Central, then select Messages & Setup, then Cable/Satellite Box, then Control Cable Setup. Verify the IR code you chose during Guided Setup. See page 8 for more on choosing an IR code.
- Try using the cable or satellite box's remote to change the channel. If it doesn't work, contact the manufacturer or service provider for assistance.

If you have a satellite box and used the Serial Control cable:

- Make sure the satellite box is turned on.
- Verify that the Serial Control cable is plugged into the data connector on the satellite box and into the **Control Out-Serial** connector on the back of the DVR.
- Unplug the satellite box from the wall, then plug it back in. Then try changing channels with the TiVo remote again.
- Try using the cable or satellite box's remote to change the channel. If it doesn't work, contact the manufacturer or service provider for assistance.
- You may have incorrectly specified the type of program guide for your DIRECTV satellite receiver. There are two types of program guides: MPG (Master Program Guide) and APG (Advanced Program Guide). First, unplug the power cord for the satellite receiver and plug it back in. Next, go to TiVo Central, then Message & Setup, then Recorder & Phone Setup, then Cable/Satellite Box, then Control Cable/Sat. Setup and select "Satellite Box." On the Connection to Satellite screen, if you originally selected Serial-MPG, change your selection to Serial-APG. (If you originally selected Serial-APG, change it to Serial-MPG.) You can also check the manual for your satellite receiver (as well as the satellite receiver's system setup screen) for information on the type of program guide it uses.

Warranty and Specifications

▶▶ TiVo DVR Limited Warranty

Limited Warranty

TiVo Digital Video Recorder

90 Days Free Labor/One Year Parts Exchange

WHO IS COVERED?

You must have proof of purchase to receive warranty service. A sales receipt or other document showing that you purchased the product is considered proof of purchase.

WHAT IS COVERED?

Warranty coverage begins the day you purchase the product. For 90 days from the purchase date, the DVR will be replaced with a new, repaired, renewed or comparable product (whichever is deemed necessary) if it becomes defective or inoperative. This exchange is done without charge to you for parts and labor. You will be responsible for the cost of shipping. From 90 days to 1 year from the date of purchase, your DVR will be replaced with a new, repaired, renewed, or comparable product (whichever is deemed necessary) if it becomes defective or inoperative. You will be responsible for all labor and shipping costs. Contact Customer Support at the phone number found on the back of this *Installation Guide* to obtain your cost (labor costs) for exchange.

All products, including replacement products, are covered only for the original warranty period. When the warranty on the original product expires, the warranty on the replacement product also expires. After one year from the date of purchase, you pay for the replacement of all parts, and for all labor charges.

WHAT IS EXCLUDED?

Your warranty does not cover:

- Labor charges for installation or setup of the product.
- Installation, performance of, or repair of: audio/video cabling, telephone line, or accessory attachments used with the product.
- Product replacement because of misuse, accident, lightning damage, unauthorized repair, or other cause not within the control of TiVo Inc.
- Incidental or consequential damages resulting from the product. (Some states do not allow the exclusion of incidental or consequential damages, so the above exclusion may not apply to you.)
- Reception transmission problems caused by signal conditions, telephone line, or cable or antenna systems outside the unit.
- A product that has been modified or adapted to enable it to operate in any country other than the country for which it was designed, manufactured, approved and/or authorized, or repair of products damaged by these modifications.
- A product used for commercial or institutional purposes.
- TiVo Inc. makes no warranty that the access connection will be a local (not long distance) phone call.

MAKE SURE YOU KEEP...

Please keep your sales receipt or other document showing proof of purchase. Attach it to this *Installation Guide* and keep both nearby. Also keep the original box and packing material in case you need to return your product.

BEFORE REQUESTING SERVICE...

Please check your *Installation Guide* before calling Customer Support. Following the troubleshooting tips contained therein may save you a call to Customer Support.

TO GET WARRANTY SERVICE...

Warranty service will be provided by TiVo. If you believe you need service for your DVR, contact Customer Support at the number found on the back of this *Installation Guide*. A representative will go through a diagnostic checklist with you. If it is determined that the product needs to be exchanged, you will receive a return authorization number. The representative will give you complete shipping details.

TO GET OUT-OF-WARRANTY SERVICE...

Out-of-warranty service can be obtained at a nominal cost for replacement and handling. To obtain out-of-warranty service contact Customer Support at the number found on the back of this *Installation Guide* to obtain the cost of out-of-warranty exchange for your product.

REMEMBER...

Record the model and serial numbers found on the product below:

MODEL # _____

SERIAL # _____

All implied warranties, including implied warranties of merchantability and fitness for a particular purpose, are limited in duration to the duration of this express warranty. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

This warranty gives you specific legal rights. You may have other rights which vary from state to state.

►► FCC Information

This equipment complies with Part 68 of the FCC Rules and the requirements adopted by ACTA. On the back of this equipment is a label that contains a product identifier in the format US:AAAEQ##TXXXX. If requested, this information must be provided to your telephone company.

A plug and jack used to connect this equipment to the premises wiring and telephone network must comply with the applicable FCC Part 68 rules and requirements adopted by ACTA. A compliant telephone cord and modular plug is provided with this product. It is designed to be connected to a compatible modular jack that is also compliant. See installation instructions for details.

The REN is used to determine the number of devices that may connect to a telephone line. Excessive RENs on a telephone line may result in the devices not ringing in response to an incoming call. In most but not all areas, the sum of the RENs should not exceed five (5.0). To be certain of the number of devices that may be connected to a line, as determined by the total RENs, contact your local telephone company. For product approved after July 23, 2001, the REN for this product is part of the product identifier that has the format US:AAAEQ##TXXXX. The digits represented by ## are the REN without the decimal point (e.g., 03 is a REN of 0.3). For earlier products, the REN is separately shown on the label.

If your TiVo DIGITAL VIDEO RECORDER causes harm to the telephone network, the telephone company will notify you in advance that temporary discontinuance of service may be required. But if advance notice isn't practical, the telephone company will notify the customer as soon as possible. Also, you will be advised of your right to file a complaint with the FCC if you believe it is necessary.

The telephone company may make changes in its facilities, equipment, operations or procedures that could affect the proper functioning of your equipment. If they do, you will be notified in advance in order for you to make necessary modifications to maintain uninterrupted service.

If trouble is experienced with this unit, for repair or warranty information, please contact customer service at the address and phone listed below. If the equipment is causing harm to the network, the telephone company may request that you disconnect the equipment until the problem is resolved.

DO NOT DISASSEMBLE THIS EQUIPMENT. It does not contain any user serviceable components.

We recommend the installation of an AC surge arrester in the AC outlet to which this equipment is connected. Telephone companies report that electrical surges, typically lightning transients, are very destructive to customer terminal equipment connected to AC power sources.

TiVo Customer Support
PO Box 2160
Alviso, CA 95002
1-877-367-8486

MACROVISION COPYRIGHT PROTECTION

The Recorder incorporates copyright protection technology that is protected by U.S. patents and other intellectual property rights. Use of this copyright protection technology must be authorized by Macrovision, and is intended for home and other limited pay-per-view uses only unless otherwise authorized by Macrovision. Reverse engineering or disassembly is prohibited. U.S. patent Nos. 4,631,603, 4,577,216, 4,819,098 and 4,907,093 licensed for limited pay-per-view uses only.

TELEPHONE LINE INTERRUPTION

Periodically, the Digital Video Recorder dials in to the TiVo service via your telephone line. If you pick up your telephone during the time information is being transferred, you will hear static noise. If you would like to use your telephone while the information is being transferred, you can hang up, wait about 5 seconds, and pick up your telephone again. The DVR will disconnect, and allow you to place your call. You can also interrupt the transfer at any time by temporarily unplugging the phone line from the DVR. If the transfer is interrupted, it will resume at a later time.



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

►► Specifications

Video In:	S-Video 4-pin mini DIN Composite Video RCA
Video Out:	S-Video 4-pin mini DIN Composite Video RCA (2)
Audio Line In:	Stereo L/R RCA (1 pair)
Audio Line Out:	Stereo L/R RCA (2 pairs)
RF In:	F-Connector Female
RF Out:	F-Connector Female Channel 3 or 4 switchable
Expansion Port:	USB (2)
Telephone:	RJ-11 female, 2-wire
Control Out:	3.5mm mini jack sockets (2)
Power:	120VAC, 60Hz, 40W
Ambient (external) Operating Temperature:	15C to 35C
Operating Humidity:	5% to 80%
Dimensions:	15" w X 11.5" d X 3" h
Remote Control:	34 Buttons
Storage:	ATA/IDE Hard Drive



Actual recording capacity depends on signal quality and the type of programming being recorded.

►► Safety Instructions

This product was designed and manufactured to meet strict quality and safety standards. There are, however, some installation and operation precautions of which you should be particularly aware. Please read these instructions before operating the equipment and save them for future reference.

1. **Read Instructions**—All the safety and operating instructions should be read and understood before the appliance is operated.
2. **Retain Instructions**—The safety and operating instructions should be retained for future reference.
3. **Heed Warnings**—All warnings on the appliance and in the operating instructions should be followed.
4. **Follow Instructions**—All operating and use instructions should be followed.
5. **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, etc.
6. **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.
7. **Tilt/Stability**—All televisions must comply with recommended international global safety standards for tilt and stability properties of their cabinet design. Do not compromise these design standards by applying excessive pull force to the front, or top, of the cabinet, which could ultimately overturn the product. Also, do not endanger yourself, or children, by placing electronic equipment/toys on top of the cabinet. Such items could unexpectedly fall from the top of the set and cause product damage and/or personal injury.
8. **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.
9. **Heat**—The appliance should be situated away from heat sources such as radiators, heat registers, stoves, or other appliances (including amplifiers) that produce heat.
10. **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 and plugs, convenience receptacles, and the point where they exit from the appliance.
11. **Object and Liquid Entry**—Never push objects of any kind into this product through cabinet slots, as they may touch dangerous voltage points or short the parts, resulting in the risk of fire or electric shock. Never spill liquid of any kind on this product.

12. Damage Requiring Service—The appliance should be serviced by qualified service personnel when:

- A. THE POWER SUPPLY CORD OR PLUG IS DAMAGED OR FRAYED;
- B. LIQUID HAS SPILLED INTO THE PRODUCT;
- C. THE PRODUCT HAS BEEN EXPOSED TO RAIN OR WATER;
- D. THE PRODUCT DOES NOT OPERATE NORMALLY WHEN YOU FOLLOW THE OPERATING INSTRUCTIONS (ADJUST ONLY THOSE CONTROLS THAT ARE DISCUSSED IN THE INSTALLATION GUIDE, AS IMPROPER ADJUSTMENT OF OTHER CONTROLS MAY RESULT IN DAMAGE, OFTEN REQUIRING EXTENSIVE WORK BY A QUALIFIED TECHNICIAN TO RESTORE THE PRODUCT TO NORMAL PERFORMANCE);
- E. THE PRODUCT HAS BEEN DROPPED OR THE CABINET DAMAGED;
- F. THE PRODUCT EXHIBITS A DISTINCT CHANGE IN PERFORMANCE.

13. Servicing—The user should not attempt service to the appliance beyond that described in the Troubleshooting section of this guide. All other servicing should be referred to qualified service personnel.

14. Cleaning—Unplug this product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners; use a damp cloth for cleaning. If the product comes in contact with any liquid, unplug the phone line and the power adapter and let the unit dry thoroughly before plugging it back in.

15. Power Source—This product should be operated only from the type of power source indicated on the marking label or in the Installation Guide. If you are not sure of the type of power supply to your home, consult your dealer or local power company.

16. Overloaded Power Outlets—do not overload wall outlets and extension cords, as this can result in the risk of fire or electric shock.

17. Electric Shock—To reduce the risk of electric shock, do not disassemble this product. Take it to a qualified serviceperson when service or repair work is required. Opening or removing covers may expose you to dangerous voltage or other risks. Incorrect reassembly can cause electric shock when this product is subsequently used.

18. Telephone Usage: When using your telephone equipment, basic safety precautions should be always followed to reduce the risk of fire, electric shock and injury to persons. To reduce the risk of fire, use only No. 26 AWG or larger telecommunication line cord.

19. Avoid moving the unit while it is plugged in to avoid accumulative shock and vibration damage to the internal hard disk drive.

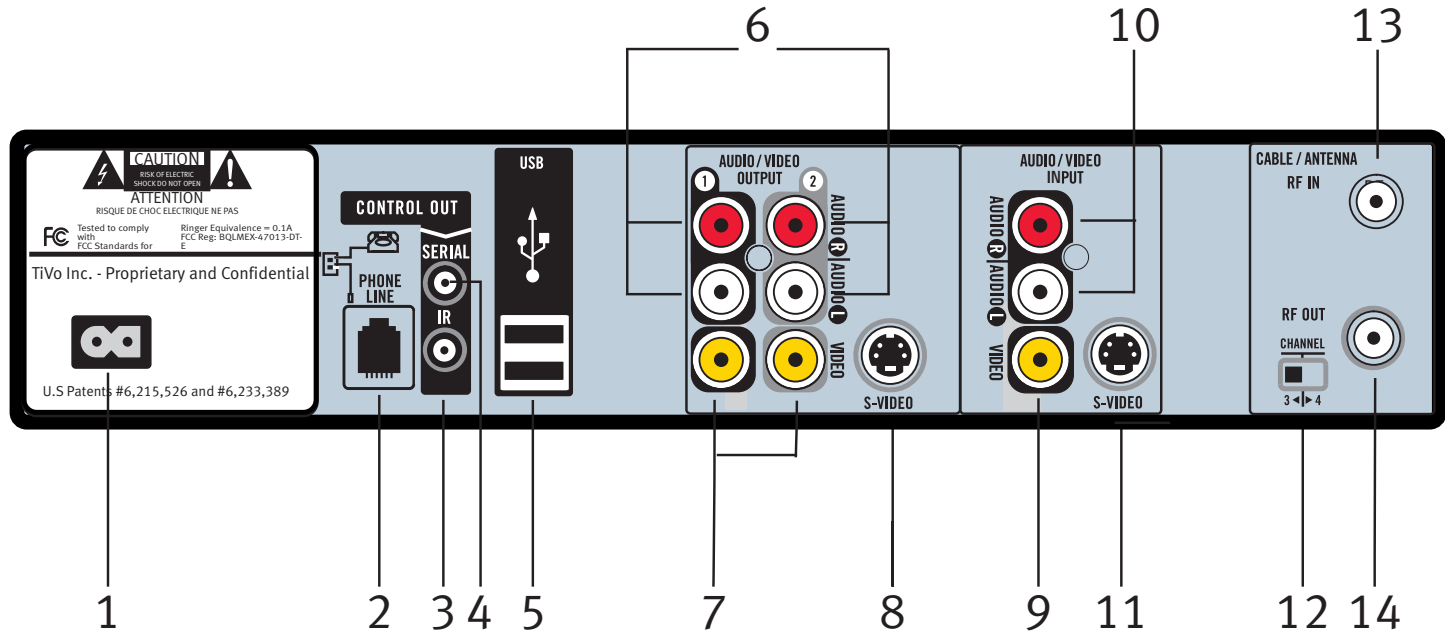
Back Panel Reference for TiVo Digital Video Recorder



Remember, always connect cables from the OUT connector of one device to the IN connector of the next. Never connect an IN to an IN or an OUT to an OUT.

▶▶ Back Panel Reference

This section provides general information about the connections on the back panel of the TiVo Digital Video Recorder.



1 - AC ~ In: (Connects to A/C power.) The DVR does not use a separate on and off switch; plugging it into the wall socket switches it on.

2 - Phone Line: (Connects to phone line.) The DVR uses the phone line to get program listings and to communicate with the TiVo Service. If you already have a phone line connected to your cable box, use the provided splitter.

3 - Control Out/IR: (Connects to cable or satellite box; IR stands for *infrared*.) This connection enables the DVR to change channels on your cable or satellite box. The purple end of the IR Control cable plugs into the DVR. The two emitters on the other end of the cable are placed in front of the IR sensor on the cable and/or satellite box.

4 - Control Out/Serial: (Connects to cable or satellite box; a Serial/Data connector is not available on all cable or satellite boxes.) This connection enables the DVR to change channels on a cable or satellite box.

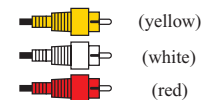
5- USB: (Universal Serial Bus.) For future use.

6 - Left/Right Audio Outputs: (Connects to TV.) Connect the Left/Right Audio cables (the white and red ones) to these connectors.

7 - Composite Video Outputs: (Connects to TV.) Composite Video provides a picture with very good quality. It is used with the Left/Right Audio cables (the white and red ones).

Composite Video and Left/Right Audio Cables

Composite Video
and L/R
Audio Cables

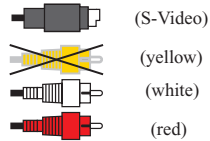


Connect to
Composite Video
and L/R Audio Jacks



S-Video and Left/Right Audio Cables

S-Video and Left/
Right Audio Cables



Connect to S-Video
and L/R Audio jacks



RF Coaxial Cable

RF Coaxial
Cable



Connect to RF,
VHF/UHF or
Antenna jack



8 - S-Video Output: (Connects to TV.) S-Video provides the highest quality picture. For audio with S-Video, use the Left/Right Audio cables (the white and red plugs on the Composite A/V cables) and just ignore the yellow cable in the Composite A/V cable set. An S-video cable is not provided.

9 - Composite Video Input: (Connects to cable or satellite box.) Composite Video provides a picture with very good quality. It is used with the Left/Right Audio cables (the white and red ones).

10 - Left/Right Audio Input: (Connects to cable or satellite box.) Connect the Left/Right Audio cables (the white and red ones) to these connectors.

11 - S-Video Input: (Connects to cable or satellite box; an S-Video connector is not available on all cable or satellite boxes.) For audio with S-Video, use the Left/Right Audio cables (the white and red plugs on the Composite A/V cables) and just ignore the yellow cable in the Composite A/V cable set. An S-video cable is not provided.

12 - Ch 3/4 Switch: If you use RF Coaxial cable to connect the DVR to your TV, you need to set this switch. Check which channel the TV is set to when it receives cable TV. Then set this switch to the same channel (either 3 or 4).

13 - RF In: (Connects to cable box, cable from wall, or antenna.) Use this connector if you are using an RF Coaxial cable to connect the cable box (or cable from the wall) to the DVR.

14 - RF Out: (Connects to TV.) Use this connector if you are using RF Coaxial cable to connect the DVR to the TV.

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We are dedicated to providing you with quality support and customer service. If you have questions or difficulties, we would like to hear from you.

Troubleshooting

Check the Troubleshooting section of this document and of the *TiVo Viewer's Guide* that came with your TiVo Digital Video Recorder.

Online Customer Support

Check the TiVo website at www.tivo.com/support, where you'll find installation self-help, answers to frequently asked questions, and step-by-step troubleshooting. You'll also find the latest information about TiVo, including service updates, the TiVo Service Agreement, and the TiVo Privacy Policy.

Contact Customer Support

After checking Troubleshooting and online Customer Support for assistance, you can find complete Customer Support contact information in the Troubleshooting chapter of this *Installation Guide*.