

EAR FORCE[®] DSS

7.1 Channel Dolby[®] Surround Sound Processor

User's Guide



System Requirements

XBOX 360® game console with one of the following XBOX® cables to support digital output:

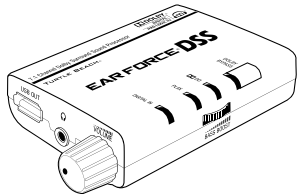
- Component A/V cable
- VGA A/V cable
- S-Video A/V cable
- Advanced SCART A/V cable
- HDMI audio adapter cable
- Composite A/V cable with digital output

PlayStation® 3 game console

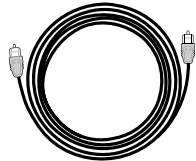
PC/laptop or Mac® with either on-board or external sound card with digital optical outputs

Requires USB power

Package Contents



**Ear Force DSS
digital audio processor**



Digital optical cable



USB cable



**3.5mm
audio cable**

Safety Notice

To avoid potential damage to the device, always disconnect all cables before transporting it.

WARNING: Permanent hearing damage may occur if a headset is used at high volumes for extended periods of time, so it is important to keep the volume at a safe level. Over time, your ears adapt to loud volume levels, so a level that may not cause initial discomfort may still damage your hearing. If you experience ringing in your ears after listening with the headset, it means the volume is set too loud. The louder the volume is set, the less time it takes to affect your hearing. So, please take care to listen at moderate levels.

- Before placing a headset on your ears, turn down the volume, then slowly increase it to a comfortable level.
- Turn down the volume if you can't hear people speaking near you.
- Avoid turning up the volume to block out noisy surroundings.

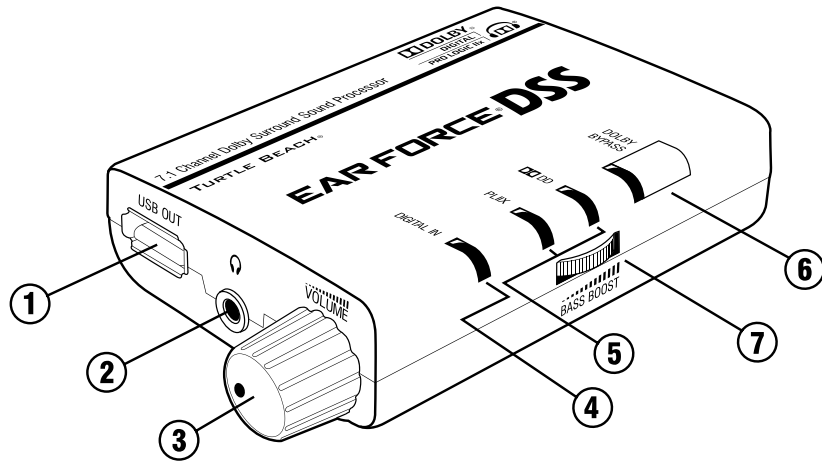
DSS Input Modes and Dolby Processing

The Ear Force DSS uses Dolby Digital, Dolby Headphone and Dolby Pro Logic® IIx surround processing technologies, the industry-standard formats for encoding multi-channel game audio. Dolby Headphone processing recreates 7.1 channel surround sound in any stereo headset so you can hear the sound all around you, as if you were listening to a 7.1 speaker system.

The DSS supports three types of digital source material and analog stereo. When the Bypass button is ON, Dolby processing is deactivated, so you can hear the unprocessed input signal in stereo, as it sounds from the source. Here's how the signal processing modes operate:

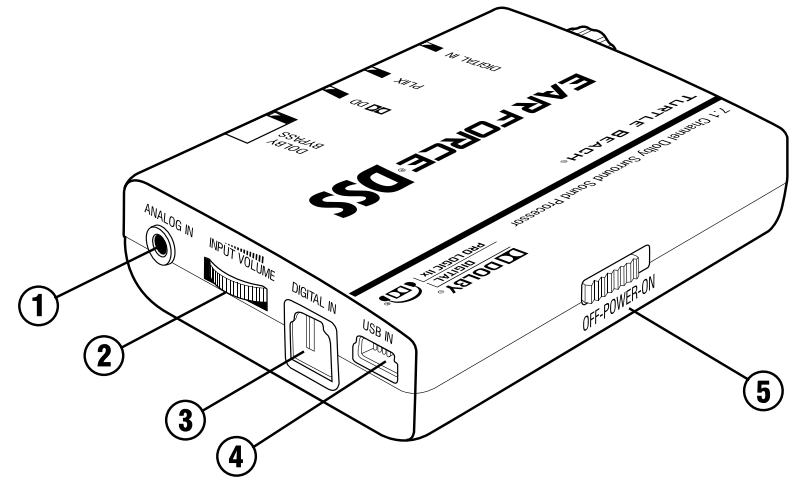
- When the digital input signal is active, the front panel Digital In LED turns on and the analog inputs are turned off. You do not have to disconnect cables to switch between analog and digital sound sources.
- If the digital input is a Dolby 5.1 or 7.1 channel signal, the front panel DD LED turns on and Dolby Headphone processes the channels to create surround sound in the headset
- If the digital source is a Dolby Pro Logic signal, both Dolby LEDs will turn on and Dolby Headphone creates Pro Logic IIx surround sound in the headset
- If the digital input is stereo, the PLIIx LED turns on and the signal is processed by Dolby Headphone to create an expanded stereo sound in the headset.
- If the digital input is not active (or is disconnected) the analog stereo signal will be active
- If there is an analog stereo input and the Bypass LED is ON, there will be no Dolby processing and the signal will be heard as stereo.
- If there is an analog stereo input and the Bypass LED is OFF, the front panel PLIIx LED turns on and the analog stereo signal is processed by Dolby Pro Logic IIx and Dolby Headphone to create an expanded stereo sound in the headset.

Overview - Front



- 1 USB Out:** This socket is a USB pass-thru that provides the same signals as the USB port connected to the DSS. You can use it just like a standard USB port to provide USB power to headsets such as the X11 or the X31, or to provide power and USB data to headsets like the PX21.
- 2 Headphone Output Jack:** Use this jack for audio output to a wired headset or the transmitter for a wireless headset.
- 3 Volume Control:** Use this knob to set the headphone volume.
- 4 Digital In Indicator LED:** This LED turns on when a digital input signal is detected. When this LED is on, the analog input on the rear of the unit is disabled.
- 5 Dolby Processing Indicator LEDs:** The PLIIx LED will light whenever the digital or analog input is being processed by the Dolby Pro Logic IIx decoder. The DD LED will light whenever digital input signal is being processed by the Dolby Digital surround sound decoder. Both LED's will turn off when the Bypass is on.
- 6 Bypass Button and Indicator LED:** Pressing this button turns off the Dolby processing, allowing you to hear the unmodified input signal in stereo. The LED will turn on when the Bypass is active and Dolby processing is disabled.
- 7 Bass Boost:** Sets the level of bass boost applied to the audio.

Overview - Rear



- 1 Analog In (Stereo Line Input):** Use this input to connect analog audio sources, such as a PC, TV, Ipad®, MP3 player, etc. If the Bypass is turned off, the analog stereo signal will be processed by the Dolby Pro Logic IIx decoder, producing an expanded stereo effect. If Bypass is left on, the analog stereo signal will be active.
- 2 Input Volume:** Sets the sensitivity of the analog inputs to accept a wide range of input levels. This control has no effect on the digital input signal level. Typically, this should be set to maximum if you are using a headset that has a volume control. If the sound distorts, turn down the Input Volume to prevent overloading the analog input.
- 3 Digital In:** Connect the digital audio input to the source (i.e. XBOX 360, PS3, PC/Mac optical output) using the included digital optical cable. This will provide Dolby digital surround sound. When the digital input is active, the Digital IN LED will turn on and the Analog Input will be disabled.
- 4 USB In (USB Power/Mic Pass-thru):** Insert the included USB cable into this socket. Insert the other side of the cable to a free USB port on your XBOX, PS3 or PC/Mac. The USB signals on this socket are passed through to the USB Out connector on the other side of the DSS.
- 5 Power Switch:** Slide this switch to the left to turn the power off, or slide it to the right to power on the DSS. Note that this does not turn off power to the USB Out.

Introducing the Ear Force DSS

What is it?

The DSS takes the Dolby digital signal from the digital optical output on your PC, XBOX 360, PlayStation 3 game console or other source and uses Dolby Headphone technology to create 7.1 channels of surround sound on stereo headphones. The result is an amazing recreation of the 3D sound cues in the game, which almost sounds as if you're listening to real surround sound speakers placed all around you. Hearing the game audio in Dolby 7.1 channel surround sound lets you pinpoint the position of sound cues to hear exactly where everything is coming from, so you'll have a more realistic gaming experience while becoming a better player.

In addition to the digital input for Dolby 7.1 channel surround sound, the DSS also includes a stereo analog input for connecting your TV, MP3 player or other analog stereo sources. The stereo sound is processed by Dolby Pro Logic IIx to create a simulated surround sound that makes it seem as if it is originating from outside of your head.

How does it work?

The DSS is powered from the USB port on your game console or PC. A USB pass through lets you connect a USB powered headset such as the Turtle Beach Ear Force X1, X11, P21, PX21 and X31 to the DSS, so you don't have to use up a second USB port on the gaming console for the headset power.

Although primarily intended as an accessory for Turtle Beach Ear Force gaming headsets, the DSS can be used with any stereo headset or headphones.

The DSS connects between your headset and your gaming console or PC. Here's how:

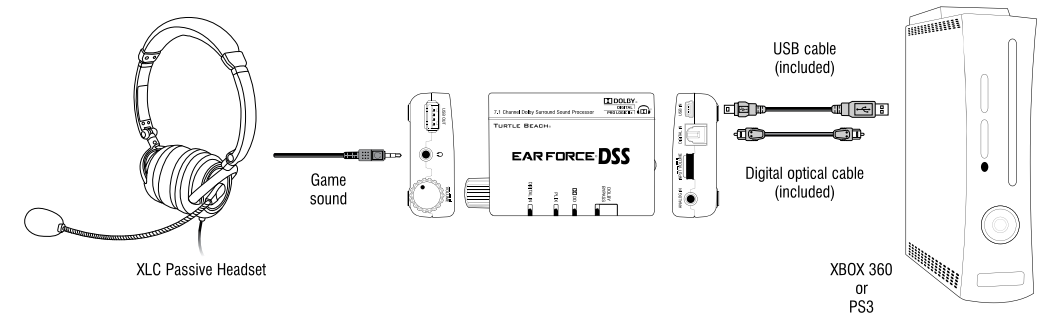
1. Connect the included fiber optic cable from the digital optical input to the optical output on your gaming console. This sends the Dolby Digital surround sound signal from your game console or PC to the DSS. Be sure to set the game console to send Dolby Digital sound to the optical output by following the instructions that were included with your console.
2. Connect the included USB cable from the DSS to a USB port on your game console or PC. This is used to power the DSS.
3. Connect your headset to the DSS headphone output jack and adjust the volume to a comfortable level.
4. If you're using a powered headset, insert the headset USB connector to the DSS USB pass-through socket. This way, you won't have to use up a second USB port on your PC or console for the headset.

What can I use it with?

The DSS connects to either a passive or powered headset. It receives its signal from either a PC, XBOX 360 or PS3. Here are some different combinations that illustrate how it works:

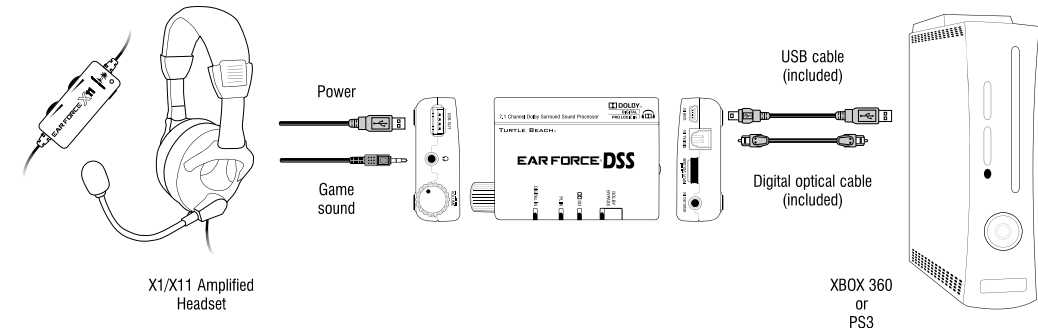
Using the DSS with a Passive Stereo Headset

The DSS has a built-in headphone amplifier that can drive any passive stereo headset, like the Ear Force XLC and Z1, or passive headsets from other manufacturers. Connect the headset to the headphone output and then adjust the volume control to a comfortable level. For example, you can use the Ear Force XLC headset, which is a passive design with a mic connection to the XBOX controller for chat mic. Combining the XLC with the DSS provides a low-cost wired Dolby surround sound headset for the XBOX, however, the chat and game volume controls are not separate and chat is processed by the Dolby Headphone feature.



Amplified Headset

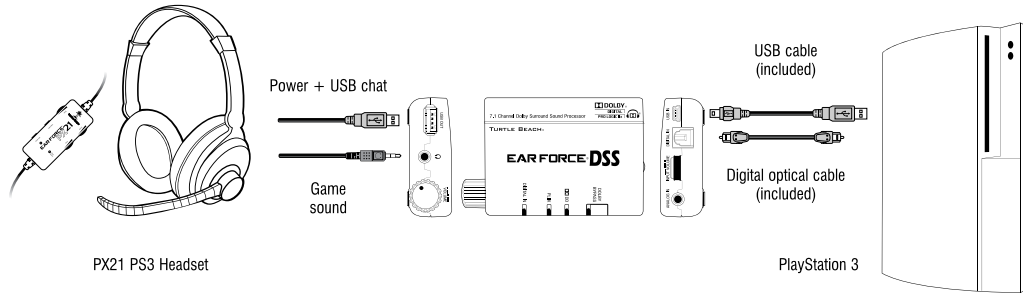
When used with an amplified headset, such as the X1 or X11, the headset is connected to the headphone output jack, just like a passive headset, and the power can be connected to the DSS USB pass-thru socket.



What can I use it with? (cont'd)

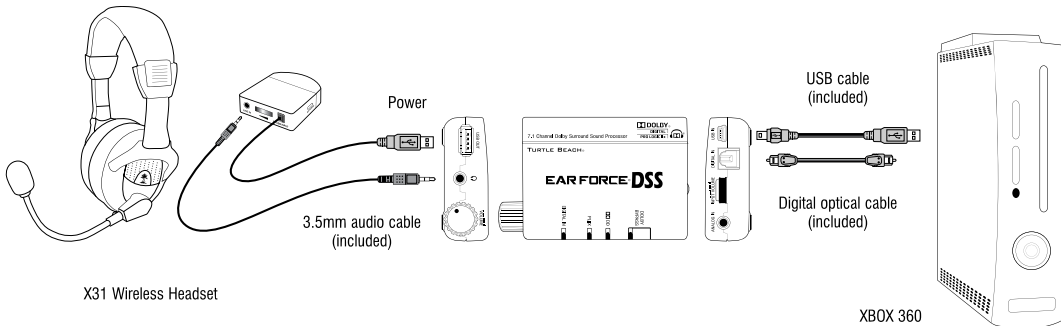
USB Composite Headset

A composite USB headset, like the Ear Force P21 or PX21, gets its power and chat signal from the USB connection. This type of headset connects to the DSS in the same way as a powered headset, except in this case the DSS USB port provides both data and power to the headset.



Wireless Headset

When used with a wireless headset, such as the X31, the transmitter USB power connects to the DSS USB pass-thru socket just like a powered headset, and the transmitter line input connects to the DSS headphone output using the included 3.5mm adapter cable. This sends the DSS headphone output to the X31 transmitter input which then transmits the sound to the X31 headset via the RF signal, so you can hear Dolby surround sound on the X31 headset.



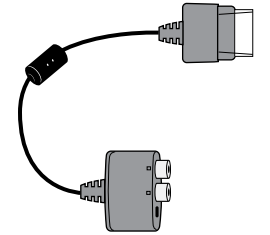
Using an HDMI connection for video

XBOX 360

If you will be using an HDMI A/V connection with an XBOX 360, you must use the optional XBOX HDMI audio adapter cable.

This cable is compatible with any XBOX 360 and allows an HDMI cable to be inserted at the same time. It is available to purchase from the official XBOX website:

<http://www.xbox.com/en-us/hardware/x/xbox/xbox360hdmicable/>



PlayStation 3

If you will be using an HDMI A/V connection with a PlayStation 3, you must also connect the digital optical cable that came with the DSS along with the HDMI cable. The following must also be configured in the PS3 settings menu:

- 1) After powering on the PS3, go to "Settings" > "Sound Settings" > "Audio Output Settings".
- 2) Select "Digital Out (Optical)".
- 3) Navigate to the right and select "Dolby Digital 5.1 Ch.".
- 4) Navigate to the right again and press "X" to save the setting on the next screen.
- 5) Go to "Settings" > "Sound Settings" > "Audio Multi-Output" and turn this feature "On".

NOTE: Audio will be sent to both the digital optical and the composite A/V cable's outputs simultaneously when the "Audio Multi-Output" is enabled.



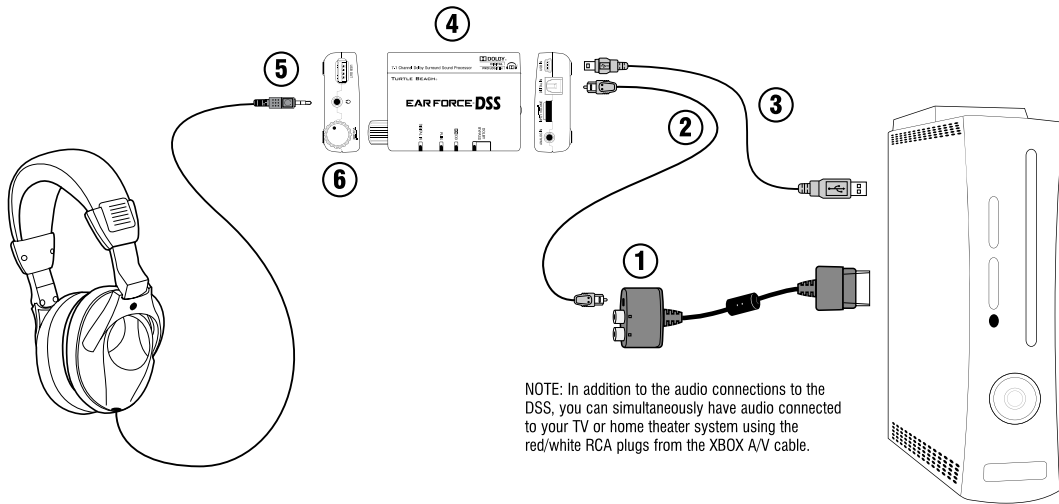
Digital Out (Optical)



Audio Multi-Output

Setting up the XBOX 360 and Ear Force DSS

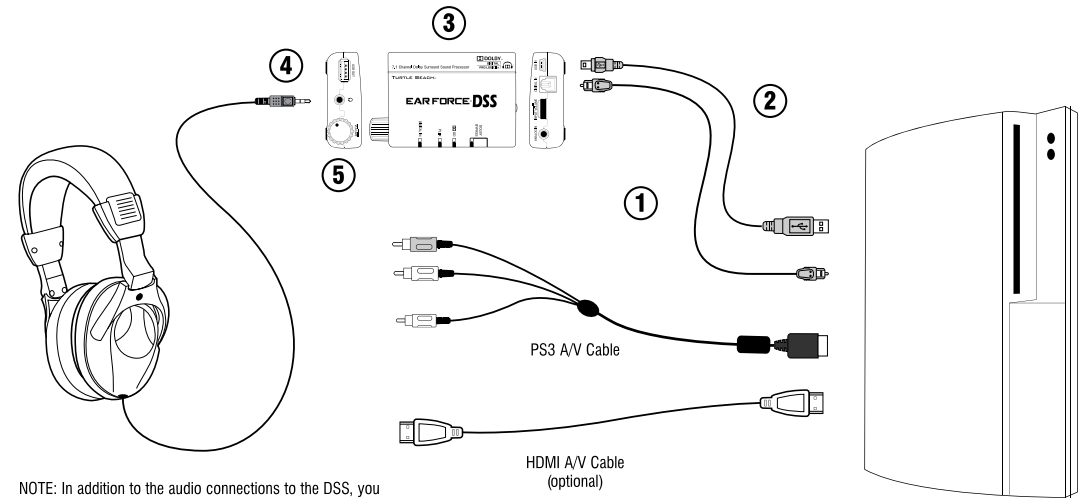
- 1 Connect the XBOX 360 A/V cable as described in the XBOX User's Guide.
- 2 Connect the DSS digital optical cable (included) from the digital output on the XBOX A/V cable to the digital input on the DSS.
NOTE: Remove the protective caps from each end of the optical cable before inserting into the sockets.
- 3 Connect the DSS USB power cable from the power socket on the rear of the unit to a free USB port on your XBOX.
- 4 Slide the power switch to the ON position. Check if the DSS top panel LEDs turn on.
- 5 Insert the audio cable from your wired headset/headphones or a wireless headset's transmitter to the Headphone Output Jack on the front of the DSS.
- 6 Adjust the Volume control knob to adjust the overall volume level of the Headphone Output.



Setting up the PlayStation 3 and Ear Force DSS

- 1 Connect the DSS digital optical cable (included) from the digital output on the PS3 to the digital input on the DSS.
NOTE: Remove the protective caps from each end of the optical cable before inserting into the sockets.
- 2 Connect the DSS USB power cable from the power socket on the rear of the unit to a free USB port on your PS3.
- 3 Slide the power switch to the ON position. Check if the DSS top panel LEDs turn on.
- 4 Insert the audio cable from your wired headset/headphones or a wireless headset's transmitter to the Headphone Output Jack on the front of the DSS.
- 5 Adjust the Volume Control knob to adjust the overall volume level of the Headphone Output.

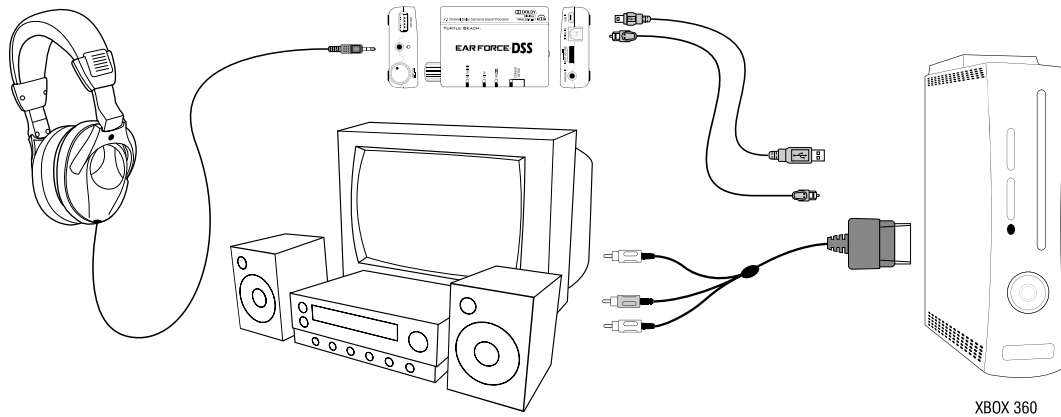
NOTE: If you are using a USB microphone to communicate over the PlayStation Network, you can plug in the USB connector to the front of the DSS. The DSS will act as a "pass-thru" device and allow you to conserve USB ports. You still must properly configure your USB microphone in the PS3 Accessory Settings menu.



Connecting your Home Theater Speakers or a TV without HDMI (XBOX)

If you do not have an HD monitor/TV and are not using an HDMI cable, the DSS can be used with a home theater system and standard-definition television.

On the XBOX 360, connect the DSS as described in this User's Guide and then use the red/white RCA plugs on the XBOX A/V cable to send audio to the home theater speakers or TV.

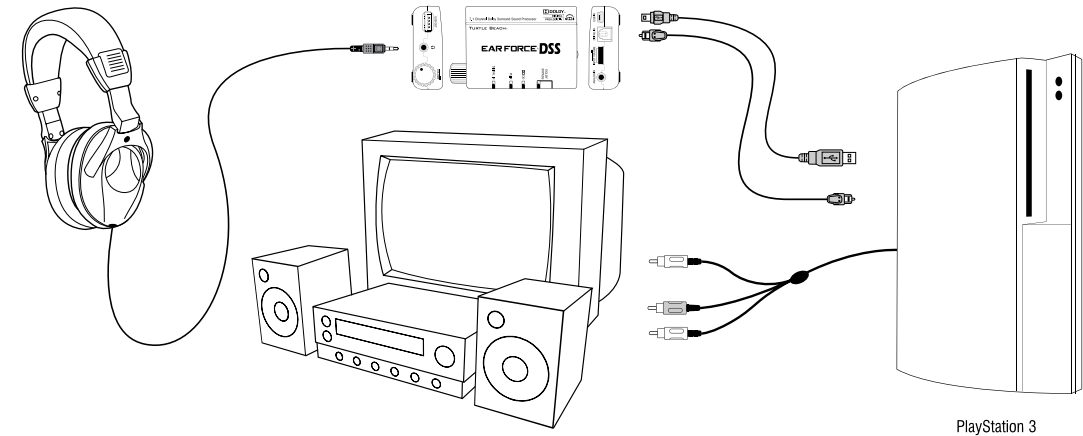


IMPORTANT: If you are going to use an XBOX composite A/V cable, it must have a digital output to connect the digital optical cable that is included with the DSS. The composite A/V cable that is included with all newer XBOX 360 consoles does not have the digital output. If your composite A/V cable does not have a digital output jack, then you can use the 3.5mm audio cable (3.5mm male to dual RCA) which is also included with the DSS. This cable will connect to the Analog In (stereo line input) on the rear panel of the DSS.

Connecting your Home Theater Speakers or a TV without HDMI (PS3)

If you do not have an HD monitor/TV and are not using an HDMI cable, the DSS can be used with a home theater system and standard-definition television.

With the PlayStation 3, connect the DSS as described previously in this User's Guide and then use the standard composite A/V cable that came with your PS3 console to send audio to the home theater speakers or TV.



The following must also be configured in the PS3 settings menu:

- 1) After powering on the PS3, go to "Settings" > "Sound Settings" > "Audio Output Settings".
- 2) Select "Digital Out (Optical)".
- 3) Navigate to the right and select "Dolby Digital 5.1 Ch."
- 4) Navigate to the right again and press "X" to save the setting on the next screen.
- 5) Go to "Settings" > "Sound Settings" > "Audio Multi-Output" and turn this feature "On".

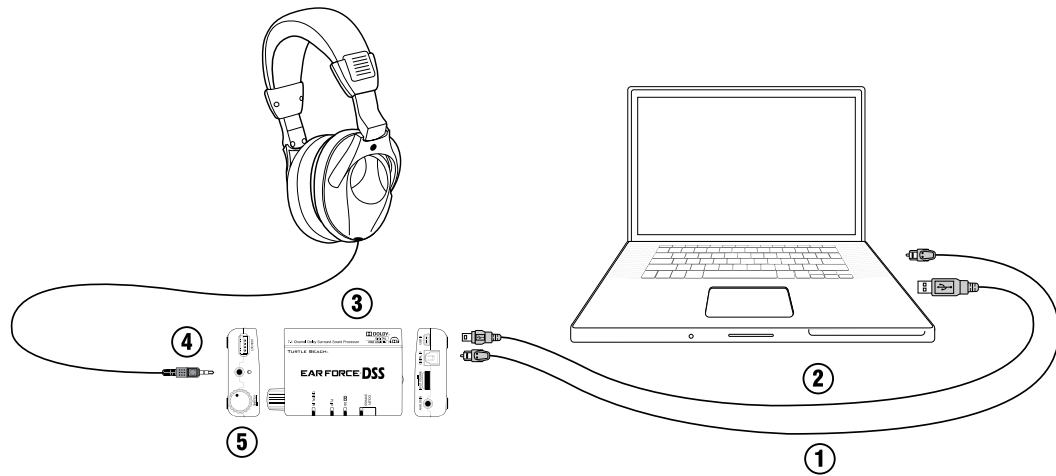
NOTE: This will allow audio to simultaneously route to the digital optical output and composite A/V cable.

Setting up the Ear Force DSS on a PC/laptop or Mac

- 1 Connect the DSS digital optical cable (included) from the digital output on the PC/laptop or Mac to the digital input on the DSS. You must remove the protective caps from each end of the cable before inserting it into the sockets.

NOTE: To connect the DSS using the included digital optical cable on a Mac, you must purchase the "Optical S/PDIF Adapter" which is available on our website as a DSS accessory. This adapter is inserted into the dual-mode 3.5mm audio output jack on your Mac to provide a digital signal to the DSS.

- 2 Connect the DSS power cable from the power socket on the rear of the unit to a free USB port on your PC/laptop or Mac.
- 3 Slide the power switch to the ON position. Check if the DSS top panel LEDs turn on.
- 4 Insert the audio cable from your wired headset/headphones or a wireless headset's transmitter to the Headphone Output Jack on the front of the DSS.
- 5 Adjust the Volume Control knob to adjust the overall volume level of the Headphone Output.

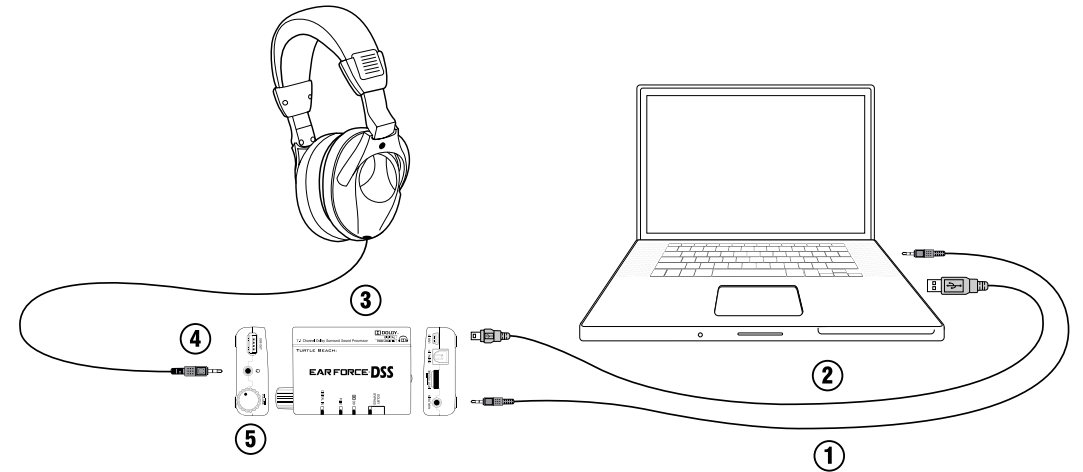


Setting up the Ear Force DSS on a PC/laptop or Mac (cont'd)

If your PC/laptop does not have a digital output, you must connect the DSS using the included 3.5mm audio cable (analog). This cable will allow you to connect the DSS to the 3.5mm analog audio output on your PC/laptop or Mac.

- 1 Connect the 3.5mm audio cable (included) from the headphone output on the PC/laptop or Mac to the Analog In input on the DSS.
- 2 Connect the DSS power cable from the power socket on the rear of the unit to a free USB port on your PC/laptop or Mac.
- 3 Slide the power switch to the ON position. Check if the DSS top panel LEDs turn on.
- 4 Insert the audio cable from your wired headset/headphones or a wireless headset's transmitter to the Headphone Output Jack on the front of the DSS.
- 5 Adjust the Volume Control knob to adjust the overall volume level of the Headphone Output.

NOTE: This configuration will not produce Dolby Digital 5.1 sound. Instead, the stereo sound from your PC/Mac will be processed into virtual surround sound by the Dolby ProLogic IIx decoder.



Troubleshooting Tips

XBOX A/V Cable Does Not Have Digital Output

Newer XBOX 360's now include an A/V cable that does not have a digital output. If this is the case with your XBOX, then you will have to purchase an A/V cable that does have a digital output jack on the connector. Here are the XBOX cables that support digital output:

- Component A/V cable
- VGA A/V cable
- S-Video A/V cable
- Advanced SCART A/V cable
- HDMI audio adapter cable
- Composite A/V cable with digital output

If you are using HDMI and your XBOX A/V cable does not have a digital output, then you can alternatively connect the DSS digital optical cable to a digital output on your HDTV (if your HDTV has a digital optical output).

No Audio When Using PS3 or BluRay Player

Ensure the audio settings in the PS3 or BluRay player are configured to play Dolby Digital. The DSS is not DTS compatible. If the DSS is connected to a digital source with a DTS signal, then the DSS will not receive audio.

No Sound When Using a Digital Connection

Ensure the digital cable is connected properly and receiving a signal. When connected to a console, PC, etc. that is powered on, carefully check to see if a red light is being emitted from the end of the digital optical cable. Also be sure that the protective covers have been removed from the ends of the digital optical cable.

Sound Too Low When Using the Analog Inputs

If you're listening to the analog inputs on the DSS and the sound is too low, even with the headset volume turned up all the way, turn up the volume on the DSS or on the audio source. Note that the DSS volume control has no effect on the digital input.

Audio Distortion When Using the Analog Inputs

If the sound is distorted when using the DSS analog input, it may be that the audio source is overloading the DSS analog input. Try turning down the analog input volume on the DSS to reduce the input sensitivity, then turn up the headset volume to a comfortable level. Note that the DSS volume control has no effect on the digital input.

Analog Input isn't Working

The DSS analog inputs will automatically shut off whenever the digital input is active. To hear the analog input signal, either disconnect the optical cable from the digital input on the DSS, or shut off the device connected to the optical cable (e.g. XBOX) to disable the digital audio signal.



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FCC Caution:

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This product is CE marked according to the provisions of the R&TTE Directive (99/5/EC)

Grantee Code/Reg Number: XGB/GC229855

FCC Code: XGB-TB2100

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