



## Tech Talk

### Home Recording Studios, Part 2 ©

by John McCarthy

Hi and welcome once again to Tech Talk. We're picking up where we left off last week: home recording studios and microphones. I'm often asked by hobbyists whether they should upgrade from the standard built-in computer microphone, and whether this will ensure an overall improvement on sound quality. If your major concern is just chatting on Skype, then no; but for anyone who'd like to delve a little deeper into the world of sound recording -whether voice or instrument - then the answer has to be a resounding yes. A major improvement can be obtained, and for relatively small expense, by purchasing a USB microphone. Indeed, the past several years have witnessed a rise in the quality and quantity of studio microphones that connect directly to the computer through a USB connection. These have been designed for simple, plug-and-play use, include an internal preamp and analogue-to-digital converter which means that the signal is sent directly to the computer over a USB cable. These are great for amateur podcasters or even musicians looking to share homemade productions online, YouTube enthusiasts and anybody who's serious about improving sound quality.

A USB mike eliminates the need for an audio interface between it and the computer, and indeed if you're willing to open your wallet just a little wider, a **good** USB mike can capture a wide range of human voices, with all their pitches, cadences, subtleties, shades of nuance and of course, flaws as well. As long as you have your desktop, laptop or tablet equipped with recording software handy, you're ready to go. If you want maximum portability and ease of use, the USB microphone is a good way to make quality recordings without breaking the piggy bank.

Models from the €60 to €170 range include the Samson Meteor, Rode NT, Audio-Tecnica's excellent AT2020, and also many people's favourite, the Blue Yeti, which offers stunning quality for the price and moreover has the added advantage of including four pick-up patterns: stereo, cardioid, omnidirectional and bidirectional ... we spoke about those last week. Nevertheless, it's also extremely sensitive and background noise can bleed into the audio. If the cat's purring downstairs in the kitchen, it'll be picked up.

For those of you with a higher budget and who put sound quality above all else, you're going to want an XLR-cabled microphone – either condenser or dynamic – with a separate audio interface. Now, the differences between condenser and dynamic microphones can be a confusing area for the indoctrinated hobbyist or enthusiast, and are way beyond the brief and scope of Tech Talk. In a nutshell, dynamic microphones use a robust design, are relatively inexpensive and general purpose, require no electrical power to operate, offer less mike-bleed, and are considered as the workhorses of the microphone world. Models that have reached cult status and are considered as the industry standard are the Shure SM57 (used on the presidential podium in the States when the Commander-in-Chief addresses the press or the nation) and SM58, which has remained virtually unchanged since its introduction in 1966, and the even more famous Shure SM7B, which was used by Michael Jackson to record all his vocals on the 'Thriller' album – no higher praise than that.

My own trusted, loyal and peripatetic companion since purchased in 1980 and on its stand immediately in front of me, is a Sennheiser MD421, one of the world's most well-known and immediately recognisable dynamic cardioid microphones. It's been a staple in studios and radio stations since the 60s, a real legend.

Condenser microphones are likely to be the most common types of microphone one finds in professional studios. Generally, they're much more expensive than dynamic microphones, and their prices can go as high as many thousands of Euros. Their main benefit over dynamics is that they can capture high-frequency detail much more accurately and are thus ideal for studio vocals and any instrument where a 'deeper' sound is desired. Condenser microphones are generally used in studios because of their high sensitivity and aren't recommended for rooms with a high degree of aural contamination – that's noisy radiators, near a train or bus station, large windows, etc. Keep in mind that they also require something called 'Phantom Power' in order to function, but any audio interface worth its salt into which an XLR condenser must be plugged will have this as standard. You'll also want a pop-screen in order to avoid exaggerating plosives such as 'p', 't' and 'k' and harsh sibilants, as for instance 's', and 'sh' – thereby avoiding the pitfalls of sounding like Kaa the snake in Disney's *The Jungle Book*, as so brilliantly interpreted by Sterling Holloway.

Well-known models are the Baby Blue, Blue Bluebird, Rode NT2, AKG C214, Stirling Audio ST55, MXL V67G – great value for money. Personally, it's an Audio Technica AT4033 for me on the occasions where I find myself in a professional, fully soundproofed studio.

The big problem is when you want to try out a microphone before buying it, because there's no simple way to judge a mike without working with it for a period of time. That's one reason why many simply tend to buy tried and tested microphones instead of unfamiliar brands or models. If you're really serious, then my advice would be to try and hire one from a reputable dealer.

Finally, be sure to get a quality stand and, most importantly of all, to sit on a chair that doesn't squeak, otherwise you'll get a lot of this however much you spend on the rest...

Out of time once again, I'm afraid. Do join me for another Tech Talk next time here on [Englishwaves.fr](http://Englishwaves.fr), where we'll be taking a look at audio interfaces and recording software. See you soon, and bye for now.