

*The Ken Stone Index***Hardware Review****February 18, 2002****iMic - USB Audio for Macs**

Griffin Technology Audio Adapter - USB device

Price: \$35

Review by [Charles Roberts](#) AKA Chawla

When I heard that Apple would no longer be including a microphone input on its new Macintosh models last year, I shrieked and screamed. One of the great things about Macintosh's from day one was that, unlike PC's, they had a high quality sound card built into the motherboard of the computer. Not only did you not have to buy a special PCI card to hear 16-bit stereo audio from the Mac, there was always a 16-bit Microphone jack right there in case you needed to quickly record something digitally.



Although the Microphone jack wasn't exactly professional (it could be quite noisy and it only recorded at the sample rate of 44.1 kHz, the rate normal for CDs but below acceptable for professional audio recording), it was very convenient for quick audio captures. Many were the times that I just needed to grab a little snippet of voice-over to finish a piece of work, and didn't immediately have access to a DAT deck. Just plug up a mike to the mixer, change the capture settings in FCP and capture away directly from the Mike input. I'm not going to waste space telling you about how I also converted a bunch of my old LP's to CD's one summer using this same jack, my stereo and a CD Burner. Suffice it to say that I used that jack a lot, to great advantage.

So when I heard that the next Mac I bought WOULDN'T have this jack, I was a little miffed. Now, in order to perform the same

actions, I would have to purchase a sound card of some kind. I don't tend to cheap out on things like this, and if I'm going to spend money, I'm going to spend it on a decent quality device that is going to match my needs all the time. In a way, losing the mike input jack might have been a blessing, since it was forcing me to make decisions about audio that I had been getting away without making by using the mike jack.

Before I went out shopping for a pro card that would cost at least several hundred bucks and likely more, I decided to check out some of the much cheaper USB audio devices that have sprung up in the wake of the loss of the mike jack. The first device that popped up in my search was [Griffin Technology's iMic USB Audio device](#). Small, cute (shaped like the round AC adapter for a Powerbook) and very cheap at around 35 bucks direct, the iMic seemed to be doing what I more or less wanted to return to my system. Audio goes in, audio goes out and it isn't breaking the bank.

The iMic plugs into the USB port of any Mac (not just the Digital Audio ones missing the mike jack) and is supported under both Mac OSX and Mac OS 9. A trip through the Griffin page yielded several downloads that were necessary for proper operation. Although the device is supported by native drivers in OSX, the iMic I received needed its firmware to be updated, a process that was painless and quick (because I can read and follow instructions!). Under OS9, there was a Control Panel and a little tweaking of the Sound Control Panel itself in order to get it working correctly. Once again, Griffin's online documentation provided the steps clearly and concisely.

After properly installing the software, the firmware update and the iMic itself and rebooting, the device showed up automatically wherever there was a choice of either audio in or out. The only real hiccup that occurred for me in the installation process was that it was not clearly stated that the device wanted a dedicated USB port. I have quite a few USB input devices (mouse, Wacom tablet, keyboard, memory card reader, jog/shuttle; OK so I like toys, sue me), so I have to use a powered USB hub to run them all. Turns out that the iMic REALLY wants to plug directly into the Mac rather than the hub. Once I re-arranged things a little, the iMic popped right up and began outputting audio immediately

So the iMic is doing its job as an audio In/Out device. But the real test of course is in the quality of the audio. Now we have to look a little deeper. Unlike the old built in mike on Macs, the iMic actually

supports 48K sampling, which is extremely convenient for FCP'ers, since this is by far the most common sample rate in use in sequences. When I recorded quick audio through the old mike jack, I always had to convert the sample rate of the recording from 44.1 to 48K to avoid trouble in FCP. With the iMic, you just set the thing at 48K in the recording application settings and let it go, removing an annoying step in the process of bringing in quick audio snippets directly to FCP.

One of the less obvious problems with using the old mike jacks for capturing audio was the fact that the circuits at the jack were very noisy. Although in a pinch, you could use them, any serious recording would result in some unacceptable hiss just by virtue of the fact that the audio circuitry was surrounded by more or less unshielded high voltage electrical fields. The iMic solves this because the iMic does its sampling and analog-digital conversion outside the Mac. What goes through the USB ports is already digital and free of most of that objectionable noise. I found the iMic audio recordings to be reasonably clean, at least in comparison with the old microphone jacks.

The specs that Griffin provides demonstrate that the potential signal-to-noise ratio and total harmonic distortion of the device are quite decent for a consumer device. With these specs, it should perform at least as well as the average high-end modern home stereo system. Since most video folks at the consumer end (the ones who refuse to shell out more than 100 bucks for an audio device) usually record audio that will not exceed these demands, the 35 dollar iMic makes a lot of sense for many users. The iMic can actually support 24-bit recording, which offers even greater dynamic range and definition of sound, although it will be a while before the Mac OS offers 24-bit support at the native level. When it does, the iMic will be there waiting.

What was more troubling is the amount of noise that is likely to be generated when using the iMic to record voice-overs using the Voice-Over tool in FCP. The iMic has a single switch allowing the user to specify that they are using either a line input or a microphone input. A line input carries a much stronger signal and is not boosted when its signal reaches the audio device. This setting would be for audio coming out of DV cameras, tape decks, and anything else that isn't a microphone. A microphone input however carries a much lower intensity signal that must be boosted somewhat to be used (a process called 'pre-amplifying').

Because the iMic (like many high quality audio devices) allows the

user to choose the mike input and pre-amp the signal, one can simply plug a mike directly into the iMic and start recording. Sound good? Well, it would be if the USB cables were longer than a foot and a half! The problem is that recording audio with a microphone right next to a hissing, buzzing high voltage Macintosh, not to mention its giant two monitor setup with video deck and component preview NTSC monitor yields exactly what you would expect. "SZHEMEMEMEMEMEMEME..."

This isn't particularly Griffin's fault, since ANY recording on any equipment made right next to this stuff would cause trouble, from the good old Mac jack right up to the highest end audio post suite stuff. But the problem is that it is so easy to hook up and start working that many folks will do this and wonder where the noise is coming from. Some might even blame the iMic, which is simply doing its job! Between the FCP Voice-Over tool and the iMic, you are tempted to just sit a foot away from the screen and punch audio into your sequence without even thinking about the noise you are picking up. If you don't have good speakers/headphones, you might never notice how noisy your tracks are becoming. And as we FCP'ers are aware, FCP doesn't have the best toolset for cleaning up noisy tracks.

I solved this problem by running a connector from my mixer to the iMic. From the mixer, I could string any number of decent microphones to another location far enough away from the heavy hardware to lose the offending noise. I did also notice that using preamps on my Mackie line/mike mixer and sending a line level signal to the iMic was cleaner than plugging a microphone directly into the iMic with the switch set to Mike. This is to be expected though; the pre-amps on a professional mike mixer are going to be better than those on an inexpensive USB Audio device, about 400 to 1000 dollars better!

So how does the thing measure up? For 35 bucks, I can't imagine finding a better audio capture device that samples natively at 48K, the sample rate FCP'ers want and need. This is a FAR more convenient and much better sounding solution than the old mike jack was, and the cost is extremely reasonable. If you need to do quick, relatively clean audio insertions into your FCP sequences, this may be the tool for you. If you have a decent mixer (and all video/film editing stations should!), you can also run a line from the stereo mini input of the iMic to the outputs of your mixer and use its (probably cleaner) pre-amps to boost your mike levels, as well as access XLR connectors for better quality mikes.

The iMic is not a "professional" audio post-production solution and is not going to satisfy anyone looking for a complete audio postproduction solution. It is simply a method of inputting and outputting two channels of digital audio with your Macintosh. It will give you the ability to record 48K audio with little noise and distortion. It will eventually support the 24-bit resolutions that you know Steve Jobs is going to announce support for at one of these upcoming MacWorld's. And for 35 bucks, you reasonably can't ask more from it! A good device and a great, inexpensive improvement on the microphone jack we lost.

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