Streambox® Media Player™ for macOS
(Stereo, Quadraphonic, 5.1, and 7.1-Channel Audio)
Audio Output Guide

Note: The Streambox Media Player is 64-bit and has been tested on macOS Catalina and Big Sur OS's, on both Intel and M1 based units.

Introduction

Streambox® Media Player for macOS is an HD/HDR player for IP video streams arriving from Streambox encoders or from the Streambox Cloud services. Streambox® Media Player supports up to 8 channels of audio. By default, multi-channel audio is downmixed on systems with only 1 or 2 speakers – essentially all iOS and macOS devices.

See "Disable Auto Stereo Downmix" in the Advanced Settings section to disable downmixing.

There are several multi-channel flavors; e.g., 5.1, 7.1, and quadrophonic with different channel/speaker ordering. Below is the order common to Avid Pro Tools (based on RFC 7845):

- 1 channel: monophonic (mono).

- 2 channels: stereo (left, right).

- 4 channels: quadraphonic (front left, front right, rear left, rear right).

- 5 channels: 5.0 surround (front left, front center, front right, rear left, rear right).

- 6 channels: 5.1 surround (front left, front center, front right, rear left, rear right, LFE).

- 7 channels: 6.1 surround (front left, front center, front right, side left, side right, rear center, LFE).

- 8 channels: 7.1 surround (front left, front center, front right, side left, side right, rear left, rear right, LFE)

NOTE: Streambox uses downmixing algorithm per RFC 7845 and assumes that the stream channels are mapped as above. This automatically supports where LFE and Center channels are swapped in the original stream.

Some cinematic formats[1] swap Right and Center channels which may influence downmixing. Should this be a problem, you can use "Downmix Swap Right/Center Channels" in the Advanced Settings section to improve downmixing.

Playing Multi-channel Audio

For simplicity, let us assume you are using a MacBook Pro which has 2 internal speakers, left and right. Stereo streams arriving to the Streambox Media Player will work without any reconfiguration. By default, streams with surround 4, 5.1, or 7.1 configuration will be downmixed to stereo. If more than two channels of audio are being streamed you will need an external device, such as the Blackmagic UltraStudio Mini Monitor, to playout the complete complement of audio.

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[1] Film: L,C,R,SL,SR,LFE. Audio editors like Avid Pro Tools and Adobe Audition and video editors like Adobe Premiere Pro and Blackmagic DaVinci Resolve all allow audio channel mapping.
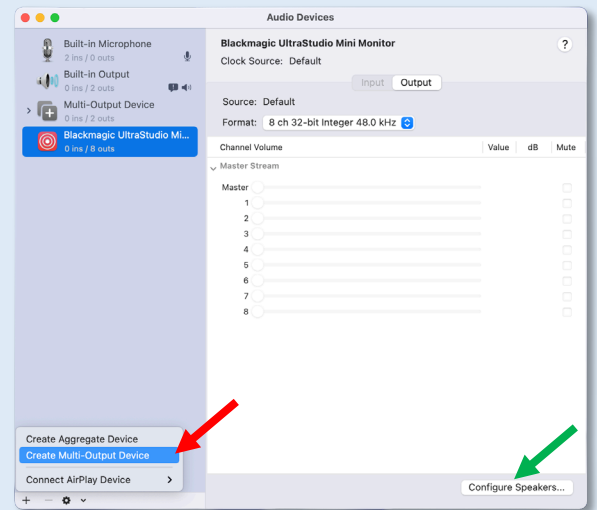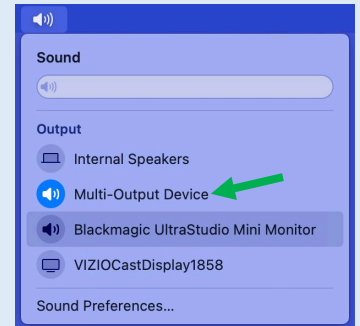
Audio Device Selection

Once the Blackmagic UltraStudio Mini Monitor (or other multichannel audio playout device) is connected, you may select it from the menu bar by clicking the speaker icon. This will direct all audio output to the attached audio device.

Depending on sound device selected, you might need to configure desired channel numbers and layout for proper output. You can use the 'Audio MIDI Setup' utility for macOS to configure speakers (it may be located in the 'Other' folder on Launchpad).

Common options are: Stereo, Quadrophonic, 5.1 and 7.1 (see Audio MIDI Setup User Guide). For example, you can select 'Blackmagic UltraStudio…' from the list on the left (image right), then use 'Configure Speakers' (green arrow) to open the speaker configuration dialog (image lower right), and then select 'Stereo'. In this example, Streambox Media Player will downmix 5.1, 7.1, or Quad audio to 2-channel stereo.
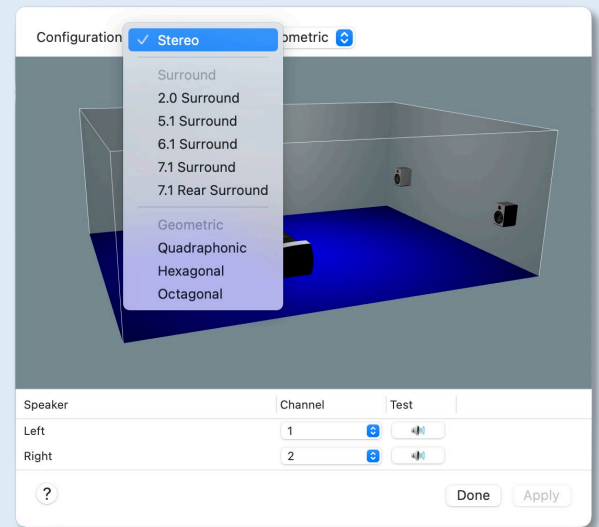
If you select Quadrophonic, 5.1, or 7.1 for speaker configuration, Streambox will not remap or downmix channels, and output remains in the order specified in the Speaker Configuration. If you want audio sent to both the internal speakers and the connected device, you will have to create a 'Multi-Output Device' and then select that from the audio out list (see green arrow, image previous page).

Creating a Multi-Output Device

When you want the audio output directed to more than one device, you need to create a Multi-Output Device.
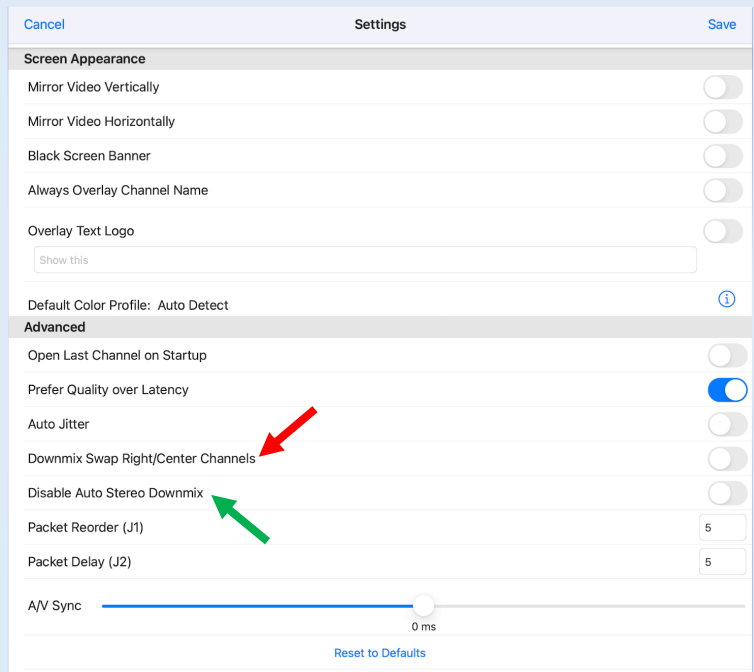
- Open the Audio MIDI Setup from the Launchpad (as above).

- Click on the add (+) button and select 'Create Multi-Output Device (red arrow, image above).

- Select the new Multi-Output Device and check the devices you want to include

- You may close this dialog box and from the Sound/Option dropdown (see green arrow, image previous page) you can now select the Multi-Output Device that was created.

Advanced Settings

Managing Downmix is done on from the Settings page. Select *Advanced Settings* from the *Settings* menu (on the Home page).

- **Downmix Swap Right/Center Channels** for cinematic streams where the primary audio is encoded on channel #3 (Center). See red arrow.

- **Disable Auto Stereo Downmix** allows channels 3-16 to be rendered as unmixed audio so all channels can be passed to an external audio device.

  See green arrow.

Support

Email support@streambox.com for a response within 24 business hours.

The below information will help to expedite your support request:

- Your name

- Company name

- Contact information and best time(s) to reach you

- Media Player version number (include platform, iOS or macOS, and OS version)

- Steps to reproduce and/or a detailed description of your support question/need and the outcome expected

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