

# PC AUDIO

Does your PC audio interface have an analogue output level control? If not, a monitor controller could resolve a lot of your frustrations.

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► Up until recently the traditional route into making modern music was to buy a guitar or keyboard and an amp, and then, if the recording bug struck, a mic, small mixing desk, and a tape deck/multi-tracker. Nowadays you're far more likely to find musicians buying a PC, plugging their sound card into a pair of active speakers, and creating a self-contained 'software studio'. With the right software, a decent audio interface and speakers, this can result in superb audio quality (especially if you install some acoustic treatment in your studio!). But there's one annoying limitation – the vast majority of audio interfaces don't provide an analogue output level control.

Some musicians make do with the level controls on their active speakers, but jumping up and down to adjust them is tedious, especially when there are usually two controls (one on the back panel of each speaker), not to mention how fraught adjusting these two independent volume pots can be while still maintaining a balanced stereo image. Others plug in their active speakers to the headphone output on their interface, which *does* often have a dedicated level control, but this output is optimised for lower impedance devices, and doesn't usually provide the same high audio quality as the main output.

Many musicians resort to using the digital faders found in the software Control Panel utilities included with many audio interfaces, but operating these below their maximum 0dB setting dispenses with digital resolution (with many active speakers a comfortable listening level might require a setting of -24dB, which effectively throws away four bits of your digital signal), and, however careful you are, you also run the risk of a full-strength digital signal accidentally reaching your speakers or your ears – the results can be painful, expensive, or both!

One solution is to buy a small mixing desk and run your soundcard output into a pair of its line-level input channels. This is great if you also need its facilities to add more mic preamps or patch in hardware effects, but overkill if you don't, and small mixers aren't renowned for the transparency of their audio path either. Never slow to spot a gap in the market, manufacturers came up with a new purpose-designed product to plug in between

your audio interface and your active speakers – the 'monitor controller'.

At the more affordable end of the market there are now quite a few of these to choose from, such as Samson's C-control ([www.samsontech.com](http://www.samsontech.com)), Mackie's Big Knob ([www.mackie.com](http://www.mackie.com)), and the Presonus Central Station ([www.presonus.com](http://www.presonus.com)). All of these examples offer three sets of switched outputs so you can connect up to three pairs of speakers to hear how your mixes translate to other systems, plus talkback functions with built-in microphones so you can talk to musicians in your live room. The Presonus also features a totally passive audio path (no power supply required, and containing no transistors, FETs, or integrated circuits), so it can't add any background noise, distortion or other colouration to your audio as it passes through, although the relatively simple active path of the other two should only have a tiny effect on your sounds.

However, if you don't have multiple speakers or require talkback functions, there are several simpler products available. SPL ([www.soundperformancelab.com](http://www.soundperformancelab.com)) has its Volume2 and Volume8 desktop units, for stereo and surround duties respectively, featuring a single large rotary volume knob plus an illuminated mute button, an extremely clean active signal path, and fully balanced XLR wiring. As its name suggests, the third rack-width or desktop PVC (Passive Volume Control) from NHT ([www.nhthifi.com](http://www.nhthifi.com)) features high quality passive circuitry, a large rotary knob, and completely balanced operation with its Neutrik Combo XLR/TRS input jacks and XLR outputs.

Another slightly more sophisticated passive alternative is from Australia's own SM Pro ([www.smproaudio.com](http://www.smproaudio.com)). M-Patch 2 has two switched inputs, each with individual rotary level controls, and two switched outputs, all housed in a 2U high, ½-rack case. Once again you get fully balanced XLR output sockets, and Neutrik Combo XLR/TRS input sockets, while the second input (ideal for a CD player or any other line-level source) is on twin phono or stereo 3.5mm jack. You also get the convenience of stereo/mono and mute switches, plus a budget headphone amp with its own level control.



While these manufacturers are obviously pleased to fill this niche requirement, for most of us it would of course be far simpler and cheaper to buy an audio interface with its own volume control already fitted. You can't do this for PCI and PCe soundcards, but you certainly can for Firewire and USB interfaces. A few models already have them, notably Focusrite's Saffire series, but hopefully other interface manufacturers will read this and ponder – having a dedicated analogue output level control is fast becoming a significant feature when musicians choose their next interface!

While I have their attention, can I plead for another feature from interface manufacturers? Audio forums are awash with PC laptop owners who, after plugging in their new audio interfaces, are suffering from a host of buzzes, whistles, and other background noises related to hard drive activity, mouse movements and graphic redraws. These problems are nearly all due to ground loops, and solving them often requires the user to insert a DI (Direct Inject) box between the audio interface's output and the amplifier, mixer, or active speaker it's plugged into.

Suitable stereo DI boxes start at about \$60, but those with full galvanic separation (i.e. using an output transformer) to guarantee that the problem will be cured, tend to be more expensive – and if you've bought an interface with eight outputs, you'll need a DI box on each one, which is not an elegant or cheap solution. So the market is crying out for a manufacturer to launch a reasonably priced USB or Firewire audio interface with transformer-coupled outputs. Any takers? ■