

Using Source with Windows Laptop DJ Setups

by Craig Anderton

Source was designed for multiple purposes, with one of them being laptop (or desktop) DJ applications—and frankly, it's about time the booth and mains got a shot of higher fidelity. Typically, you'd route the computer's USB output to the floor speakers, and a separate computer output (like the analog headphone output jack) to the Source's headphones section by patching the computer's analog audio output to Source's AN1 or AN2 input. This means the dance floor gets the ultra-high fidelity direct USB digital output from the computer, while the analog out can provide previewing or cuing, depending on the program.

Sounds easy enough, right?

On the Mac, it is indeed easy because you can aggregate multiple interfaces under Core Audio, and audio interfaces use Core Audio. So, the Mac's internal 1/8" headphone jack could patch to Analog 2 and provide the cuing output, while the Mac's USB provides the main output to the Source USB input. (By the way, don't be scared away by the horror stories of aggregation on the Mac; while it started off being somewhat flaky, it's now stable and I've had excellent luck aggregating multiple interfaces.)

But Windows is a different story. Paradoxically, it's been possible to aggregate interfaces using the WDM driver protocol (or the low-latency WDM/KS driver protocol) for years, and it's both reliable and stable. That's the good news. The bad news is most pro audio users and DJs use ASIO due to its ubiquity and low latency, and with very few exceptions, integrating ASIO interfaces is a non-starter.

Fortunately, there's a suitable workaround—although it makes Windows and your audio interfaces do something they really don't want to do, so it's a little complex to set up. And while this application emphasizes DJ applications, it applies to any situation where you want to get an additional set of outs from a Windows machine (e.g., listen to the control room speakers from the USB out, while sending a click track from the analog out to the drummer).

THE ASIO4ALL DRIVER

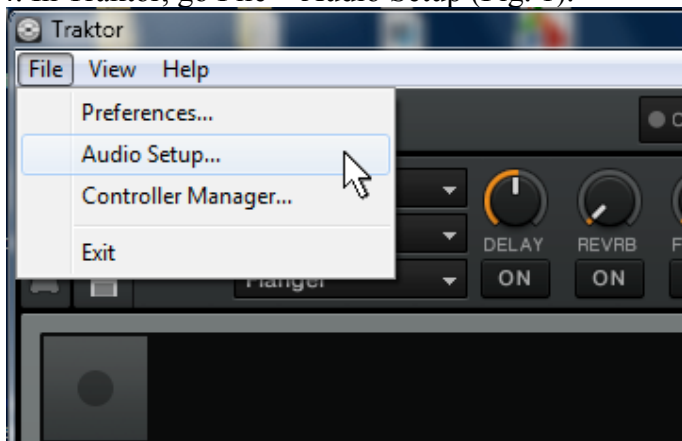
An application called ASIO4ALL makes WDM devices appear like ASIO, and can aggregate them with Source's CEntrance USB audio driver. Therefore, you can feed the Source USB to your main speakers, and patch the Windows computer's 1/8" headphone jack from the internal sound card (just about every Windows laptop and desktop on the planet has one of these) into AN2 to provide the cue output.

This following assumes that your DJ program and controller are already installed and known to be working, and also, that you've downloaded and installed the Source USB driver from <http://centrance.com/products/registration.php?product=258> and verified that it works correctly. Before proceeding, make the necessary USB and audio connections between your computer and Source.

READY . . . SET . . . TWEAK

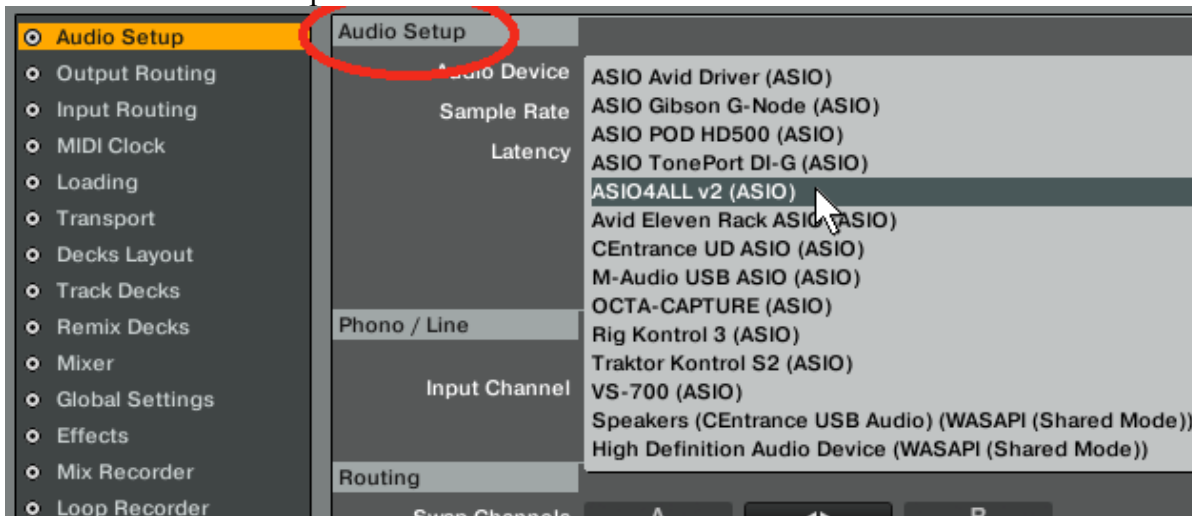
Here are the step-by-step instructions on how to implement the aggregation workaround using Native Instruments' Traktor Pro 2 and their Kontrol S2, but the same principles apply to just about any combination of DJ gear and controllers.

1. Go to www.asio4all.com and download the latest version of ASIO4.ALL.
2. With all other programs closed and any virus protection turned off, double-click the ASIO4ALL executable (.exe file) to install it. For documentation, go Start > All Programs > ASIO4ALL to locate the instruction manual. (This also accesses the uninstall routine, should you need it someday.)
3. With your USB interface and/or controller connected, open your DJ program (e.g., Traktor Pro 2).
4. In Traktor, go File > Audio Setup (Fig. 1).



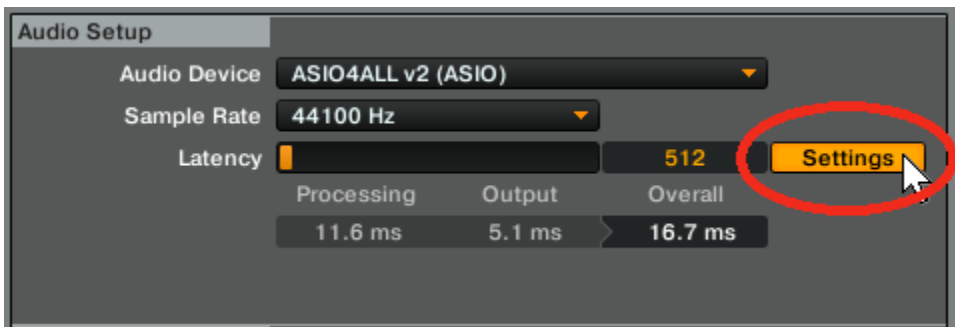
[Fig. 1]

5. Under Preferences > Audio Setup, choose ASIO4ALL (Fig. 2) from the Audio Device drop-down menu under Audio Setup.



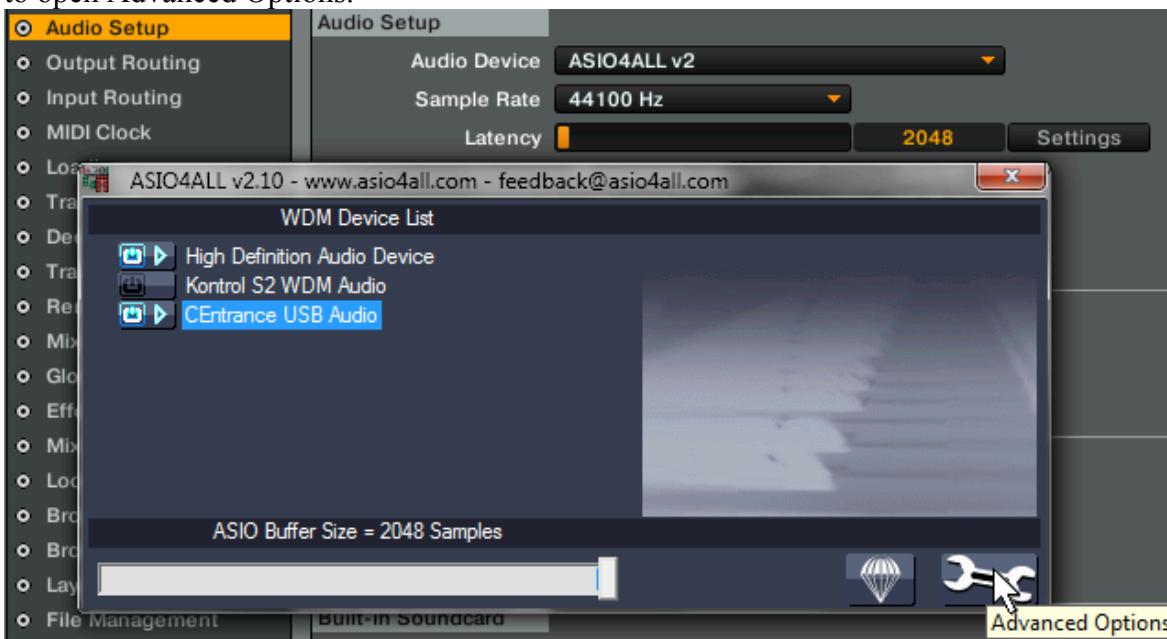
[Fig. 2]

6. Click Settings (Fig. 3) to open the ASIO4ALL control panel.



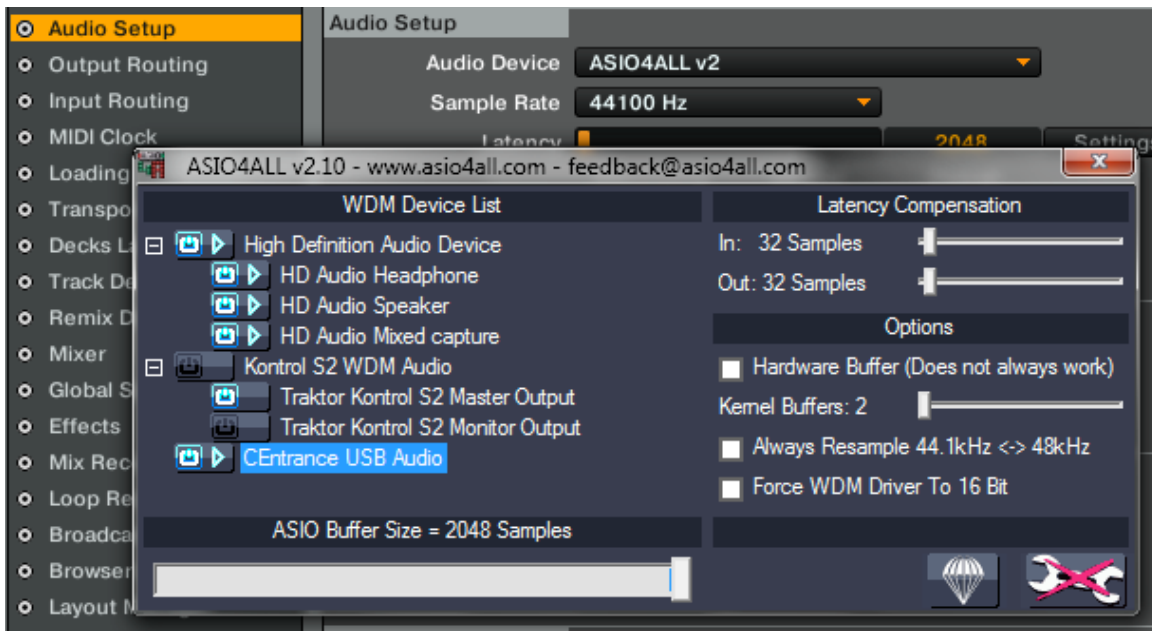
[Fig. 3]

7. When the Control Panel opens up, set the ASIO Buffer Size to a conservative setting, like 2048 samples (Fig. 4). Later, after the system is working, experiment with lowering this to reduce latency; however, you won't be able to get it as low as with an ASIO-only setup. Then, click on the wrench icon to open Advanced Options.



[Fig. 4]

8. Expand all device trees (Fig. 5) to reveal your Kontrol S2 devices as well as the sound card's audio devices (the High Definition Audio Device name for the Windows internal sound card may be different, but is the most common designation). Click the "power" button for the High Definition Audio Speaker and Headphone devices to turn them on; if only one is present, just choose that option. Also click the Traktor Kontrol S2 Master Output in the Kontrol S2 tree, but *not* the Kontrol S2's Monitor Output or its master tree button. Finally, select CEntrance USB audio. The buttons you selected should be green.



[Fig. 5]

Note: When you change these settings, Traktor may crash because it's not seeing something it expects to see. No worries; close Traktor and re-open it. The program will recognize the new settings.

9. Click on the wrench icon again to revert to simple mode. If you want to reduce screen clutter, close the ASIO4ALL window.

10. Close the Preferences screen, then close Traktor. Re-open Traktor and when you're asked if you want to switch Audio to Traktor's interface (e.g., the Kontrol S2), click No. Now Traktor will adopt all your ASIO4ALL settings. This step is usually not necessary, but it's extra insurance that Traktor adopts the correct audio settings.

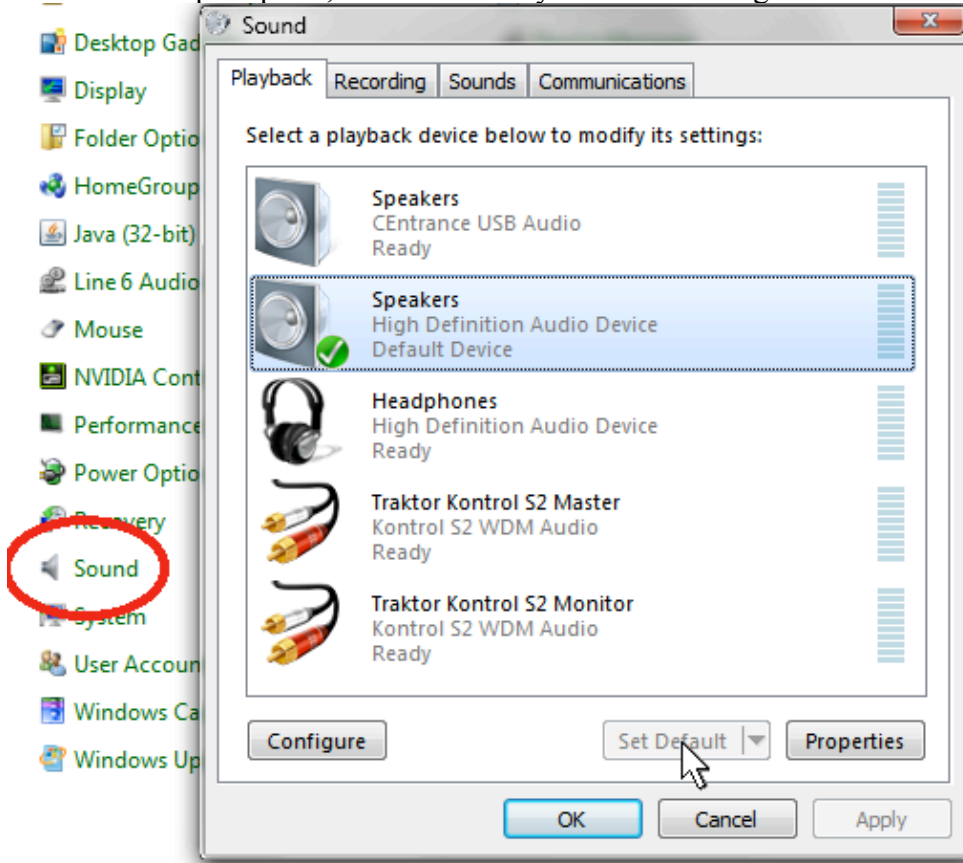
11. Go File > Preferences, and click on Output Routing (Fig. 6). First, select Not Connected for all drop-down menus so you can start with a clean slate. Then, using the Output Monitor drop-down menu, select the HD Audio Headphone 1 (or Speaker 1; see the note below) for Left, and HD Audio Headphone 2 (or Speaker 2) for Right. Using the Output Master drop-down menu, choose USB Audio 2.0 Audio 1 for Left, and USB Audio 2.0 Audio 2 for Right. When these assignments are made, click Close.

Note: Your Windows sound card may offer a headphone output, speaker output, or both. Most laptops will use the headphone option. In some computers, the jack(s) will be marked unambiguously but in others, there may simply be a jack marked "Output" and you won't know whether it's connected to the internal headphone or speaker output. If later on you don't hear audio from the cue or preview function and had selected Headphone, try Speaker instead . . . or vice-versa.



[Fig. 6]

12. You will also need to go Start > Control Panel > Sound and under the Playback tab, click the Windows sound card option you selected (Headphones or Speakers), then click Set Default (Fig. 7). Click OK after making your selection. If as mentioned above you later need to switch to the other sound card output option, remember that you need to change this Sound setting as well.



[Fig. 7]

Okay . . . you should be good to go! Drag a file into a Traktor deck, hit Play, and make sure USB is enabled on Source. You should hear audio from the deck.

Now drag a file into the Traktor browser's Preview deck. You can audition the Preview deck with AN2 (assuming that's where you patched the computer's analog audio output), and/or Traktor's main output with USB. If you don't hear the audio from the Preview deck, return to step 11 and re-visit your sound card assignments.

IN PRACTICE

The AN2 input also lets you preview a different deck (e.g., Traktor's deck 2). Assuming your crossfader is set to deck 1 so deck 2 isn't going to the floor, you can monitor Traktor's cue via AN2 by clicking deck 2's headphone icon, and setting the balance between the two decks with the S2's front panel Cue Mix control.

Be aware that there will be latency through the analog out, so if you listen to AN2 and the USB outs at the same time, you'll hear a disconcerting echo. So, do your cuing, beat-matching, etc. using the AN2 input, and work the cuing controls to determine what you hear. When you're ready to hit play to bring in the next track and start working the crossfader or effects controls, switch over to the USB input so you can hear what the dance floor is hearing. After working with Source for a while, you'll figure out your own optimum workflow but the basic rule is if you're doing things you want the floor to hear, listen to the USB input; if you want to do things in the background, listen to AN2

Have fun!