

General Setup

When the Cox technician installs your Cox HDTV Setup box, the technician will set up your HDTV, VCR and/or other devices as listed below. Be certain the technician enters this information below, as it is necessary for switching from one device to another.

Input Source List

- Standard TV – Video Input: _____
- HDTV – Video Input: _____
- VCR – Video Input: _____
- DVD – Video Input: _____
- Video Input: _____
- Video Input: _____

Getting Started

To begin using your Cox HDTV service, power ON both the Cox setup box and your HDTV:

- Using the Cox remote, power on the Cox setup box by pressing the CABLE button to set it in Cable mode, then the POWER button.
- With the Cox remote, power on the HDTV by pressing the TV button, then the POWER button; OR, using your HDTV Remote, follow your TV manufacturer's instructions for turning on your HDTV.

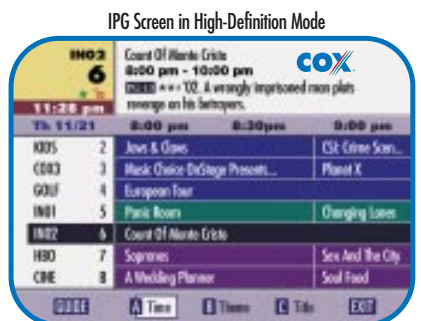
NOTE: Not all TVs are compatible with the Cox Remote.

To View a High-Definition Channel

After powering on:

Viewing a High-Definition Channel

- On your TV's remote, press the VIDEO INPUT MODE button (refer to your TV's manual for clarification) as necessary until you reach the HDTV Video Input noted on the previous page.
- On the Cox remote, press the CABLE button to set the remote in Cable mode.
- Use the Cox remote to access the high-definition channels in any of the following ways:
 - Press the CHANNEL UP/DOWN buttons to scroll to a high-definition channel.
 - Press the applicable number keys to go to a specific channel number.
 - Browse, using the Interactive Program Guide (IPG).



Changing One High-Definition Channel to Another

Changing High-Definition Channels

There is no need to switch the input source when changing from one HD channel to another HD channel.

- On the Cox remote, press the CABLE button to set the remote in Cable mode.
- Follow step 3 above.

NOTE: The Channel Banner will not stretch all the way across your TV screen when you are watching an HD channel.

Viewing and Changing a Standard-Definition Channel

Viewing Standard-Definition Channels

- On your TV's remote, press the VIDEO INPUT MODE button (refer to your TV's manual for clarification) as necessary until you reach the Standard TV Video Input from the INPUT SOURCE LIST on the first page.
- On the Cox remote, press the CABLE button to set the remote in Cable mode.
- Use the Cox remote to access the standard definition channels in any of the following ways:
 - Press the CHANNEL UP/DOWN buttons to scroll to a standard definition channel.
 - Press the applicable number keys to go to a specific channel number.
 - Browse, using the Interactive Program Guide (IPG).
- With your TV's remote, press the FORMAT (aspect ratio) button (if available) as needed, stretching or zooming to adjust the picture display until any black (or gray) sidebars are eliminated.

Changing Standard-Definition Channels

There is no need to switch the input source when changing from one standard-definition channel to another standard channel.

- On the Cox remote, press the CABLE button to set the remote in Cable mode.
- Follow step 3 above.

Important Information to Protect Your HDTV Display

Sidebars

Most TV screens and programming were designed using a 4:3 aspect ratio for standard-definition TV reception and viewing. However, some HDTVs are "wide screen," which use an aspect ratio of 16:9. Therefore, when a standard-definition program is viewed on a wide-screen HDTV, the HDTV may center the image on the screen with black or gray margins (known as sidebars) on either side in order to retain the 4:3 aspect ratio. The Cox setup converter uses this same process when 4:3 content is viewed via the high-definition input of a 16:9 wide-screen HDTV.



Letterboxing

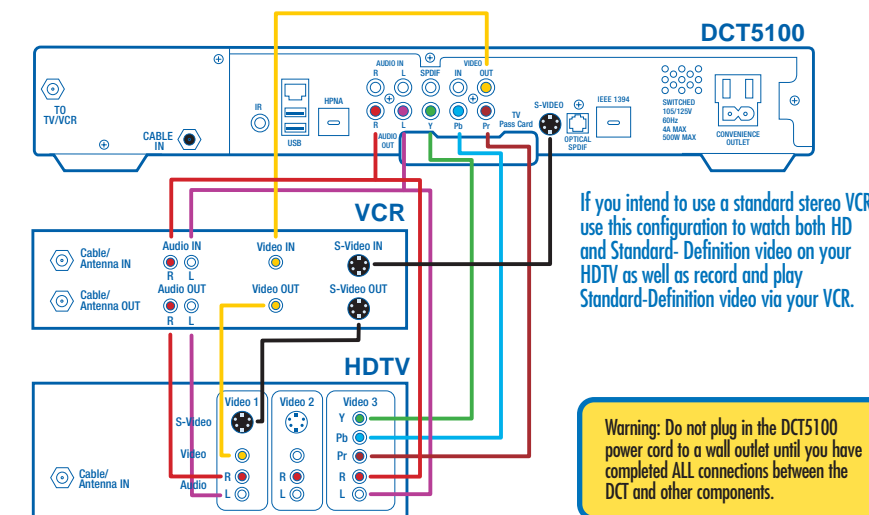
In a similar fashion, when wide-screen (16:9 aspect ratio) content is transmitted to a 4:3 TV screen, the content provider may add black margins on the top and bottom of the screen to ensure that the entire width of the picture is visible. This is known as "letterboxing."



Avoiding Sidebar or Letterbox Damage (Burn-In)

Persistent viewing of programs with sidebars or letterboxing over long periods of time may degrade the picture quality of your HDTV by reducing your HDTV's ability to display colors evenly across the screen. Both the television manufacturers and Cox recommend that sidebars be eliminated by using the zoom feature whenever possible. (Since letterboxing is done by the content provider, letterboxed programs cannot always be completely zoomed to fill the screen. See your TV's manual for details.) Pausing DVD's or videos for extended periods of time can also cause burn-in. Cox will not be held responsible for any burn-in on your HDTV set.

Connecting the DCT5100 to a High-Definition TV and VCR



If you intend to use a standard stereo VCR, use this configuration to watch both HD and Standard-Definition video on your HDTV as well as record and play Standard-Definition video via your VCR.

Warning: Do not plug in the DCT5100 power cord to a wall outlet until you have completed ALL connections between the DCT and other components.

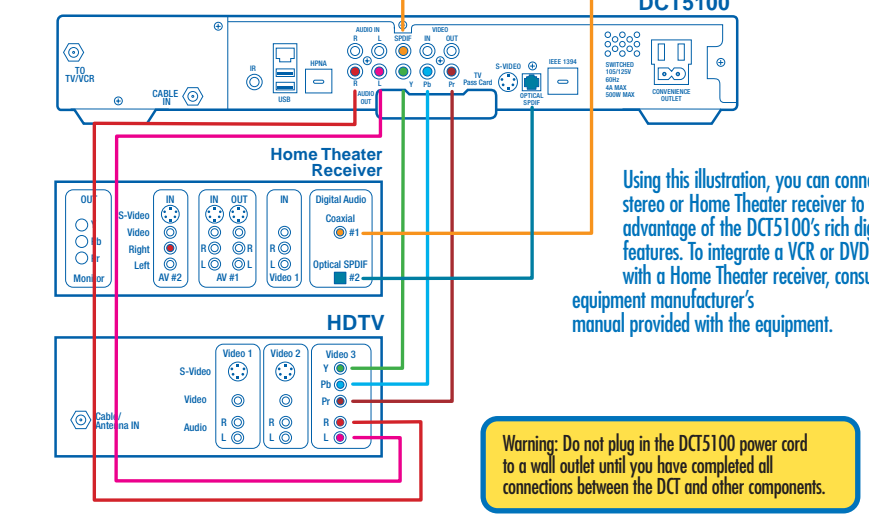
You will need the following connector cables:

- 1 set of two-pronged red & white RCA-type audio cables
- 2 sets of "Y" audio splitter cables
- 2 S-video cables – OR – 2 sets of single-pronged RCA type video cables

Note: The inputs/outputs on your specific VCR and HDTV determine which video cables you will need. If your VCR and HDTV accepts S-video, this should be your first choice as it is considered the higher standard-definition video output.

- Using the coaxial cable from an active wall outlet, connect the cable to the CABLE IN coaxial input on the DCT5100.
 - Locate the Y Pb Pr inputs on your HDTV and the Y Pb Pr outputs on the DCT5100. (These connectors are color-coded on the DCT5100 as follows: Y = green, Pb = blue, Pr = red. Colors may vary on your HDTV.)
 - Using a three-jack component video connector, connect the Y output on the DCT5100 to the Y input on your HDTV. Do the same for the Pb and Pr connections.
 - Connect the single connector end of a Y audio splitter cable to the AUDIO OUT R (red) on the DCT5100. Insert the other ends into the AUDIO IN R on your VCR and AUDIO IN R on your HDTV.
 - Use the second splitter cable to connect the AUDIO OUT L (pink) on the DCT5100 to the AUDIO IN L connections on both the VCR and the HDTV.
 - Use the two-pronged RCA cable to connect the AUDIO OUT L & R on your VCR to the AUDIO IN L & R on your HDTV.
 - Using an S-video cable, connect the S-VIDEO output on the DCT5100 to the S-VIDEO IN on your VCR. Then use the second S-video cable to connect the S-VIDEO output on the VCR to the S-VIDEO IN on your HDTV.
- OR –
- Using your single-pronged RCA-type video connector cable, connect the VIDEO OUT (yellow) connector on the DCT5100 to the VIDEO IN connector on your VCR. Next, use the second single-pronged RCA-type video connector cable to connect the VIDEO OUT connector on your VCR to the VIDEO IN connector on your HDTV.

Connecting the DCT5100 to a High-Definition TV & Home Theater



Using this illustration, you can connect a stereo or Home Theater receiver to take full advantage of the DCT5100's rich digital audio features. To integrate a VCR or DVD player with a Home Theater receiver, consult the equipment manufacturer's manual provided with the equipment.

Warning: Do not plug in the DCT5100 power cord to a wall outlet until you have completed all connections between the DCT and other components.

There are three options to configure your audio connection to include your Home Theater. Configure your audio setup to match the audio inputs on your Home Theater receiver. Options 1 and 2 are of equal sound quality. Option 3 is of lesser quality.

- Option One – Optical**
- Follow steps 1 through 3 in the previous diagram.
 - Locate the OPTICAL SPDIF output on the DCT5100 and the OPTICAL SPDIF input on your digital Home Theater receiver. This input may also be labeled Toslink on your digital Home Theater receiver.
 - Using an optical audio connector, connect the output on the DCT5100 to the input on your digital Home Theater receiver.
- Option Two – RCA-Type Digital Audio**
- Follow steps 1 through 3 in the previous diagram.
 - Locate the orange RCA-type SPDIF output on the DCT5100 and the RCA-type SPDIF or digital audio input on your Home Theater receiver.
 - Using a single-pronged RCA-type audio connector, connect the output on the DCT5100 to the input on your Home Theater receiver.
- Option Three – Baseband Audio Connector cables to be used: Two-pronged RCA type audio cable (red & pink)**
- Follow steps 1 through 3 in the previous diagram.
 - Locate the AUDIO OUT L (pink) and R (red) outputs on the DCT5100 and the AUDIO IN L & R inputs on your HDTV
 - Using a two-pronged RCA-type audio connector, connect the L & R outputs on the DCT5100 to the L & R inputs on your HDTV. Remember L will go to L, and R will go to R.

NOTE: When using your audio receiver, it is recommended that you mute or turn down the volume on your TV.

Frequently Asked Questions

What is HDTV?

High-definition television is a high-resolution digital wide-screen TV format. A high-definition TV signal has twice the color resolution and imparts a picture that is six times sharper than that provided by a traditional analog TV set. HDTV likewise provides enhanced audio, such as Dolby Digital.

How is HDTV Different?

The usual National Television Standards Committee (NTSC) analog TV screen in the U.S. has 525 scan lines, with 480 actually visible. The usual TV has an effective picture resolution of about 210,000 pixels. In the highest resolution digital TV formats, each picture contains about 2 million pixels. This means about 10 times more picture detail on the HDTV screen!

I keep hearing about 720p and 1080i signal formats — what does Cox support?

The formats used in HDTV are:

- 720p - 1280x720 pixels progressive
- 1080i - 1920x1080 pixels interlaced

The Cox settop will automatically convert all high-definition signals to 1080i format regardless of the format of the broadcast signal.

4:3, 16:9, wide screen and pan and scan — what does it all mean?

4:3 (width: height) is the standard television shape. HDTV's have been manufactured in both 4:3 and 16:9 aspect ratios.

16:9 (width: height) is the traditional shape of a HDTV, although some HDTV's have been designed with a 4:3 aspect ratio.

Wide screen is a term used for the 16:9 aspect ratio. Most HDTV sets are easy to identify because of their wide screens. These screens, which are usually a lot wider than they are tall, closely resemble their movie theater counterparts.

Pan and Scan is a tool that can be deployed to present 16:9 content onto a 4:3 television (vs. letterboxes). The "pan and scan" technique displays only part of the picture at any given time, so that it can fill up the entire display screen rather than require sidebars to fit within the 4:3 HDTV display ratio.

What is the difference between "interlaced" and "progressive" scan?

"Interlaced" or "progressive" refers to the scanning system. In an interlaced format, the screen shows every odd line at one scan of the screen, and then follows that up with the even lines in a second scan. Since there are 30 frames shown per second, the screen shows one half of the frame every sixtieth of a second. For smaller screens, this is less noticeable. As screens get larger, the problem with interlacing is flicker.

Progressive scanning shows the whole picture, every line in one showing, every sixtieth of a second. This provides for a much smoother picture, but uses slightly more bandwidth.

Will I be able to view closed captioning with HD Service?

The Cox high-definition set-top initially will not fully support closed captioning on high-definition channels; however, you will still be able to view closed captioning over the duplicate standard-definition versions of HD channels (whether in the analog lineup or on Cox Digital Cable). The closed captioning limitation on HD channels is a technical limitation. Cox is diligently working with its set-top supplier on the development of new software for providing closed captioning on all channels. This software will be downloaded to your set-top once it becomes available.

I am tuned to a high-definition channel, however the picture is not displayed in full screen. What is wrong?

Not all programs are in high-definition format and therefore programs will not always be full-screen. Not every show currently broadcast by a HD station is in HD format. You can assume that if you are getting a picture on the HD channel, then your equipment is functioning properly. You may want to check your HD monitor (TV set) settings (consult the HD monitor's user manual).

Can I view all my regular TV channels through the HDTV connection?

Yes, but you may get what is known as "burn-in" on the sides of your TV screen. This could ruin your television, especially if it is a projection-type television. Consult your TV's user manual for information regarding viewing 4:3 (standard video) programming in its native format.

When I tune to a high-definition channel, the picture seems to take a long time to display. Is this normal?

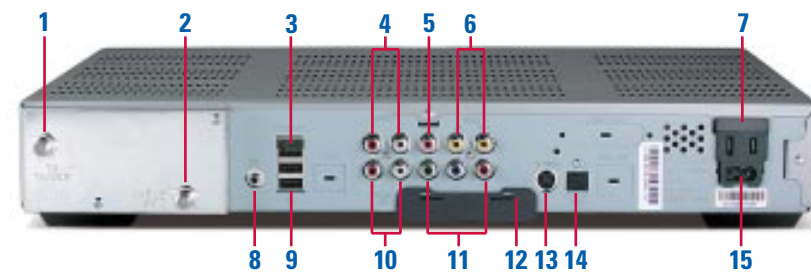
Yes, it may take up to 5 seconds for a high-definition picture to first display. This occurs because there are many more pixels to be created, thus, more time is required.

Why is the aspect ratio of different programs inconsistent?

The aspect ratio of the content is controlled by the service providers (HBO, Showtime etc.). You can go to the HBO website at www.hbo.com or the Showtime website at www.sho.com and find out which programming is in 16:9 HDTV. On the HBO website, you need to look for the HDTV symbol and on the Showtime website, it will say "WIDESCREEN" for the 16:9. As time goes on, there will be more and more HD in 16:9 aspect ratio. Whether the HD signal is in 4:3 or 16:9 formats, the picture quality will be better (crisper, clearer, etc.) than an analog or a standard digital signal. The reason for this is that there is up to 5 times the information, or data, for each HD service than there is for standard digital, no matter what the aspect ratio.

The DCT5100 Back Panel

The rear panel of the DCT5100 consists of three types of interfaces — audio, video and data. The following information describes each connection and its use.



Key	Description	Key	Description
1. TO TV/VCR	This coaxial output connector is used to connect the DCT5100 to a TV or VCR operating on channel 3 or 4.	8. IR	This connector enables the DCT5100 to control a VCR while recording a selected program. Not all electronic program guides support this feature.
2. CABLE IN	This connector receives the incoming signal from your cable service provider.	9. USB	The Universal Serial Bus (USB) is used to support devices such as keyboards, joysticks, scanners, disk storage, PCs, printers, and digital cameras. (Not currently enabled.)
3. ETHERNET	This port supports PC networking. (Not currently enabled.)	10. AUDIO OUT R AUDIO OUT L	The RCA phono-type connectors are used to deliver audio to a stereo receiver.
4. AUDIO IN R AUDIO IN L	These connect a settop between a peripheral audio device such as a CD player and a stereo tuner or A/V receiver. The audio from the peripheral device will pass through the DCT5100 when it is turned OFF.	11. Y Pb Pr	These connectors are used to deliver component video to an HD-ready TV or monitor. Though capable of delivering standard definition video to your TV or monitor, these cables are necessary to deliver high-definition video.
5. SPDIF	The orange coaxial SPDIF connector is a digital output connection that carries Dolby Digital 5.1 audio or PCM audio. It is used to connect the DCT5100 to a stereo tuner or A/V receiver to provide surround-sound, theater-style audio.	12. TV PASS CARD	For Future Use
6. VIDEO IN VIDEO OUT	The VIDEO IN connector accepts a baseband video input from a VCR, camcorder or other video device. (Not currently enabled.) The VIDEO OUT connector is used to deliver baseband video to an external device such as a VCR or TV.	13. S-VIDEO	This connector is used to deliver high-quality, standard-definition video to external devices that accept S-Video inputs, such as a high-end VCR or TV.
7. OUTLET	This outlet may be used to plug your TV into the DCT5100 as a convenient additional outlet.	14. OPTICAL SPDIF	The OPTICAL SPDIF connector is an SPDIF optical digital output connection that carries Dolby Digital 5.1 audio or PCM audio. It is used to connect the DCT5100 to a stereo tuner or A/V receiver to provide surround-sound, theater style audio.
15. POWER INLET	For the female end of the supplied power cord.		

Cox Technical Support:

949-240-1212 South County
949-720-2020 Central County

Effective June, 2003.

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High-Definition Service from Cox Quick Reference Guide

The DCT5100 Front Panel

The DCT5100 front panel has 12 keys and an LED display. Use the keys to perform basic functions such as access to the electronic program guide, navigate menus, and purchase Pay-Per-View events. The table following this drawing describes each key and its use.



Key	Description
1. LED	Displays the channel number or time of day.
▲▼▶◀	There are four indicator lights on the LED screen: <ul style="list-style-type: none"> • MSGS. — the DCT5100 has received messages for you to read • ON — the DCT5100 is powered on • A/B — the RF bypass is active (Not enabled on this unit.) • REMOTE — the remote control is in use
2. CURSOR	Moves the cursor around the program guide and menu screens.
3. MENU	Displays the main menu.
4. POWER	Turns the device ON or OFF.
5. INFO	Displays the current channel and program information.
6. A/B	Use to manually enable the RF bypass function. You must have a cable-ready TV for this function to operate. (Not enabled on this unit.)
7. SELECT	Selects menu options, Pay-Per-View events or programs from the program guide.
8. GUIDE	Displays the program guide.
9. CHANNEL + CHANNEL -	Changes the channels by moving Up or Down.
10. SMART CARD SLOT SLOT	This interface is intended to support electronic commerce activity utilizing a Smart Card. (Not enabled on this unit.)

Welcome to High-Definition Service from Cox

Congratulations on receiving a new DCT5100 High-Definition Cable settop box from Cox Communications. You can now experience the ultimate in high-definition video and digital audio. Your Cox HD settop enables reception of both high-definition and standard-definition digital programming as well as analog programming. Along with the Cox settop, you'll also receive the Cox Interactive Remote Control, which will be used along with your existing HDTV's Remote Control to navigate and control your cable service. This Set-Up Guide introduces you to the basic features of the DCT5100 and provides several options for integrating it into your current entertainment system.

HDTV programming schedules can be found online at the following web sites: www.fitantv.com, www.hdtvgalaxy.com, www.hidefguide.com, www.hdpictures.com.

If you need technical support, please call:
(949) 240-1212 South County Residents; (949) 720-2020 Central County Residents.

Important Safety Instructions

▶ Ventilate

The Motorola DCT5100 has been designed to operate reliably in a well-ventilated household environment. Slots and openings in the unit cabinet are provided for ventilation. These openings should never be blocked by placing the product on a bed, sofa, rug, or similar surface. The unit should be positioned with at least 2 inches of space above and on all sides.

▶ Safety Instructions

1. Position the DCT5100 with at least 2 inches of space above and on all sides.
2. Do not block the slots and openings in the DCT5100.
3. Do not place anything on top of the DCT5100.
4. Do not position the DCT5100 in an enclosed space that would restrict airflow around the unit.
5. Do not position the DCT5100 near any external heat source that could raise the temperature around the unit.

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