

Demo: Frequency training by listening to your iPod

All sounds are made up of different 'frequencies', and which frequencies are loudest determines how high or low the pitch of the sound is.

Learning to distinguish between frequencies is essential for studio engineers and other audio professionals, but is also extremely beneficial to musicians, as it expands our perception of sound, so we can appreciate much more complex things in what we hear.

There are 10 standard 'frequency bands', ranging from:

- **The lowest frequencies we can perceive**
e.g. The '30 Hertz' band, barely audible on some sound systems
A dull rumble for the lowest band (think subwoofer or booming cinema sound)

to

- **The highest frequencies we can perceive**
e.g. (the '16 kilohertz' band)
A very high pitched hissing for the highest band.

This demo shows one easy way to train your ears to recognise the different bands – listen to music!

By temporarily boosting the volume of each band, you learn to appreciate which parts of the music are occupying each band. For example, that the bass guitar is around the 125-250 hertz bands, and the shimmery bits of the cymbals are in the 8-16 kilohertz bands, and so on.

Track 1 is an introductory track which boosts the 'pure frequency' versions of each band ('pink noise' for you audio pros!). Each band is announced, then the normal sound is played, then with that band boosted. **Listen for the change.**

After that, there are several specially prepared versions of songs, in which different bands are boosted in turn. Each is announced before it's boosted.

For now, just try to listen out to how the sound changes after each announcement – which instruments are louder than they were before? Has the sound of an instrument changed slightly (e.g. become bassier or clearer-sounding)?

After spending a while with tracks like these:

- You are able to anticipate the effect of boosting each band
- You can identify which band is boosted when the sound of a recording changes
- You can hear much more happening simultaneously in each track, as your brain begins to perceive the contents of each band, rather than just the entire track as a whole.