

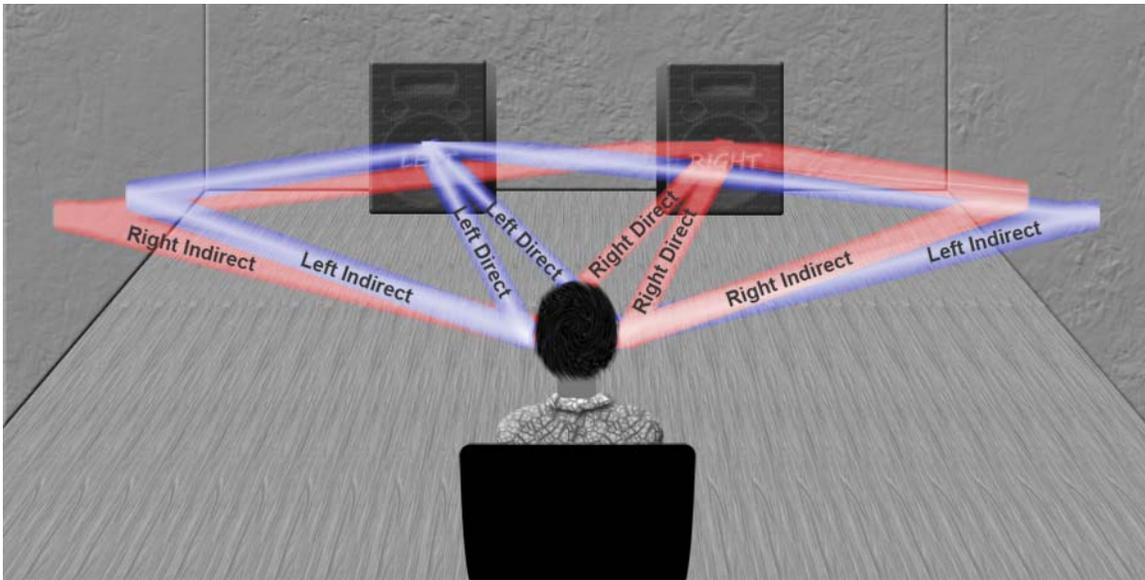
## DA11 and the >PiC<™ (Playback Image Control) feature

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The >PiC<™ is a new patent pending concept. Is it just another feature? Or is it a **must have** feature?

Mixing and mastering audio calls for much attention to proper stereo image. Virtually all of the music preparation is done while monitoring sound generated by speakers. However, this process is based on the assumption that the listener's (end user's) listening environment will be similar to the space where the music preparation took place. That assumption is often incorrect. Often, speaker location in the home can not emulate a mastering facility setup. Furthermore, an extreme discrepancy occurs when the end user listens through headphones.

The picture below is a basic representation of listening to stereo speakers



The left ear hears sounds generated by BOTH speakers.  
The right ear hears sounds generated by BOTH speakers.

The impact of each speaker on the left ear differs from its impact on the right ear, but sound from each speaker impacts both ears noticeably. Without accurate crossover, the sound field becomes distorted. Proper “adjustments” by competent mixing and mastering engineers can create a very realistic listening experience.

How much sound from the left speaker is heard by the right ear (or the right speaker on the left ear)? Try for your self, it is easy:

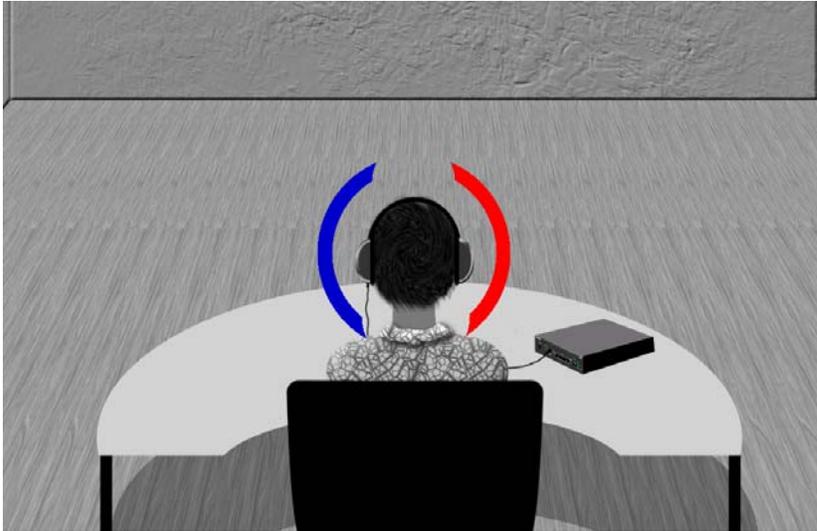
1. Turn off the right speaker
2. Listen to the left ear by “blocking your right ear”
3. Listen to the right ear by “blocking your left ear”

Clearly, the amount of sonic contribution from the “opposite speaker” is very significant.

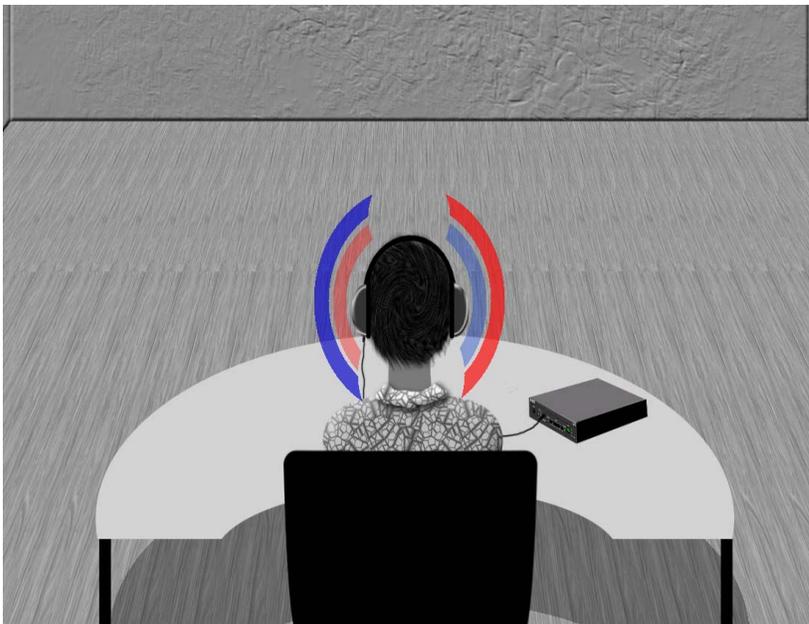
It is not too difficult to realize that the distance between the speakers, as well as the distance between the listener and speakers plays a significant role in good creating a stereo image. If the speakers are right next to each other, their impact on both ears is nearly identical. Placing speakers too far apart also ruins the sound field.

When using headphones, ALL of the left channel sound ends up at the left ear, and NONE of it at the right ear. Conversely, ALL of the right channel sound ends up at the right ear, and NONE of it at the left ear. The headphone listener loses the benefit of a proper (realistic) sound field, because the music was prepared for listening through speakers.

Headphone listening without the ">PiC<™



Headphone listening with the >PiC<™



Mixing and mastering engineers have many tools at their disposal (both software and hardware) for creating good stereo field. However, all the good work is based on the assumption that the playback setup properly emulates the music production setup. This assumption may “fall apart” at the PLAYBACK location, and no amount of preparation at the PRODUCTION locations can solve it ahead of time. Whenever the speaker location is less than ideal, or whenever the listener is using headphones, a correction at the PLAYBACK location is required, thus “Playback Image Control”.

No one would argue that adding a 6dB bass boost, some heavy EQ, or compression is a subtle change. On the other end of the spectrum, there are ongoing discussions regarding the causes of most minute and subtle sonic alterations. For example, people listen and compare the affects of different speaker wires, AC power conditioners, or the types of capacitor in some given circuit. Many sonic alterations are so minute or even subjective that they beg for objective double blind listening tests.

This >PiC<™ is a new concept. Few people have experienced listening to the DA11. So where does it belong to in terms of impact on audibility? The >PiC<™ does not require double blind listening. There are two cases when you cannot hear the stereo image adjustments:

1. The music source is playing mono (not stereo)
2. The listener is significantly hearing impaired in one or two ears.

In other words, the >PiC<™ is a process that solves real issues in a real way. You will hear it clearly. It is not yet another box attempting to artificially force a sense of “space” into music recoding that lacks space. The >PiC<™ image width correction enables the listener to alter the amount of stereo width without added sonic alterations (such as added distortions, noise compression...).

The DA11 offers 6 image settings for each channel. The settings are:

- +2 for widest
- +1 for wide
- 0 for normal
- 1 for narrow
- 2 for narrower
- 3 for narrowest

Of course, the optimal stereo adjustments differ between individual setups. For most music recordings, headphone use or speakers that are set too far apart call for narrower stereo image settings. The wider image settings are best suited for speakers that are too close together, and to a listener located too far away from the speakers. Also, wider image settings work best for many binaural recordings which as a rule are better suited for headphones. At times, the music itself also plays a role - reflecting the artistic tastes of different mastering engineers.

The DA11 image control is quick and easy. Using front panel controls or a dedicated low cost universal remote control, adjusting the image in real time is as effortless as a volume adjustment.

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