

A quick guide to DAB

What, why, who, how explained

by Rob Kerr published on 15 December 2008

What is it?

Standing for Digital Audio Broadcast, it's essentially technology used by radio stations to transmit a digit rather than an analogue signal such as the likes of FM. The initial concept was to deliver CD-esque listening quality over the airwaves, which in most cases it seems to do rather nicely.

Besides that, DAB can effectively offer more radio channels in the same space or bandwidth than its analogue counterparts. This is all without infringing on other stations or losing audio quality of any kind in the process. Marvellous!

It began its development way back in the 1980s, but really only went in to a mass rollout from 1999 onwards with the UK being the very first country to have a big up take.

What are the variations of the technology?

There isn't a great deal of variance within DAB, even from country to country. There is however a newer emerging standard that we'll talk about later, where the difference is quite considerable compared to what's around now.

In saying that, you still might find some variations in stations that broadcast at different bitrates to others. These are still comparable to CD quality, but with some coming under par and hitting a tad lower than FM standards.

Some people might find, and there have been comparison listening tests, the sound quality could be lesser than FM. This is open to wide debate, with furious and ferocious discussions still being waged today - almost 10 years in from the standard's launch.

Why should I care?

For one, there's a much wider choice than FM, MW and AM. And not just in number of stations



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either, as DAB also caters for a diverse range of music tastes.

The audio quality is also much better along with its reception; once heard it's really hard to go back without being threatened with violence. Think of a home projector film compared to a Blu-ray movie with 5.1 sound, then you'll get how far along it's come.

DAB radios in most cases are already tuned to all the available stations, without the fiddling and the tuning associated with traditional radios. They're also, more often than not, updated automatically over the air when new stations arrive - just to highlight a few key benefits.

There are other features that make this a winning technology. Digital text can be broadcasted on the accompanying music track, showing information such as the artist, track name, album plus many other details.

Text-based traffic updates can also be delivered in this way too, just to further the endorsement of how useful this sideline to DAB really is.

DAB radios that are coupled with flash memory or hard drives even let you pause live radio and then resume listening later on. This functionality also allows for the recording of radio in some cases.

What's a good example in practice?

As well as Freeview set-top boxes with DAB onboard, more and more home stereo systems have it built-in while car manufacturers are starting to offer it as an option.

The most popular consumer version of the tech is currently standalone DAB radios from companies like Roberts and Pure, with common place features such as pausing and rewinding functions on live DAB radio, with the ability of also playing MP3s from an SD card, the latter of which just goes to show the all round digital integration of such devices.

Where it's sadly lacking is in the appearance on personal music players, or built in to MP3 players. There are a few available, but they aren't that great. Where they fail against FM portable radios is that you either get a signal or you don't rather than just hiss and crackle as the signal gets weaker. It's here where we could see the next spurt in growth or even greater dominance over FM, if the risk was only taken just to include it.

Is there a competing technology that I should be aware of?

The nearest rival is internet radio where a radio station is streamed online over the Internet to your computer.

The quality of internet radio can be a better bitrate than DAB in some cases, but once again it's dependant on the radio station's broadcasting or streaming quality.

Internet radio offers various ways of receiving the signal and various software to do so. One station could run inside Windows Media player, another could be geared for RealPlayer software and so on and so on.

Two other factors to consider are; it's only as good as your internet bandwidth and it's more than likely computer dependant. Although most people do have a 512Kbps connection or over at home, you still have to watch out for what's running in the background hogging all the bandwidth.

What is in store for the future?

DAB had its first real airing in 1985, so as you can guess the technology has been around now for a while and really hasn't changed all that much. It's still using the same MPEG-1 Audio Layer II or MP2 codec from back then which was actually created as a part of the project, and has now gone on to feature in the DVDs we see around today.

What's next for DAB is a new version of this system, called DAB+. This uses a different format for delivering digital radio. This time around it's

<http://www.pocket-lint.com/news/19857/pocket-lint-quick-guide-dab-radio>

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using AAC+, a file format common to users of iTunes as it's the same format as their music.

Sadly DAB+ isn't backward compatible with DAB, due to the very same reason which makes it better - it's a different codec. This means in most cases your current DAB receiver will not be able to pick up the signal.

This new standard is due to arrive in the UK between 2010 and 2013, with early adaptors already seen in countries such as Italy and Switzerland.