Pace

Customcare

PACE DC700X SET-TOP   CUSTOMER SERVICE AND INSTALLATION GUIDE

To enhance the set-top, the on-screen menus may be updated from time to time, over the cable. They may therefore differ from those shown in this manual. However, the way that you use the menus will remain similar to the way described in this manual.

SAFETY INFORMATION

This digital set-top has been manufactured and tested with your safety in mind. However, improper use can result in potential electric shock or fire hazards. To avoid defeating the safeguards that have been built into the set-top, please observe the precautions discussed in this document.

Warnings on the set-top

```
┌─────────────────────┐   ┌──────────────────────────┐
│      CAUTION        │   │         CAUTION          │
│ RISK OF ELECTRIC SHOCK │ │  WHEN SERVICING ONLY USE  │
│    DO NOT OPEN      │   │ IDENTICAL REPLACEMENT PARTS │
└─────────────────────┘   └──────────────────────────┘
```

The lightning flash with arrowhead symbol, within a triangle, is intended to alert you to the presence of uninsulated "dangerous" voltages within the set-top's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within a triangle is intended to alert you to the presence of important instructions in the literature accompanying the set-top.

Other warnings

To reduce the risk of electric shock, do not remove the cover of the set-top. There are no user-serviceable parts inside it.

Do not perform any servicing unless you are qualified to do so. Refer all servicing to qualified service personnel. Servicing the set-top yourself will invalidate the warranty.

To reduce the risk of fire or electric shock, do not expose this set-top to rain or moisture.

On the rear panel of the set-top there is a tamper-evident label that states 'Warranty void if broken or removed'.

Installation

The installation of the set-top should be carried out by a qualified installer and should conform to local codes.

Note to the installer

This reminder is provided to call the attention of the cable-TV-system installer to Section 820 of the National Electrical Code (USA), which provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as is practical.

Service address:
Pace Americas Inc.
3701 FAU Boulevard, Suite 200, Boca Raton
Florida 33431 U.S.A.

Before you install or use the apparatus, you must read and understand these Important Safety Instructions. At all times when using the apparatus you must follow these Important Safety Instructions to reduce the risk of fire, electrical shock and injury to persons.

1. Read these instructions.

2. Keep these instructions.

3. Heed all warnings.

4. Follow all instructions.

5. Do not use this apparatus near water.

6. Clean only with dry cloth.

7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.

8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.

9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into the outlet, consult an electrician for replacement of the obsolete outlet.

10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.

11. Only use attachments/accessories specified by the manufacturer.

12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.

13. Unplug this apparatus during lightning storms or when unused for long periods of time.

14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

In addition to the Important Safety Instructions, please read the Safety Information below.

Power sources

The model number, serial number and electrical rating of this set-top are on a label on its base.

You must operate the set-top only from the type of power source indicated on the marking label. If you are not sure of the type of power supply to the home, consult the dealer or local power company. If you move the set-top between locations at different temperatures, allow it to reach room temperature before you apply power to it.

Water and moisture

Do not expose the set-top to dripping or splashing and ensure that no objects filled with liquids, such as vases, are placed on the set-top. See also item 5 in the Important Safety Instructions.

Lightning

For added protection for the set-top during a lightning storm, or when it is left unattended and unused for long periods of time, disconnect the cable system from the set-top. See also item 13 in the Important Safety Instructions.

Placement and mounting

Do not place the set-top on an unstable or uneven surface. The set-top may fall, causing serious injury to a child or adult and serious damage to the set-top. If you mount the set-top, for example to a wall or ceiling, follow the manufacturer's instructions and use a mounting accessory recommended by the manufacturer. See also item 12 in the Important Safety Instructions.

Ventilation

Slots and openings in the casing of the set-top are provided for ventilation, to ensure reliable operation of the set-top and to protect it from overheating.

- Never block the ventilation openings by placing the set-top on a bed, sofa, rug or other similar surface.
- Never cover the ventilation openings with items such as newspapers, table-cloths or curtains.
- Do not place the set-top in a built-in installation such as a bookcase or rack unless proper ventilation is provided or you have adhered to the manufacturer's instructions.
- It is recommended that you maintain a minimum distance of 1 inch around the set-top for sufficient ventilation.
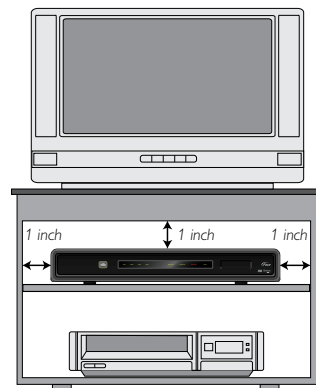
See also item 7 in the Important Safety Instructions.

Entry of objects and liquids

Never push objects of any kind into the set-top through openings as they may touch dangerous voltage points or short-out parts that could result in fire or electric shock. Never spill liquid of any kind on the set-top.

Risk of fire or scorching

Never place naked flame sources, such as lighted candles, on or adjacent to the set-top.

Ambient temperature

The operating temperature range of the set-top is 32-104°F. If the ambient temperature around the set-top falls outside this range, you must correct this in order for the set-top to work correctly and safely. For example, if the temperature is too high, switch on the air conditioning.

Transporting

Move the combination of set-top and cart with care. Quick stops, excessive force and uneven surfaces may cause the combination of set-top and cart to overturn. See also item 12 in the Important Safety Instructions.

Overloading

Do not overload wall outlets, extension cords or other power outlets as this can result in a risk of fire or electric shock.

Replacement parts

When replacement parts are required, be sure that the service technician has used replacement parts specified by the manufacturer or that have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock or other hazards. See also item 14 in the Important Safety Instructions.

Safety check

Upon completion of any servicing or repairs to the set-top, ask the service technician to perform safety checks to determine that the set-top is in its proper operating condition. See also item 14 in the Important Safety Instructions.

SAVE THIS INFORMATION FOR FUTURE REFERENCE

Safety aspects of connections

Full details of the rear panel are on page 10.

Connecting

Do not connect the set-top (or any other equipment such as a TV or VCR) to the power supply until you have properly connected all the other cables.

The set-top operates with a 120 V AC, 60 Hz power supply. Do not connect the set-top to any supply other than this.

This set-top is equipped with a two-wire power cord, with a polarized plug at one end. The other end of the cord is fitted with a polarized connector, which is shaped such that it can be fitted only one way into the power input jack of the set-top. Connect this end first, before inserting the polarized plug into the wall socket-outlet.

Disconnecting

Disconnect the set-top from the power supply before you disconnect any other equipment from its rear panel.

The only way to disconnect the set-top from the power supply is to remove the power cord from the wall socket-outlet. The set-top must therefore be installed near to the wall socket-outlet, which should be easily accessible.
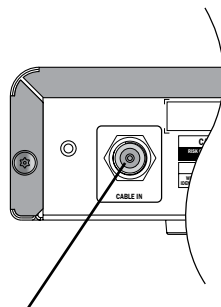
The CABLE IN connector is designed for connection to a cable network only.

You must not connect any other equipment, such as a VCR, to this input.

POWER INPUT
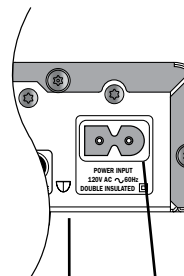
The model number, serial number and electrical rating of this set-top are on a label on its base.

Epilepsy and on-screen images

Certain people are susceptible to epileptic seizures or losing consciousness when faced with certain types of flashing lights in our daily environment.

These people are exposed to the risk of seizures if they watch certain television images or if they view certain images while they are browsing the Web. These phenomena may appear even when the subject has no previous history of this problem or has never suffered an epileptic seizure.

If you, or a member of your family, has already suffered symptoms linked to epilepsy (seizure or loss of consciousness) in the presence of stimulation by light, please consult your doctor before using this product.

If you or any person using the equipment experiences dizziness, involuntary movements or convulsion, please immediately stop viewing and consult a doctor.

When you are browsing the Web or playing a Web-based game, take the following precautions:

- Use the equipment in a well-lit room, and turn down the brightness of the television screen.
- Sit at a reasonable distance from the television screen.
- Take a break for ten minutes every hour.

You should avoid using the Web if you are tired or have lost some sleep.

Regulatory information

CAUTION: Do not attempt to modify the set-top without written authorization from the manufacturer. Unauthorized modification could void your authority to operate the set-top.

NOTE

The set-top has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. The set-top generates, uses and can radiate radio-frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If the set-top does cause harmful interference to radio or television reception, which can be determined by turning the set-top off and on, you are encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the set-top and the receiver.
- Connect the set-top to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

OVERVIEW

- Read all the safety information on pages 2 through 7.

- Familiarize yourself with the front and rear panels of the set-top (see pages 9 through 11).

- Is the set-top in a TV cabinet with closed non-transparent doors or somewhere else where its IR-receive window is blocked from view? If so, connect a remote "eye" (IR receiver) (see page 13).

- Decide how you want to connect the set-top (and to which equipment) and look at the table on page 15 to see which setup you should use.

- Be aware of menu settings that could affect your choice of setup (see page 54).

- Connect the equipment together according to your chosen setup, but do not yet connect the power cords (see pages 16 through 33).

- Connect the power cords and turn on the equipment (see pages 34 through 36).

- Check that you can see a picture on the TV and do any necessary tuning (see page 37).

- Check whether an external hard disk is required and allowed (see page 39).

- Check whether the user settings are appropriate for the TV being used and change them if necessary (see pages 41 through 50).

- Any problems? Display the diagnostic screens (see page 55) and consult the "Solving Problems" section on page 56.

The set-top's front-panel

POWER button
To turn the set-top on/off

POWER light *(around button)*
Lights green when the set-top is on;
red when the set-top is off; not lighted
when the set-top is disconnected
from the power supply

RECORD light
Lights red to show recording is taking place

PLAY light
Lights green to show playback is taking place

POWER

480i   480P   720P   1080i   MESSAGE   REMOTE   RECORD   PLAY

Pace

HD □DOLBY
DIGITAL

Resolution lights
Relevant one lights up
to show the resolution
of the picture
(for live program or
play-back program)

MESSAGE light
Lights when there is an unread message
and when you make User Settings

REMOTE light
Lights when the set-top
is receiving a signal from
the remote control

9

SEPARABLE SECURITY MODULE
(behind cover)
Removal will interrupt the service

COMPONENT VIDEO
Component video output for **analog** *HDTV*

VIDEO OUT
Composite video output

SATA
For connection to an optional external hard disk

CABLE IN
From cable service-provider

1394
For connections to 1394-compatible devices

HDMI™
Video and audio output for **digital** *HDTV*

POWER INPUT (Make this connection last of all)

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN

CAUTION
WHEN SERVICING ONLY USE
IDENTICAL REPLACEMENT PARTS

CABLE IN

TO TV

1394

ETHERNET

Pr   Pb   Y
COMPONENT VIDEO

R   L
AUDIO OUT

VIDEO OUT

S-VIDEO

DIGITAL AUDIO
OUT OPTICAL

HDMI

SATA

IR RECEIVE

POWER INPUT
120V AC ∿ 60Hz
DOUBLE INSULATED

DIGITAL AUDIO OUT OPTICAL
Optical S/PDIF audio output

The model number, serial number and electrical rating of this set-top are on a label on its base.

TO TV
RF output to the TV or VCR

ETHERNET
To connect to optional PC

AUDIO OUT
Audio outputs (stereo, R and L)

S-VIDEO
S-video output

Universal Serial Bus (USB) port
To connect a USB device

IR RECEIVE
Infra-red input from a remote "eye"

CABLE IN	Connect the cable service here.
TO TV	Connect to the RF/antenna input on the TV or VCR (optional).
VIDEO OUT	Connect to the video composite input on the VCR (or a standard TV).
AUDIO OUT	Connect to the L and R audio inputs on the stereo TV, stereo VCR or optional stereo amplifier.
SEPARABLE SECURITY MODULE (behind cover)	Removal will interrupt the service.
COMPONENT VIDEO	If the HDTV does **not** have an HDMI™, connect the HDTV here.
S-VIDEO	Connect to the S-video input (if present) on the VCR or TV.
IR RECEIVE	Connect to an optional remote "eye".
USB ⬱ (Universal Serial Bus)	Connect to compatible optional equipment that supports a USB 2.0 interface.

|	
HDMI™ (High Definition Multimedia Interface)	If the HDTV has an HDMI™, connect it here for a **digital** audio/video connection (instead of using the AUDIO and 3 **analog** COMPONENT VIDEO connectors).
ETHERNET	Connect to an optional PC network (future use).
1394	Connect to 1394-compatible devices.
SATA	Connect to an optional external hard disk.
DIGITAL AUDIO OUT OPTICAL	Connect to the **optical** digital audio input on optional digital audio equipment, such as an audio decoder or home theater receiver.
POWER INPUT	Connect the set-top's power cord here.

GETTING THE CABLES READY

Below is a list of cables (and their connectors) that are shown in the diagrams on pages 16 through 33, along with a key to how they are depicted in the diagrams. (Options are shown as dashed lines.)

Cable type	Connector type	Cable numbers	Drawn as
75 Ω coaxial (RF cable)	male F-type		– – – – –
Standard HDMI™	HDMI™ 19-pin type A	1	————
HDMI™ (to DVI)	HDMI™ 19-pin type A/DVI	2	————
Component video 75 Ω coaxial	male RCA jack	9, 12	————
Video 75 Ω coaxial	male RCA jack	13	————
S-video	4-way male mini-DIN	4, 5	————
Stereo audio coaxial	male RCA jack	3, 6, 7, 10	————
Digital audio 75 Ω coaxial	male RCA jack	11	————
Digital audio optical	optical S/PDIF	8	————
IR receive	male 3.5 mm jack		————

You may need to install the set-top in an equipment closet with closed non-transparent doors or some other location where the remote-control sensor (IR-receive window) on the set-top's front panel is blocked from view (for example, if the TV is wall-mounted). In that case, you need to connect a remote "eye" (IR receiver) to the set-top's rear panel. The IR signals from the remote control can be received by the remote eye and they then reach the set-top through the remote eye's cable. The remote eye is not supplied with the set-top.

1. Select a location for the remote eye. This will typically be on the top or side of the TV, but could be in a different, but convenient, location. Make sure that it is in a position where there is a clear path between the remote control and the remote eye.

2. Make sure that you can conveniently route the cable. The cable on the remote eye is approximately 10 feet long, so make sure that the location you have chosen is within 10 feet of the IR RECEIVE jack on the set-top's rear panel.

3. Make sure the area where you will attach it is clean and dry.

4. A small adhesive patch is supplied with the remote eye. Remove the paper from one side of the patch and stick the patch to the back (larger, flat side) of the remote eye.

5. Remove the paper from the other side of the adhesive patch and stick the remote eye at the position you want. Make sure that the window at the curved end of the remote eye points towards the position from which the remote control will be operated.

6. Insert the 3.5 mm jack plug on the other end of the remote eye's cable into the socket labeled "IR RECEIVE" on the rear panel of the set-top.

front of HDTV

remote eye

adhesive patch

3.5 mm jack plug

13
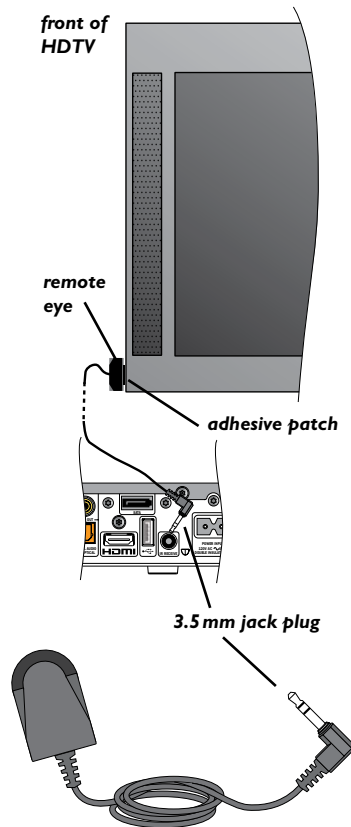
In order for you to view programs broadcast in high-definition, the set-top must be connected to a suitable HDTV or computer monitor. The set-top is also compatible with standard-definition TVs and VCRs.

On the following pages are diagrams that show you how to connect typical equipment (HDTV, VCR, DVD player and home theater receiver) to the set-top. The connected items are shown individually and then in combination (see the tables on page 15). Some of the connections may change when extra equipment is added. For example, when a you add a home theater receiver, some cables that previously went to the TV can, instead, go to the home theater receiver.

These setups make efficient use of the connectors on the set-top. However, depending on the other equipment and the connectors on it, you may choose to connect things differently.

These setups allow stereo recording and play-back of video tapes. You hear stereo sound from the home theater's loudspeakers.

Although the RF cables (shown by dashed lines in the diagrams) are not absolutely necessary, we recommend that you connect them as a back-up. If you use the RF cables, you must tune the TV (and VCR) to the set-top's VHF output channel (3 or 4: consult the cable service-provider to find which channel it is for the location). Consult the manuals supplied with the TV and VCR for information on how to tune.

You can take advantage of the digital audio output from the set-top by connecting a suitable cable between the home theater receiver and the DIGITAL AUDIO OUT OPTICAL jack.

WARNINGS
Do not connect the set-top (or any other equipment such as a TV or VCR) to the AC power supply until you have properly connected all the other cables.
Disconnect the set-top from the AC power supply before you disconnect any other equipment from its rear panel.
The only way to disconnect the set-top from the AC power supply is to remove the AC power cord (or switch the wall socket-outlet switch, if present, to its OFF position). The set-top must therefore be installed near to the AC power socket-outlet, which should be easily accessible.
The cable input is designed for connection to a cable network only. You must not connect any other equipment, such as a VCR, to this input.

Setups using the TV's HDMI™ connector:

HDMI™ TV (+ optional home theater receiver)	Setup A	Page 16
DVI HDTV (+ optional home theater receiver)	Setup B	Page 18
VCR and HDMI™ TV	Setup C	Page 20
VCR, home theater receiver and HDMI™ TV	Setup D	Page 22
DVD player and HDMI™ TV	Setup E	Page 24
VCR, DVD player, home theater receiver and HDMI™ TV	Setup F	Page 26

Setups using the TV's component video and stereo audio connectors:

HDTV (+ optional home theater receiver)	Setup G	Page 28
DVD player and HDTV (+ optional home theater receiver)	Setup H	Page 30
VCR, DVD player, home theater receiver and HDTV	Setup I	Page 32

NOTES

How you set up the equipment may depend on the home theater receiver. For example, the optical and digital audio inputs may be associated with particular video inputs. Please see the home theater user information for further details.

NOTE

Copy protection via an HDMI™ secure link

The HDMI™ link between the set-top and the HDTV should be a secure link. When the set-top is attached via an HDMI™ cable to an HDCP-compliant (High-bandwidth Digital Content Protection) HDTV, the HDTV and set-top negotiate a secure link, which allows the set-top to transmit full resolution video (picture) to the HDTV.
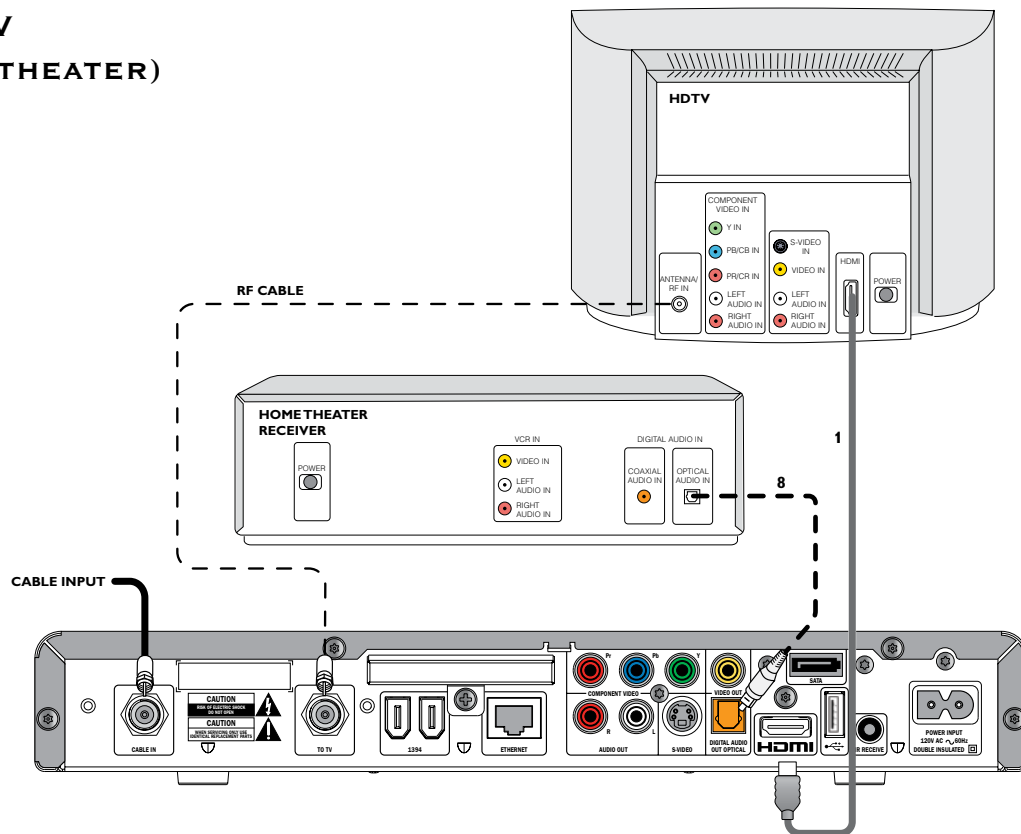
Not all HDTVs support HDCP. If the set-top is connected to an HDTV that does not support it, the following may be displayed:

The HDTV does not support HDCP. Please use the YPbPr component connection to watch TV.

The HDMI™ output is then disabled, so no picture is transmitted from this connector. In that case use the component video connectors to connect up (see Setups G, H and I).

15

SETUP A: HDMI™ TV
(+ OPTIONAL HOME THEATER)

HDTV

COMPONENT VIDEO IN

Y IN
PB/CB IN
PR/CR IN
LEFT AUDIO IN
RIGHT AUDIO IN

S-VIDEO IN
VIDEO IN
LEFT AUDIO IN
RIGHT AUDIO IN

ANTENNA/ RF IN

HDMI

POWER

RF CABLE

HOME THEATER RECEIVER

POWER

VCR IN

VIDEO IN
LEFT AUDIO IN
RIGHT AUDIO IN

DIGITAL AUDIO IN

COAXIAL AUDIO IN
OPTICAL AUDIO IN

1

8

CABLE INPUT

CAUTION
RISK OF ELECTRIC SHOCK DO NOT OPEN
CAUTION

CABLE IN

TO TV

1394

ETHERNET

COMPONENT VIDEO

Pr
R
Pb
L
Y

AUDIO OUT

S-VIDEO

VIDEO OUT

DIGITAL AUDIO OUT OPTICAL

SATA

HDMI

IR RECEIVE

POWER INPUT
120V AC 60Hz
DOUBLE INSULATED

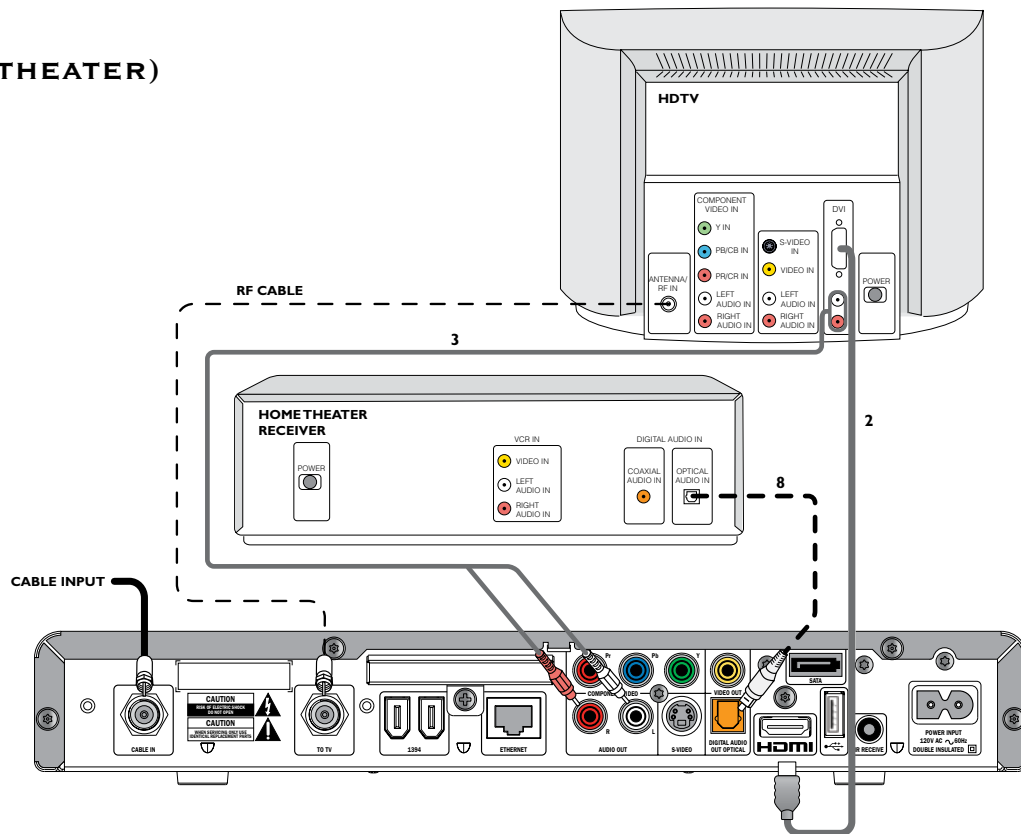**About Setup A: Using an HDMI™ cable to connect an HDTV (optional home theater shown)**

This is the most basic setup, with only an HDTV and optional home theater connected.

- The set-top has a high-definition multimedia interface (HDMI™) connector.

- The HDTV has an HDMI™, so use an HDMI™ cable (1) to connect it to the set-top's HDMI™.

- HDMI™ carries both high-resolution digital video and digital audio.

- To enhance the sound, you can connect a home theater receiver.

- There is an S/PDIF output labeled DIGITAL AUDIO OUT OPTICAL, which is shown connected by cable 8 in the diagram on page 16.

- When you add a home theater receiver, the set-top's audio connection to the TV (via HDMI™) is not needed, so you may wish to mute (turn off) the audio on the TV.
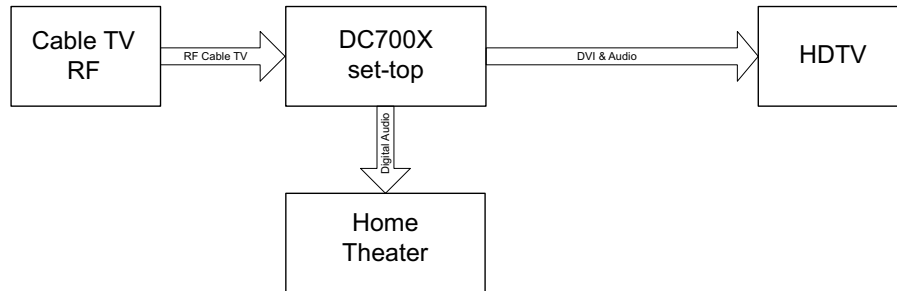
Cable Wiring Diagram A
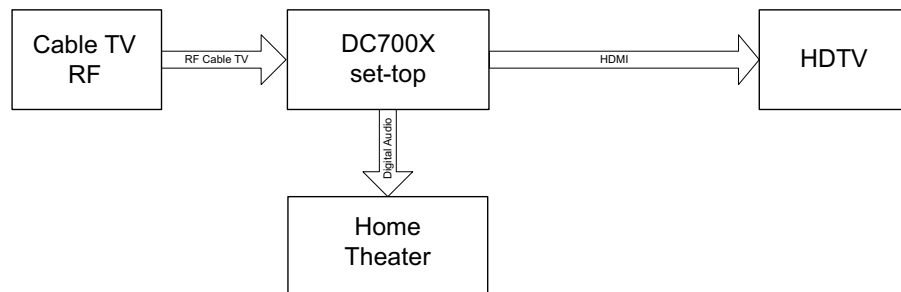
SETUP B: DVI TV
(+ OPTIONAL HOME THEATER)

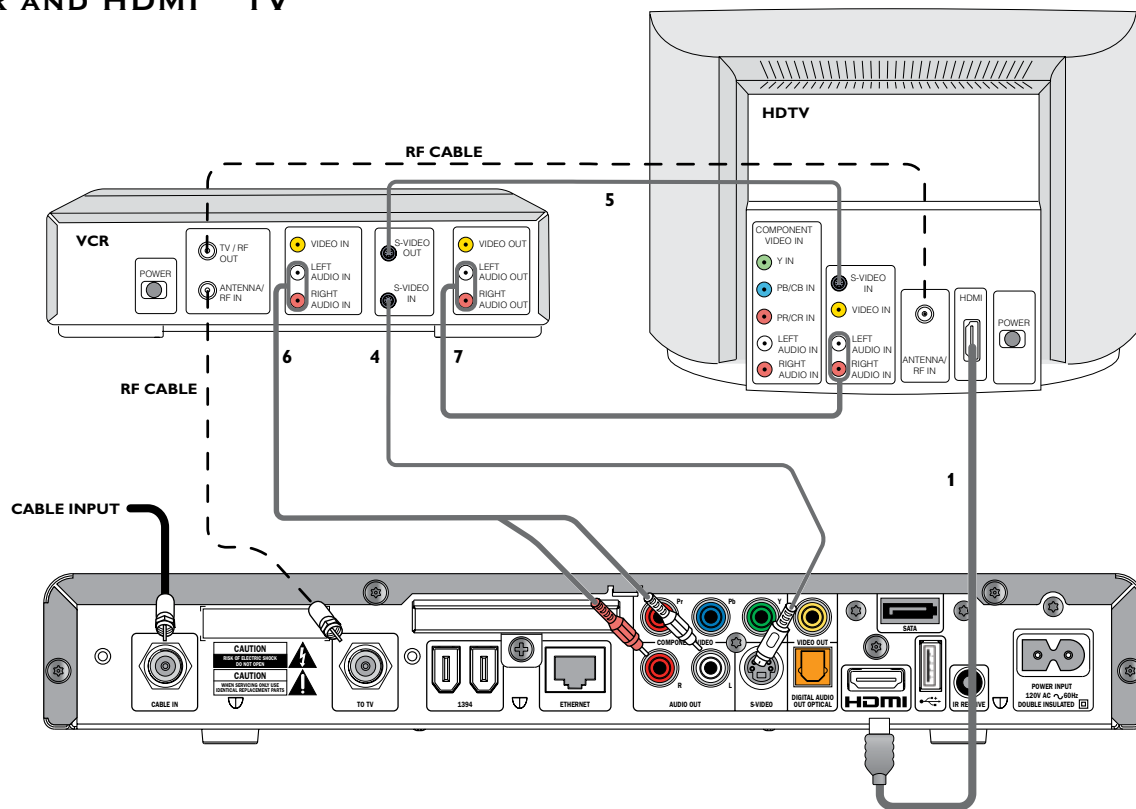**About Setup B: Using an HDMI™-to-DVI cable to connect an HDTV (optional home theater shown)**

If the HDTV has a DVI connector, you can still take advantage of the digital video signal.

• The set-top has a high-definition multimedia interface (HDMI™) connector.

• The HDTV has a DVI, so use a special HDMI™-to-DVI cable (2) to connect it to the set-top's HDMI™. Both DVI and HDMI™ carry high-resolution digital video.

• Use audio L and R cables: cables 3 from the set-top's AUDIO OUT jacks to the HDTV's audio inputs, as shown.

• To enhance the sound, you can connect a home theater receiver, using the set-top's DIGITAL AUDIO OUT OPTICAL connector (as shown on page 18). In that case, cables 3 are not needed.

Cable Wiring Diagram B

```
┌──────────┐              ┌──────────┐              ┌──────────┐
│ Cable TV │  RF Cable TV │  DC700X  │  DVI & Audio │   HDTV   │
│    RF    │ ────────────▶│  set-top │ ────────────▶│          │
└──────────┘              └──────────┘              └──────────┘
                               │
                       Digital Audio
                               │
                               ▼
                          ┌──────────┐
                          │   Home   │
                          │  Theater │
                          └──────────┘
```

## SETUP C: VCR AND HDMI™ TV

About Setup C: Using an HDMI™ cable to connect an HDTV and S-video cable to connect a VCR

In this setup, a VCR is added to the basic setup. The way in which you connect the HDTV to the set-top (either HDMI™ or component video) does not affect the way you connect the VCR. Therefore an HDMI™ connection between the set-top and the HDTV is shown on page 20. (It could be component video instead.)

- If the VCR and HDMI™ TV have S-video connectors, use S-video cables (4 and 5), as this gives a better quality picture. If there are no S-video connectors, use the composite video jacks (labeled VIDEO OUT on the set-top) and video 75 ohm coaxial cables.

- Use audio L and R jack cables: cables 6 (from the set-top's AUDIO OUT jacks) and cables 7 (between the VCR and the HDMI™ TV).

- The path for recording on the VCR is cables 6 (audio L and R) and cable 4 (S-video) (or via composite video jack).

- The path for playing back from the VCR is cables 7 (audio L and R) and cable 5 (S-video) (or via composite video jack).
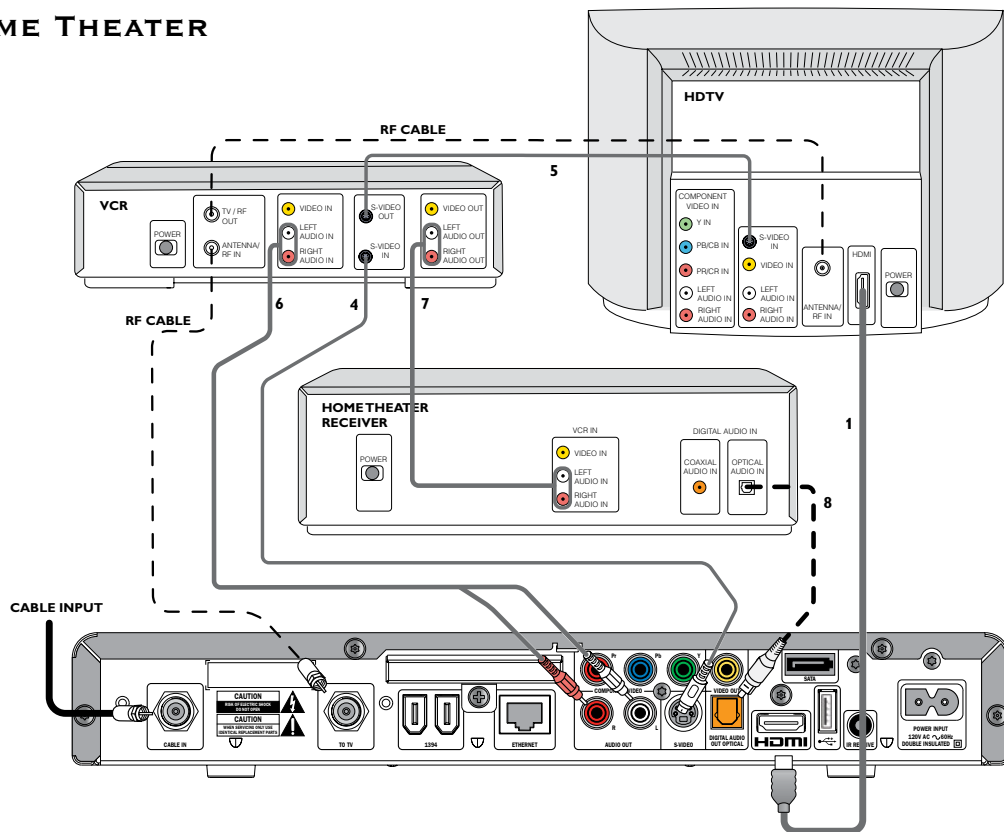
Cable Wiring Diagram C
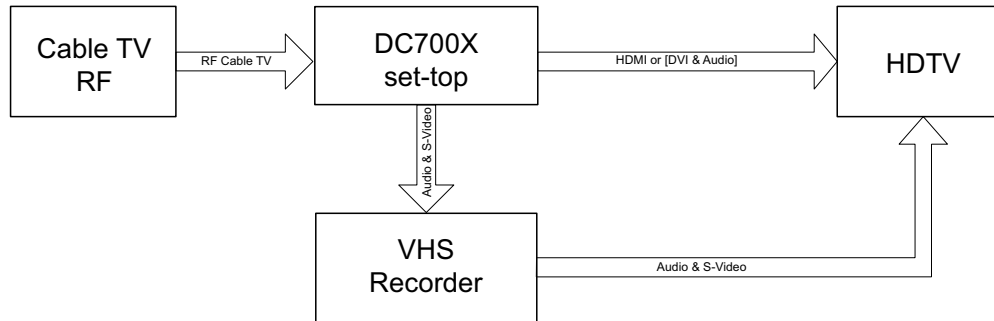
NOTE
The diagram shows a video path from the set-top to a VCR to allow recording to the VCR. It shows a video path from the VCR to the TV to allow playback of videos. Video signals fed through a VCR may be affected by copyright protection systems, which can cause picture distortion on the TV. Do not therefore use a path through a VCR to watch the set-top programs. Use the HDMI™ path or an alternate **direct** video path from the set-top to the TV. Remember to select the correct input on the TV.

```
Cable TV      RF Cable TV     DC700X         HDMI or [DVI & Audio]     HDTV
RF                            set-top

                          Audio & S-Video

              VHS
              Recorder        Audio & S-Video
```

Setup D: VCR, Home Theater and HDMI™ TV

About Setup D: Adding a home theater receiver to Setup C

All of the points mentioned in Setup C apply.

- To enhance the sound, connect a home theater receiver.

- There is an S/PDIF output labeled DIGITAL AUDIO OUT OPTICAL, which is shown connected by cable 8 in the diagram on page 22.

- When you add a home theater receiver, the set-top's audio connection to the HDTV (via HDMI™) is not needed, so you may wish to mute (turn off) the audio on the HDTV.

- Instead of the VCR's audio L and R outputs going to the HDTV, they connect via cables 7 to the home theater receiver.

Cable Wiring Diagram D
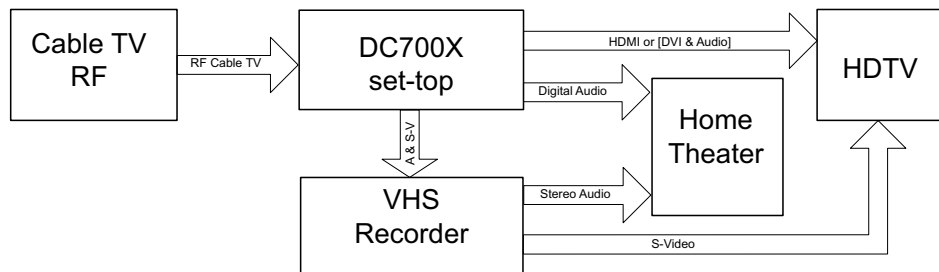
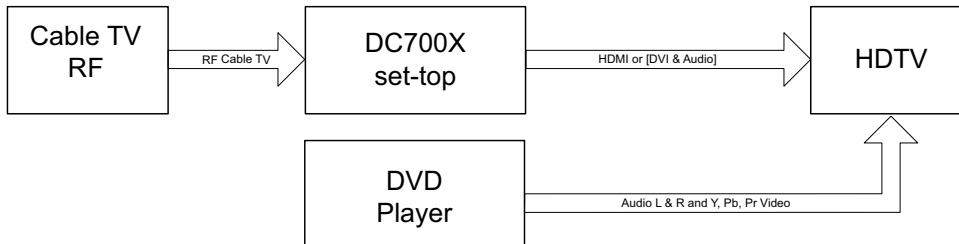| NOTE |
| --- |
| The diagram shows a video path from the set-top to a VCR to allow recording to the VCR. It shows a video path from the VCR to the TV to allow playback of videos. Video signals fed through a VCR may be affected by copyright protection systems, which can cause picture distortion on the TV. |
| Do not therefore use a path through a VCR to watch the set-top programs. Use the HDMI™ path or an alternate **direct** video path from the set-top to the TV. Remember to select the correct input on the TV. |

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SETUP E: DVD AND HDMI™ TV
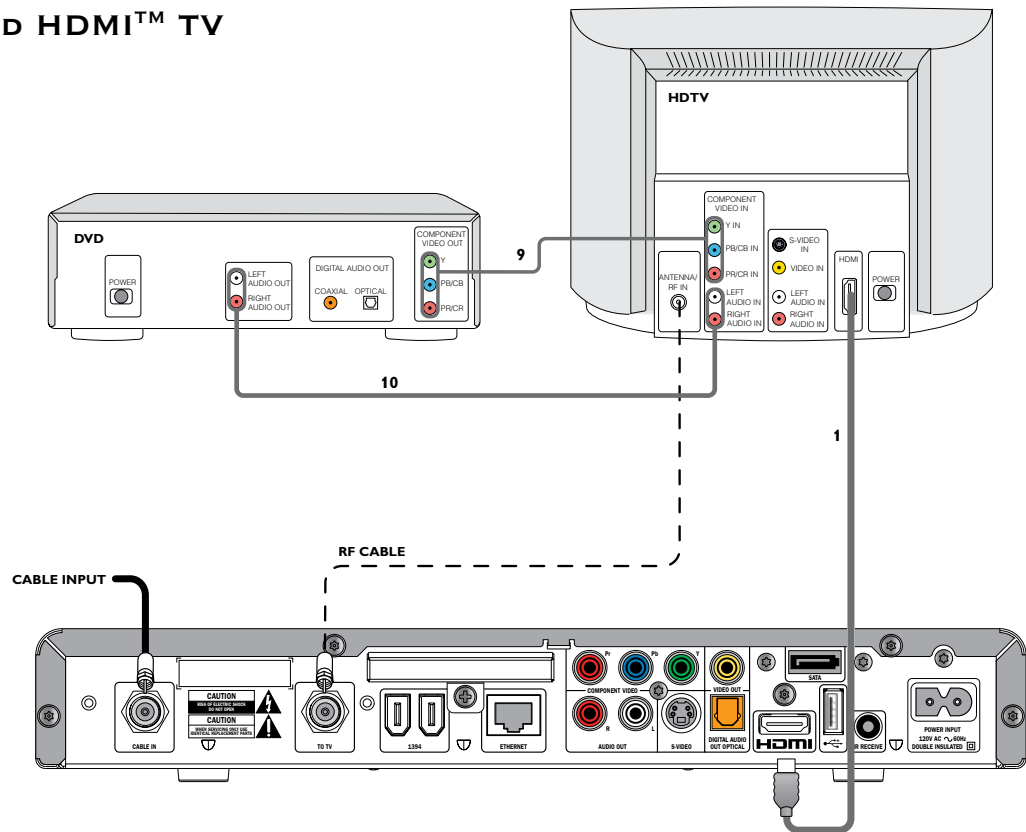
About Setup E: Using component video cables to connect a DVD player and an HDMI™ TV
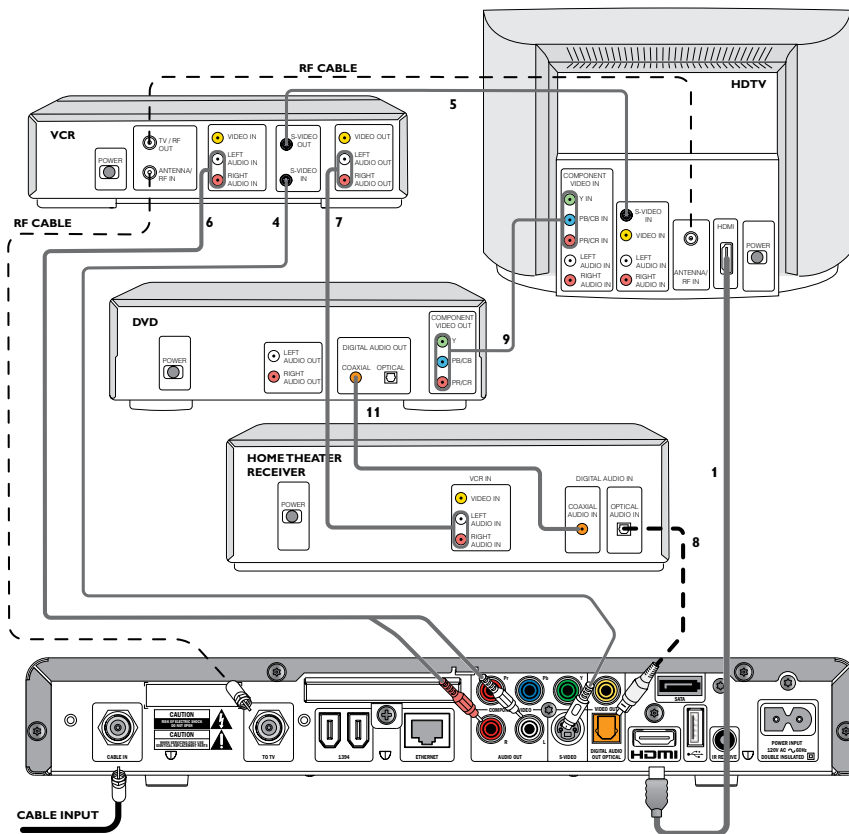
In this setup, a DVD player is added to the basic setup. In this example, the set-top and HDTV are connected by an HDMI™ cable. The component video option is shown in Setup H on page 30.

- This setup assumes that the DVD player has component video output jacks and you make the connection using three cables (9). If it does not have component video outputs, then you can connect it to the HDTV using any spare composite video or S-video input jacks on the HDTV.

- The audio connection from the DVD player can go directly to the HDTV (provided that there are enough audio input jacks on the HDTV), as shown by cables 10 in diagram on page 24.

Cable Wiring Diagram E

| Cable TV RF | → RF Cable TV → | DC700X set-top | → HDMI or [DVI & Audio] → | HDTV |

DVD Player → Audio L & R and Y, Pb, Pr Video →
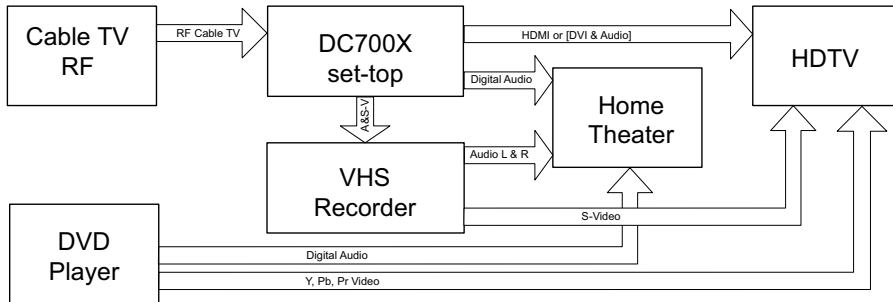
SETUP F: VCR, DVD, HOME THEATER AND HDMI™ TV

About Setup F: Combining all the equipment with an HDMI™ TV

This setup shows the best use of cables and connectors if the HDTV has an HDMI™ and if the DVD player has component video connectors.

- Although the video and audio from the set-top to the VCR could be looped through the home theater receiver, it is not necessary to do this and it requires more cables.

- When you add a home theater receiver, as shown, the set-top's audio connection to the HDTV (via HDMI™) is not needed, so you may wish to mute (turn off) the audio on the HDTV.

Cable Wiring Diagram F

| Cable TV RF | —RF Cable TV→ | DC700X set-top | —HDMI or [DVI & Audio]→ | HDTV |

A&S-V · Digital Audio · Audio L & R · S-Video · Digital Audio · Y, Pb, Pr Video

VHS Recorder · Home Theater · DVD Player

NOTE
The diagram shows a video path from the set-top to a VCR to allow recording to the VCR. It shows a video path from the VCR to the TV to allow playback of videos. Video signals fed through a VCR may be affected by copyright protection systems, which can cause picture distortion on the TV. Do not therefore use a path through a VCR to watch the set-top programs. Use the HDMI™ path or an alternate **direct** video path from the set-top to the TV. Remember to select the correct input on the TV.

SETUP G: COMPONENT-VIDEO HDTV
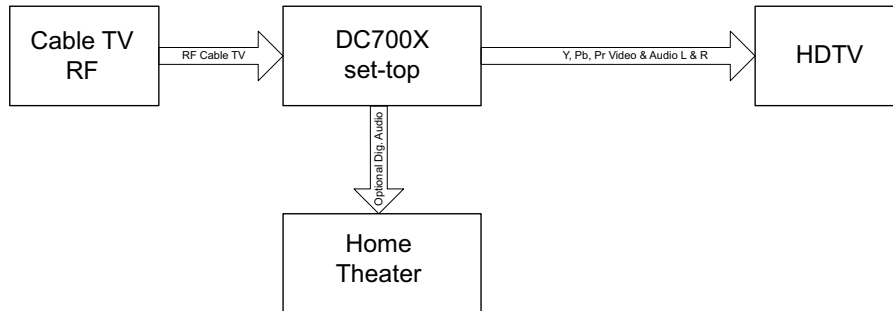## (+ OPTIONAL HOME THEATER)
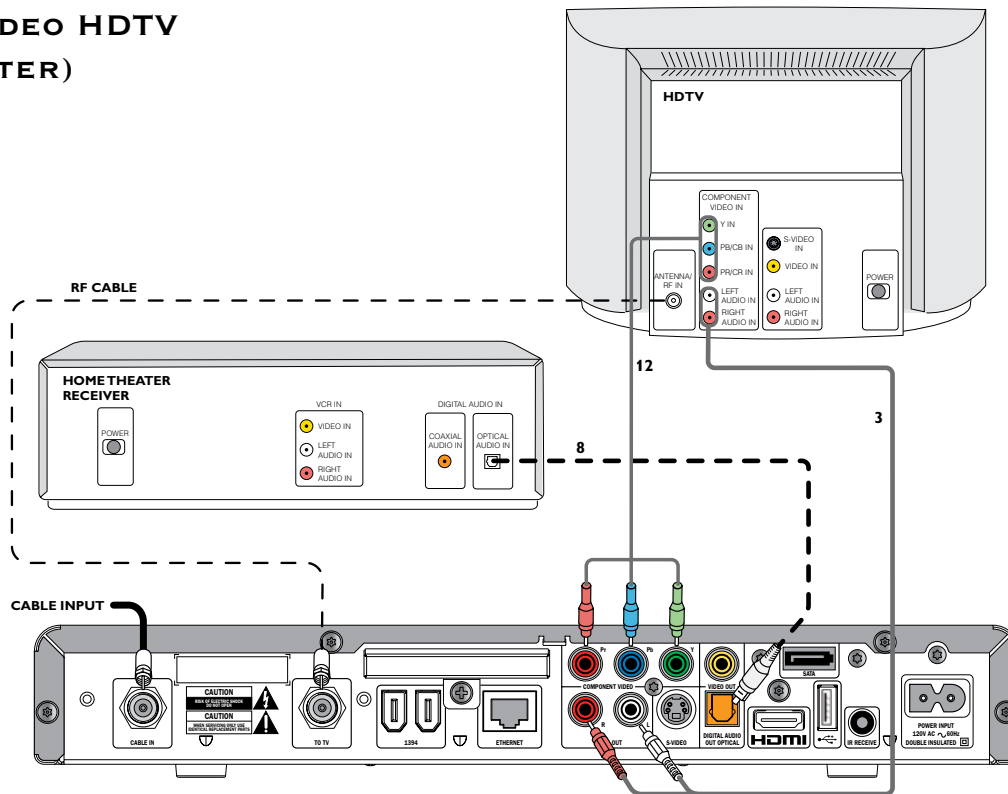
About Setup G: Using component-video cables to connect an HDTV
(optional home theater shown)

This is the most basic setup for a non-HDMI™ TV, with only an HDTV and optional home theater.

- The set-top has component-video connectors as well as an HDMI™.

- Use component-video cables (12) to connect the HDTV to the set-top.

- In addition, connect audio L and R cables (3) between the AUDIO OUT jacks on the set-top and the audio in jacks on the HDTV.

- To enhance the sound, you can connect a home theater receiver, in which case audio L and R cables 3 are not needed.

- There is an S/PDIF output labeled DIGITAL AUDIO OUT OPTICAL, which is shown connected by cable 8 in the diagram on page 28.

Cable Wiring Diagram G

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## Setup H: DVD and Component-video HDTV (+ optional home theater)
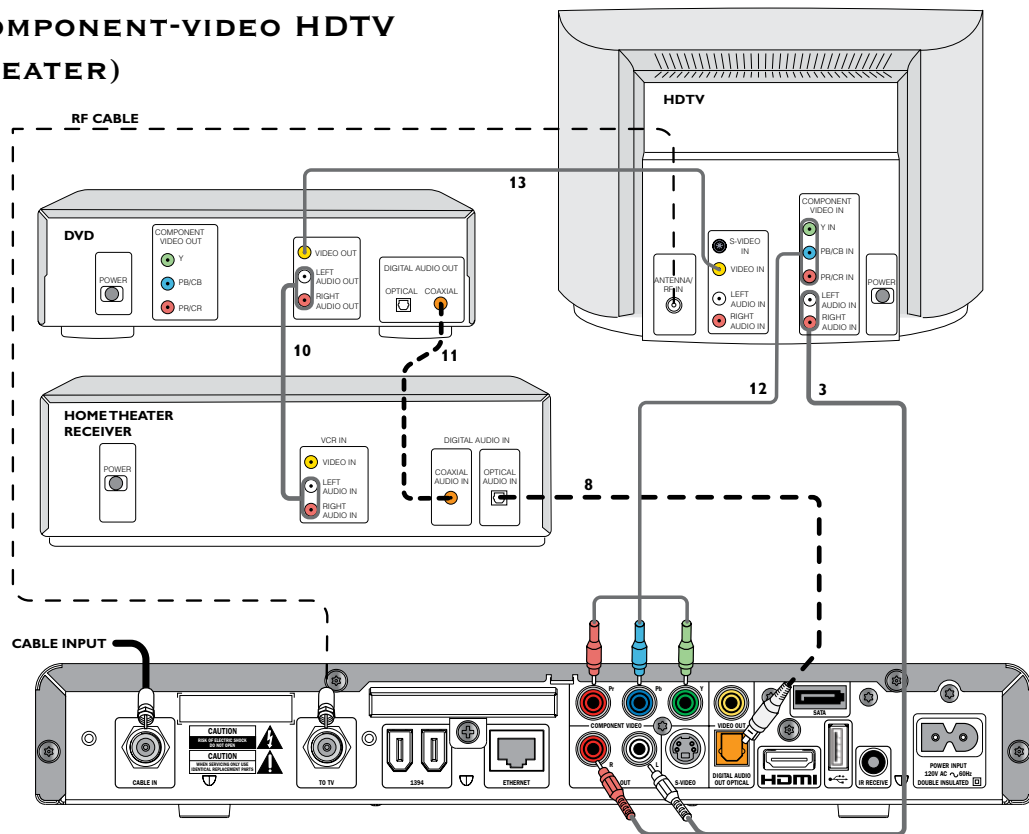
About Setup H: Using component-video cables to connect a DVD player and an HDTV

In this setup, a DVD player is added to Setup G.

- Connect the DVD player directly to the HDTV using any spare composite video or S-video input jacks that the HDTV may have.

- The audio connection from the DVD player could go directly to the HDTV, provided that there are enough appropriate audio input jacks on the HDTV. If there are not enough audio inputs on the HDTV, or if you wish to enhance the sound, you must connect a home theater receiver or audio amplifier to the DVD, as shown (cables 10).

- If the DVD player has a digital audio output, this can be used to connect to the home theater receiver (e.g. cable 11 in the diagram on page 30), in which case, cables 10 are not needed.

- A home theater receiver will also enhance the sound from the set-top. There is an S/PDIF output labeled DIGITAL AUDIO OUT OPTICAL, which is shown connected by cable 8 in the diagram on page 30.

- In the diagram on page 30, cables 3 are not needed if cable 8 is used.

Cable Wiring Diagram H
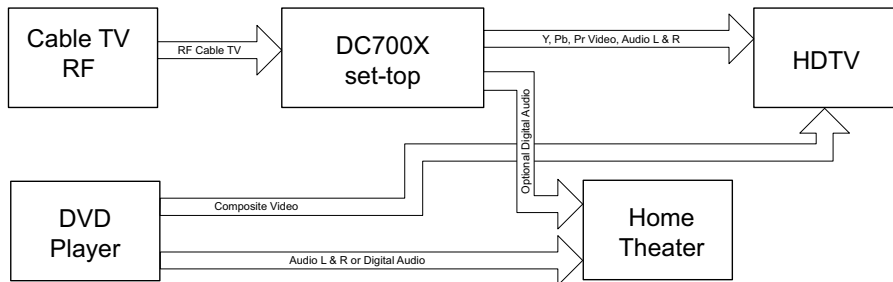
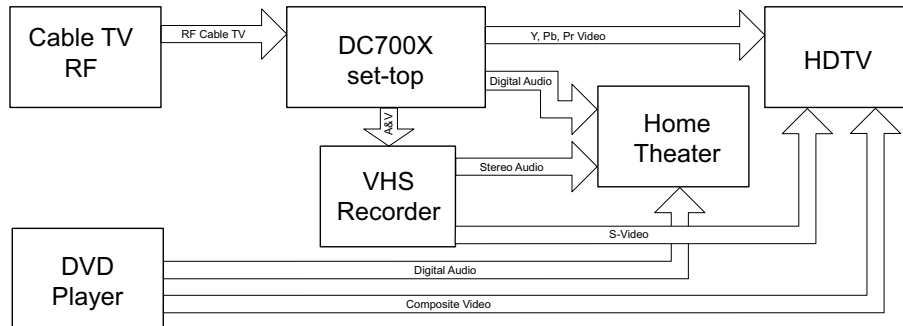## SETUP I: VCR, DVD, HOME THEATER AND COMPONENT-VIDEO HDTV
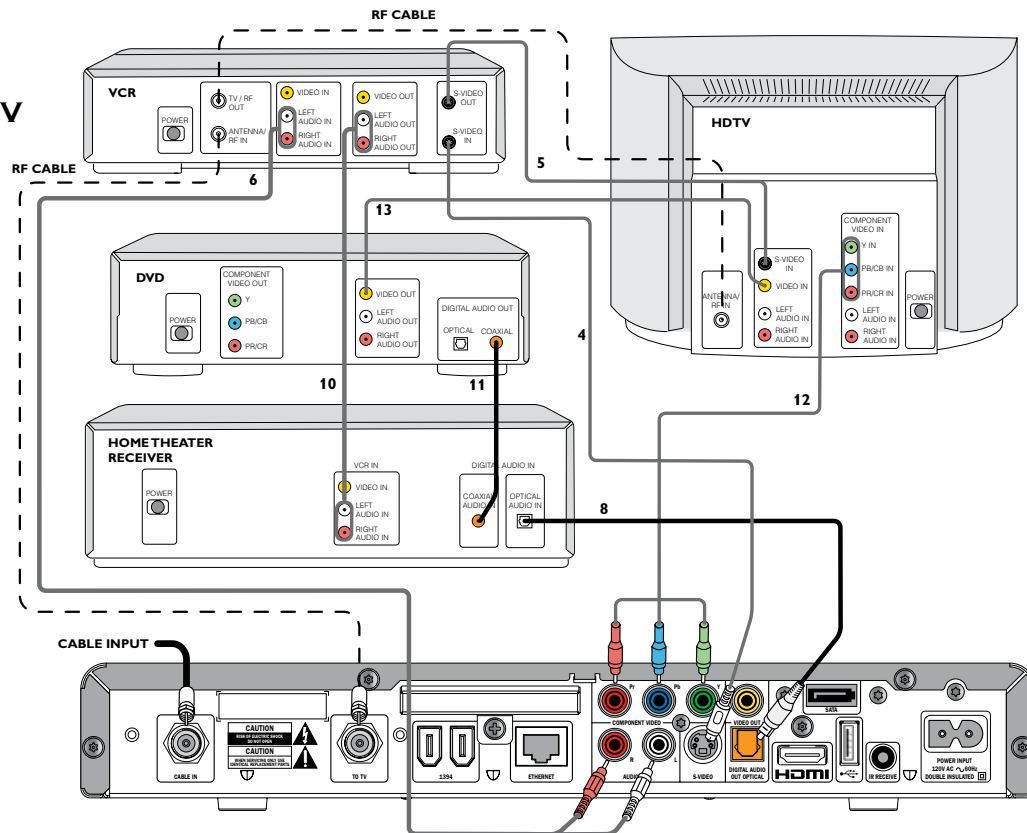
About Setup I: Combining all the equipment for a component-video HDTV

This setup shows the best use of cables and connectors if the HDTV and the DVD player have component video connectors.

•   The audio output from the VCR goes to the home theater receiver (via cable 10) to enhance the sound during playback.

•   Although the video and audio from the set-top to the VCR could be looped through the home theater receiver, it is not necessary to do this and it requires more cables.

•   If there is no home theater receiver in the setup, the audio from the set-top, VCR and DVD player must all go to the HDTV (assuming it has enough audio input connectors on it).

Cable Wiring Diagram I

Cable TV RF	RF Cable TV →	DC700X set-top
		Y, Pb, Pr Video
		Digital Audio
	A&V	
		VHS Recorder
	Stereo Audio	
DVD Player	Digital Audio	
	Composite Video	

HDTV

Home Theater

S-Video

> **NOTE**
>
> The diagram shows a video path from the set-top to a VCR to allow recording to the VCR. It shows a video path from the VCR to the TV to allow playback of videos. Video signals fed through a VCR may be affected by copyright protection systems, which can cause picture distortion on the TV.
> Do not therefore use a path through a VCR to watch the set-top programs. Use the component video path or an alternate **direct** video path from the set-top to the TV. Remember to select the correct input on the TV.

WARNINGS
Do not connect the set-top (or any other equipment such as a TV or VCR) to the AC power supply until you have properly connected all the other cables.
Do not defeat the safety purpose of the polarized plugs on power cords. A polarized plug has two blades with one wider than the other. This plug fits into the outlet in only one way; match the wide blade of the plug to the wide slot of the outlet.

CONNECTING THE POWER CORD TO THE SET-TOP
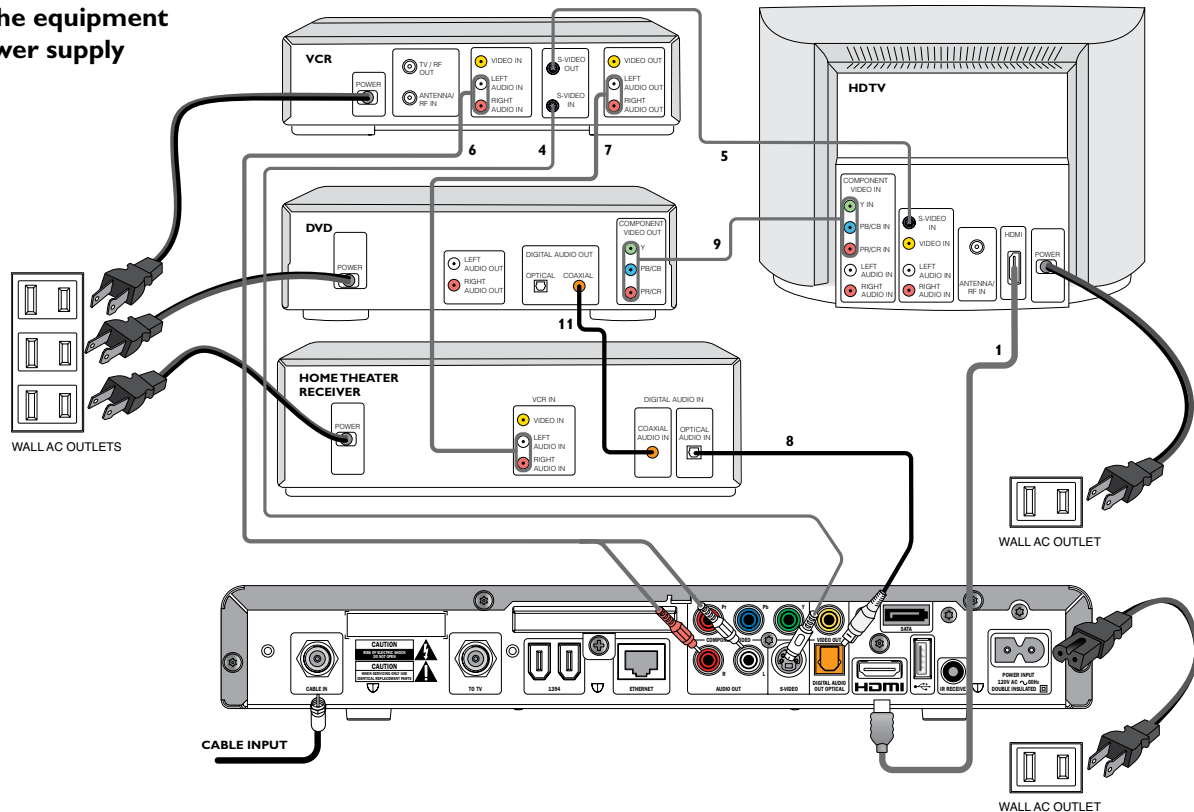
Before you connect the set-top to a wall outlet, connect the polarized socket on the power cord into the plug labeled "POWER INPUT" on the set-top's rear panel.

CONNECTING EQUIPMENT TO THE WALL AC OUTLETS

Connect the polarized plugs on the power cords from the set-top, VCR and any other equipment into wall AC outlets. If these outlets have switches, switch them to ON.

Connecting the equipment to the AC power supply

VCR

POWER

TV / RF OUT

ANTENNA/ RF IN

VIDEO IN

LEFT AUDIO IN

RIGHT AUDIO IN

S-VIDEO OUT

S-VIDEO IN

VIDEO OUT

LEFT AUDIO OUT

RIGHT AUDIO OUT

HDTV

COMPONENT VIDEO IN

Y IN

PB/CB IN

PR/CB IN

S-VIDEO IN

VIDEO IN

LEFT AUDIO IN

RIGHT AUDIO IN

ANTENNA/ RF IN

HDMI

POWER

DVD

POWER

LEFT AUDIO OUT

RIGHT AUDIO OUT

DIGITAL AUDIO OUT

OPTICAL

COAXIAL

COMPONENT VIDEO OUT

Y

PB/CB

PR/CR

6   4   7   5   9   11   1

HOME THEATER RECEIVER

POWER

VCR IN

VIDEO IN

LEFT AUDIO IN

RIGHT AUDIO IN

DIGITAL AUDIO IN

COAXIAL AUDIO IN

OPTICAL AUDIO IN

8

WALL AC OUTLETS

WALL AC OUTLET

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN

CAUTION

CABLE IN

TO TV

1394

ETHERNET

COMPONENT VIDEO

AUDIO OUT

S-VIDEO

VIDEO OUT

DIGITAL AUDIO OUT OPTICAL

HDMI

SATA

IR RECEIVER

POWER INPUT
120V AC ~60Hz
DOUBLE INSULATED

CABLE INPUT

WALL AC OUTLET

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Turning the set-top on and off

After you have connected the set-top to the wall AC outlet (and switched this outlet ON, if it has a switch), the light around the **POWER** button on the set-top's front panel should be red.

Wait for a few seconds, then press the button labeled **POWER** on the front panel of the set-top to turn it on. The light around the **POWER** button goes green, to show that the set-top is on.

If the light around the **POWER** button is neither red nor green, there is a problem.

To turn the set-top on or off at any time, press the **POWER** button on its front panel or the **POWER** button on the remote control (first making sure the remote control is set to control the set-top).

Never turn off the set-top by simply disconnecting it from the power supply. If you need to disconnect the set-top, first stop any recording to an external hard disk (if there is one connected). Then turn off the set-top by pressing the **POWER** button on its front panel or on the remote control, so that the light around the **POWER** button goes red. Then wait 60 seconds before disconnecting the set-top at the wall AC outlet.

Power Saving: To save power and money, and to reduce greenhouse gas emissions, please turn off the set-top, using the POWER button, when it is not in use.

*To turn on the set-top, press the **POWER** button.*

The light around the button changes from red to green.

NOTES
IMPORTANT: Unless there is a lightning storm or the set-top's users are away from their home for a long time, they should not unplug the set-top at the wall AC outlet (nor switch it off there, if the outlet has a switch). The set-top cannot be updated with new features, through the cable, if it is disconnected from the AC power supply.

Tuning the TV and VCR to the set-top

The set-top's RF output port (labeled "TO TV") can transmit signals on either channel 3 or channel 4. The cable operator has set up the set-top to transmit on the channel that is suitable for the installation location and should have told you which channel this is. You must tune the TV and the VCR to this output channel so that programs can be watched and recorded through the RF coaxial cables. To do the tuning, refer to the diagram, right, and the manuals supplied with TV and VCR, if necessary, then carry out the following steps.

1. Make sure that all the equipment, including the set-top, is turned on.
   Make sure that you have selected the RF input at the TV.

2. On the VCR, switch the TV/VCR switch to "TV".

3. Tune the TV to the set-top's RF output channel (3 or 4, as stated by the cable operator).

You should now be able to see on the TV a program that is coming from the set-top. If you cannot, check that the RF coaxial cables are securely and correctly connected (see the setup diagrams). If there is still a problem, check with the cable operator that you are using the correct RF output channel.

4. When you can see a set-top program on the TV, switch the TV/VCR switch on the VCR to "VCR".

If you can still see the picture on the TV, everything is tuned correctly. If the picture disappears, carry out the following final step.

5. Tune the VCR by setting the VCR's RF output channel to the same RF channel number as the set-top and TV (either 3 or 4, as stated by the cable operator).

Everything should now be tuned correctly.

Find out from the cable operator whether the set-top's RF output is channel 3 or channel 4 (see step 1)
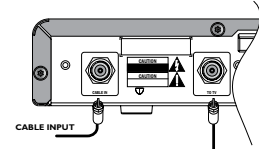
Set the VCR's RF output to the same channel number as the set-top's RF output (see step 5)
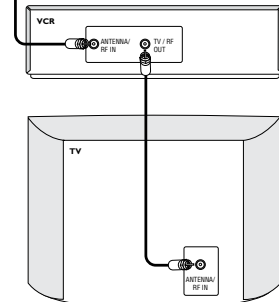
Tune the TV to the same channel number as the set-top's RF output (see step 3)

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NOTE
Regardless of the program channel number selected on the set-top, the RF output channel number will always be fixed (either 3 or 4, as quoted by the cable operator). The TV and VCR must be tuned to this channel if you want to watch and record programs through the RF coaxial cables.

USING THE REMOTE CONTROL

The cable TV service-provider determines the digital channels, services and screen information that you see on the TV when you use the set-top and its remote control.

Consult the information supplied by the cable service-provider for details on how to make the most of the digital cable services. Also read the operating instructions that are supplied with the remote control.

LIGHTNING STORMS

Disconnect the set-top's power cord during lightning storms. A lightning storm may affect the set-top, if it is on during the storm. It may appear that it has stopped working, but you can easily restore its operation as follows.

Unplug the set-top's power cord at the wall AC outlet. Then plug this power cord in again at the wall AC outlet (and, if there is a switch by this outlet, switch it to its ON position).

Adding digital video recorder (DVR) functionality

The cable service-provider may enable a feature that allows an external hard disk to work with the set-top. If this is the case, you can attach a hard disk to the SATA connector on the set-top's rear panel and use it to record and play back digital television programs (many more hours than if you record using a VCR or DVD recorder). There is a **RECORD** light on the set-top's front panel to show when recording is taking place. Most major brands of serial ATA hard disk are supported. You should not connect an external hard disk to a 1394 port or the USB port.

The recordings on the external hard disk are uniquely linked to the set-top on which they were made, so you cannot play them back or delete them with a different set-top.

Connecting an external hard disk

1. Turn off the set-top with the **POWER** button and then wait 60 seconds before disconnecting it from the wall AC socket. (You must not "hot plug" an external hard disk).

2. Connect the external hard disk, using an appropriate cable, to the SATA connector on the set-top.

3. Apply power to the external hard disk.

4. Reconnect the set-top to the wall AC socket and turn it on with the **POWER** button.

If the external disk needs formatting, the set-top will inform you by means of a pop-up dialog box on the TV screen (see right).

5. Use the **arrow** and **SELECT** buttons on the remote control to select YES, and the formatting will begin.

Do you want to format the external hard drive?

YES   NO

Formatting the Hard drive. Please wait...

Using the external hard disk for DVR functions

The set-top has two digital tuners, so you can record one program while watching a different one. Many DVR functions are available if the cable service-provider enables the SATA connection.

With the set-top and attached external hard disk you could:

- Pause live TV

- Instantly replay live TV

- Fast forward up to the point of live TV

- Watch a scene in slow motion

- Rewind through a program you have been watching

- Record high-definition digital pictures (as well as the regular standard definition)

- Record a program while watching a previously recorded program

- Schedule the set-top to record a program or a whole series

- Fully manage the stored recordings

- Back up the digital recordings to a VCR or DVD recorder

- Retain full control over any parental viewing restrictions you have set up

Consult the information supplied by the cable service-provider for more details. Also read the operating instructions that are supplied with the remote control.

NOTES

The exact DVR functionality of the set-top and an attached external hard disk depends on the on-screen program guide. For more details, consult the information supplied by the cable service-provider.

About User Settings

You need to make the appropriate settings to make sure the set-top is compatible with the HDTV or TV. You can make the following settings.

- TV Aspect Ratio (the screen's width-to-height ratio, or shape)
- TV Display Capability (screen resolution)
- Auto Pillarbox
- Closed Captions
- Front Panel Settings
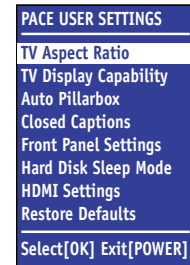- Hard Disk Sleep Mode (for energy saving)
- HDMI Settings

You use the buttons on the remote control and on-screen menus to make the settings. However, please note that, until the set-top has been set up to match the display capability of the HDTV, these menus may not be visible. If this is the case, refer to page 44.

Putting the set-top into "user settings mode"

1. Make sure that the set-top is turned on (**POWER** light is green).

2. Press the **POWER** button on the remote control, then, *within 1 second,* press the **MENU** button.

You should see the PACE USER SETTINGS menu, shown right, on the TV screen.

3. When you have finished making changes (see pages 42 to 50), press the **POWER** button to remove the PACE USER SETTINGS menu and return to normal viewing.

POWER light

PACE USER SETTINGS

TV Aspect Ratio
TV Display Capability
Auto Pillarbox
Closed Captions
Front Panel Settings
Hard Disk Sleep Mode
HDMI Settings
Restore Defaults

Select[OK] Exit[POWER]

About the TV Aspect Ratio

The TV that you have connected to the set-top has an aspect ratio (width-to-height ratio) of 4:3 (basic/standard) or 16:9 (widescreen). You must set the appropriate TV Aspect Ratio (4:3 or 16:9) on the set-top, so that it is compatible with the TV.

Setting the TV Aspect Ratio

If you have not done so, put the set-top into "user settings mode", as described on page 41. Press the ▲ or ▼ button on the remote control until you highlight TV Aspect Ratio in the PACE USER SETTNGS menu.

1. To change the **TV Aspect Ratio**, press the ▶ button.
    The TV Aspect Ratio menu, shown right, appears on the TV screen. In the menu, the current setting ("4:3" or "16:9") has **>** in front of it. Also, whenever the current setting is highlighted, the MESSAGE light will be lighted on the set-top's front panel.

2. Press the ▲ or ▼ button to highlight the TV Aspect Ratio you want.

3. Press the **SELECT** button to confirm your choice and change to that TV Aspect Ratio.

4. Press the ◀ button. The PACE USER SETTNGS menu reappears.

To continue making the settings, see the next section.

4:3 standard TV, EDTV or HDTV

16:9 HDTV

TV Aspect Ratio
4:3
>16:9
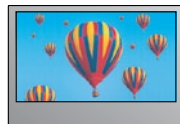
About TV Display Capability (resolution settings)

- *The set-top* can transmit pictures to the TV in a range of resolutions (also called "Display Capabilities" - see below for the settings available). Generally, higher screen resolutions give better quality pictures. However, the quality will always depend on how the program was originally transmitted.

- *Different TVs* display different screen resolutions. For example, standard TVs display "480i", EDTVs (Enhanced Definition TVs) display "480p" and most HDTVs display "1080i" or "720p". Many HDTVs will display at more than one resolution. For more information, see the information supplied with the HDTV.

You must make the appropriate TV Display Capability setting(s) on the set-top, so that it is compatible with the TV. See the next page for full instructions.

In order to display the best picture every time, you should select *every* resolution that the TV is capable of displaying. This should ensure that programs are displayed with the minimum distortion.

There are green lights on the set-top's front panel to show you the resolution of the picture for the program the set-top is currently handling (a live program or one you are playing back).

TV Display Capability settings

- **480i** is standard definition NTSC and is transmitted in a 4:3 aspect ratio (see right)

- **480p** is enhanced digital TV and can be transmitted in either a 4:3 or 16:9 aspect ratio

- **720p** and **1080i** are HDTV and are transmitted in a 16:9 aspect ratio (see right)

*480i transmission:
The aspect ratio is 4:3*

*1080i transmission:
The aspect ratio is 16:9*

NOTE

When the HDTV is connected to the set-top via an HDMI™, the set-top gets information from the HDTV about the HDTV's display capability. The set-top uses this information to adjust its TV Display Capability settings.

The set-top also records the HDTV's ID (identification), so that only one HDTV is supported at any one time. When the HDTV has updated the set-top's TV Display Capability settings, you may change them if you wish. Your changes will then be stored with the ID.

You can restore the set-top's TV Display Capability settings to their factory values, as described on page 51. You can also restore the set-top to the settings that the HDTV has passed to the set-top. To do this you must first restore the factory settings while the set-top is disconnected from the HDTV, then reconnect the HDTV via an HDMI™ cable.

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Changing the TV Display Capability

If the HDTV **does not** initially display video from the set-top, on its component video or HDMI™ input, the HDTV may not support the set-top's current output resolution.

Current output resolution from the set-top (1080i, 720p, 480p or 480i)

- To overcome this problem, first press the **POWER** button on the remote control, then, *within 1 second,* press the **MENU** button. Next, press the **ZOOM** button (could be labeled **ASPECT**) until video appears. Each button-press changes the set-top's output resolution, which also appears on-screen. After a few seconds, you see the PACE USER SETTINGS menu.

Video Format : 1080i

If the HDTV **does** initially display video, put the set-top into "user settings mode" (if you have not done so already), as described on page 41. Press the ▲ or ▼ button on the remote control and highlight TV Display Capability in the PACE USER SETTINGS menu.

The available resolutions are: 1080i, 720p, 480p and 480i. (See pages 43 and 45 for more information about these.)
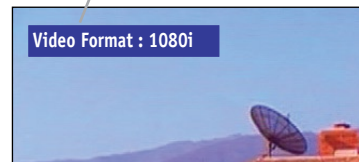
1. To change the **TV Display Capability**, press the ▶ button.
   The TV Display Capability menu appears on the TV screen.

2. Press the ▲ or ▼ button to highlight each resolution in turn and, for each one, press the **SELECT** button if you wish to change the setting (the setting changes between "YES" and "NO" each time you press **SELECT**).

   If, at any stage in this process, the menu disappears from the screen, immediately press **SELECT** *to restore the menu.*

3 Repeat step 2 until you have tried all the resolutions.

4. When you are satisfied that all the TV resolutions are correct, press the ◀ button. The PACE USER SETTINGS menu reappears.

If the highlighted resolution is currently set, the MESSAGE light will be lighted and YES will be in the menu.

TV Display Capability		
1080i	:	YES
720p	:	NO
480p	:	YES
480i	:	YES

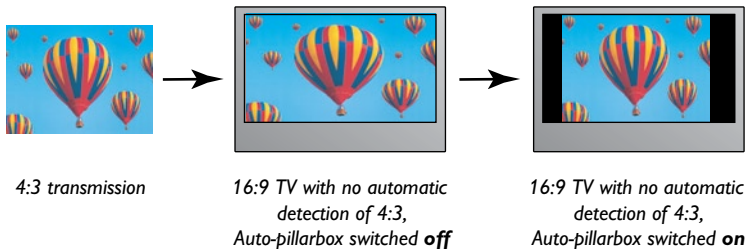**44** To continue making the settings, see page 45.

Further information about the TV Display Capability

The TV Display Capability settings relate to equipment that is connected to the HDMI™ and COMPONENT VIDEO OUT connectors because the settings control the output at those connectors. If equipment is connected via an HDMI™ cable, that equipment may also pass information back to the set-top, which may affect what settings are available.

Generally, the TV Display Capability settings do not affect equipment connected to the VIDEO OUT and S-VIDEO jacks, because the output at these jacks will always be the standard definition 480i.

Setting Auto Pillarbox

If the TV is a 16:9 TV that does not automatically detect 4:3 transmissions (and therefore does not add black bars to the sides of the picture), then 4:3 transmissions *may* display "stretched" to fit the 16:9 screen. If you do not want this effect, you can set the set-top to add black bars to the 4:3 picture, so that it is transmitted to the TV at a 16:9 aspect ratio. See the example below.

4:3 transmission

*16:9 TV with no automatic detection of 4:3, Auto-pillarbox switched **off***

*16:9 TV with no automatic detection of 4:3, Auto-pillarbox switched **on***

Changing the Auto Pillarbox setting

If you have not done so already, put the set-top into "user settings mode" (see page 41). Press the ▲ or ▼ button on the remote control and highlight Auto Pillarbox in the PACE USER SETTINGS menu.

1. Press the ► button. The Auto Pillarbox menu appears on the TV screen.

2. If you want to change the setting, press ▲ or ▼. Press the **SELECT** button to confirm the choice and change to the new setting.

3. Press the ◄ button. The PACE USER SETTINGS menu reappears.

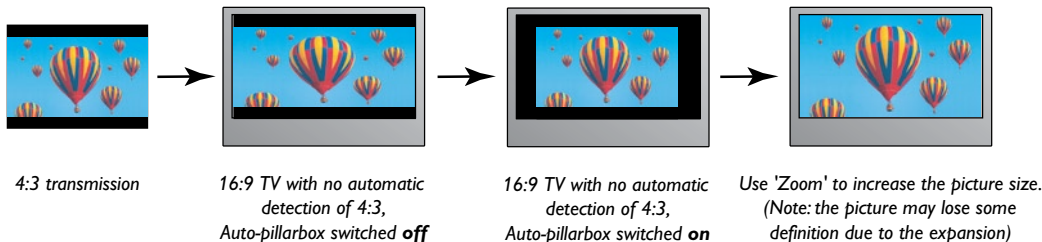To continue making the settings, see the next section.

Auto Pillarbox
YES
>NO

> shows current setting, as does a lighted MESSAGE light

NOTE

16:9 picture in a 4:3 transmission
Sometimes 4:3 transmissions may contain a 16:9 picture, with black borders at the top and bottom. On a 16:9 TV this may display with black borders all the way around the picture. To remove these borders, you can use the "Zoom function" button on the remote control (could be labeled ZOOM or ASPECT). See the example below. For more information about using "Zoom," see page 53.

4:3 transmission

*16:9 TV with no automatic detection of 4:3, Auto-pillarbox switched **off***

*16:9 TV with no automatic detection of 4:3, Auto-pillarbox switched **on***

Use 'Zoom' to increase the picture size. (Note: the picture may lose some definition due to the expansion)

Making Closed Captions Settings

Closed captioning is a means of displaying alerts and subtitles on the TV screen, superimposed on whatever you are watching. You can turn closed captions on or off, as required, and you can also change the closed captions' appearance.

Turning closed captions on or off

If you have not done so already, put the set-top into "user settings mode", as described on page 41. Press the ▲ or ▼ button on the remote control and highlight Closed Captions in the PACE USER SETTINGS menu.

1. To change the Closed Captions setting, press the ▶ button. The Closed Captions menu appears on the TV screen, see right.

2. The current Closed Captions (CC) setting, either "ON" or "OFF" is highlighted on the menu.

3. If you want to change the setting, press the **SELECT** button - the setting changes.

4. Press the ◀ button. The PACE USER SETTINGS menu reappears.

To continue making the settings, see the next section.

Changing the closed captions' appearance

If you want to change the closed captions' appearance, you can see the effect of your settings by looking at the example below the menu.

1. In the Closed Captions menu (see above), press the ▼ button to highlight "Configure Captions", then press **SELECT**. The Configure Captions menu, shown right, appears.

2. Use the ▲ and ▼ arrows to highlight each option in turn. Use the **SELECT** button to choose the setting you want (the setting changes each time you press **SELECT**).

Closed Captions	
CC : OFF	
Configure Captions	

Configure Captions	
Size	: Small
Font	: Style 1
Character Color	: White
Character Shading	: Auto
Background Color	: Black
Background Shading	: Auto
Std Def CC	: Auto
Hi Def CC	: Service 1
Reset to Defaults	

Closed Caption Example

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3   If you wish to reset all the Closed Caption settings to their default values (mainly Auto), press the ▼ button to highlight "Reset to Defaults" in the menu, then press **SELECT**.

4.   When you have made all the changes you want to make, press ◄ twice to re-display the PACE USER SETTINGS menu.

MAKING FRONT-PANEL SETTINGS

You can use the Front Panel Settings menu to set the brightness level of the front-panel lights (but not the POWER light) when the set-top is being used ("Viewing TV" level) and when it is switched off ("Standby" level).

The remaining setting "IR Receiver" is not applicable to this product, and cannot be changed.

1.   If you have not done so already, put the set-top into "user settings mode", as described on page 41. Press the ▲ or ▼ button on the remote control and highlight Front Panel Settings in the PACE USER SETTINGS menu.

2.   Press the ► button. The Front Panel Settings menu, shown right, appears on the TV screen.

3.   Press the ▲ or ▼ button to highlight "Standby Level" or "Viewing TV Level" as required.

4.   Use the **SELECT** button to choose the setting you want (the setting changes each time you press **SELECT**): "Low", "Std" (Standard) or "High". Look at the dimming and brightening of the front-panel lights while you are making the settings, to see the effect of your selections.

5.   When you have made all the changes you want to make, press ◄ to re-display the PACE USER SETTINGS menu.

Front Panel Settings	
Standby Level	: Std
Viewing TV Level	: High
IR Receiver	: NA

SETTING HARD DISK SLEEP MODE

If the set-top is in Hard Disk (Hdd) Sleep Mode, any attached external hard disk will enter sleep mode when you switch off the set-top (that is, when the front-panel **POWER** light is red and the set-top is in standby). This is an energy-saving feature.

If you have set up the set-top to make recordings, the set-top and external hard disk will switch on to allow those recordings to be made, even if this "Standby Sleep Mode" feature is on (set to "YES"). However, it will take a little more time to do so, compared with having Standby Sleep Mode off (set to "NO").

1. If you have not done so already, put the set-top into "user settings mode", as described on page 41. Press the ▲ or ▼ button on the remote control and highlight Hard Disk Sleep Mode in the PACE USER SETTINGS menu.

2. Press the ▶ button. The Standby Sleep Mode menu, shown right, appears on the TV screen.

3. If you want to change the setting, press ▲ or ▼. Press the **SELECT** button to confirm the choice and change to the new setting.

4. Press the ◀ button. The PACE USER SETTINGS menu reappears.

To continue making the settings, see the next section.

Standby Sleep Mode
>YES
NO

> *shows current setting, as does a lighted MESSAGE light*

Changing HDMI Settings

You can use the HDMI Settings menu to choose an Audio Output Mode, and to enable or disable automatic detection of a newly connected HDTV (when using an HDMI™ cable).

1. If you have not done so already, put the set-top into "user settings mode", as described on page 41. Press the ▲ or ▼ button on the remote control and highlight HDMI Settings in the PACE USER SETTINGS menu.

2. Press the ▶ button. The HDMI Settings menu, shown right, appears.

3. Press the ▲ or ▼ button to highlight "Audio Output Mode" or "Disable Auto Detect" as required.

4. Use the **SELECT** button to choose the setting you want (the setting changes each time you press **SELECT**).

   Audio Output Mode has three possible settings:

   "Auto" (provides the audio format best suited to the connected equipment)

   "LPCn" (provides PCM audio only)

   "PASS" (maintains the original incoming-audio format)

   Disable Auto Detect is either "YES" or "NO".

5. When you have made all the changes you want to make, press ◀ to re-display the PACE USER SETTINGS menu.

HDMI Settings
Audio Output Mode : Auto
Disable Auto Detect : NO

Removing the User Settings menus

When you have finished making all the user settings you wish to make, press the **POWER** button to remove the PACE USER SETTINGS menu and return to normal viewing.

RESTORING THE FACTORY DEFAULT SETTINGS

If you wish, you can restore the user settings to their factory defaults. All the changes you have made will be lost and the settings will revert to those that were programmed in the factory.
The factory settings are:

PACE USER SETTINGS menu item	Options	Factory default setting
TV Aspect Ratio	–	16:9
TV Display Capability	1080i 720p 480p 480i	Yes No Yes Yes
Auto Pillarbox	–	No
Closed Captions	–	Off
Configure Captions	Various	All Auto except Hi Def CC, which is Service 1
Front Panel Brightness	Standby Level Viewing TV Level IR Receiver	Std High NA (setting not available)
Hard Disk Sleep Mode (Standby Sleep Mode)	-	Yes
HDMI Settings	Audio Output Mode Disable Auto Detect	Auto No

To restore the factory default settings, follow the instructions on page 52.

1. If you have not done so, put the set-top into "user settings mode", as described on page 41.

2. Press the ▲ or ▼ button on the remote control and highlight Restore Defaults in the PACE USER SETTINGS menu.

3. Press the ▶ button. The message: "Restore Default. Press OK to confirm" appears on the TV screen.

4. To confirm and restore the factory settings, press the **SELECT** button.
   The factory settings are restored, and the PACE USER SETTINGS menu reappears.

5. If you want to continue changing the settings, see the sections from page 41 onwards. If you have finished changing the settings, press the **POWER** button. The set-top will switch on with the restored settings.

NOTES
If the set-top and HDTV are connected via an HDMI™ cable, the HDTV may pass information about the required settings back to the set-top (see page 43). If you wish to restore the set-top's settings to those created by the HDTV, you should disconnect the set-top from the HDTV before you restore the factory default settings. When you reconnect the HDTV to the set-top via the HDMI™ cable, the HDTV will pass back the information again.
Always turn off the set-top, wait 60 seconds, then disconnect the set-top from the wall AC outlet before you connect or disconnect any other equipment to or from its rear panel.

Using "Zoom" to change the picture

Making the appropriate TV Aspect Ratio and TV Display Capability settings (see pages 42 through 45) should ensure that the picture on the TV screen is not distorted (stretched or squashed) and that it fills as much of the screen as possible.

However, even if you have selected the correct settings, there will be times when a program appears with black borders either at the top and bottom or at the sides of the picture (or sometimes even all the way round the picture). This happens because the aspect ratio (shape) of the *transmitted program* does not match the aspect ratio of the HDTV, or because the transmitted programme includes black borders as part of the transmission (see right).

The remote control should have a "zoom function" button (could be labeled ZOOM or ASPECT), which you can use to change the TV picture until it appears as you want it to:

1. Press the "zoom function" button once to change the display.

2. Press it again to change the display again. Continue to press it in this way until the picture appears as you want it to.

Note: The effect that this button has on transmissions depends on the transmission itself. On some transmissions it may have no effect at all.

*A 4:3 **transmission**, with a 16:9 picture. Dark bars are added at the top and bottom of the transmission*
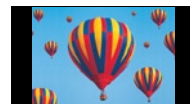
*A 16:9 **transmission**, with a 4:3 picture in it. Dark bars are added at the sides of the transmission*

USING THE SETUP MENUS

In addition to the user settings described on pages 41 through 50, setup menus may be available in the on-screen guide. These should be described in the information provided by the service-provider. There may also be on-screen information to explain these menus.

However, certain settings may affect how the set-top and TV work. See the table below for information about typical menu items and settings (they depend on which on-screen guide is running on the set-top, so may vary from those given below).

Item	Options	Settings	Notes
Cable Box Setup	Configuration		Allows you to view the configuration of the set-top.
Audio	Default Audio Track	Channel Default, English, various other languages	Sets the language track that the set-top first attempts to use when tuning to a channel. "Channel Default" means the set-top will use the default audio track for the program. Selecting a language means it will use the corresponding language track, if available.
	Optimal Stereo		Selecting this option enables the set-top to regulate the volume to minimize sudden changes in volume, for example during a commercial break.
	Audio Output	TV Speakers, Stereo, Advanced	If you select "Advanced", further settings are displayed, allowing you to set the Compression (to None, Light or Heavy) and the Stereo Output (to Mono, Stereo or Matrix Stereo).
Screen position			This allows you to adjust how the picture displays on the TV screen.

Other items and options may be available on these screens. The menus may be subject to change in the future, as the set-top advances with new technology.

Displaying the Diagnostics Information screens

The Diagnostic Information screens provide "read-only" information about the configuration of the set-top. For example, information on addressing, memory, current channel, status information, etc.

First of all, make sure that the set-top is connected to the TV, and set the TV to its appropriate input.

Ensure the set-top is on (the light around the **POWER** button on the front panel should be green).

To display the Diagnostics Information screens:

Press and release the **POWER** button on the remote control, then immediately (within 2 sec) press and release the **SELECT** button.

The DIAGNOSTICS DASHBOARD (see right) is displayed on the TV.

From the DASHBOARD, you can press the ◄ button to display the DIAGNOSTICS MAIN MENU (see right).

Use the ◄ button to toggle between the DIAGNOSTICS DASHBOARD and MAIN MENU.

To use the Diagnostics Information screens:

In both these menus, use the ▲ and ▼ buttons to move the on-screen cursor through the items, then press **SELECT** or ► to view more information in sub-menus. (In the DIAGNOSTICS MAIN MENU you can use the remote control to key in the 2-digit number of the sub-menu to display it.)

To remove a sub-menu and return to the preceding level, press the ◄ button.

To remove the DIAGNOSTICS DASHBOARD (or MAIN MENU), and return to normal TV viewing, press the **POWER** button twice.

If the installed system does not seem to be working properly, first make sure that all the cables are securely connected, then carry out the following checks, in the order shown.

Check	Suggested solution	Further checks, if there is still a problem
Is anything lighted on the set-top's front panel? **YES** ▼ **NO** ▶	Power may not be reaching the set-top. Make sure that the power cord is properly plugged in. If there is a switch by the wall AC power outlet, switch it to ON.	Check that the wall AC power outlet is working (for example by plugging in a lamp).
Does the remote control operate the set-top? **YES** ▼ **NO** ▶ Please see the next page	The set-top may not be turned on. Check if the light around the **POWER** button on the front panel is green. If it is red, press the **POWER** button on the front panel to turn on the set-top.	Check that nothing is blocking the path from the remote control to the front panel. Check that the remote control is currently set to operate the set-top (consult the instructions supplied with the remote control). If the remote control will still not operate the set-top, replace the batteries in the remote control. If there is still a problem, try to operate the set-top by using its front-panel buttons. If this works, then the remote control may be faulty.

Check	Suggested solution	Further checks, if there is still a problem
Can you see a picture on the TV screen? **YES** ▼ **NO** ▶ Please see the next page	The TV and other equipment may not be turned on. Check that they are plugged into AC power outlets and turned on.	Check that you have selected the appropriate AV input on the TV: HDMI™, component video (YPbPr), composite video or S-video (depending on how the system is connected up). If you are using a component video (YPbPr) connection, make sure the set-top's TV Display Capability settings are appropriate for the TV (see page 43). If the video path between the set-top and the TV loops through other equipment (such as a VCR), you may need to turn off this equipment for the loopthrough to work. If you are using the HDMI™ connection, make sure the connection goes directly from the set-top to the TV. If the set-top detects that the link is not secure, the set-top will not transmit a picture (see page 15). If you expect the link to be secure, try disconnecting and reconnecting the HDMI™ cable.

Check	Suggested solution	Further checks, if there is still a problem
Is the picture distorted or too small? **YES** ▶ **NO** ▼	Check that the TV Aspect Ratio and TV Display Capability, as set on the set-top, are appropriate for the TV (see pages 42 to 46). Change them if necessary.	If the TV is a 16:9 TV, you can use Auto Pillarbox to add black borders to 4:3 transmissions, so that the picture is not stretched (see page 45). If the TV Aspect Ratio and TV Display Capability settings are correct, try using Zoom to improve the picture (see page 53) or consult the instructions that came with the TV and try adjusting the TV's display.
Can you display menus and guides on the screen? **NO** ▶ **YES** ▼	If the TV is connected to the VIDEO OUT or S-VIDEO jacks, then you will see menus and guides only if the screen resolution **480i** is set to "**Yes**" and **480p**, **720p** and **1080i** are set to "**No**".	Change the TV Display Capability resolution settings if necessary (see page 44).
Is there any sound? **NO** ▶ **YES** ▼	Check that the audio cables are securely and correctly connected.	Check that you have not muted the sound on the set-top and/or TV. Adjust the volume on the set-top and/or TV. If there is a home theater receiver, check it is set up correctly. There may be a menu to select a second soundtrack (SAP: secondary audio program). If this is selected, but no SAP is being transmitted, there may be no audio.
Can you hear stereo sound? **NO** ▶ **YES** ▼ Please see the next page	First check that the program is likely to have stereo sound (an old movie, for example, may not be in stereo). Check the on-screen Setup Menu, Audio settings (see page 54). The Stereo Output may be set to "Mono". Change it to "Stereo".	If the TV is mono, you will hear stereo sound only if you have a stereo audio amplifier and speakers or home theater connected to the stereo VCR or set-top.

Check	Suggested solution	Further checks, if appropriate
Can you see and hear a DVD that you are trying to play? **NO** ▶ **YES** ▼	Check that all the audio and video cables are securely and correctly connected, including any to a home theater receiver that you may be using to enhance the sound.	
Is the picture low quality, or "fuzzy", when you are expecting to see an HDTV-quality picture? **YES** ▶	Some programmes may include "copy protection" which means, if the set-top is connected to the HDTV via the component video jacks, the picture is downgraded to standard TV quality. To prevent this from happening, use an HDMI™ (high definition multimedia interface) connection instead.	

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