DVDO EDGE

High Definition Video Processor & Hub

Product Manual
Version 1.0

Important Safety Information

Never operate this product with the top cover removed.

High Voltages are present inside the enclosure which present an electrical shock hazard. Never operate this product with the top cover removed.

Do not expose this product to water or other liquids.

Never insert objects through the vent holes on the top cover. High voltages are present inside the enclosure which present an electrical shock hazard.

No user serviceable parts inside the enclosure. Contact Customer Support for servicing.

Customer Support Information

email: edgesupport@dvdo.com

phone: 1-877-382-EDGE (1-877-382-3343)

web site: www.dvdo.com/edge

Check the web site for news and updates for your DVDO EDGE

To learn about VRS Video Processing Technology, visit
http://www.anchorbaytech.com/vrs_technology/

DVDO by Anchor Bay Technologies

983 University Avenue, Building A

Los Gatos, California 95032 USA

Table of Contents

Table of Contents (continued)

Section 1: Introduction: What will DVDO EDGE do for you?

DVDO EDGE will improve the quality of your experience with your home audio and video system.

EDGE achieves this by acting as an intelligent central switching hub and video processor. It connects all of your audio/video source devices to your high definition TV and AV receiver. It makes switching from one component to another simple, and it comes with a Universal Remote so that you can manage all the components in your system with one control.

Most home audio video setups consist of a number of separate components that must be connected together. The task of connecting, configuring, optimizing and operating the system is left to the user. EDGE excels at handling these tasks for you.

DVDO EDGE is a unique product that helps to simplify your system's interconnections, while delivering ease of use and world class video processing to your high definition television.   The more components your system has, the more you benefit from the simplification and performance that DVDO EDGE can deliver.

EDGE features a number of technical innovations. EDGE is based on the ABT2010 video processing chip. This chip incorporates VRS high performance video processing developed for the company's line of Home Theater Video Processors, including the DVDO VP 50 Pro. The chip delivers outstanding picture quality at new low price point. Ease of use features include automatic input switching, based on predetermined priority, so switching audio/video sources is as simple as powering on a component. Controls for Aspect Ratio, Zoom, and Picture Controls are customizable for each input.

EDGE features dual HDMI output connectors, one for video/audio and a 2nd dedicated audio HDMI connector. This configuration delivers optimal performance and ease of use in a system that included both a digital display and an AV Receiver. EDGE communicates with your display to obtain its preferred format, then automatically adjusts its processing to produce to match the display's preferred format.

EDGE also communicates with your AV Receiver to learn its audio capabilities, then combines display information and communicates *system* capability back to the source components, which provide optimized output. You can let EDGE manage your system or if you prefer, you can manually control your system through EDGE. Either way, EDGE makes it easier.

DVDO Edge is a result of a vision: Using a home Audio/Video system, with high definition video and surround sound audio should be and can be much easier.

Using DVDO EDGE in a Home System AV System
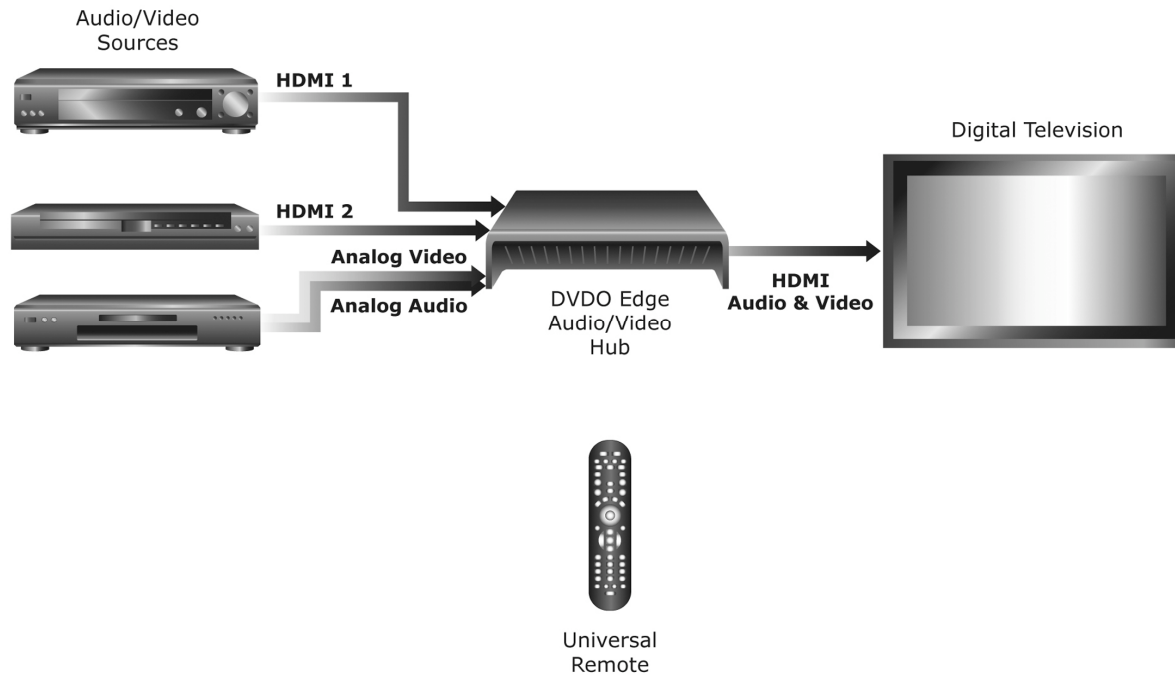
The illustration above shows a basic home audio/video system using DVDO EDGE. The components on the left are "sources." Sources are DVD Players, set top boxes, or any other component that produces an audio and video signal. These audio and video signals connect to the inputs of the EDGE, and the output of the EDGE connect to a TV. The EDGE switches audio and video signals, and provides image processing to match the incoming video formats to the preferred format of the TV.

The source components may use a variety of different signal formats and cabling. EDGE can accept practically all commonly used cabling, and can handle a mix of cabling and format types. In the illustration above, two of the sources have HDMI outputs, while the third one uses an older analog audio and video interface. Three sources are shown above, EDGE can accept up to ten.

7

Using DVDO EDGE in a Home System AV System (continued)
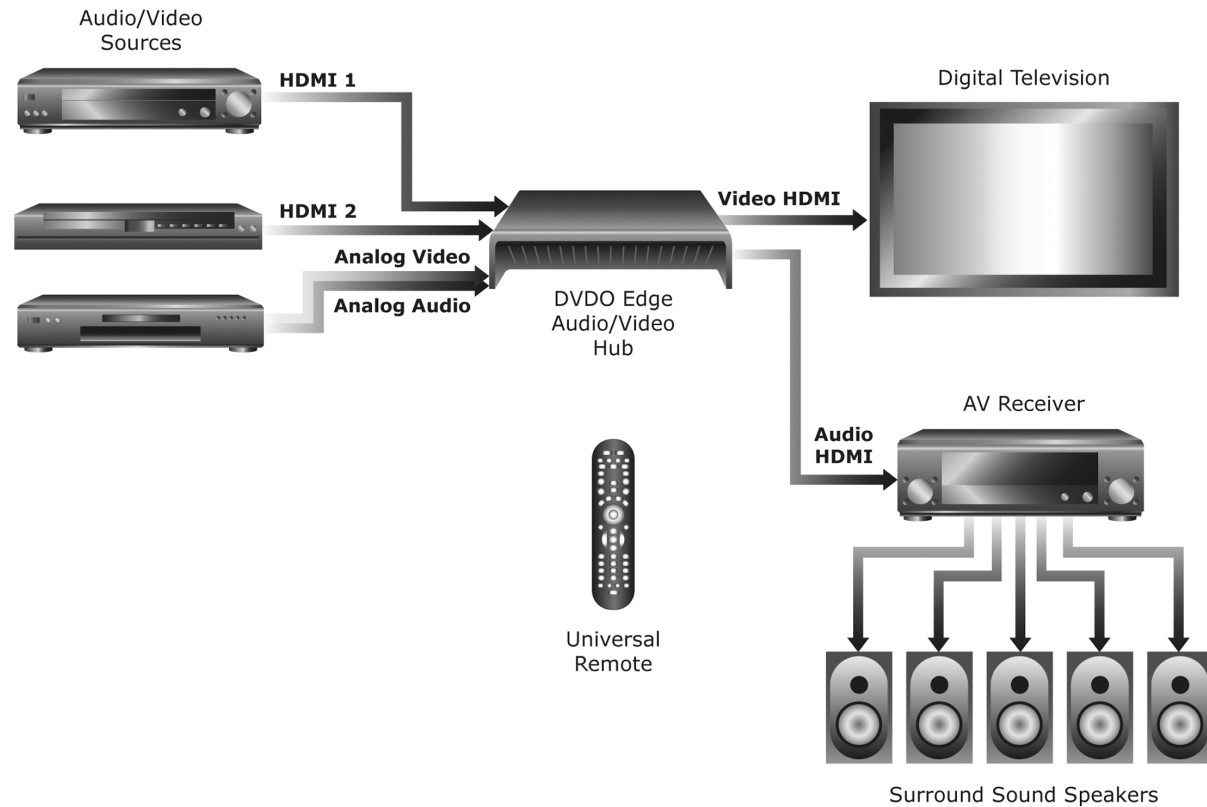
EDGE is optimized for use in a system with an AV Receiver as shown above. It has a dedicated audio HDMI output port, and an Optical audio output for AV Receivers without HDMI. EDGE accepts audio and video from the source components, then routes video to the TV and audio to the AV Receiver. Switching source components is simple; EDGE handles the audio and video routing details.

EDGE provides automatic, intelligent communication between the source devices on the left, and the TV and AV Receiver on the right. EDGE will automatically adjust its internal processing to produce the preferred video format of your digital TV or display.

Using DVDO EDGE in a Home System AV System (continued)

EDGE comes with a **DVDO Universal Remote**. It controls EDGE, and it can control up to seven other components in your system, including your TV, your AV Receiver and your source components.

Once you have set up your system and programmed your remote, you can use this single remote for the day to day control of your system. You will need the other remotes during setup or for specialized functions.

DVDO Universal Remote has advanced **Punchthrough** and **Macro** features that make operation of your system simpler. These features let you control your system in a more natural way, by function instead of by component.

For example, if you want to control your sound volume, you can simply press the Volume UP/Down buttons without having to remember which component in your system controls sount volume.

The Punchthrough feature works with other functions, including Channel Selection, and the Play--Stop--Pause--Fast Forward--Fast Reverse group.

The **Macro** function is useful when you find yourself using a sequence of button presses over and over. Macros allow the combination of a sequence of button presses into a single button. A Macro is often used to combine a series of power commands into a single button, for one-button power-on or power-off of some or all of the components in your system.

You can program Punchthrough and Macro functions as part of your system setup.

DVDO EDGE Feature Summary

Accepts inputs from up to 10 video sources and 10 audio sources.

Outputs video and audio to your digital TV via HDMI.

Dedicated audio HDMI output routes audio to your AV Receiver.

Separate Optical digital audio output for AV Receivers that don't have HDMI.

Allows use of the highest quality video format your TV can accept and the highest quality audio format your AV Receiver can accept.

Converts video formats from any video input to the highest quality format your TV can support.

Outstanding video quality using the ABT2010 video processor chip.

Links audio and video inputs so they can be switched together.

Intuitive on-screen Menus for controlling and configuring your system.

Automatically switches inputs using preprogrammed priority. Alternatively, the user may manually switch inputs using the remote or through the On-Screen Menus.

Wizard guides you through setup of new TVs, receivers, or input devices.

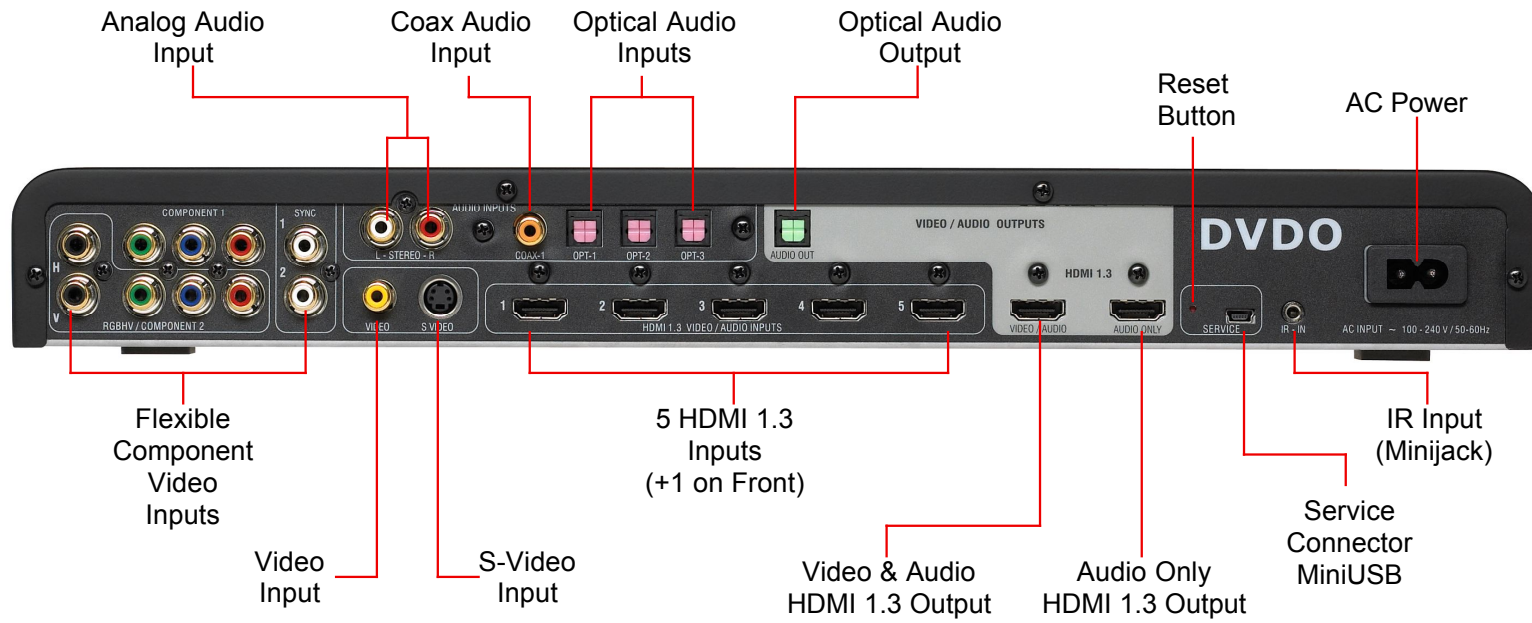User programmable audio/video lip sync; up to 200mS delay.

Simple Aspect Ratio controls available on the remote to through the On-Screen Menus.

Picture Controls, Aspect Ratio, Game Mode, and Zoom are individually configurable for each video input.

Backlit DVDO Universal Remote controls all the components in your system.

Rear Panel Connections

A description of these connectors starts on the next page.

Rear Panel Connections (continued): Video Inputs

Flexible Component Video Inputs
This group of connectors can accept 3 types of analog component video inputs:
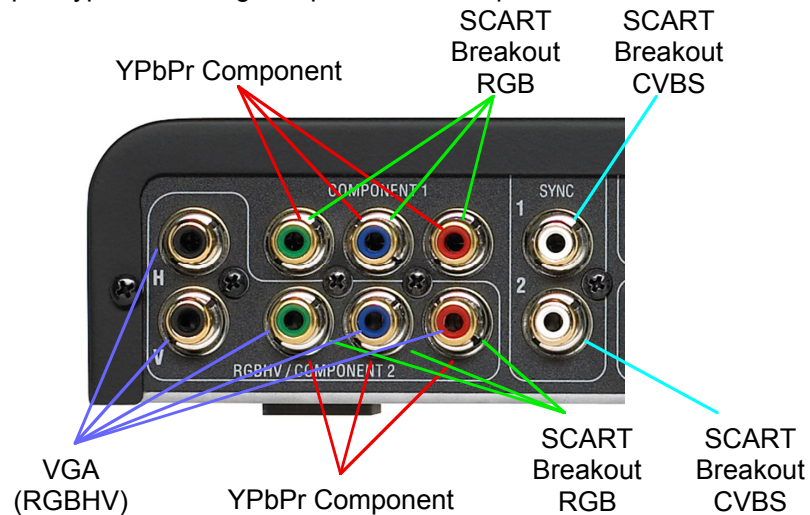
YPbPr Component (2 Inputs)
This is the most common type of component analog signal. Cables are usually, 3 RCA-> RCA type.

RGBHV
RGBHV stands for "Red, Green, Blue, Horizontal Sync, Vertical Sync.
It is usually used to connect a computer's analog VGA output using the VGA to RGBHV adapter cable.

EDGE can accept these format on RGBHV:
        VGA   640 x 480 @ 60Hz
        SVGA 800 x 600 @ 60Hz
        XGA   1024 x 768 @ 60 Hz
        SXGA 1280 x 1024 @ 60 Hz

RGB + CVBS
For use with a SCART breakout cable. Connect the breakout cable to a SCART connector, then connect Red, Green, and Blue to the component inputs, and connect CVBS to the Sync input horizontally adjacent to the component inputs.
Note: SCART is primarily a European connector type. CVBS means Composite Video Broadcast Signal; typically this would be an analog PAL or SECAM signal.

Rear Panel Connections (continued)

Video Input (yellow RCA connector)
Composite video input. This signal is also known as "base band NTSC." Also accepts European standards
PAL and SECAM.

S-Video
S-Video is a analog input signal format similar to base band NTSC (or PAL/SECAM), except that the chroma and luma/sync
components are on separate conductors, for improved signal quality. If you have a choice between Video or S-Video,
choose S-Video.

Audio & Video Inputs

HDMI 1.3
EDGE has a total of 6 HDMI inputs. HDMI version 1.3 is the most current and most full featured revision of the HDMI
standard. One of the HDMI inputs is located on the front of the unit. HDMI is the only input that carries both video and audio.
HDMI is compatible with DVI using an HDMI to DVI adapter cable. If you use a DVI source, you will need a separate audio
cable because DVI connectors do not carry audio.

Audio Inputs

Stereo Audio Input (Red and white pair)
Analog input for stereo audio. The connector is labeled L - Stereo - R.

Coax (orange)
Coax is the name given to a type of audio input. The cable is a RCA style, like the Video input. Coax carries digital audio in
an SP/DIF format.

Optical (Toslink)
EDGE has 3 Optical audio inputs. They carry the same signal format as Coax, i.e. SP/DIF digital audio.

Rear Panel Connectors (continued)

HDMI 1.3 Video/Audio

This connector is used to carry video to your TV or display. It will also carry audio depending on how you configure your EDGE.

HDMI 1.3 Audio Only

This connector is intended to connect to an AV Receiver for audio processing. EDGE will automatically sent audio to this connector if it is connected to a powered-up AV Receiver, or you can manually configure EDGE's audio output.
This connector does not output video.

Optical

If you have an AV Receiver for audio processing, but it does not have an HDMI input, you can use the Optical output to connect audio from your EDGE to your AV Receiver. Configuration of the audio output of EDGE can be done using the Settings Menu.

Other Rear Panel Connectors

Service

This connector is used for software upgrades if they are necessary using a mini-USB cable. Refer to the web site: www.dvdo.com/edge for updates regarding software upgrades.

Reset

Resets the EDGE, and brings it into a known state. Reset does not change user settings. If Reset is used, it should be pressed and released quickly (less than 2 seconds).

The reset button will also restore factory defaults. If the reset button is pressed and held, the front panel LED will blink for about 5 seconds. When it stops blinking and stays on, the reset button can be released. All factory defaults will have been restored, and any user settings will be erased.

IR - In

This connecter can be used in installations where line-of-sight IR reception is not possible in conjunction with accessories that allow for remote IR connections.

AC Input

Power connection for your EDGE.

Section 2: Set Up your DVDO EDGE: Summary

A summary form of the setup procedure appears on this page, followed by a more detailed description over the following pages. Some steps may be skipped depending on your system configuration and your preferences.

Gather your cables. For help choosing cables, see the "Video Cables" or "Audio Cables" chapter.

Connect your AV Receiver (you can skip this if you will use your TV's built-in audio).

> Connect a cable from your DVDO EDGE to your AV Receiver
> > If your AV Receiver has HDMI input, connect an HDMI to HDMI cable from EDGE's Audio HDMI output to your Receiver's HDMI input.
> > If your AV Receiver does not have HDMI, connect a cable from EDGE's Optical Audio output to your Receiver's optical input.
> Power up your AV Receiver
> Set up your AV Receiver to accept input from EDGE

Connect and set up your TV

> Connect a cable from your DVDO EDGE to your TV
> > If your TV has an HDMI input, use and HDMI to HDMI cable.
> > If your TV has a DVI input, use an HDMI to DVI adapter cable.
> Power up your DVDO EDGE and your TV
> EDGE's Display Wizard will lead you through the remaining setup.

Connect and set up your input components

> Connect a cable from your source component's audio/video outputs to your EDGE
> Power up the source component
> Input Wizard should appear to guide you through setup.
> Test to see that you have both audio and video from the source component
> Repeat the steps above for each of your source components

Program the DVDO EDGE Universal Remote

> Use the preprogrammed Code Method to program the remote for control of your system's components
> Program punch-through features for channel selection and audio control (a convenience option)
> Program a macro for 1 button power on/off (a convenience option)

Set Up your DVDO EDGE -- Details: Output Connections

DVDO Edge -- Rear View of output Connectors

**Connect your TV to
the Video/Audio output.**

**Connect your AV Receiver to
the Audio Only HDMI output
if the Receiver has HDMI.**

OR

**Connect your AV Receiver to
the Optical Audio Out
connector if your Receiver
does not have HDMI.**

1. If you don't have an AV Receiver, skip to # 2.

If your AV receiver has HDMI input,
connect an HDMI cable from Edge's Audio
Only HDMI output to an HDMI input on your
AV receiver.

If your AV Receiver does not have HDMI,
connect an Optical cable from the Optical
Audio Out to an optical input on your
AV Receiver.

Use your AV Receiver's remote to power
on the AV Receiver and set its input
to Edge.

2. Connect your TV.

If your TV has HDMI input,connect an HDMI to
HDMI cable from Edge's Video/Audio output to
an HDMI input on your TV.

If your TV or monitor has DVI input, you will need
an HDMI to DVI adapter cable. Connect the
HDMI end to Edge's Video/Audio HDMI output
and the DVI end to your TV or monitor.

Use your TV's remote to power up and set
its input to Edge.

Plug in Edge's AC cable (if you haven't done
so already).

Set Up your DVDO EDGE -- The Display Wizard -- Step 1: Name your display.

You should see the Display Wizard on your TV as shown left. The Display Wizard assists setup of your TV and your audio.

Using Display Wizard, you can
1. **Name your Display.**
2. **Select an output video format.**
3. **Select an output connector for audio.**

If you don't want to change anything, press **Left Arrow** to Exit the Wizard.

1a. Name your Display

If you want to change the name of your display, press **Right Arrow** to go to the on-screen keyboard.

Otherwise, press **Down Arrow** to go to the next setup step 2.

1b. Name your Display - Keyboard

Use this on-screen keyboard to rename your display.

When you are finished, highlight "Finish" then press **OK** to accept the new name.

If you want to exit the keyboard screen with no changes, highlight "cancel" then press **OK**.

17

Set Up your DVDO EDGE -- The Display Wizard--Step 2: Output Format.

2a. Select an output video format.

EDGE defaults to "Auto Select"
and communicates with your TV to find
the TV's preferred format.

If you want to change the output format,
press Right Arrow to go to the Output
Format screen, shown below.

Otherwise, use Down Arrow to use
the preferred format, and proceed to
the next step 3.
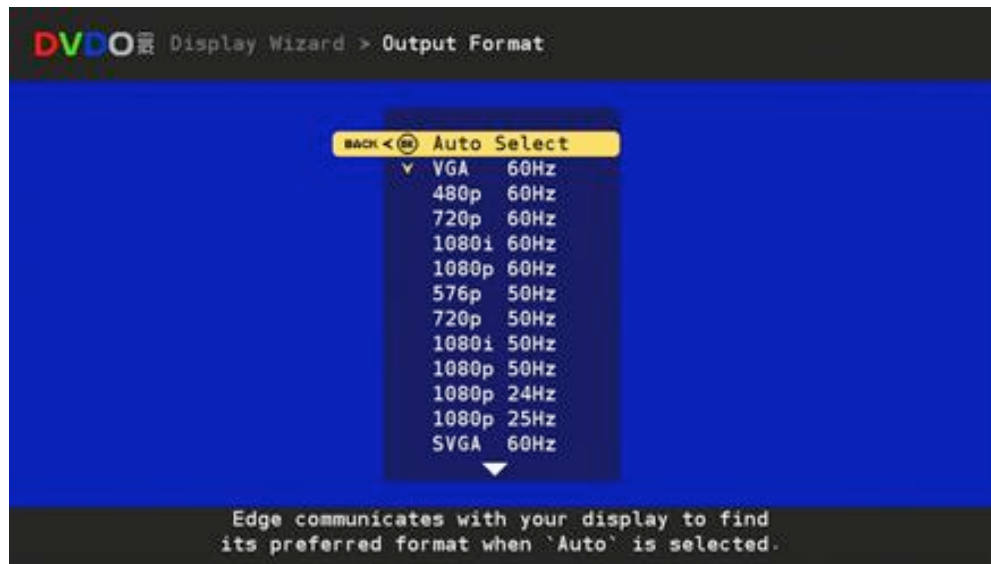
2b. Output Format Selection.

Use the Down Arrow to highlight
the output format you want, then
press OK.

EDGE will switch to the new output
format. You will have to confirm that
you can see a picture within 10 seconds.
If you don't confirm, EDGE assumes that
you can't see the picture and will return
to the previous format.

Set Up your DVDO EDGE -- The Display Wizard--Step 3: Audio Output.

3a. Select an audio output connector.

You have 4 choices for audio output:

A. Auto: Default setting.

Automatically chooses an output depending on the capabilities of the attached, powered-on components.

B. Video HDMI: Outputs audio on the Video HDMI connector. Use this setting if your TV has audio capability and you don't have (or don't want to use) an AV Receiver.

C. Audio HDMI: Outputs audio on the Audio HDMI connector. Use this setting if you have an HDMI capable AV Receiver.

D. Optical: Outputs audio on the Audio Optical connector. Use this setting if you have an AV Receiver that does not have HDMI input.

Make a selection and/or press < to exit this screen.

You finished with your Video and Audio output setup.

Left Arrow Exits Display Wizard

19

Set Up your DVDO EDGE -- The Input Wizard--Step 1: Input Name.
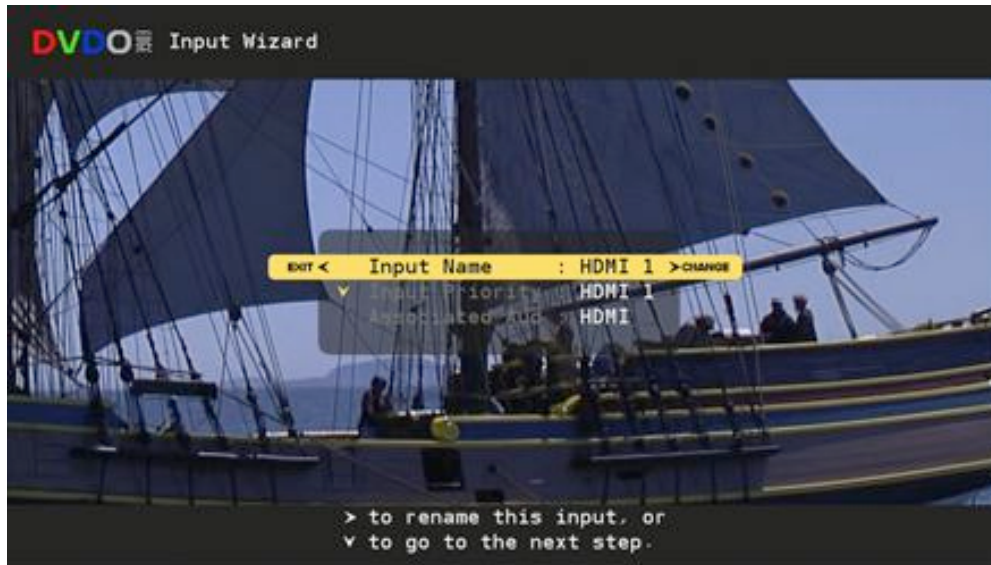
Input Wizard guides you through the setup of your input components. You can run the Input Wizard for every input component.

Using the Input Wizard, you may

1. **Rename an input component.**
2. **Set an Input Priority for the component**
3. **Associate an Audio Input with the**
   video input.

1a. Input Name
   Use the on-screen keyboard to rename this input, or press Down Arrow to go to step 2.
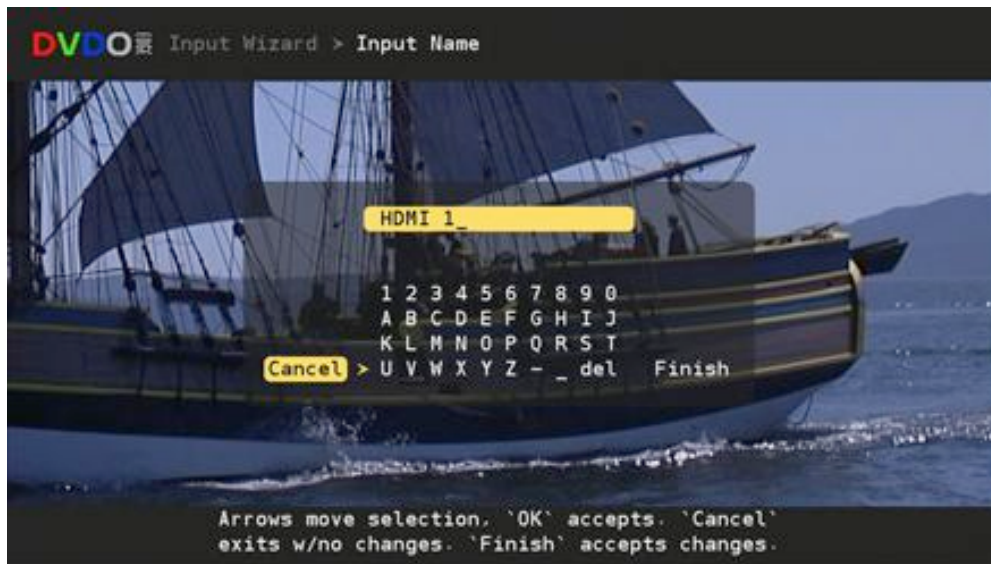
1b. Input Name - Keyboard
   Use this on-screen keyboard to rename your display.

   When you are finished, highlight "Finish" then press **OK** to accept the new name.

   If you want to exit the keyboard screen with no changes, highlight "cancel" then press **OK**.

Set Up your DVDO EDGE -- The Input Wizard--Step 2: Input Priority.
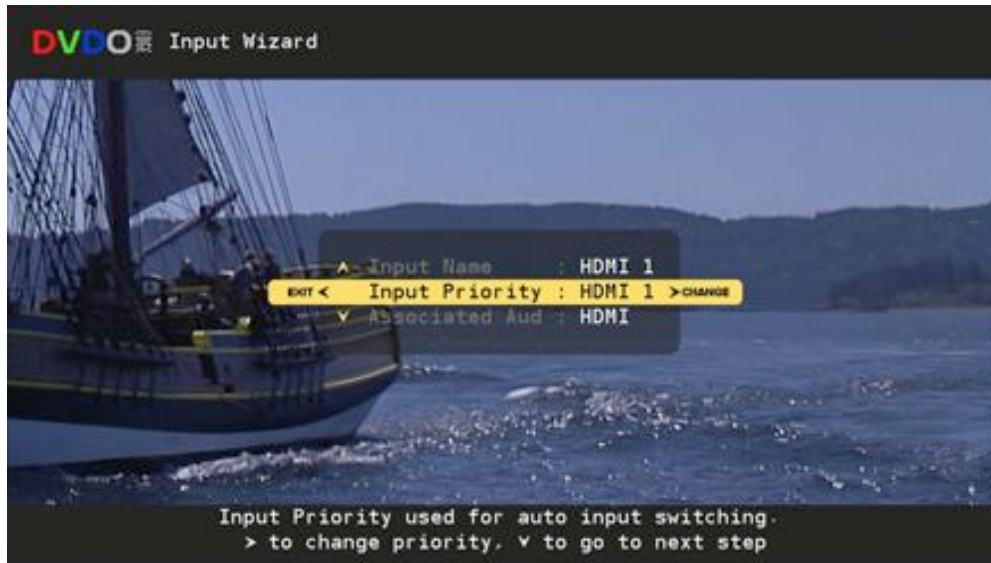
2a. Set Input Priority

Input Priority is used to auto-matically select inputs when EDGE is in Auto Input Select mode, which is the default.

If EDGE is in Auto Input Select Mode, and multiple inputs are powered on, then EDGE will select the input with the Highest Priority.

If you don't want to change Input Priority, press **Down Arrow** to go to step 3.

2b. Change Input Priority

To change Input Priority put the highlight bar over the input you want to change then press **OK**.

Use **Down Arrow** to move the selection, then press **OK**

21

Set Up your DVDO EDGE -- The Input Wizard--Step 3: Associate Audio.
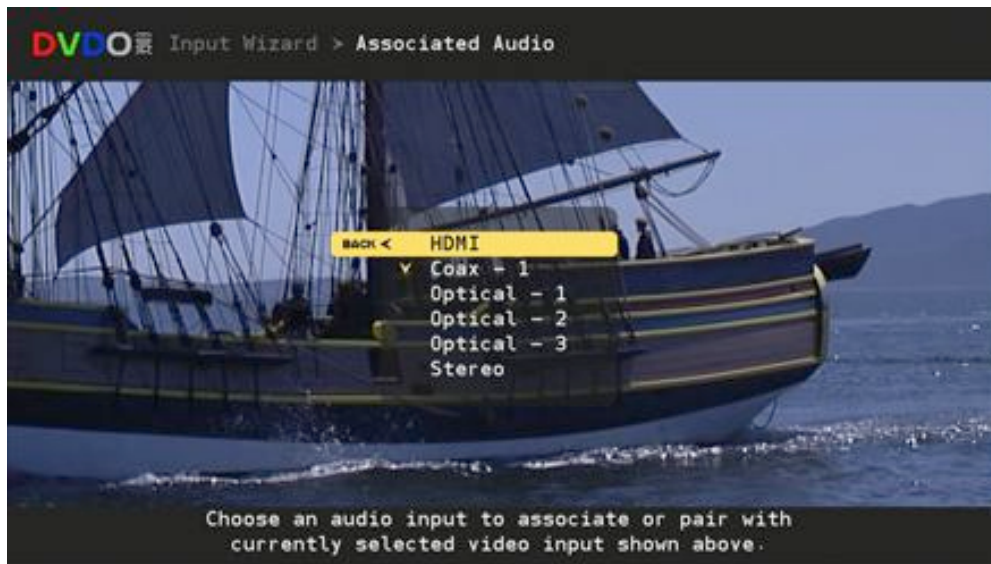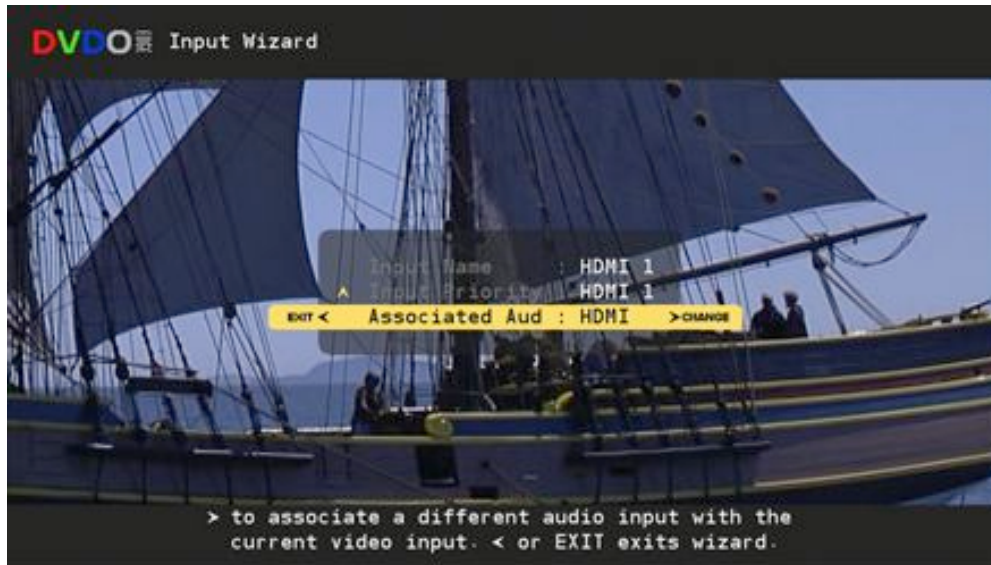
3a. Associate Audio

> "Associate Audio" is used to create an audio/video pair of inputs that are switched as a unit.
>
> If your source component does not have HDMI output, then you have set upEDGE so that it treats a video input and an audio input as a pair for switching.

"Associate Audio" lets you choose the audio input that is paired with the current video input.

If you are using HDMI input, you do not have to Associate Audio; you can exit the Input Wizard.

3b. Choose an audio input.

> Choose the audio input that you want to Associate with the current video input.

You are finished setting up this input component.

Left Arrow Exits Input Wizard

22

Section 3 -- Controlling EDGE: Remote and On-Screen Menus

Using the Remote to Control Edge

The remote control that comes with your DVDO Edge is a universal type. It can control your edge plus 7 other components in your system.

The remote must be in DVDO mode to control Edge. Then the buttons shown on the right will work as described.

The Picture Shape buttons on the bottom of the remote will work anytime, independent of the remote's current mode.

Hint:
The DVDO Universal Remote operates in "Modes." It becomes the remote for a particular component in your system when it is put into the Mode for that component.

To see what mode the remote is currently in, push the OK button. One of the component buttons will light up, telling you the mode. (The other mode buttons are just below the power buttons).

Power On — Power Off

Information Screen

Main Menu Screen — Exit Menus

Navigation Rose includes 4 Arrow keys plus OK

Zoom Buttons

Input Select Buttons

DVDO Mode Button

Picture Shape Buttons

23
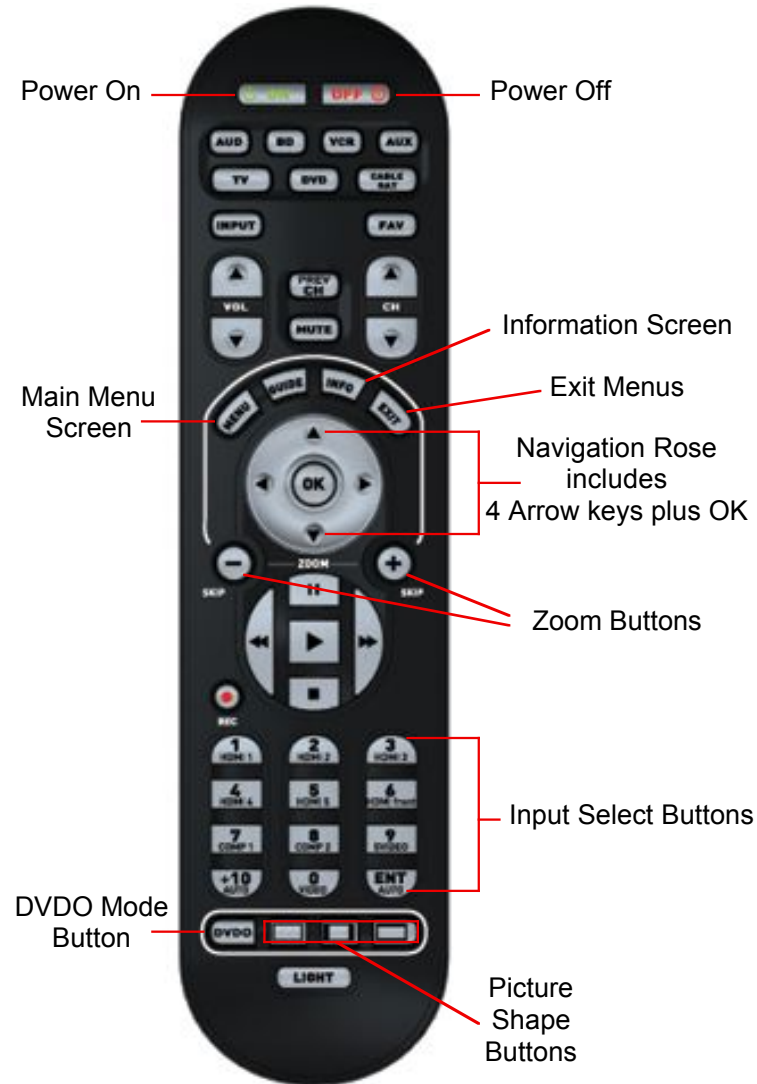
Section 3 -- Controlling EDGE: Menus and User Interface

You can control DVDO EDGE using the Menu system. The Menus are logically organized to make control and setup easy while using just a few remote buttons.

Arrow
Buttons

EXIT button
Exits Menus

Menu
Pathname

Highlight
Bar

Right Arrow
go to next
screen.

Left Arrow
goes
to previous
screen
or Exits Menus
from Main Screen

Up & Down
Arrows move
Highlight Bar

On-Screen
Hints

To see Menus
Press **DVDO**
then **MENU**

24

Section 3 -- Controlling EDGE: Menu Organization

The Menus are organized as a hierarchy in which you move from left to right. Think of the Main Menu screen as the leftmost or highest in the hierarchy. Up/Down Arrows move a Highlight Bar vertically. Right Arrow moves to the next screen until you reach a screen where you can make changes.

Move to the left in the hierarchy using the left arrow. This takes you "higher" in the hierarchy.

An example of using the Menus to adjust brightness is shown in the figure below.

Right Arrow moves to **Picture Control** Screen

Right Arrow moves to **Adjust Brightness** Screen

From Main, use Down Arrow to move the highlight bar to **Picture Controls**

Left Arrow goes to **Previous** Screen

EXIT button Exits Menus

Section 3 -- Controlling EDGE: Main Menu
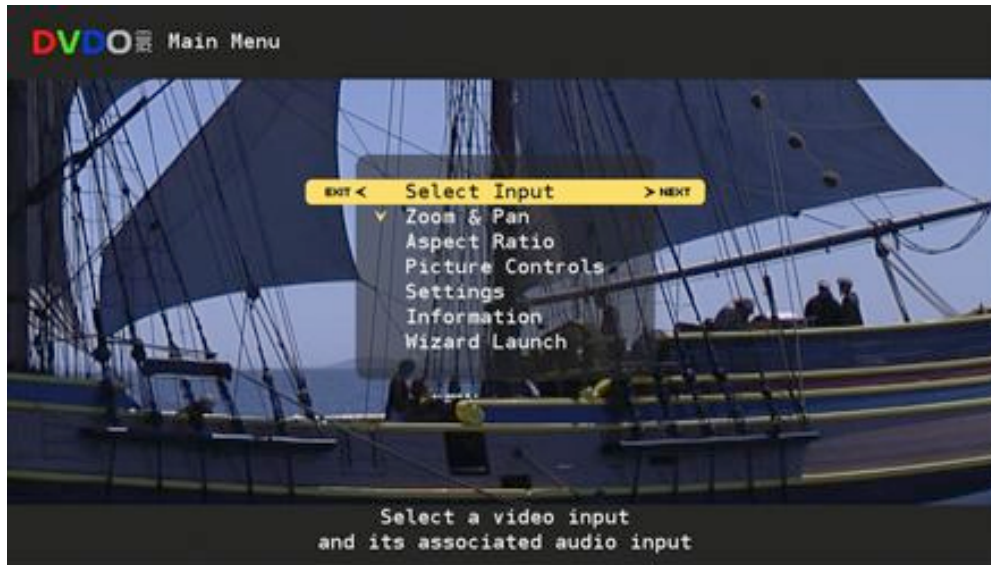
Main Menu

The Main Menu is the first screen you
see after pressing the Menu button.
It is the gateway that lets you quickly
navigate to the function you want to
control.

DVDO Button
puts remote into
EDGE mode.

MENU Button
Brings up the Main Menu

POWER
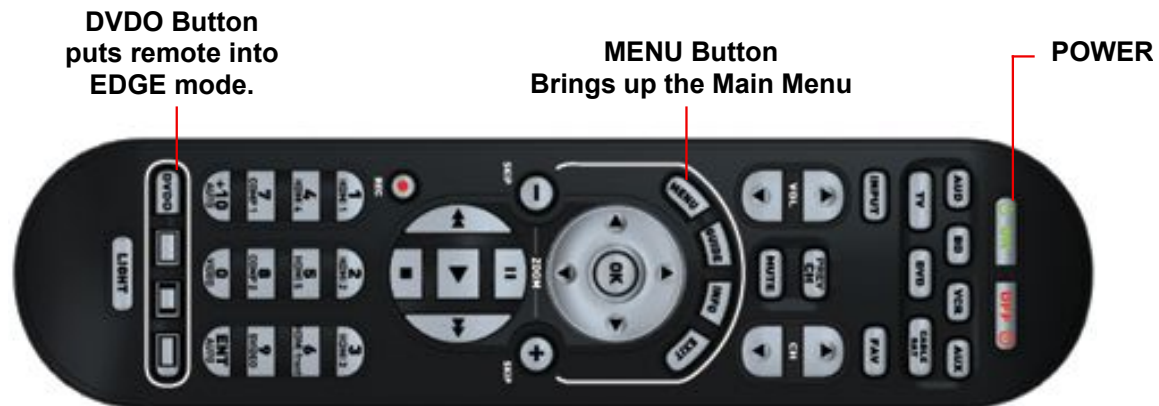
Section 3 -- Controlling EDGE: Select Input

Main Menu -> Select Input

Select Input

Auto is the default setting. If more than one input has an active signal, the one selected depends on the
Input Priority setting. The active input with the highest priority will be selected.

Input Priority can be set by going to Main Menu -> Settings -> Input Priority.

Inputs can be selected manually. Position the highlight bar over an input name and press **OK**.

Hints for using Auto Input Select

Automatic input switching is one of the features of your DVDO EDGE that makes your system easier to use. Using Automatic Switching, you switch inputs by simply powering on a component.

For a simple example, suppose you have only 2 inputs: a cable set-top box, and a DVD player, and you use the set-top box 80% of the time. Set the priority so that your set top box has LOWER priority than your DVD player. Then, if you want to switch from watching cable to watching a DVD, simply power up the DVD player. Your DVDO EDGE will recognize a new signal on the DVD input, check the priority list, and then switch to DVD because it has HIGHER priority. This is an overly simple example, but the idea is to set priority *HIGHER* for the *Least-Used* inputs.

DVDO EDGE will switch inputs automatically when you power up a *Higher-Priority* component.

Manual Input Select

There are 2 ways to select inputs manually.
1. Switch inputs using the Select Input Menu, or
2. Set up your remote to switch using the numeric keypad.

Remember that when you use manual select, you are disabling Auto Select.

Input Select using the Remote's Numeric Keypad

You can use your remote for input switching as an alternative to the Menus on the previous page.

Input
Select
Buttons

AUTO input Mode
Buttons

DVDO Mode
Button
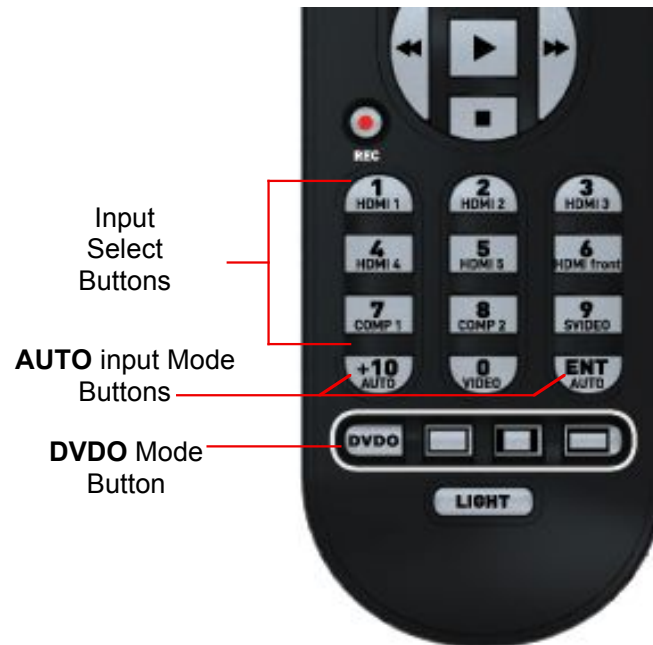
To use the Remote
to Select Inputs:

Then press **DVDO**, and then
the numeric button
corresponding
to the input you want to select.

You can also select AUTO input
select mode using the buttons
labeled **AUTO.**

29

Zoom and Pan

Main Menu -> **Zoom & Pan** -> **Zoom**

The Zoom control allows you to magnify your picture. As the picture magnifies, the area around the edges becomes invisible off the sides, top, and bottom of your display.

Pan lets you to move around on a zoomed picture. You can shift left, right, up or down. Shift has no effect unless the picture is zoomed. If the picture is not zoomed, the Pan control will be grayed, meaning it is unavailable.

The Zoom and Pan settings you choose apply only to the current input. You can customize the zoom settings for every input if you so choose. Zoom and Shift settings will be stored and will not change until you deliberately change them.
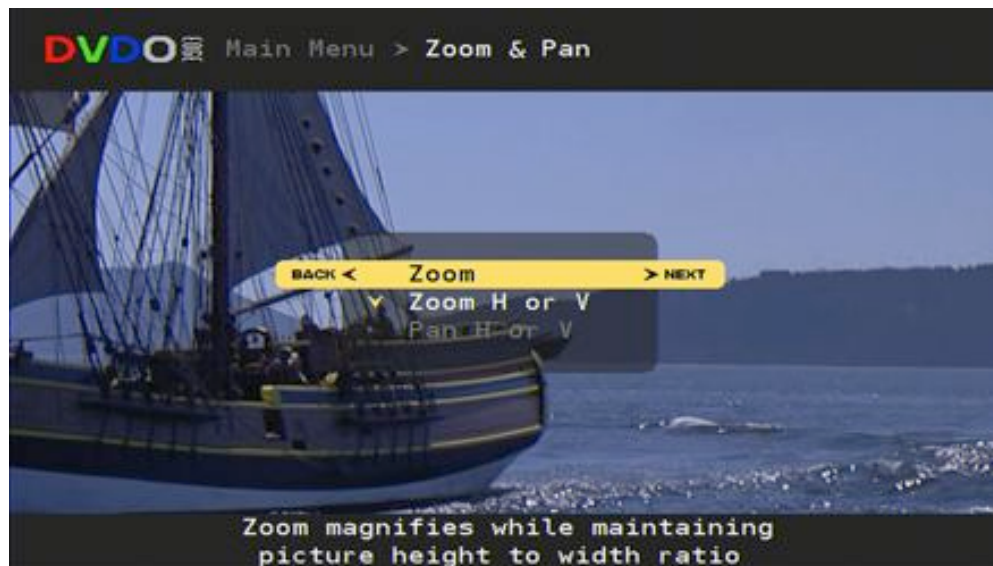
Zoom
Magnifies picture and preserves aspect ratio.

Zoom H or V
Independent horizontal and vertical zoom control.

Pan H or V
Pan chooses the parts of a zoomed picture that will be displayed. Independent horizontal and vertical control.

(Selection is gray if the picture is not zoomed).

30

Zoom Control Screen

Main Menu -> **Zoom & Pan** -> **Zoom**
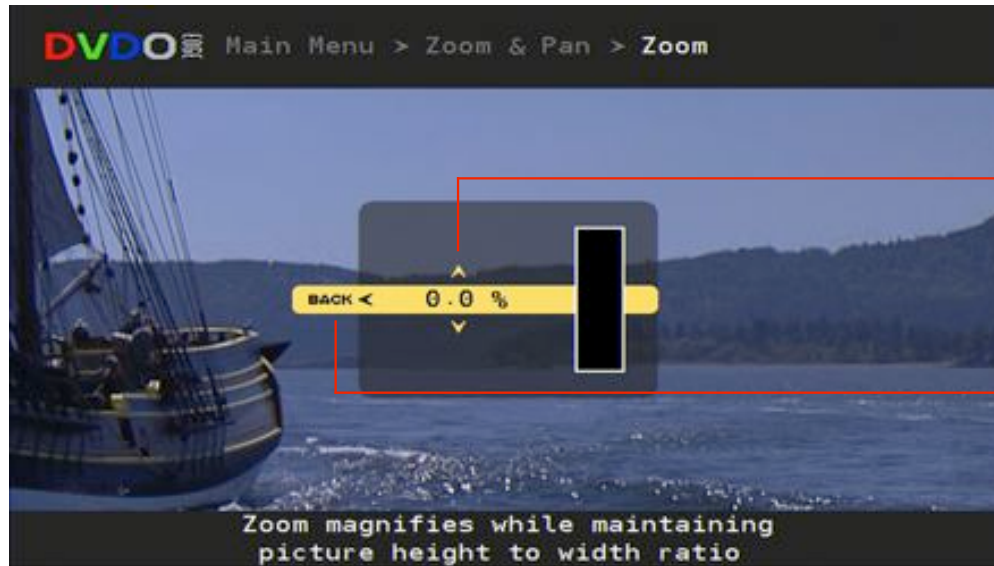
Use Up/Down Arrows
to adjust Zoom

Press Left Arrow to go BACK
to the previous screen.
or
Press **EXIT** to exit menus.

Independent Horizontal and Vertical Zoom

Main Menu -> **Zoom & Pan** -> **Zoom H or V**

Zoom H or V gives you independent horizontal and vertical zoom control. The original aspect ratio is not maintained using this control.

The Zoom H or V control works differently from most other control screens. It uses Up/Down arrows to zoom vertically, and Left/Right arrows to zoom horizontally. The OK button takes you to the previous screen, or you can press the EXIT button your remote to exit menus.
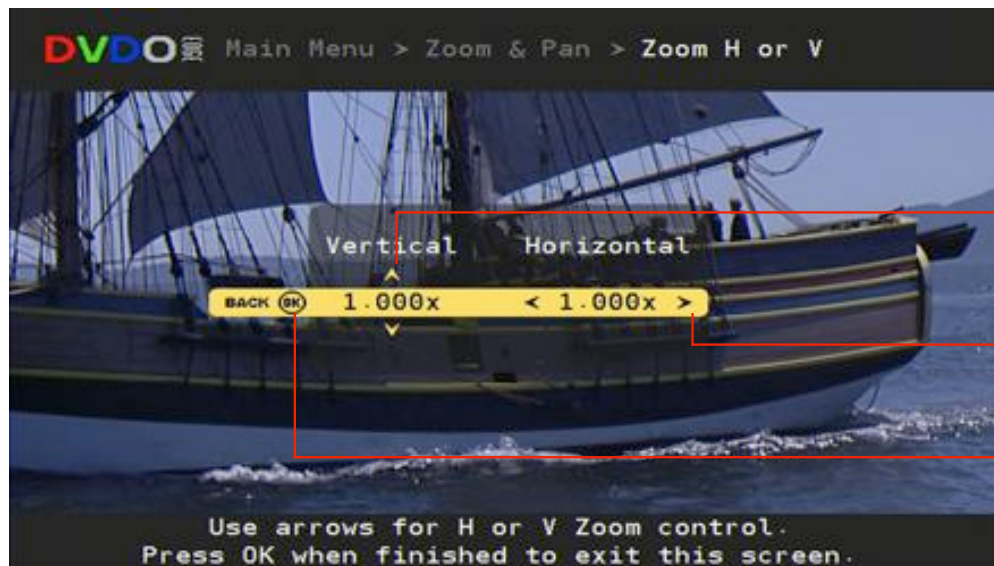
Use Up/Down Arrows to zoom vertically.

Use Left/Right Arrows to zoom horizontally.

When you are finished, press **OK** to go BACK or **EXIT** button to exit menus.

Pan H or V

Main Menu -> **Zoom & Pan** -> **Pan H or V**

The pan feature allows you to move around on a zoomed picture. As you move around, you expose parts of the picture that were not visible because the picture was Zoomed. Pan works only on a Zoomed picture.

The controls on this screen work differently than most screens. The controls are work like the Zoom H or V described on the previous page.

Uses Up/Down arrows to zoom vertically, and Left/Right arrows to zoom horizontally. The OK button takes you to the previous screen, or you can press the EXIT button your remote to exit menus.
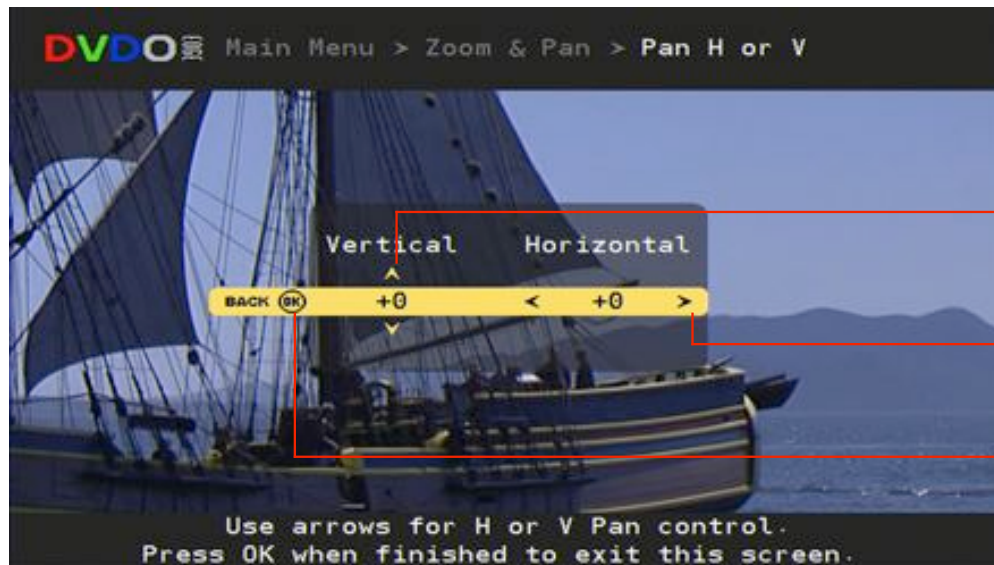
Use Up/Down Arrows to pan vertically.

Use Left/Right Arrows to pan horizontally.

When you are finished, press **OK** to go BACK or **EXIT** button to exit menus.

Zoom using the Remote Control

You can Zoom directly from remote without using the Menus. Zooming using the remote uses the aspect ratio preservation zoom. All Zoom controls apply to the currently selected input, giving you independent Zoom controls for every input component.

To Zoom using the Remote, First press DVDO,

Next, Zoom using the + and - buttons.

Aspect Ratio Control using Menus or Remote

Main Menu -> **Aspect Ratio**

Aspect Ratio controls apply to the currently selected input, for independent Aspect Ratio controls per input.
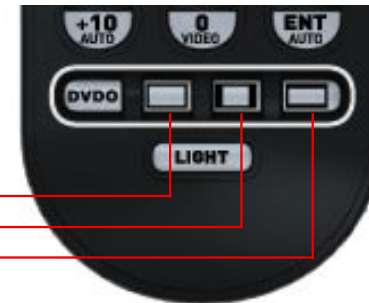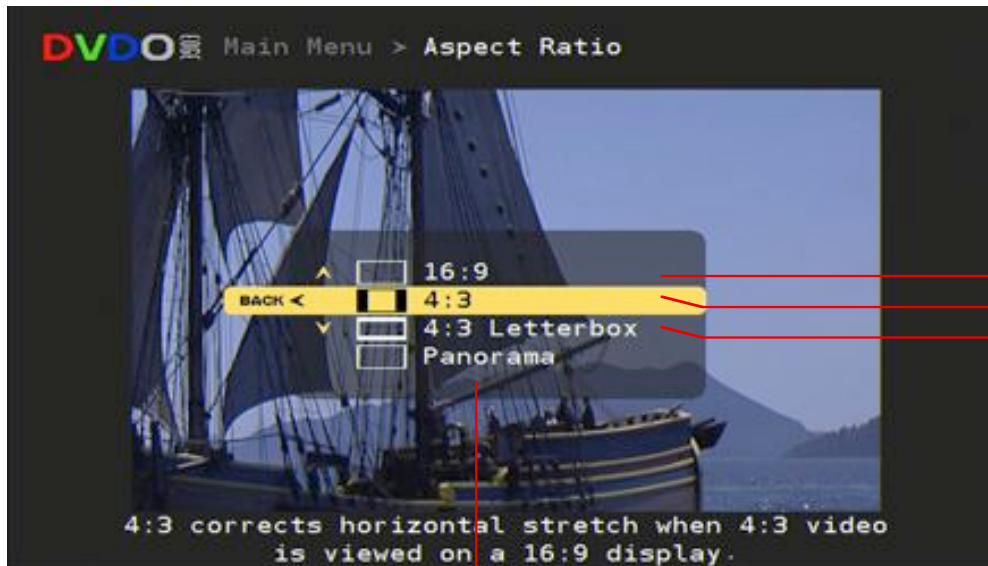
You can use either the menu or the remote to adjust Aspect Ratio

Panorama, also known as non-linear stretch; available only via the menus.

Picture Controls

Picture Controls let you make adjustments to your picture. The set of Picture Controls available are briefly described below:

Brightness	Adjusts the level of black level.
Contrast	Adjust the level of white
Color Saturation	Adjusts the vividness of colors
Hue	Color adjustment that shifts the shade of color. Sometimes called tint. This color control changes color without changing Luminance (picture brightness) or color saturation.
Detail Enhancement	Sharpening control that influences picture details
Edge Enhancement	Sharpening control that influences large image features
Mosquito Noise Reduction	Type of noise filtering that removes "mosquito noise," common video compression artifact

Picture Controls apply to the currently selected input, for independent Picture Control of every input component.

Main Menu -> **Picture Controls**
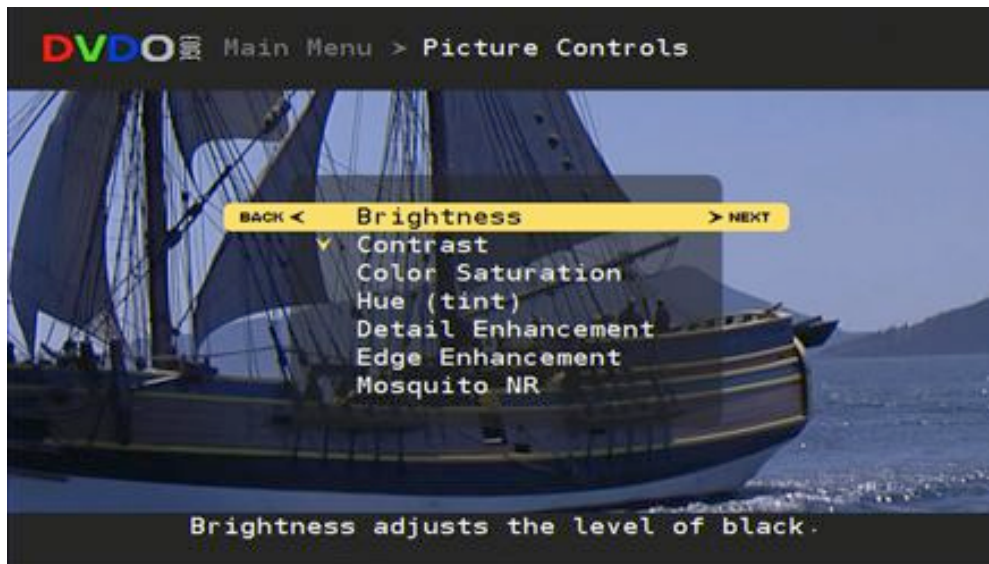
Picture Controls apply to the currently selected input, for independent Picture Control of every input component.

Brightness Control

Main Menu -> **Picture Controls** -> **Brightness**

**Use Up/Down Arrows
to adjust Brightness**

**Press Left Arrow to go
BACK to the previous
screen.
or
Press EXIT to exit menus.**

Video brightness controls work by changing the level of the black. When you make an adjustment to brightness, all levels of brightness, from black to peak white, are shifted up or down.

The Brightness control is complimentary to the Contrast control on the next page. Contrast adjusts the level of white.

Contrast Control

Main Menu -> **Picture Controls** -> **Contrast**

Contrast control, like all picture controls, is independently adjustable for every video input. When you make a change to a picture control, the change applies only to the currently selected video input.

Press **DVDO**, press **MENU**, select **Picture Controls,** select **Contrast**

**Use Up/Down Arrows
to adjust Contrast**

**Press Left Arrow to go
BACK to the previous
screen.
or
Press EXIT to exit menus.**

Video contrast works by adjusting the level of white. Contrast is complimentary to the Brightness control. Contrast controls should be used carefully because if overly adjusted, some details in lighter areas can become less visible.

Color Saturation

Main Menu -> **Picture Controls** -> **Color Saturation**

Color Saturation, like all picture controls, is independently adjustable for every video input. When you make a change to a picture control, the change applies only to the currently selected video input.

**Use Up/Down Arrows
to adjust Color Saturation**

**Press Left Arrow to go
BACK to the previous
screen.
or
Press EXIT to exit menus.**

Color Saturation refers to the mix of "color" vs. "brightness" in the picture. Increasing Color Saturation makes colors look more vivid. Decreasing Color Saturation makes colors look "washed out." Changes to either Brightness or Contrast can change your Color Saturation. You can use this control to balance the mix of color verses brightness.

Hue

Main Menu -> **Picture Controls** -> **Hue**

Hue, like all picture controls, is independently adjustable for every video input. When you make a change to a picture control, the change applies only to the currently selected video input.
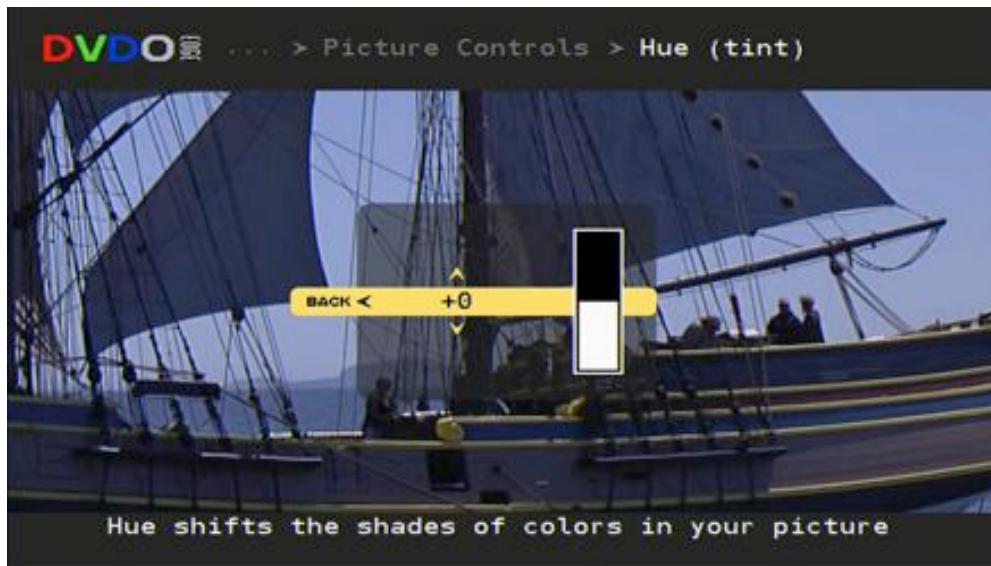
**Use Up/Down Arrows
to adjust Hue**

**Press Left Arrow to go BACK
to the previous screen.
or
Press EXIT to exit menus.**

Hue is a type of color adjustment. The changes made with a Hue control effect what most people would refer to as "color." Hue controls cause a shift in color spectra. Sometimes this control is called "Tint" but this term is confusing to people that are familiar with mixing paint colors. Adding white to a paint color changes it's tint. In terms of video controls, this is what the saturation control does. Actually adding white to a paint color actually preserves Hue, so the color or hue is not changed, only the saturation.

Picture Controls: Detail Enhancement

Main Menu -> **Picture Controls** -> **Detail Enhancement**

Fine Enhancement, like all picture controls, is independently adjustable for every video input. When you make a change to a picture control, the change applies only to the currently selected video input.
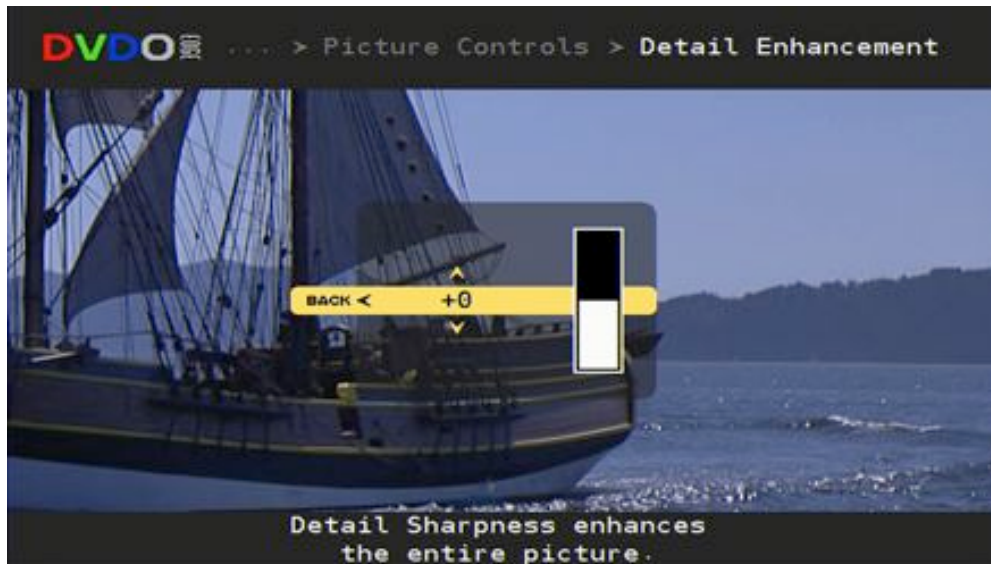
**Use Up/Down Arrows
to adjust Detail Enhancement**

**Press Left Arrow to go BACK
to the previous screen.
or
Press EXIT to exit menus.**

About Detail Sharpening

Detail Sharpening can be used to enhance your picture by making details stand out.

Picture Controls: Edge Enhancement

Main Menu -> **Picture Controls** -> **Edge Enhancement**

Edge Sharpening, like all picture controls, is independently adjustable for every video input. When you make a change to a picture control, the change applies only to the currently selected video input.
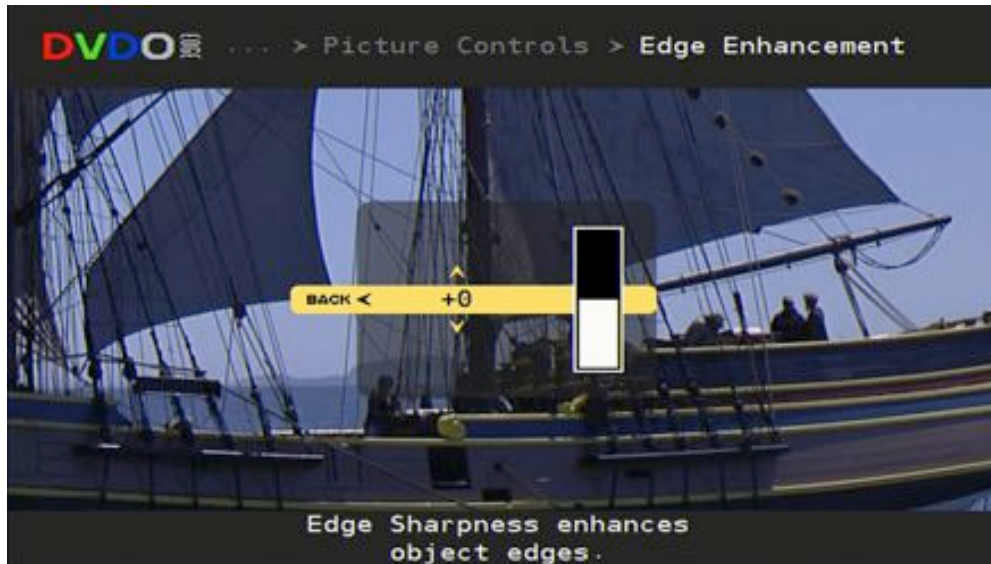
Use Up/Down Arrows to adjust Edge Enhancement

Press Left Arrow to go BACK to the previous screen.
or
Press EXIT to exit menus.

About Edge Sharpening

Edge Sharpening can be used to enhance your picture. It tends to sharpen object edges more than it will sharpen details such as grass or the texture of a plaster wall. It it useful when you want to sharpen a lower quality picture. When you sharpen a low quality picture, raise the visibility of the objectionable areas of the picture. In this case, course sharpening may be a better choice than fine sharpening.

Picture Controls: Mosquito Noise Reduction

Press **DVDO**, press **MENU**, select **Picture Controls,** select **Mosquito NR**
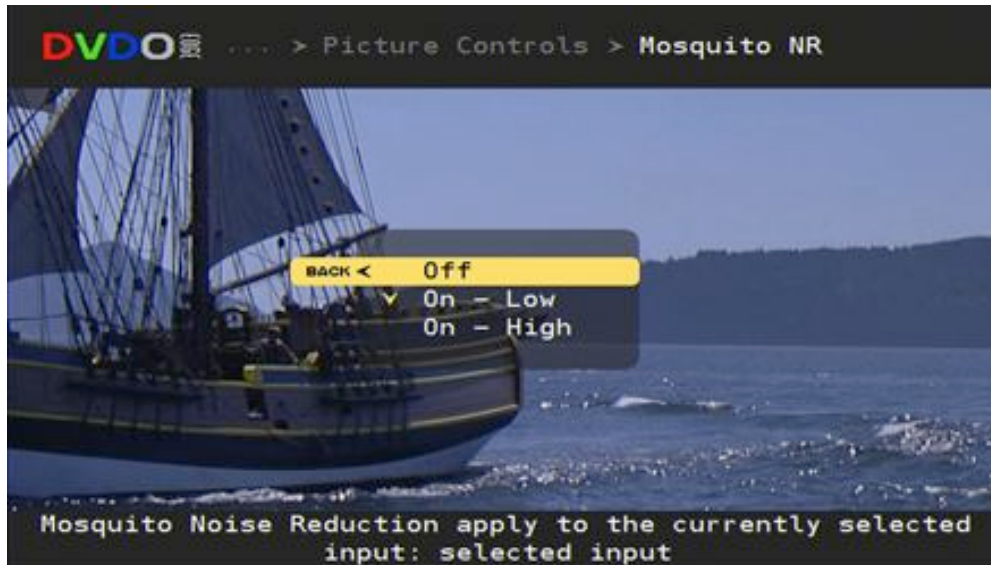
Off disables filtering

On - Low for minimum filtering

On - High for maximum filtering

About Mosquito Noise Reduction

The term "noise" in the context of video images refers to unwanted or unnatural looking elements that find their way into video signals. "Mosquito Noise" is a particular type of image noise that is caused by video compression processing. Video compression is common for all types of transmitted video, including cable, satellite, and over-the-air broadcasts. Compression is also used with DVD and other prerecorded media. The visibility of Mosquito Noise will vary. In some cases, it can become objectionable. Mosquito Noise will be more obvious in standard definition video, although it is sometimes present in high definition video.

Your DVDO EDGE has a Mosquito Noise Reduction feature that can remove some of this noise. An example of mosquito noise in a TV weather report is shown on the left side of the next page. The same image with Mosquito Noise Reduction applied is shown on the right side of the next page.

Mosquito Noise reduction works by analyzing the image for features that are likely to cause Mosquito Noise. It then intelligently applies filtering to those areas to remove the noise.

About Mosquito Noise Reduction (continued)

The image on the left was captured from a broadcast of a television weather report. Mosquito noise appears most obviously around the text, both in the white areas and in the darker areas around the edges of the text.

The image on the right is the same image processed using Mosquito Noise Reduction to remove mosquito noise.

TV Weather Report showing Mosquito Noise   **Mosquito Noise Reduction enabled**

44

Settings Menu

Main Menu -> **Settings**

Your DVDO EDGE provides a rich set of configuration options, accessible through the Settings Menus.
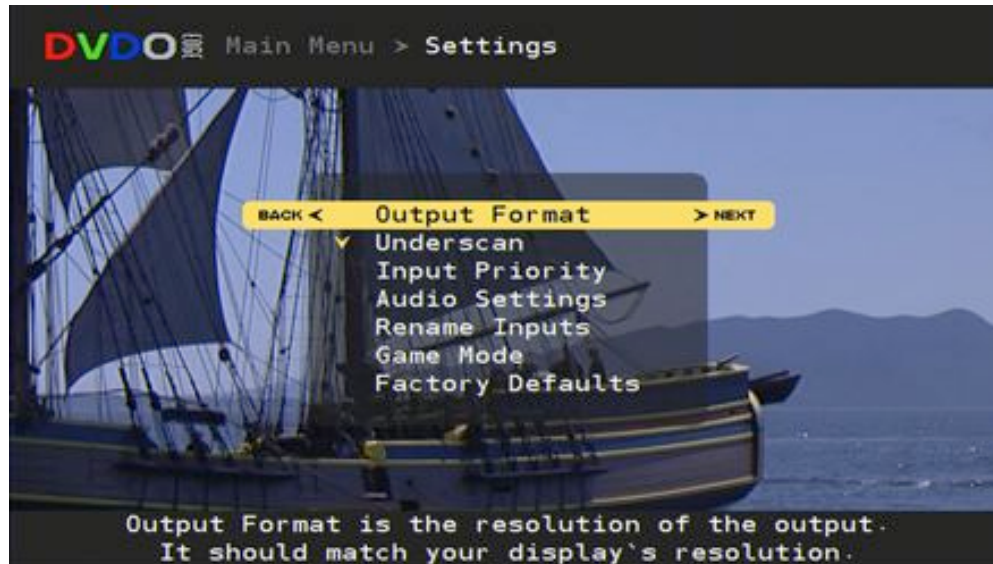
Output Format: Output format refers to the resolution scanning scheme (progressive or interlaced) and frame rate of the output.

Input Priority: Used to select which inputs will displayed with multiple inputs are active and Auto Priority is selected in the menu: Main Menu -> Select Inputs -> Auto Select.

Audio Settings: Adjusts configuration options related to audio.

Rename Inputs: Renames inputs so that the names make sense to you.

Game Mode: Sets a particular input in game mode for better response through your game controller.

Factory Default: Restores the original factory settings.

Settings: Output Format

Main Menu -> **Settings** -> **Output Format**
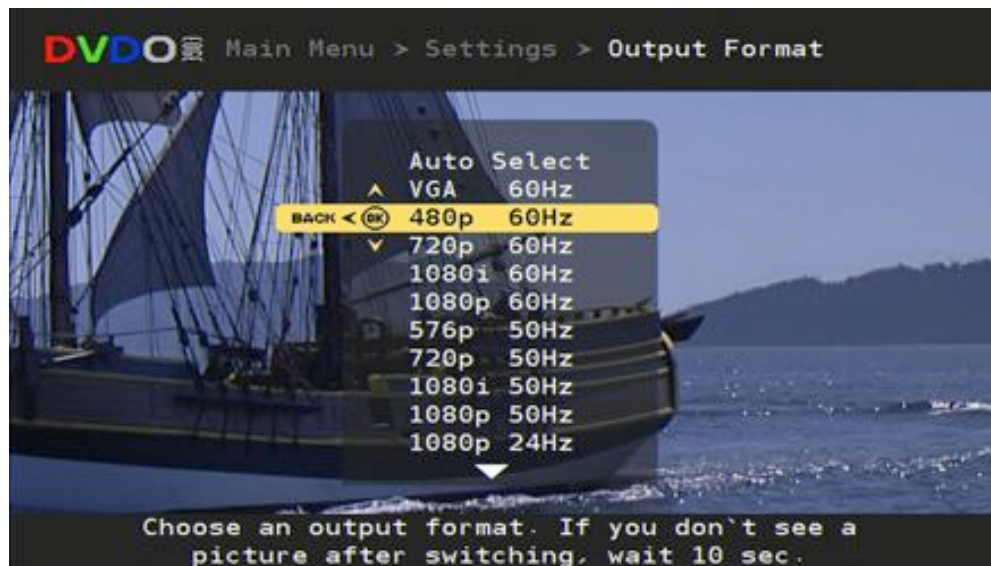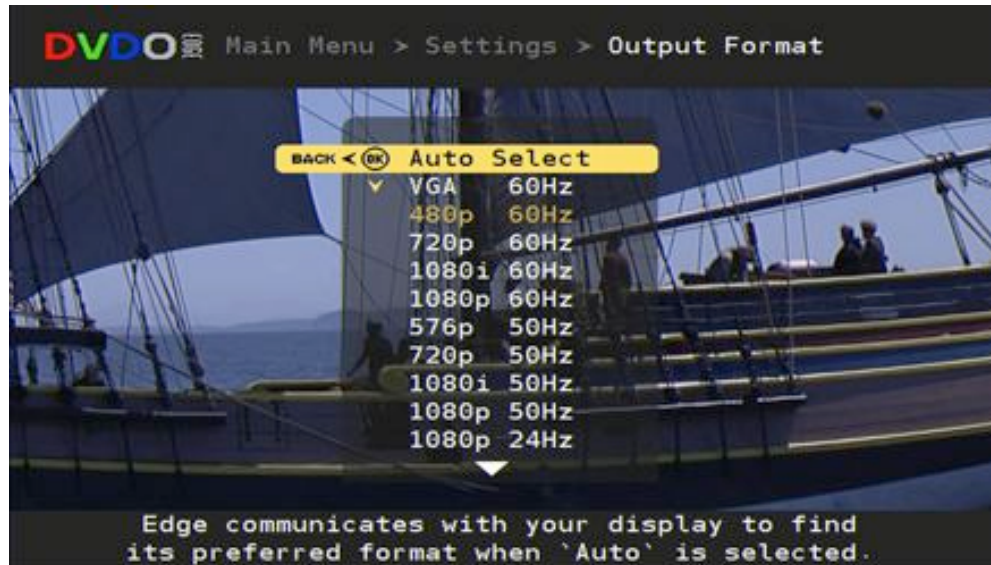
Auto Select: Default setting

Auto Select is one of the new innovations in the EDGE product.

All DVI and HDMI displays have an Extended Display Identification Data (EDID). The EDID contains information about the display's capability. This information can be read by EDGE over the HDMI or DVI cable.

Displays will report their "preferred format" and EDGE will automatically self-configure its outputto this preferred format. It is possible that the preferred format reported by the display is not on the list of standard formats shown on the "Output Format" screen.

It is also possible that the preferred format is unique to the display.

To see the current output format, use the Info button on the remote or the Information screen in the menu.

Manual Format Select:

If you prefer not to use Auto Select, you can choose one of the standard formats from the list on the screen.

Switching Output Formats

New Format Check Screen

If the output format changes, EDGE tests
to insure that your display can accept the new format.

EDGE will put up the screen shown left. You have about 10 seconds to verify that you see the new format by moving the highlight bar to "Yes" then "OK."

If you don't verify the new format in a few seconds, EDGE will revert to the previous format.

Settings: Underscan

Main Menu -> **Settings** -> **Underscan**
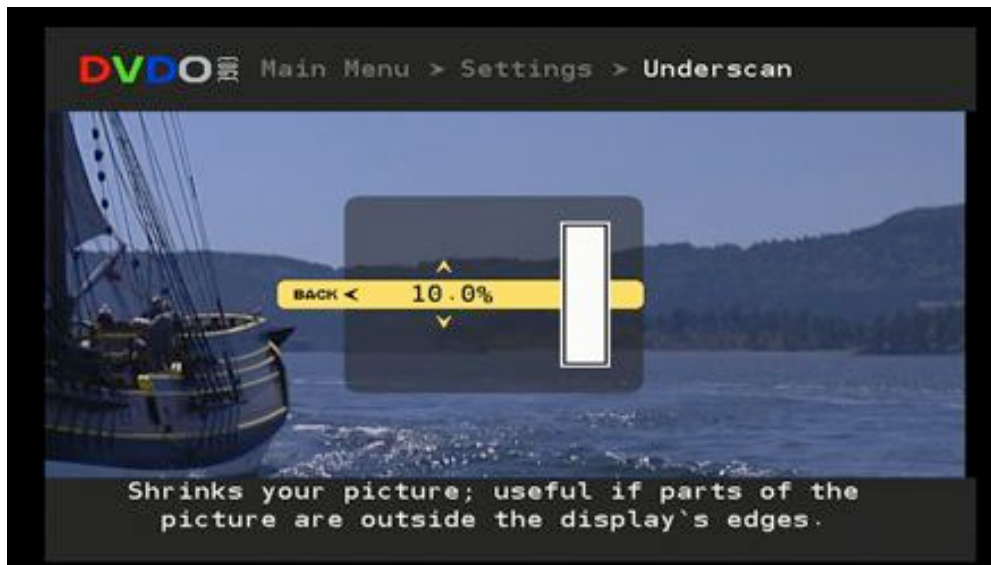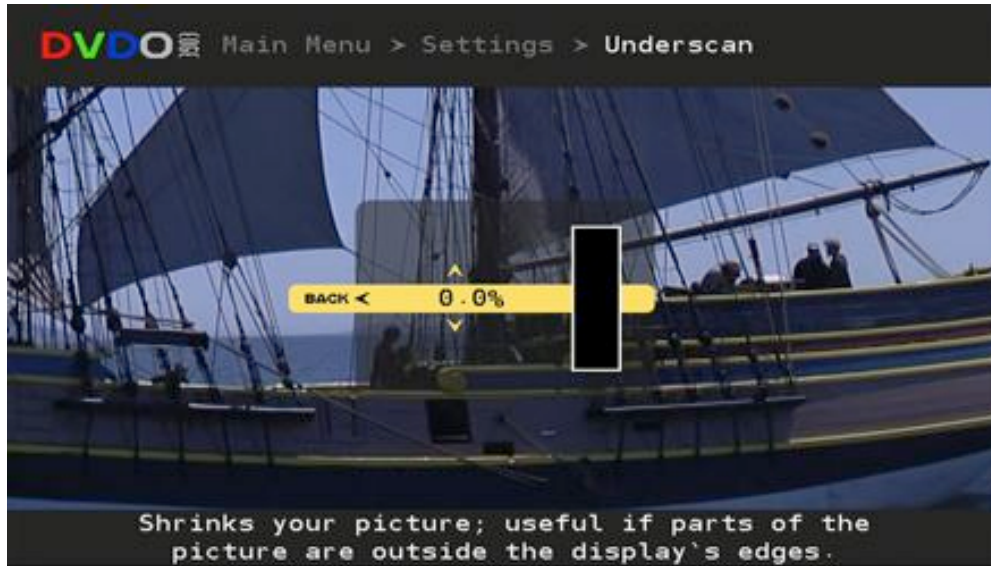
Underscan

Some displays will overscan the picture, which means that the edges of the picture are outside the frame of the viewable area.

The **Underscan** control lets you shrink the picture. so that you can see all of it, and adjust for overscanning.

The upper screen shows the **Underscan** control. In the lower screen, **Underscan** is set to its maximum of 10%. You can see that the picture is scaled down to fit a smaller frame, and that the on-screen text also adjusts.

Underscan works differently than other controls. Zoom & Pan, Aspect Ratio, and Picture controls all apply on a per-input basis which gives allows input-independent control of these features.

Underscan is a global control. Once it is set, it applies for ALL inputs.

48

Settings: Input Priority

Main Menu -> **Settings** -> **Input Priority**

Input Priority is used to decide which input to use when multiple inputs are active at the same time and Input Select:
is set to "Auto." If multiple inputs are active at the same time and "Auto Select" is selected in the "Input Select" menu, then the input
with the highest priority will be selected.

You can find Input Select at this path name: **Main Menu** -> **Input Select**

1. **Position the highlight bar over the name of the input whos
    priority you want to change.**

2. **Press OK.**

3. **Use Up/Down
    Arrows to move
    selection.**

4. **Press OK to set new priority.**

Audio Settings -- Select Audio Output

Main Menu -> **Settings** -> **Select Audio Output**
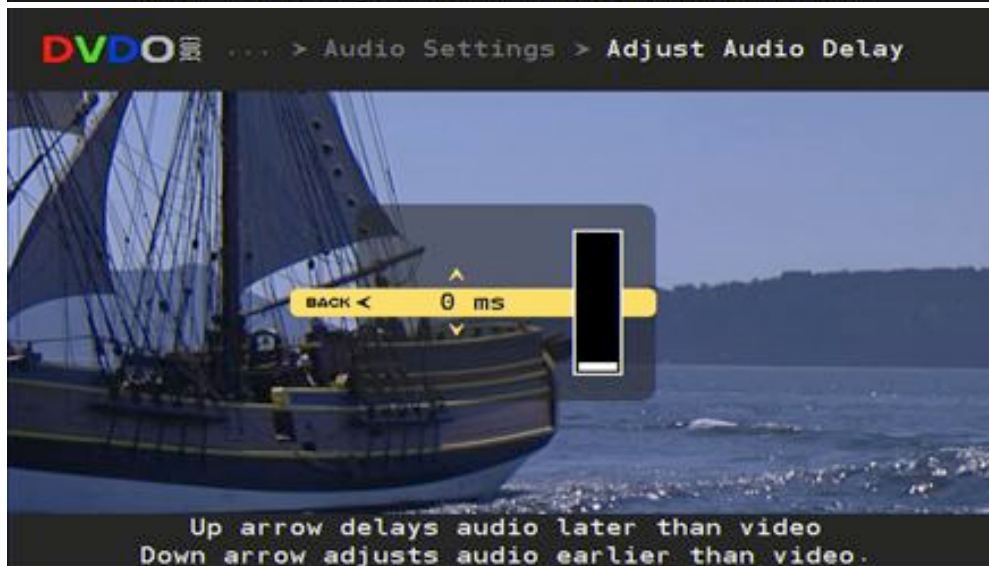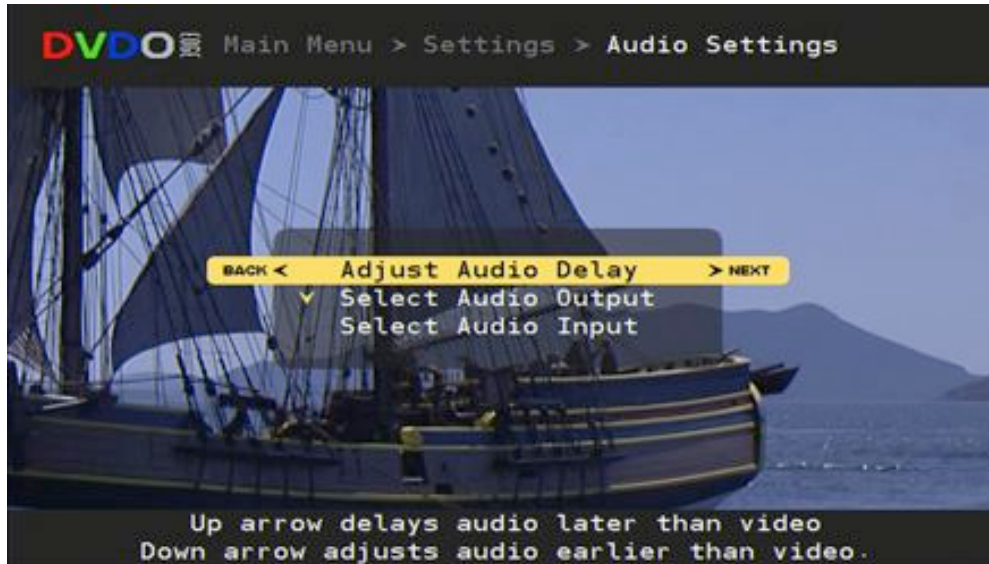
Press **DVDO**, press **MENU**,
select **Settings,** select **Audio Settings**

Using Audio Settings Menu, you can

Adjust Audio Delay
If you have a constant AV Lipsync problem
in your system, you can use this control to
add or subtract a fixed delay to the audio
relative to the video.

Select Audio Output
Your DVDO EDGE can output audio on 1
of 3 different connectors.

Select Audio Input
Associate Audio and Video inputs.

Adjust Audio Delay

Press **DVDO**, press **MENU**,
select **Settings,** select **Audio Settings,**
select **Adjust Audio Delay**

Use the Up/Down arrows to either add
delay to audio (Up) or subtract delay
from audio (Down).

50

Settings: Audio: Select Audio Output

Main Menu -> **Settings** -> **Select Audio Output**
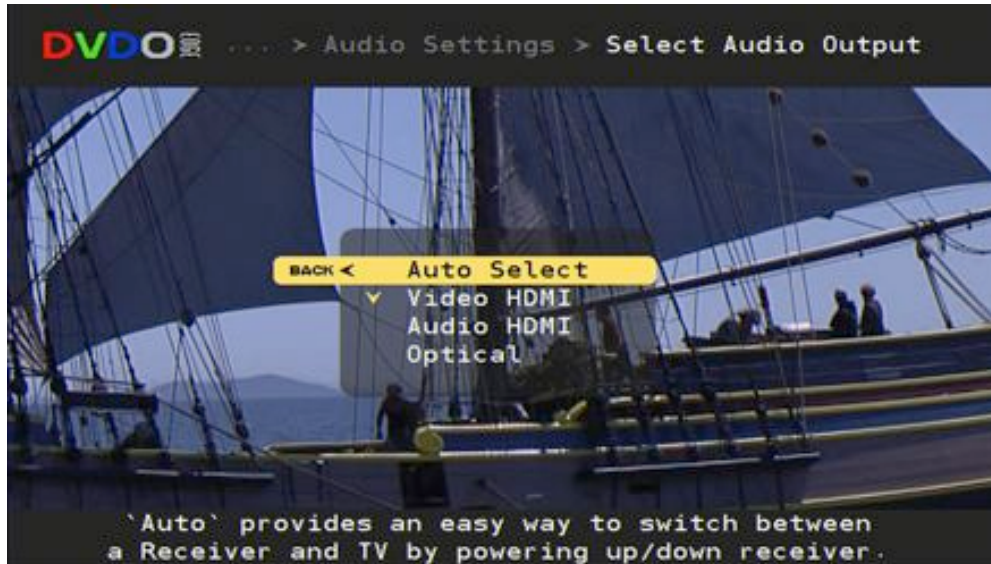
Auto Select
EDGE will automatically route audio to an audio output. The choice of output depends on what components are connected to the outputs and powered up

Audio Out on Video HDMI
Use this setting if you want to send audio to your video display to use its built in audio.

Audio Out on Audio HDMI
Use this setting if you have an AV Receiver that accepts HDMI and you want to use it for processing audio.

Audio Out on Optical
Use this setting if you have an AV Receiver that does not accept HDMI inputs.

Decision Logic for Auto Select: The table below shows the connector choice for audio when Auto Select is chosen.
Note: "EDID" is information about the capability of a display or AV Receiver that is automatically read by EDGE over the HDMI or DVI cable.

Output Connector	Conditions
Video/Audio HDMI	Display has audio capability (reported via the EDID). No AV Receiver connected to the Audio HDMI port, or an AV Receiver is connected but powered off.
Audio HDMI	AV Receiver with HDMI inputs is connected to the Audio HDMI port and powered on.
Optical	Display does not have audio capability (reported via the EDID). No AV Receiver connected to the Audio HDMI port, or it is powered off.

If you are using an AV Receiver for processing audio, then you need to configure your receiver to accept audio from the input that is connected to the DVDO EDGE. You need only do this once, because your DVDO EDGE will handle audio switching.

Settings: Audio: Associate Audio and Video Inputs

Main Menu -> **Settings** -> **Select Audio Input**
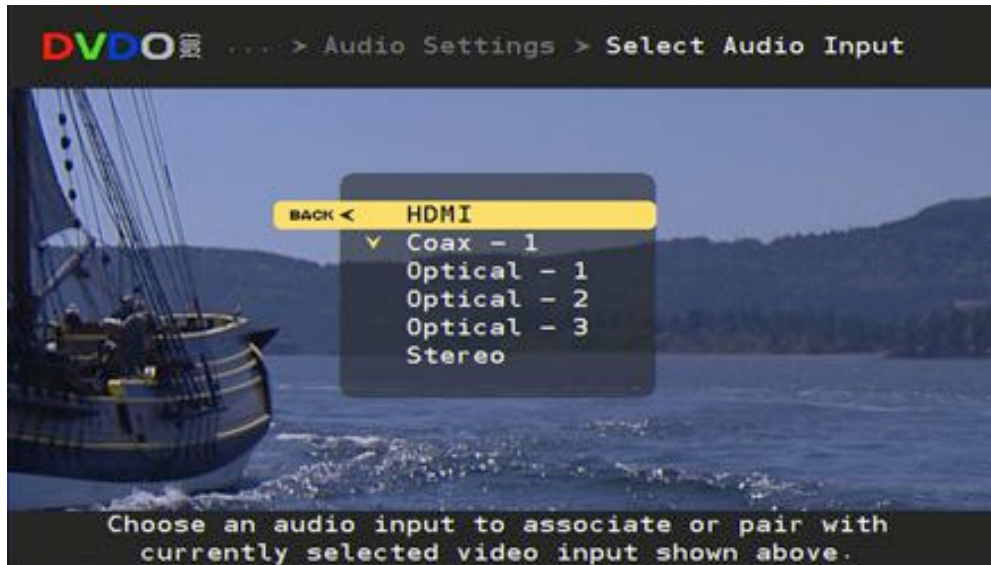
If you have a non-HDMI input component, you must use this screen to associate (pair) the audio from that component with the video.

EDGE will then treat them as a pair when switching inputs, so that they switch together.

When you choose an audio input on this screen, you are associating that input with the currently selected video input.

If your source component uses DVI for video output, and you are connecting to EDGE using a DVI to HDMI adapter cable, then you will have to connect audio via a separate cable and use this screen to associate the pair.

Settings: Rename Inputs

Main Menu -> **Settings** -> **Rename Inputs**
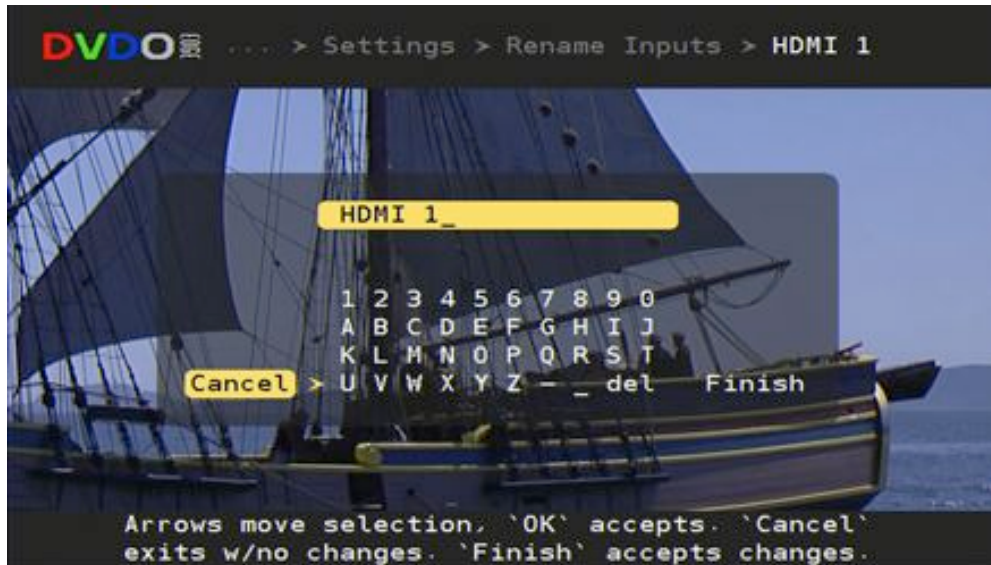
The Rename Inputs feature lets you customize your setup. The names you enter will appear in the "Select Input" menu.

Use the **Arrow keys** to move the highlighted character around on the keyboard.

OK puts the selected character in the edit bar.

Cancel exits the window with no changes.

Finish exits the window and applies the new name.

Settings: Game Mode

Main Menu -> **Settings** -> **Game Mode**
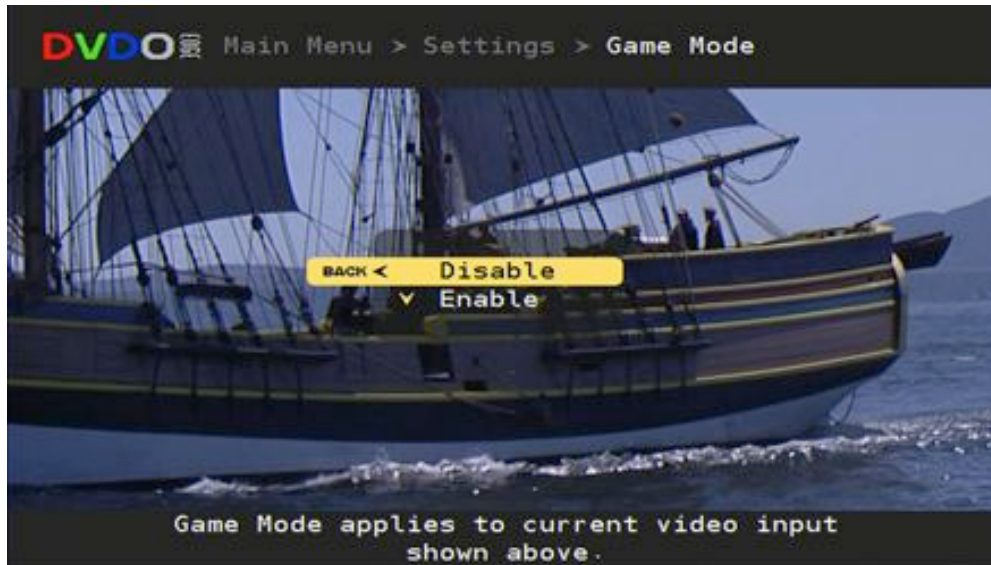
About Game Mode

The video processing performed in EDGE adds a few milliseconds of delay to your video and audio. For most viewing this delay is not a problem, but if you are playing video games that require quick response on your game controls, the delay can be noticeable and annoying.

Game Mode is a special processing feature that minimizes delay so your game control inputs are more responsive.

Removing delay requires some tradeoffs in processing. You may notice differences in picture quality if Game Mode is enabled.

If the incoming video signal is an interlaced format, Game Mode may result in a lower-resolution image due to the changes in deinterlace processing required to minimize delay.

If the incoming video signal is a progressive format, and Game Mode in enabled, some processing features will be unavailable, including Mosquito Noise Reduction, Detail Enhancement, and Edge Enhancement.

Settings: Factory Defaults

Main Menu -> **Settings** -> **Factory Defaults**
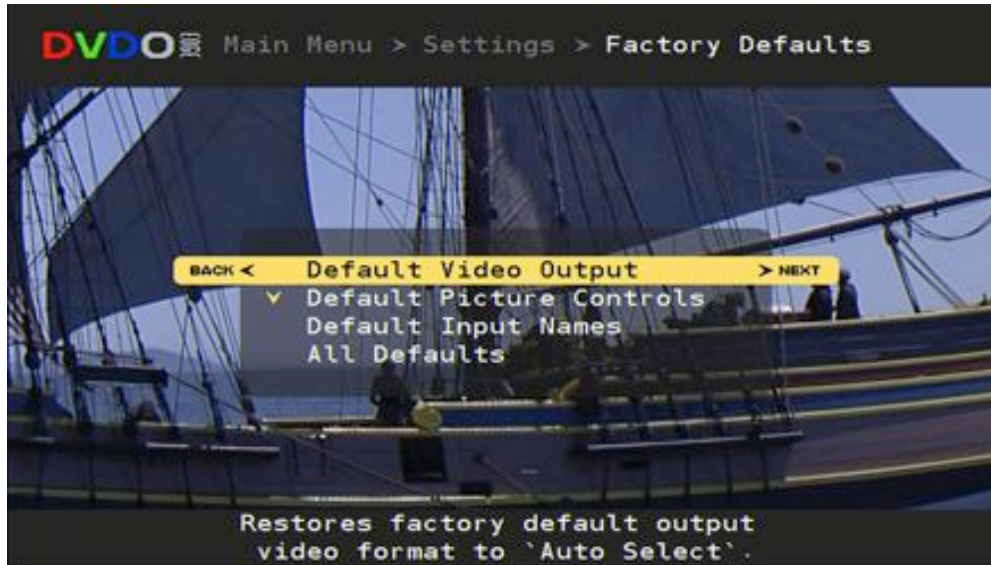
Factory Defaults is a quick way to "undo" any settings that have been made, and restore EDGE's original default settings.

Default Video Output

The Default video format setting is "Auto." In Auto mode, EDGE will automatically communicate with your display and output your display's preferred format.

Default Picture Controls
Restores default settings to Brightness, Contrast, Hue, Mosquito Noise Reduction, Detail Enhancement, and Edge Enhancement.

Default Input Names
Restores default names for video inputs.

All Defaults

Restores all defaults.

55

Section 4: Cables
        Video Cables

HDMI to HDMI

Connect the HDMI output of a source component to an HDMI input on your EDGE.

or

Connect the Video/Audio output of your EDGE to an HDMI input on your TV.

or

Connect the Audio HDMI output of your EDGE to an HDMI input on your AV Receiver.

DVI to HDMI Adapter Cable.

Connect the DVI output of a source component to an HDMI input on your EDGE.

or

Connect from the Video/Audio HDMI output of your EDGE to the DVI input on a display.

Video Cables

Triple RCA to RCA

This cable is a triple RCA style cable (same connectors on both ends of the cable).

Use it to connect from the analog component output of a source to a Component input of your Edge.

Video Cables

S-Video Cable

S-Video signals are often available on equipment that produces baseband NTSC, PAL, or SECAM signals.

If you have a choice, S-Video will give you better Picture Quality than Video on a single RCA cable.

RCA Cable

This is the most basic type of Video cabling. RCA Cables carry baseband NTSC, PAL, and SECAM signals, which are older analog standards.

RCA cables are also used to transport digital audio signals. In this application, the connector is called "Coax." EDGE has one Coax input for digital audio

Paired RCA cables are used for the analog stereo audio input
L - Stereo - R

Video Cables

VGA to RGBHV Adapter Cable

Computers with VGA analog outputs can connect to EDGE using this adapter cable.

Plug the 5 RCA cables into the 5 connecters inside the white boundary.

The Red, Green, and Blue cables connect to the Red,Green, and Blue connectors.

The Black and White cables connect to H and V. Look for H and V labels on the cable; the Black and White colors are non-standarized regarding function.

Audio Cables

Optical Audio Cable.

Optical cables are used to carry digital audio signals encoded in the SP/DIF format.

For sources that don't have HDMI, you can use a Optical cable to connect the source's audio output to an audio input on your EDGE.

EDGE has 3 Optical Audio Inputs.

EDGE has 1 Optical Audio Output. It can be used to connect digital audio to an AV Receiver if the Receiver does not support HDMI input.

HDMI
HDMI was described in the video cable section. HDMI is the only interconnection scheme that can carry both audio and video on the same cable.

Coax
Coax is a shorthand way of saying "coaxial cable." In the consumer audio/video industry, the term "Coax" is
is a type of digital audio interconnect which uses an RCA style cable. Coax cables may be colored orange. Coax carries a digital audio signal called SP/DIF.

Analog Stereo
Analog Stereo is an audio interconnect found usually on older equipment. As the name implies, the signals are analog and a stereo 2 channel signal is carried on RCA style connectors. Usually, these cables are colored Red/White.

Which Cable Should I Use?

Your audio and video components may have multiple types of connectors, Which type should you use if you have a choice? Your choice of cables can effect the capability of your system. The guide below will help you choose the optimum cable for your setup.

Cables for Your TV

If your TV has an HDMI input, choose an HDMI to HDMI cable. Connect the cable from the Video/Audio connector on the back connector panel to the HDMI input of your TV. Most TVs have multiple inputs, so you will need to switch your TV to the HDMI input connected to your DVDO EDGE. You may never need to switch inputs on your TV again because your DVDO EDGE will handle switching in your setup.

The HDMI cable also carries audio to your TV, so you can use your TV's audio for sound.

If your TV has a DVI input, choose an HDMI to DVI adapter cable. You will need to switch your TVs input to use DVI.

DVI does not carry audio. You will probably need an AV Receiver for sound processing. The AV Receiver can be connected with an HDMI or optical cable.

Cables for your AV Receiver

If your AV Receiver has HDMI inputs, you should use an HDMI to HDMI cable, connected between the HDMI Audio output of the DVDO EDGE and an HDMI input on your receiver. You will need to switch your AV Receiver to use the HDMI input. You should not have to switch audio in your receiver again because your DVDO EDGE will handle switching for you.

If your AV Receiver does not have HDMI, then you can use a Optical cable to connect your DVDO EDGE to your AV Receiver.

Input Cables

Video Cable Hierarchy

If you have a choice of video cables, use the list below to make the best choice. Use the lowest numbered cable on the list to achieve optimum video quality.

1. HDMI
    HDMI to HDMI cable. This will connect both audio and video.

2. DVI
    DVI to HDMI adapter cable. You will need a separate cable for audio.

3. Component
    Component to Component cable. You will need a separate cable for audio.

4. S-Video
    S-Video cable. You will need a separate cable for audio.

5. Video
    Video cable. You will need a separate cable for audio.

Audio Cable Hierarchy

If you have a choice of audio cable types, you can se the lowest numbered cable on the list below to achieve optimum audio quality.

1. HDMI
    HDMI to HDMI cable. This will connect both audio and video.

2. Optical
    Optical maintains the audio signal in digital form, which reduces processing and preserves quality.

3. Analog Stereo (L - Stereo - R)

Section 5: The DVDO EDGE Universal Remote Control

<u>**DVDO EDGE**</u>
<u>**Universal Remote**</u>

Power On/Off Buttons

Macro Buttons
Power & Component
Buttons can optionally
be used for Macros

Component Select Buttons
to control other Components
in your system.

Channel Select Group
includes CH, Rev. Ch, FAV,
and Numeric Keypad

Volume Select Group
included VOL, MUTE

DVDO EDGE
Navigation, Control, and
Zoom Buttons

Player/Recorder Controls,
Play, Fast Forward/Reverse,
Pause, Skip +/-, REC

Numberic Keypad for channel
selection.
In DVDO mode, these buttons can
be used to select inputs

DVDO Mode
Select Button
for Controlling
EDGE

Image Shape Buttons
work in any Mode

The DVDO EDGE Universal Remote

The chapter "Using the Remote to Control DVDO EDGE" introduced the Universal Remote and focused on controlling the DVDO EDGE. This chapter discusses use of the remote for control of other components in your system.

The DVDO EDGE remote is a universal type. It allows you to control up to 8 components (including EDGE) in your audio/video system with a single remote. Use the DVDO EDGE remote for the day to day operation of your system. You will still need the remotes for your other devices when you set up your system for the first time. And you will need the other remotes occasionally when you need to make changes to your setup.

Universal Remote Overview

This section presents a brief overview for using the remote from a system perspective and points out functions and features unique to the DVDO EDGE remote control. Details of programming the remote are in the section titled "Programming the Remote."

The remote has 3 primary features that work in combination to make control of your system as simple as possible:

1. Modes:
You put the remote into a mode for controlling a particular component in your system by pressing one of the 8 mode buttons. Once the remote is switched to a particular mode, it controls a single component in your system.

2. Punch Through
Punch Through is a feature that minimizes the need for switching modes as much as possible. Some of the buttons on your remote control have related functions. For example, the VOLUME, and MUTE buttons both control sound volume, so they are related. Another example is the PLAY, PAUSE, FAST FORWARD, FAST REVERSE, and STOP buttons. Buttons that have related functions are a "group."

Punch Through allows one group of buttons for a particular component to work while the remote is switched into a mode for a different component. For example, DVD players typically don't control sound volume. Sound volume is typically controlled by an AV Receiver or a TV. Punch Through allows you to control sound volume while in the DVD mode. If you program punch through to control your sound device for all your components, then you don't have to think about what mode is currently selected. Instead, sound control becomes a function, and you no longer have to remember which component controls sound.

3. Macros
A Macro allows you to perform a series of button presses using a single button. Macros are useful if you find that you use a particular series of button presses over and over. A Macro allows you to invoke the entire series with one button.

Modes

You can control individual components in your setup by pressing one of the mode buttons. This switches the remote into a mode in which it communicates with the component you selected. Seven of the mode select buttons are located near the top near the power on/off. The DVDO mode button for controlling the DVDO EDGE is located near the bottom.

DVDO Mode Select

7 Device Selects
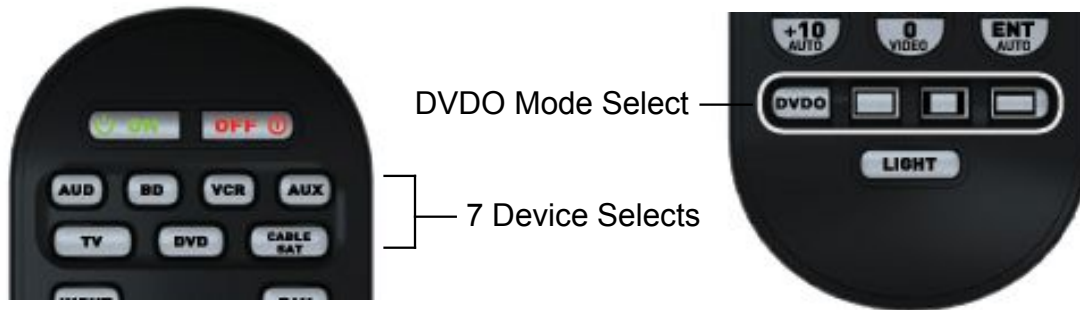
The devices that con be controlled using these 7 buttons are as follows:

AUD: Audio
Controls the audio component in your system. This button is used when the audio processor is a separate component than your TV. Typically, the AUD button is used if you have an AV Receiver that performs surround sound processing and drives your speakers. If you use your TV's built in audio for sound, then you control sound by selecting the TV button.

BD: BluRay Disc
Controls your Blu Ray high definition DVD Player

VCR: Video Cassette Recorder

AUX: Auxiliary
Auxiliary can be used for a device that is not already used by the other buttons. You can think of it as a "spare" device select button.

TV: Controls your digital TV

DVD: Controls your DVD player.

Cable/SAT
Controls your cable or satellite set top box.

Punch Through

Punch Through is a feature of the universal remote that allows control of certain features a component while in the mode of another component. For example, suppose that your setup uses an AV Receiver as an audio processor, and you are playing a DVD in your DVD player. You have your remote in "DVD" mode so you can control the Play, Pause, Fast Forward, etc. for your DVD player. But you also want to control your audio volume.   Punch Through allows the volume up/down and mute buttons on the remote to control your receiver even if you are in DVD mode. So you don't have to switch modes from DVD to Audio to control volume; instead, you simply press the volume button while still in DVD mode.

You have to set up Punch Through when you program your remote. Setting up Punch Through is covered in the Universal R7 manual included on the CD.

Macros

Your remote can be set up to perform Macros. A Macro allows you to perform a series of button presses using a single button. Macros are useful if you find that you often repeat the same series of button presses.

For example, a Macro can be used to power up all the components in your system with a single button press.

Let's say that find that you often pick up your remote and power up your TV, Receiver, and set-top box; this particular set of power-up button sequences is used again and again in your setup. The button sequence is as follows:

1. Press TV
2. Power On TV
3. Press AUD (receiver)
4. Power On receiver
5   Press Cable/Sat (Set Top Box)
6. Power on Set Top Box
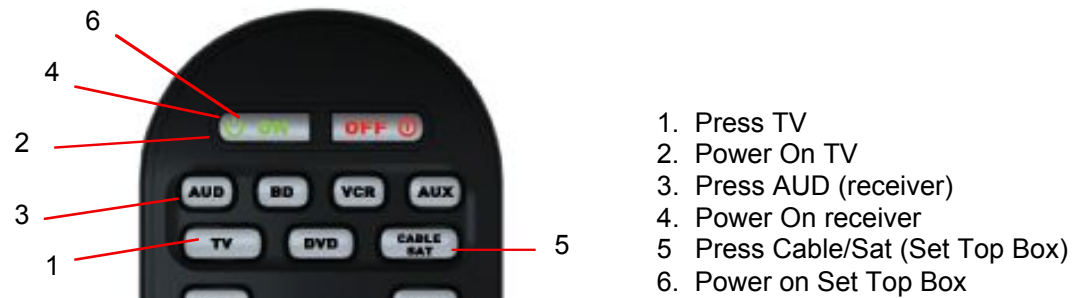
This series of 6 button presses could be put into a macro, so that one button press powers up the 3 components used in this example. Note that we did not power on the DVDO EDGE because it will sense a signal from the Set Top Box and it will power itself on automatically.

There are 9 buttons that can be used for Macros. They are the Power On/ Off pair, and the 7 component select buttons (AUD, BD, VCR, etc.). When you use one of these buttons for a Macro, it can no longer be used for its previous function. Therefore, the best choice for a Macro button is one that is not being used for anything else in your system.

Programming the Remote

The DVDO remote control has been designed to operate 7 different Audio/Video components in addition to EDGE. The remote control is preprogrammed to operate major brand's AUDIO, TV, DVD, CD, VCR, SAT/CABLE and AUX (Light, Media PC etc.).

The remote control also has seven learning modes for learning the functions from the original remote controls of manufacturers.

The remote control provides distinct visual feedback with LED under the Device buttons to assist you in programming the remote control.

1. Programming the remote with the preprogrammed code

Note: A complete listing of 3 digit codes is provided at the end of this section.

A. Using Three Digit Setup Code Number Method

Step 1] Turn on the device you want to operate manually.

Step 2] Press the Device button and the OK buttons simultaneously and hold for 3 seconds until the Device LED turns on. (The LED will stay on for 20 seconds. The next step must be entered during this period).

Step 3] Point the remote control toward the device and press in the first three-digit Setup Code number for that device using the number buttons(0-9) on the remote control. (The Device button LED will blink once for each button pressed).

Tip) Your device will turn off when the corrected Setup code number has been selected. If the device does not turn off, press in the next Setup Code numbers until your device turns off.

If you have tried all of the Setup Code numbers listed and it still did not turn off, please proceed to the **Auto Search Method**. Some components are being produced by OEM manufacturer.

Step 4] Once your device turns off, press the Device button selected in the Step]2 once again to store the Setup Code number. (The Device LED will blink three times to confirm that the code has been stored).

Step 5] Please repeat the above steps to program the remote control for each of other devices.

B. Using Auto Search Method

Step 1] Turn on the device you want to operate manually.

Step 2] Press the Device button and the OK buttons simultaneously and hold for 3 seconds until the Device LED turns on. (The LED will stay on for 20 seconds. The next step must be entered during this period).

Step 3] Point the remote control toward the device and press the Cursor + (or Cursor -) button one at a time (or keep it at pressed) until turn of the device.

Tip) Each the Cursor + (or Cursor -) button sends the Power signal of one Setup Code number.
Tip) Once the device turns off, you are able to test other functions by pressing the buttons except the device, Cursor+/-, Number 0-9 and Light buttons. Power On , Off, MUTE and Volume and Channel number buttons (0-9). (The Device button LED will blink once for each button pressed).

Step 4] Once your device turns off, press the Device button selected in the Step]2 once again to store the Setup Code number. (The Device LED will blink three times to confirm that the code has been stored).

Step 5] Please repeat the above steps to program the remote control for each of other devices.

Tip) You are able to go back to the "**Using Three Digit Code Method"** mode by pressing the Channel number buttons (0-9) the OK button in the Step]3.

Tip) If you are still missing the Setup Code numbers to control any of your devices, use the **Learning Method** on the next page.

C. Programming a Second TV, DVD, etc. to Other Device Buttons.

This feature is used to program the remote control for two or more TVs, DVDs, etc., or to program a device into other device buttons. You can program the Setup Code number for any device into any other unused Device button.

Example: If you have two TVs. First, using the TV device button, program the remote via standard setup to operate the first TV. Then, program your second TV into a Device button that is not being used, e.g., AUX using this method.

Step 1] Turn on the TV manually.

Step 2] Press the AUX button and the OK buttons simultaneously and hold for 3 seconds until the AUX LED turns on. (The AUX device LED will stay on for 20 seconds. The next step must be entered during this period).

Step 3] Press the TV button to program TV's Setup Code numbers.

Step 4] Point the remote control toward the TV and press in the first three-digit Setup Code number for that device using the number buttons(0-9) on the remote control. (The TV Device LED will blink once for each button pressed).

Tip) Your TV will turn off when the corrected Setup code number has been selected. If the TV does not turn off, press in the next Setup Code numbers until your TV turns off.

Step 5] Once your device turns off, press the AUX button once again to store the Setup Code number. (The AUX device LED will blink three times to confirm that the code has been stored).

D. Finding the Setup Code number that was stored in the Device

Step 1] Press the Device button you wish to verify and the OK buttons simultaneously and hold for 3 seconds until the Device LED turns on.
(The LED will stay on for 20 seconds. The next step must be entered during this period).

Step 2] Press the INFO button.

The Device LED will blink number of times indicating the number of each digit of the Setup Code number. Each digit is separated by 1 second interval of the LED being turned off.

For example: One blink, three blinks and eight blinks indicate the code number 138.
Tip) Ten blinks are equal to the number "0".

69

2. Programming the remote with Learning Method:

-All buttons in 7 Device modes can learn except the "LIGHT" button.
-. Learning available carrier frequency is from 15KHz to 480KHz.
-. Learned functions override any existing preprogrammed functions on the remote control.
-. Learned functions are automatically erased when a new function is learned on the same button.
-. Learned functions are retained even after a different Setup Code number is programmed into the remote control.
-. To return to an original preprogrammed function, a learned functioned should be erased.

A. Learning a New Command

Step 1] Press the Device button and the ENT buttons simultaneously and hold for 3 seconds until the Device LED turns on. (The LED will stay on for 20 seconds. The next step must be entered during this period).

Step 2] On the remote control, press the button that is to be taught the new command. (The Device LED will blink one time)

Step 3] On the original remote control, press and hold the button for the command to be learned until the device LED blinks twice.
Tip) The LED will flash 5 times if there is error in process of learning. Please repeat Step 2] and Step 3]

Repeat Step 2] and Step 3] for any other buttons to be taught in the Device mode selected in Step 1]

Step 4] Once you have completed learning new commands to buttons in the selected Device mode. Press and hold the Device button and ENT button simultaneously to save learned functions. The Device button LED will blink three times to confirm the programming.

Please repeat for any other Device modes starting from Step 1.

B. To Erase a Learned Command From a Button:

Step 1] Press the Device button and the ENT buttons simultaneously and hold for 3 seconds until the Device LED turns on. (The LED will stay on for 20 seconds. The next step must be entered during this period).

Step 2] On the remote control, press the button that is to be erased for 3 seconds.   (The Device button LED will blink twice to confirm it).

Repeat Step 2] for any other buttons to be erased in the selected Device mode.

Step 3] To exit this feature, press and hold the Device button and the ENT button simultaneously, once again. (The LED will blink three times).

C. To Erase All the Learned Commands in One Device Mode:

Step 1] Press the Device button and the ENT buttons simultaneously and hold for 3 seconds until the Device LED turns on. (The LED will stay on for 20 seconds. The next step must be entered during this period).

Step 2] Press the Device and Pause buttons simultaneously and hold for 5 seconds until the LED blinks two times.

Step 3] To exit this feature, press and hold the Device button and the ENT button simultaneously, once again. (The LED will blink three times).

3. Programming the remote with Advanced Functions

A. Programming Multi Commands to Macro Buttons

There are nine (7 for R5) macro buttons (ON, System Off and 7 (5 for R5) Device buttons) that are designed to store up to 20 commands in each button.

Pressing any one of the macro button will send out the series of commands that are stored in the button. For example, you either turn on or off several devices at a time by storing Power On/Off commands to these buttons.

Step 1] For programming macro commands on a Device button, press the Device and the MUTE buttons simultaneously and hold for 3 seconds until the Device LED turns on. (The LED will stay on for 20 seconds. The next step must be entered during this period).

For Programming macro commands on the POWER ON or SYSTEM OFF button,
Press the POWER ON or SYSTEM OFF button and the MUTE buttons simultaneously and hold for 3 seconds until the TV and SAT/CABLE Devices LED turns on. (The LED will stay on for 20 seconds. The next step must be entered during this period).

Step 2] Press one of the Macro buttons.

Step 3] Press in up to 20 buttons you wish to store in the macro. (The Device LED will blink once for each button pressed).
Tip) Pressing a Device button to change device modes is considered as one command.

Step 4] Press the Channel UP button to save the selection. (The LED will blink three times to confirm the programming).

Note: You can program delays in between commands by pressing the PAUSE button. Each press add half a second to the delay.

Note: If you add the delay time at the first step of macro commands, the remote will send the macro commands once you pressed the macro button for 2 seconds. (**Press & Hold Function**)

Note: You can not program the CH + and PAUSE buttons as a macro command.

Erasing the macro commands:

Step 1] Press the Device button and the MUTE buttons simultaneously and hold for 3 seconds until the Device LED turns on. (The LED will stay on for 20 seconds. The next step must be entered during this period).

Step 2] Press the Macro button you wish to erase commands.

For erasing macro commands on the POWER ON or SYSTEM OFF button,
Press the POWER ON or SYSTEM OFF button and the MUTE buttons simultaneously and hold for 3 seconds until the TV and SAT/CABLE Devices LED turns on. (The LED will stay on for 20 seconds. The next step must be entered during this period).

Step 3] Press the Channel UP button to save the selection. (The LED will blink three times to confirm the programming).

B. Programming Punch Through:

Volume Control "Punch Through"

The remote control can be programmed so that either the Audio or TV Volume controls (Volume UP, Down and MUTE) will operate in any of the seven device modes.

Step 1] Press the Device button and the OK buttons simultaneously and hold for 3 seconds until the Device LED turns on. (The LED will stay on for 20 seconds. The next step must be entered during this period).

Step 2] Press the VOL Up button. (The Device LED will blink one time).

Step 3] Press the Audio device button to set up for Audio volume control (or the TV device button to set up for TV volume control. (The Device LED will blink three times to confirm the program).

Channel Control "Punch Through"

You can program the remote so that either the CABLE or TV Channel Controls (Channel Up, Down, Prev.CH and Channel number (0-9 buttons) will also operate in other modes on the remote control.

Step 1] Press the Device button and the OK buttons simultaneously and hold for 3 seconds until the Device LED turns on. (The LED will stay on for 20 seconds. The next step must be entered during this period).

Step 2] Press the CH Up button. (The Device LED will blink one time)

Step 3] Press the SAT device button to set up for SAT channel control (or the TV device button to set up for TV channel control. (The Device LED will blink three times to confirm the program).

Transport Control "Punch Through"

You can program the remote control so that VCR or DVD Transport Controls (Play, Stop, FF, REW, PAUSE, SKIP+, SKIP- and Record buttons) will also operate in other modes on the remote control.

Step 1] Press the Device button and the OK buttons simultaneously and hold for 3 seconds until the Device LED turns on. (The LED will stay on for 20 seconds. The next step must be entered during this period).

Step 2] Press the PLAY button. (The Device LED will blink one time)

Step 3] Press the DVD device button to set up for DVD transport control (or the VCR device button to set up for VCR transport control. (The Device LED will blink three times to confirm the program).

OSD Control "Punch Through"

You can program the remote control so that SAT or DVD OSD Controls (MENU, GUIDE, INFO, EXIT, SEL and 4 Cursor buttons) will also operate in other modes on the remote control.

Step 1] Press the Device button and the SEL buttons simultaneously and hold for 3 seconds until the Device LED turns on. (The LED will stay on for 20 seconds. The next step must be entered during this period).

Step 2] Press the MENU button. (The Device LED will blink one time)

Step 3] Press the SAT device button to set up for SAT OSD control (or the DVD device button to set up for DVD OSD control. (The Device LED will blink three times to confirm the programming).

C. Back Lighting

The backlighting turns on for 10 seconds any time the LIGHT button is pressed and will remain lit an additional 10 seconds with each subsequent button press when the light is already on.

D. Factory Reset

To erase EVERYTHING you programmed, press and hold the TV and REC buttons for 10 5 seconds until TV SAT/CABLE device LED will blink 5 times. The remote erase all of your settings and return to the factory default setup.

Code Tables: AV Receivers and audio processors.

Manufacturer/Brand	Set-Up Code Number
ADC	007
ADCOM	082 092 225 161 269 355 356
AIWA	170 018 104 202 203 213 211 188
AKAI	189
AMC	125 126 127 281 282
ANGSTROM	42
ANTHEM	335 337
ARCAM	141 418
ATLANTIC TECHNOLOGY	342
AUDIO FILE	071
AUDIO MATRIX	167
AUDIO TECHNICA	134
B & K	096 097
BOSE	070 170 224 347 409 460
BOSTON ACOUSTICS	447
BRIX	555
CARVER	006 028 061 071 201 214 226 185 022 077 284
CINEMA SOUND	134
CITATION	148 272
CLARION	026
DELPHI	515
DENON	109 215 230 234 259 330 340(Default)
ELAN	057 290
ENLIGHTENED AUDIO	099 098
ESCIENT	368 451
FISHER	047 214 182 297
FLEXTRONICS	378
FOSGATE AUDIONICS	231 342
GE	056
GOLDSTAR	008
HARMAN KARDON	231 233 153 154 118 318
HITACHI	020
INTEGRA	275
JAMO	398
JCPENNEY	216
JENSEN	058
JVC	163 191 114 279 291
KENWOOD	026 066 145 192 182 005 280 374
KLH	331
KOSS	216
KRELL	150 072 376 384
KYOCERA	007
LEXICON	120 235 236 237 357 360

Code Tables: AV Receivers and audio processors.

Manufacturer/Brand	Set-Up Code Number
LINN	124 377
LUXMAN	137 139 052 165 115 004 009
LXI	056
MAGNAVOX	086 164 152 208
MARANTZ	006 028 031 040 063 185 186 251 265 119 289 296
MCINTOSH	238 286
MERIDIAN	100 012 013
MITSUBISHI	242 243 204
MONDIAL	157 158 042 043 081 112
MYRYAD	276 293
NAD	186 113 283 478 479
NAKAMICHI	111 244 245 172 183 287
NEC	176
NIRO	343
NILES	403
ONKYO	017 046 108 080 209 275
OPTIMUS	026 041
OUTLAW	342
PANASONIC	032 195 219 177 292 383
PARASOUND	129 130 132 261 294 295 333 334
PHILIPS	249 250 251 063 119
PIONEER	014 039 044 069 168 116 035 078 198 480
POLKAUDIO	515
PROCEED	144 268
RCA	010 048 117 156 067 288
REALISTIC	019 056 073 075 095
ROTEL	074 083 085
RUSSOUND	379 391 392
SAMSUNG	016
SANSUI	040 048 110 119 065 228
SANYO	047 059
SCOTT	019 091
SHARP	026 094 131 175
SHERWOOD	024 102 106 447
SIRIUS	555
SONY	018 247 248 166 101 184 218 271 369 372 380
SOUNDESIGN	036
SSI	068
SUNFIRE	344 345 346
TEAC	005 019 049 111 212 217
TECHNICS	122 176 193 219 178 177 200 257 262
THETA DIGITAL	136
TOSHIBA	060 087 198 278
XM SATELLITE RADIO	515

Code Tables: AV Receivers and audio processors.

Manufacturer/Brand	Set-Up Code Number
YAMAHA	026 253 169 067 173 205 264 232 089 264 274 285 373
ZENITH	143 210

Code Tables: Audio (Satellite Radios).

Manufacturer/Brand	Set-Up Code Number
BRIX	555
DELPHI	515
POLKAUDIO	515
SIRIUS	555
XM SATELLITE RADIO	515

Code Tables: Blu-ray & HD DVD.

Manufacturer/Brand	Set-Up Code Number
LG	004
PANASONIC	002
PIONEER	003
SAMSUNG	005
SONY	001
TOSHIBA	006

Code Tables: CD Players (no dedicated remote button is provided; see programming method 1C).

Manufacturer/Brand	Set-Up Code Number
ADCOM	062 042
AIWA	089 170 187
AKAI	202
AMC	231 232
ARCAM	238
AUDIO ACCESS	119 147
AUDIO EASE	165
AUDIO TECHNICA	046
CALIFORNIA AUDIO	103 008
CARVER	185 041 044 050 107 130 134 135 138 139 203 204 167
CREEK	159
DENON	256 123
EMERSON	042
FISHER	050 185 134 008
GENEXXA	010
HARMAN KARDON	033 047 208
HITACHI	042 175
iNKEL	130

77

Code Tables: CD Players (no dedicated remote button is provided; see programming method 1C).

Manufacturer/Brand	Set-Up Code Number
JCPENNEY	141
JENSEN	158
JVC	257 022 136 163 213 214 242 243
KENWOOD	185 259 023 055 071 072 142 137 254
KRELL	241
KYOCERA	258
LUXMAN	011 028 070 249 252
MAGNAVOX	044 107
MARANTZ	041 044 051 077 107 209 246
MCINTOSH	212 247
MEMOREX	010
MISSION	044 107
MITSUBISHI	179
MONDIAL	147
MYRYAD	244 155
NAD	258 178
NAKAMICHI	217 218
NEC	062
NIKKO	046
NSM	044 107
ONKYO	030 038 039 168 169
OPTIMUS	010 050 081
PANASONIC	103 172 008 068 248
PARASOUND	233 240
PHILIPS	041 044 107 246
PIONEER	010 020 174 175 176
PROCEED	239
PROTON	044 107
QUASAR	103 008
RCA	017 042 150
REALISTIC	042 050 051 187
ROTEL	044 107 161 178 250
SAE	044 107
SANSUI	044 107 128 171 190 125
SANYO	050
SHARP	026 031 051
SHERWOOD	019 051 096 112 115 119 166
SIGNATURE	033
SONY	048 081 097 126 133 177 225 226 164
SOUNDESIGN	251
SUMO	155
SYLVANIA	044 107
SYMPHONIC	052
TANDY	010

Code Tables: CD Players (no dedicated remote button is provided; see programming method 1C).

Manufacturer/Brand	Set-Up Code Number
TEAC	051 052 140 079
TECHNICS	103 172 184 008 068
THETA DIGITAL	234 235
VICTOR	257 022
WARDS	185 033
YAMAHA	024 046 054 186 183 245

Code Tables: Video Cassette Recorders (VCR).

Manufacturer/Brand	Set-Up Code Number
AIWA	034 161
AKAI	016 146 043 046 124 125
AMPRO	072
ANAM	145
AUDIO DYNAMICS	012 023 039 043
BROKSONIC	035 037 129
CANON	028 145
CAPEHART	108
CRAIG	003 040 135
CURTIS MATHES	145 041
DAEWOO	111 116 117 119 005 007 010 065 108 110 112
DAYTRON	108
DBX	012 023 039 043
DYNATECH	034 053
ELECTROHOME	059
EMERSON	006 029 035 017 025 027 145 034 036 037 046 101 129 131 153 162 116
FISHER	003 010 008 009
FUNAI	034
GE	145 072 147 063 107 109 144
GO VIDEO	132 136 155 040 115
GOLDSTAR	101 106 114 013 020 012 123
HARMAN KARDON	012 045
HITACHI	004 026 150 018 034 043 063 137 160 013
INSTANTREPLAY	145
JCL	145
JCPENNEY	012 013 015 040 066 101
JENSEN	043
JVC	048 043 130 150 055 060 012 145 050 152 166
KENWOOD	014 048 034 047
LG	101 106 114 013 020 012 123
LLOYD	034
LXI	034 003 009 017 106
MAGIN	040
MAGNAVOX	067 145 034 068 041 156 164
MARANTZ	067 069 012 145 156
MARTA	101
MATSUI	027 030
MEI	145
MEMOREX	101 003 010 014 145 034 053 072 102 134 139
MGA	045 046 059
MINOLTA	013 020
MITSUBISHI	059 061 151 013 020 045 046 051 049 168
MTC	034 040
MULTITECH	024 034

Code Tables: Video Cassette Recorders (VCR).

Manufacturer/Brand	Set-Up Code Number
NEC	012 023 039 043 048
NORDMENDE	043
OPTONICA	053 054
ORION	025
PANASONIC	066 070 145 083 133 140 157 163 074 167
PENTAX	013 020 145 063
PHILCO	145 034 067
PHILIPS	145 067 034 101 054 071 156
PILOT	101
PIONEER	021 013 048
PORTLAND	108
PULSAR	072
QUARTZ	002 014
QUASAR	066 145 075
RADIO SHACK	123
RCA	107 109 144 147 158 041 145 013 020 140 034 040
REALISTIC	003 008 010 014 145 034 040 053 054 101
RICO	058
RUNCO	148
SALORA	014
SAMSUNG	102 104 113 115 112 120 032 040 066 107 109 125
SANSUI	022 043 048 135
SANYO	003 010 007 014 134 102
SCOTT	017 037 112 129 131
SEARS	003 008 010 014 013 101 009 017 073 112
SHARP	149 054 145 159 165
SHINTOM	024
SIGNATURE	034
SONY	056 057 058 057 052 003 078 076 145 149 154
SOUNDESIGN	034
STS	013
SYLVANIA	145 034 059 067
SYMPHONIC	034
TANDY	010 034
TATUNG	039 043
TEAC	034 039 043
TECHNICS	145 070
TEKNIKA	145 019 034 101
THOMAS	034
TMK	006
TOSHIBA	112 131 079 008 059 047 082 013
TOTEVISION	040 101
UNITECH	040
VECTOR RESEARCH	012

Code Tables: Video Cassette Recorders (VCR).

Manufacturer/Brand	Set-Up Code Number
VICTOR	048
VIDEO CONCEPTS	012 034 046
VIDEOSONIC	040
WARDS	003 013 017 024 145 034 040 053 054 131
YAMAHA	012 034 039 043
ZENITH	072 056 048 101 034 058

Code Tables: VCR-TV/VCR Combos.

Manufacturer/Brand	Set-Up Code Number
DAEWOO	005 117
EMERSON	153
FUNAI	034
GOLDSTAR	101 123
HITACHI	034
JCPENNEY	101
LG	101 123
LLOYD	034
MAGNAVOX	034 067
MEMOREX	101
PANASONIC	070 167
PHILIPS	034 067
RADIO SHACK	123
RCA	034
SEARS	101
SONY	057 154
SYLVANIA	067
SYMPHONIC	034
THOMAS	034
ZENITH	034

Code Tables: PVR, TIVO.

Manufacturer/Brand	Set-Up Code Number
HUGHES	001
HUMAX	001
PHILIPS	001
REPLAY NETWORKS	775
SONY	804 805
TIVO	001
TOSHIBA	001

Code Tables: AUX -- PC & iPod.

Manufacturer/Brand	Set-Up Code Number
APPLE	401 412
BOSE	409
DLO	418
GRIFFIN	471
IPORT	419
KENSINGTON	406
SONACE	419
TEN TECHNOLOGY	401

Code Tables: AUX -- Media PC.

Manufacturer/Brand	Set-Up Code Number
DELL	261 262
GATEWAY	261 262
HAUPPAUGE	294 295
HP	261 262
KEYSPAN	297
SONY	261 262
TOSHIBA	261 262
WINBOOK	261 262

Code Tables: AUX -- Gaming Systems.

Manufacturer/Brand	Set-Up Code Number
MICROSOFT / XBOX	408 107
SONY / PS2	414

Code Tables: AUX -- Lighting.

Manufacturer/Brand	Set-Up Code Number
LITE-TOUCH	208 257
LUTRON	158 159 077
X-10	183 093

Code Tables: TV.

Manufacturer/Brand	Set-Up Code Number
ABEX	025
ADMIRAL	072 251 161 160
ADVENT	247
ADVENTURA	002
AKAI	197 146 248 473 474 475
A MARK	112 143
AMPRO	167 073 157 183
AMSTRAD	052
ANAM	043 054 056 080 112
AOC	197 004 112 058
APEX DIGITAL	006
ASTAR	477
AUDIOVOX	076
BARCO	233
BELCOR	116
BELL&HOWELL	161 072
BLAUPUNKT	088
BROKSONIC	238
BROCKWOOD	116
CAIRN	201
CANDLE	197 002 003 004
CAPEHART	058
CELEBRITY	070
CENTURION	197
CETRONIC	043
CITIZEN	197 002 003 004 043 101 103 143
CLASSIC	043
CLP CLASSIC	161
COLORTYME	116 197
CONCIERGE	073 157 183
CONCERTO	004
CONTEC	043 050 051
CORNEA	116
CORONADO	143
CRAIG	043 054
CROWN	043 143
CURTIS MATHES	197 101 004 143
CXC	043
DAEWOO	004 016 043 044 076 103 114 125 127 143
DAYTRON	004 143

Code Tables: TV.

Manufacturer/Brand	Set-Up Code Number
DELL	319 320 321
DIMENSIA	161
DREAMVISION	235
DUKANE	011 025
DUMONT	116 073 157 183
DURABRAND	096
DWIN	177 257
DYNASTY	043
DYNATECH	062
DYNEX	400
EIKI	187
ELECTROBAND	070
ELECTROGRAPH	466
ELECTROHOME	143 024 076 196
ELEKTRA	072
ELEMENT	363 494 526
EMERSON	028 048 043 155 005 197 004 047 050 051 076 096 143 151 153 154
ENVISION	116 197
ESA	323
FISHER	007 057
FUJITSU	198 246 346
FUNAI	028 043 052
FUTURETECH	043
GATEWAY	242 268
GE	160 144 165 073 197 008 009 034 056 074 130 155 161 004 157 183
GIBRALTAR	116 073 157 183
GOLDSTAR	113 116 102 004 106 112 119 127 143
HALL MARK	004
HAIER	164 363
HANNSPREE	381
HISENSE	419 442
HITACHI	011 166 004 009 010 012 023 075 143 158 072 250
HP	316 327 378
HUMAX	518
ILO	472
INFINITY	164
INFOCUS	230 330 333 547 548
INTEQ	073 157 183
INSIGNIA	350 354 400 457
JANEIL	002
JBL	164
JCB	070
JCPENNEY	004 024 197 008 009 030 065 101 143 160
JENSEN	013

Code Tables: TV.

Manufacturer/Brand	Set-Up Code Number
JVC	038 034 070 083 199 210 240 241 406
KAWASHO	116 070 197
KEC	043
KENWOOD	197 070
KLEGG	466
KLOSS	002 059
KMC	143
KNOLL SYSTEMS	230
KONKA	457
KREISEN	530
KTV	043 197 143 154
KURAZAI	072
LG	113 116 102 004 106 112 119 127 143 243 284 363
LODGENET	072
LOEWE	164
LOGIK	072
LUXMAN	004
LXI	166 007 138 052 251 160 164
MAGNAVOX	164 059 197 003 060 061 004 063 064 127 022 160 094 239 226 467
MAJESTIC	161 072
MARANTZ	197 164
MATSUI	164
MAXENT	242
MEGATRON	116 197 011
MEMOREX	007 072 004
METZ	088
MGA	197 004 024 028 042
MIDLAND	161 073 157 183
MINERVA	088
MINUTZ	008
MITSUBISHI	109 124 024 004 028 040 042 146 191 348
MONTGOMERY WARD	161 072
MTC	197 004 062 101
NAD	138 025
NEC	132 130 134 197 040 016 024 056 019 237 262 272
NET TV	202
NIKEI	043
NIKKO	116 197
NIKO	527
NORCENT	390
NUVISION	351
OLEVIA	432
ONKING	043
ONWA	043

Code Tables: TV.

Manufacturer/Brand	Set-Up Code Number
OPTIMUS	025
OPTONICA	019 251
OPTOMA	265 270 249
ORION	096
PANASONIC	034 056 080 092 164 208
PHILCO	197 003 059 060 064 164 004 024 056 063
PHILIPS	164 005 093 038 197 003 004 059 127 206 239 259 161
PILOT	116
PIONEER	135 025 197 018 023 116 234 272
POLAROID	323 328 353 354 356 457 494 505
PORTLAND	004 143
PROSCAN	144 160 161 165 167
PROTON	004 112 058 143 171 172 193
PROTRON	498 499
PROVIEW	494
PULSAR	116 073 157 183
QUASAR	034 056 092
RADIO SHACK	019 004 143 043 127
RCA	160 165 065 144 161 197 004 024 056 152 023 074 333
REALISTIC	007 019 043 047
REVOLUTION HD	466
ROCTEC	186
RUNCO	072 169 178 179 180 181 182 183 073 157 342 416
SAMPO	197 058 004 202
SAMSUNG	050 089 101 105 004 127 143 160 228 229 258
SAMSUX	197
SANSUI	096 400
SANYO	166 007 020 053 057 082 187
SCEPTRE	276
SCOTCH	116 197
SCOTT	028 043 004 048 143 497
SEARS	138 030 004 007 028 057 143 094 160 082 165 166
SELECO	189 200 205 011
SHARP	019 014 028 029 004 022 143 175 251 308
SHOGUN	116
SIEMENS	088
SIGNATURE	072
SIMPSON	003
SOLE	231 232
SONY	**070(Default) 139 147 126 185 085 213 277 279**
SOUNDESIGN	028 004 003 043
SOYO	528
SPECTRICON	112
SPECTRONIQ	499

Code Tables: TV.

Manufacturer/Brand	Set-Up Code Number
SSS	004 043
SUPRA	116
SUPRE MACY	002
SUPREME	070
SVA	328
SYLVANIA	197 003 052 059 060 063 064 164 044 160 127
SYNTAX OLEVIA	161 144 160 376 432
TANDY	251
TATUNG	056 062
TECHNICS	034 080
TECHWOOD	004
TEKNIKA	002 003 004 024 028 043 072 101 143
TELEFUNKEN	037 046
TELERENT	072
TERA	172
TMK	004
TOSHIBA	138 030 007 040 062 101 325 230
TOTEVISION	143
TRUTECH	529
UNIVERSAL	008 009
VICTOR	038
VIDEO CONCEPTS	146
VIDIKRON	174 164 188 192 342
VIDTECH	004
VIEWSONIC	242 433
VIKING	002
VIORE	472
VISCO	526
VITO	363
WARDS	004 008 009 019 028 060 061 063 064 072 074 143 164 034
WESTINGHOUSE	076 280 070
YAMAHA	197 004 370
YORK	004
YUPITERU	043
ZENITH	073 072 095 103 157 183 243 284
ZONDA	112

Code Tables: Cable Boxes.

Manufacturer/Brand	Set-Up Code Number
ABC	004 103 003 039 042 046 053
ADELPHIA	043 074
ADVANCED NEWHOUSE	043
ALTRIO	043
AMERICAST	099
ARMSTONG	074
AT&T BROADBAND	074 035
ATLANTIC BROADBAND	043 074
BELL SOUTH	099
BLUE RIDGE	043 074
BRESNAN	074
BRIGHT HOUSE	043 110
BUCKEYE COMM	074
CABLEVISION	043 074 108
CHARTER	043 074
CISCO	043 003 041 042 045 046
COGECO	074
COMCAST	043 074 110
COMSAT	074
COX DIGITAL	043 074
DIGEO	111
EAGLE	020 030 040
EASTERN	057
GEMINI	008
GENERAL INSTRUMENT	074 103 104
GNC	099
GOLDEN CHANNEL	030
HAMLIN	049 050 055
HITACHI	103 055
INSIGHT	074
JERROLD	074 004 103 002 003 008 009 010 069
MAGNAVOX	010 012
MASSILLON	074
MEDIACOM	074
MEMOREX	052
MOTOROLA	074 110 148 111 112 036
MOVIE TIME	028
MOXI	111
NCTC	074
NSC	015 028 038 071
OAK	031 037 053
PACE	043 074
PANASONIC	044 047
PARAGON	052

Code Tables: Cable Boxes.

Manufacturer/Brand	Set-Up Code Number
PHILIPS	006 012 013 020 085
PIONEER	043 103 034 051 063 076 105
PULSAR	052
QUEST	112
RCA	047
RCN	074
REGAL	049 050
REGENCY	057
RODGERS	043
SAMSUNG	030
SCIENTIFIC ATLANTA	043 003 041 042 045 046
SEREN	043
SERVICE ELECTRIC	074
SHAW	074
SIGECOM	043
SONY	108
SPRUCER	047
STARCOM	002 004 008 009
STARGATE	008 030 104
SUSQUEHANNA	043 074
TIME WARNER	043 074
TOCOM	039 040 056
TOSHIBA	052
UNITED CABLE	004 053
VERIZON	110
VIDEOTRON	043
WIDE OPEN WEST	043 099
ZENITH	052 060 093 100

Code Tables: Satellite Boxes.

Manufacturer/Brand	Set-Up Code Number
CABLEVISION	148
DIRECTV	173
DISH NETWORK	122
ECHOSTAR	122
EXPRESSVU	122
GENERAL ELECTRIC	151 116 150
GENERAL INSTRUMENT	148
GOI	122
HITACHI	139 140
HTS	122
HUGHES	114
JVC	122
LG	170
MITSUBISHI	114
MOTOROLA	148
NEXT LEVEL	148
PANASONIC	142 160
PHILIPS	152 153 156 114
PROSCAN	151 116 150
RADIOSHACK	148
RCA	151 116 150
SAMSUNG	155 163 169 175
SKY	164
SONY	115
STAR CHOICE	148
TOSHIBA	127 114 158
VOOM	148
ZENITH	159

Code Tables: DVD.

Manufacturer/Brand	Set-Up Code Number
AIWA	146
AKAI	281
ALPINE	098
APEX DIGITAL	087 111 115
BROKSONIC	130
CINEVISION	091
COBY	260
CYBERHOME	271
DENON	138 080 173
DURABRAND	091
DVD 2000	017
EMERSON	091 143
ESA	143
FISHER	147
FUNAI	143
GE	026 027
GO VIDEO	137 091 220 221 222
GOLDSTAR	091
HARMAN KARDON	084 140
HITACHI	101
ILO	268
INITIAL	111
INSIGNIA	143
INTEGRA	142 180
JBL	084
JVC	012
KENWOOD	151
KISS	279
KLH	135
KRELL	104
LEXICON	148
LG	091 057 074
LITEON	264 265
MAGNAVOX	001 096 143 282
MALATA	267
MARANTZ	083 095
MERIDIAN	153
MICROSOFT	027
MINTEK	111 282
MITSUBISHI	017
MYRYAD	102 134
NAD	088
NAKAMICHI	103
ONKYO	076 035 180

Code Tables: DVD.

Manufacturer/Brand	Set-Up Code Number
OPPO	266
OPTIMUS	107
ORION	130
PANASONIC	021 042 138 144 150
PHILIPS	001 083 095 105 166
PHILIPS-MAGNOVOX	035 001
PIONEER	023 092 099 107 108 131
POLAROID	233
POLK AUDIO	035 001
PROCEED	086
PROSCAN	026 027
RCA	026 027
RJTECH	269
SAMSUNG	056 165 170 137 159
SANSUI	154
SANYO	147
SEARS	130
Sensory Science	222
SHARP	094
SONY	033 118 145 126 191
SUPERSCAN	143
SV2000	143
SYLVANIA	143
SYMPHONIC	143
TATUNG	102
TEAC	107
TECHNICS	042
TECHWOOD	088
THOMPSON	026 027
TOSHIBA	035 034 130 141 164 188
VENTURER	149
X-BOX	027
YAMAHA	042 089 166 138 197
ZENITH	057 074 091

Code Tables: DVD Recorders.

Manufacturer/Brand	Set-Up Code Number
CYBERHOME	271
GO VIDEO	220 221 222
ILO	268
KISS	279
LITEON	265
PANASONIC	138
SENSORY SCIENCE	222
SONY	191
TOSHIBA	188

Code Tables: DVD-TV/DVD Combos.

Manufacturer/Brand	Set-Up Code Number
AIWA	146
AKAI	281
DURABRAND	143
ESA	143
FUNAI	143
INSIGNIA	143
MAGNAVOX	282
MINTEK	282
SAMSUNG	165
SV2000	143
SYLVANIA	143
SYMPHONIC	143
TOSHIBA	130

Code Tables: DVD-TV/DVD/VCR Combos.

Manufacturer/Brand	Set-Up Code Number
EMERSON	143
INSIGNIA	143
MAGNAVOX	143
PANASONIC	144
SUPERSCAN	143
SYLVANIA	143
TOSHIBA	164

Code Tables: DVD-DVD/VCR Combos.

Manufacturer/Brand	Set-Up Code Number
GO VIDEO	137
PANASONIC	150
PHILIPS	105 (VCR Functions for VCR 067)
SAMSUNG	137 159
SANSUI	154
SONY	145 191
TOSHIBA	141
ZENITH	091 (VCR Functions for VCR101)