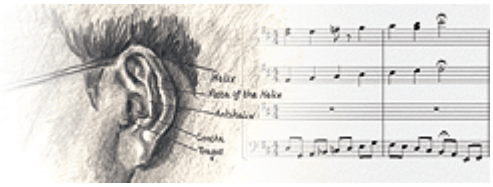
feature ear training

an ear for detail

IMPROVING YOUR MUSICAL SKILLS WITH EAR TRAINING



Ear training — learning to intuitively recognise note intervals, chords and progressions, and even absolute pitches — is something that many musicians could benefit from, although few actually attempt it. **Richard Leon** explains the skills involved, and rounds up some software which can help you improve in this area.

I'm perpetually amazed by the number of people I meet who say 'Oh, I'm not at all musical' when I tell them I make music. Push them a little and it inevitably turns out that they have huge CD collections, or that they couldn't imagine life without music from the radio. The simple truth is that if you like listening to music, you're musical; it doesn't matter if it's Radio One or Classic FM, the Spice Girls or some obscure academic composer most people have never heard of. If you like listening to it, you like music, and you have some form of musical ability, even if it's more passive (receptive) than active, as in a great songwriter or composer.

What Ear Training Is

But exactly how good are your ears? It's a fact of life that having a good musical ear makes for easier and more creative music-making. Unless you're classically trained or ridiculously talented from birth, the chances are good that your ears aren't used to listening to things and picking them apart. Anyone knows that learning to play music — or, if you're a synth and sequencer fan, learning to program music — requires a big investment in time and enthusiasm. What not so many people realise is that making music happen is only half the story. You can make a similar investment in your ability to listen. And if you do, the new skills you acquire will pay you back in spades.

The process is called ear training. If you make music for fun, ear training can give you a better appreciation of how music works and how it's put together. With a trained ear, a mush of chords, backing and vocals snaps into sharper focus. You'll hear details and relationships you weren't aware of before. At its simplest, being able to follow someone else's music note-for-note is pretty damn impressive, especially when you suddenly find you can play it yourself.

If you're a professional, you can also use ear training to improve your earning power.

Programmers — the musical, not the software sort — are sometimes handed tapes or CDs of a track or an album and asked to recreate it for a live performance. If you're not given the sequence data — and sometimes you're not, because it may not exist — then a trained ear is the only way to deal with this kind of challenge. Remixers, too, can use the skill to up their rates. If all you're given is a finished track and the vocal line on DAT or CD, deconstructing the original and reconstructing it in a creative way is easy. But if you can't hear how the song works, you're going to waste hours, or even days, trying to work it out by trial and error. DJs can use ear training to arrange their sets more effectively, too, by taking into account key changes as well as the less specific 'feels' of different grooves.

And, of course, if you make your living from playing covers in a band, ear training will make your life a lot easier. You'll no longer need to spend a fortune on sheet music, and this can only be a good thing, because quite a lot of published music isn't all that accurate, and solos and other recorded details aren't always included anyway.

With so many useful pay-offs, it's surprising that ear training doesn't get more attention. Many people seem to assume that anyone who can do these things can do them from birth, and that those without the required 'magic ear' genes will never be able to acquire them.

In fact, this isn't even slightly true (although the debate continues to rumble on — I'll return to the point later on in this article). As with learning languages, it is admittedly a lot easier to train your ears before your brain congeals into adulthood. But there's still plenty you can do improve your ear even after puberty has stopped distracting you.

One practical problem with ear training was that until recently you needed someone to help you with it. Playing notes and trying to follow them is pointless if *your* fingers are the ones on the keys or fretboard. But finding a good teacher is difficult, and sometimes expensive. Computers and CDs have changed all that, and it's now possible to develop your ability to hear pitches more clearly without human help. I've included a quick look at what I consider to be some of the better products in this field in the boxes dotted throughout this article.

But before you leap straight into practicalities, let's take a closer look at what having a trained ear means. There are two completely different skills involved, and it's possible to be good at one while being hopeless at the other. Either is useful on its own, but being able to do both will completely transform the way you make and listen to music.

KBA Software *KBAComplete* (PC Only)

KBAComplete is a suite of three different programs, including interval training, chord/scale training and chord sequence recognition, all written by a retired music professor and author. You can get each part separately for US$18.95 if the full 40 dollars seems like too much. And, of course, you can download and pay over the Internet.

Visually, *KBA* is quite crude, and both the interval training and chord/scale training are basic, and not particularly customisable; I didn't feel that I made much progress while using them. The chord sequence recognition is the most useful feature — you get a few hundred pre-written bits of real music, and have to pull the chord changes out. This is closest to what you have to do when listening to real songs, and although most of the music is cheesy, this is the only package I've tried that gives you this option.

Overall this is a bit of an also-ran, in a 'you get what you pay for' kind of way. Nevertheless, if you have US$18.95 to spare, it could be worth getting the chord sequence recognition part to give yourself some extra practice.

Relative Pitch

First, there's relative pitch. This is the ability to follow a piece of music and make an educated, accurate guess about how it's put together. The first rung on the relative pitch ladder is being able to identify the gap between two notes. If you can do this, you can hear someone play a fourth, fifth, major-seventh or octave interval and label it immediately. You might think this is a fairly abstract skill — and you'd be right. In practical musical contexts, there isn't all that much you can do with interval identification, although occasionally it comes in handy. Realistically, this is just a starting point, although if you've never done it before, it's still a challenge. Most people can hear fifths and octaves quite easily (remember all those synth patches which have oscillators detuned by an octave, or sometimes a fifth?). Beyond that, it gets harder. Fourths are like fifths, only not quite as 'in tune'. Seconds and sevenths sound plain 'out of tune'. Major and minor thirds and sixths get more confusing still, as they're neither in tune nor out of tune enough to be obvious to the untrained ear. With all of these, most people find it's just a matter of practice.

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The next level up is being able to follow a tune. This sounds like it is just an extension of being able to recognise intervals, but there's more to it than that. Real music isn't just a random collection of pitches; notes are always tied to a scale. Almost everyone knows about major and minor, but there's also a selection of other common scales that get a lot of air time in blues, jazz, and rock. Being able to name these scales is overkill for most people — particularly as some of them don't *have* established names. Being able to recognise them, though, is a very useful skill.

Beyond scales, all music has repeated patterns. These are called either idioms or clichés, depending on how generous you're feeling. Learning them can make your life a lot easier, because you can recognise whole riffs in one go. This is one of the simplest and most useful kinds of ear training you can attempt. If you go through any style of music you like, learn to recognise some of the most common patterns, and then learn to play or sequence them, you'll have gone a long way to mastering that musical style.

A related skill is chord recognition. Being able to tell major from minor is a good start, but ideally it should be just as easy to recognise diminished, augmented, and other more colourful chord patterns. While this may sound daunting, people often find this part of the process is relatively easy. A key point here is that you don't need to spend time learning chords you never use. If you play fairly simple rock or dance arrangements, then major and minor chords, with a few sevenths, will do just fine. If your interests are more jazzy, you may find yourself heading off into rarely explored harmonic hinterlands that include chromatically altered ninths and elevenths, and other musical esoterica. How far you take this is up to you. While you could spend the rest of your life learning obscure chords, all you really need to do here is learn the chords you're already familiar with in the music you make intuitively.

As with tunes and riffs, chord sequences also tend to be clichéd. Most people are familiar with the three-chord tricks that are used in a lot of pop and rock. (D, G, and A on guitar, because it's easy to play. Or the 'Phil Collins sequence'; E minor, D, C, D). A bit more listening will show that a few other more obscure sequences and changes are also popular, such as going from minor to major during the chorus of a song. Again, you can make huge improvements in your ability to pick things up by ear just by learning to recognise, and perhaps play, these sequences. It's impossible to stress this enough — ear training is at least as much about learning to recognise common musical patterns that you already know as it is about learning to hear the relationships between individual notes in isolation.

You could say that music is like a building; stacking bricks on top of each other is important and stops the whole thing falling down, but it's the overall shape of the thing that matters most. If you can learn to recognise different outlines, working out where the individual notes go gets a lot easier. There's a story told about how the young Mozart was able to listen to a performance and then write down every single note played. Remembering thousands of notes would be impossible, even for a genius; but remembering the overall structure of a piece and using that as a memory aid to work out the rest is just about feasible, especially if you already know enough about the different structures that composers use to be able to pick the one that was used when writing the music. After all, even classical music has accepted structures, and even clichés. Learn those, and suddenly it becomes altogether more approachable.

Finally in the relative pitch camp, there's the ability to deconstruct an arrangement into its component parts, such as bass, vocals, chords, and lead, and identify each part separately. Complex as it may sound, this is really just an extension of the skills I've already mentioned. If you can hear the structure, you can usually fill out the individual lines just by listening to them, even in the densest of arrangements, where a little guesswork may be necessary.

You may be boggling at this point and thinking this seems like a lot to take in. Isn't it easier just to fire up your home studio and start playing stuff intuitively? Indeed it is, and there's no reason at all to stop doing this. But being able to understand melodic lines and structures opens up completely new kinds of music-making. It also makes it easier to be creative. If you can't hear the big picture (as it were), your songwriting can be a hit-and-miss affair. You've probably heard or recorded demo tracks that sound nearly-but-not-quite impressive, and yet you can't quite put your finger on why. Once you start to understand how successful songs are put together, you're that much closer to making music that people want to listen to. It's true that learning the tricks and the formulas is no substitute for true inspiration, but there's no harm in being able to give your music an edge it wouldn't otherwise have.

Emagic *HearMaster* (Mac/PC)

This is a relatively unfussy but effective and comprehensive way to teach yourself to recognise intervals, tunes, chords, scales and rhythm patterns. It has a deceptively simple interface which hides a lot of different features. You can load in pre-programmed lessons, or set it up exactly as you want — so if you're having trouble telling the difference between major and minor thirds, you can concentrate on those until you get them right reliably. While testing it, I found my abilities at the basics improved rapidly, although it wasn't so good at the more advanced areas. It will play tunes instead of just intervals for you to recognise, and it can teach you some fairly obscure jazz-type scales.

The downside with *HearMaster* is that it's a little old (last updated in 1997), a little flaky, and will sometimes do strange things like lose all its chord tables, or start speaking to you in German. That aside, it's good value for what you get, and probably the most effective way to run through simpler ear-training lessons.

Perfect Pitch

The above skills are all derived from an ability to recognise relative pitch. But there's a different, unrelated ability which can also be extremely useful. Perfect pitch is the ability to hear a note and name it, without reference to anything else. If someone plays an 'A', you can tell that that's what it is, and not any other note. If you have *advanced* perfect pitch, you

can also determine whether that A is correctly in tune, or slightly sharp or flat — again, just by listening to it, without any other kind of pitch reference. It's like having a built-in biological guitar tuner, or set of tuning forks.

The advantage of perfect pitch is advanced musical literacy. The disadvantage can be musical hell. Imagine being unable to listen to music without hearing tiny deviations from perfection all the time. Worse still, imagine having the notes you're playing clash with what you *expected* to hear, such as when playing an incorrectly tuned piano (and pianos are often deliberately tuned a semitone or two flat, partly because they stay in tune longer that way, and partly because old cheap models will very occasionally implode because the frame can't cope with the string tension for correct tuning — not something you want happening in your living room).

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Once again, 'conventional wisdom' has it that you either have perfect pitch or you don't, and that it can't ever be acquired. In fact, most people seem to have a rudimentary sense of perfect pitch. Try playing a MIDI-based arrangement in your favourite sequencer, then transpose it to a different key and play it again at the same tempo. Doesn't it sound strangely, inexplicably different? In theory, all the tempo and relative pitch relationships are exactly the same, so there should be no difference. In practice, just about anyone can tell that something important has changed, not just in the notes, but in the 'feel'. And that's where perfect pitch seems to live for those lucky enough to have it — *not* in the notes themselves, but in the 'quality', 'vibe', 'feel', or 'colour' of each one (all common examples of the frustratingly vague terms people resort to when trying to express musical ability in words). Some people try to teach themselves perfect pitch by listening to a tuning fork over and over until they remember the tone, and then referring anything they hear to that internal reference. But that's not really perfect pitch; it's more like relative pitch keyed to an absolute frequency. The experience of true perfect pitch seems to be very different.

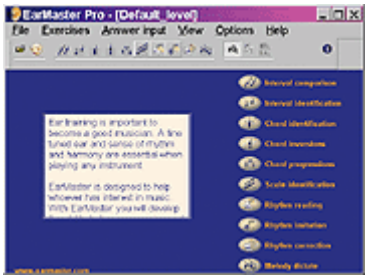
You can get a hint of it just by playing two different notes on your favourite instrument (if you have a synth, use your favourite patch). Swap between them, and really listen. You may start to hear that not only does the pitch change, but that each note has an indefinable quality about it — it may honk, squeak, squawk, blart, or be smooth and mellow. If you practice recognising those differences, you'll eventually be able to open up that aspect of your hearing, and ultimately recognise individual notes.

That's the good news. The bad news is that when starting out, perfect pitch is a lot easier to hear on only one instrument — the one you're most used to playing. It seems to take a while for it to develop on other instruments too. The rest of the bad news is that starting to hear this way with any kind of confidence can take you anywhere between six months and two years, depending on how much you practice. Is it worth it? Surprisingly, even just getting a few hints of the experience suggest it can be. Instead of hearing chords, you suddenly start hearing music as relationships between different notes, each of which has its own emotional quality. This can make listening a lot more intense, and a lot more enjoyable. But is it an essential skill? Probably not. Most people, including plenty of professional musicians, both classically trained and otherwise, seem to get by without it. In ear-training terms, it's the icing on the cake, as opposed to the bread-and-butter usefulness of relative pitch.

MidiTec *EarMaster Pro* (PC Only)

It's almost a rule of thumb that any software that has 'pro' in its title is

anything but. But *Earmaster Pro* is a very competent package, covering everything from intervals to complex chord sequences, all arranged as graded lessons from the very simplest to the almost impossibly obscure. In terms of content, this is perhaps the most comprehensive package around, as it covers just about everything you might need to know. But the slant is definitely classical rather than rock/pop (never mind dance) and that makes it more appealing for anyone studying for grades or university entry, and not quite so useful for songwriters, or anyone who just wants to bash away on their Strat or Nord Lead.



The main downside is the lack of scope for customisation. The lessons are pretty much as given, and if they're not what you need, there's nothing you can do. This only really matters with the absolute basics — once you get past that stage, the approach seems to work just fine. The other disadvantage is that the software is quite results-driven, and it's easy to feel like you're taking an exam instead of just learning because you want to. On this note, you might find it useful to know that there is actually a slightly more expensive education-oriented version, *EarMaster School*, which adds better statistics, custom lesson design and network support.

Overall, if you don't mind a fairly disciplined approach, it's an effective teaching aid, and good value too.

The Dangers Of Thinking Too Much

I started off this article by commenting that most people have some degree of musical ability, even if they don't think they have, and that this ability can almost always be improved by training. If you're of the opinion that you're either born with a good ear or not, you might counter this by commenting that there are plenty of people who like music, but can't sing in tune to save their lives. Surely, the argument goes, these people are simply tone-deaf? Furthermore, there are many obviously gifted musicians around who nevertheless find the process of ear training difficult. Doesn't this strengthen the argument that you're either gifted with inate musical ability or not, and that time spent trying to develop it is time wasted? I'd like to conclude by attempting to explain why I think these arguments are not valid.

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£ *EarMaster Pro* £49.95. Prices include VAT.

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Dealing with the second point first — singers and violinists tend to be more aware of pitch than guitarists and keyboard players. A little thought should suggest why. If you're singing, you need to be sensititive enough to hit those notes exactly. Similarly with string playing — no frets on the fingerboard board means no room for error. Guitars are fretted so you can take pitch for granted, at least until you start bending strings. Real pianos, of course, aren't even slightly capable of pitch-bend, so again you can just assume your fingers will play in tune. Synth players who practice their pitch-bending technique tend to open their ears while they do it, but most keyboard players just set their keyboard's pitch-bend range as wide as possible and hope for the best.

So, put simply, the ears of some musicians don't have any incentive to open, depending on the instruments they play. But that's not at all the same thing as being tone deaf. Tone deafness is practically a medical condition, and is extremely rare. Most people have some sense of pitch and pitch relationships, although usually their ability is rudimentary and doesn't start working properly until it gets some practice. And as for singing — teaching people to relax and lose their self-consciousness sorts out a surprising number of pitching problems.

Something similar applies to ear training. Pitch recognition works best when it *isn't* filtered through the conscious mind. Most people's musical instincts are sound, but they get swamped by a counter-productive tendency to analyse and understand what they're hearing — which is actually the *opposite* of what ear training is supposed to be about. Getting your analytical mind to shut up is hard work, but when you do, you'll likely be amazed at how much more you can hear, and how different everything sounds. SOS

EarTraining.com *Relative/Perfect Pitch Supercourses* (CD/Cassette-based Course)

We cynical Brits may be unimpressed by the bad photography, cheesy intros, dodgy voiceovers and general commercial shininess of these two American CD courses. But if you can get past the camp and the glitz, they offer an interesting alternative to software-based instruction. Coming on a sizeable pile of CDs, both include the kind of information you'd normally only get from a teacher. Where software checks how well you're listening, tuition tells you what to listen for. This can make all the difference between stumbling around and making real progress.

Both courses follow the same format. There are two lessons per CD, each of which starts with an entirely skippable and pointless introduction, before getting into the meaty stuff, which is mostly teacher David Burge telling you things you need to know, followed by some exercises. For US$139, the *Perfect Pitch* course takes you from the basics of listening to being able to hear the subtle differences that can help you recognise absolute pitches. The more advanced levels help you with fine-tuning and intonation, so you can recognise not only absolute note values, but also whether they're precisely in tune or not — a useful skill for anyone who makes music, and damn-near-essential for anyone who sings, or tries to.

The main issue with the course isn't the money involved — $139 isn't all that expensive, considering what you get — but how much time you have to put in. It only takes a few minutes a day, but realistically, no one is going to finish this course in less than six months, and you could still be learning a couple of years down the line. Also, there's no guarantee that you'll have perfect pitch at the end — although I'd be very surprised if anyone finished the course without much improving their ability to recognise all sorts of musical details.

The *Relative Pitch* course (which for some reason isn't advertised on the company's web site) follows a similar format, but takes you through just about every chord shape and interval used in music today. This is far more comprehensive than any of the software courses. It's useful for anyone, but possibly more so for jazz/funk/obscure players than people heading in a classical direction.

Is it worth it? 349 dollars (the cost of the *Relative Pitch* course) is a hefty price tag, and looked at objectively, you'll get better value from one of the software packages. But if you can spend this kind of money without wincing, then yes, it's worth it, as you get the next best thing to personal tuition.

If you don't like either course, there's a 40-day money-back guarantee. There are no electronic commerce facilities on the web site, so you have to phone or fax the US to order, or use unsecured email.

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£ *Perfect Pitch* course US$139; *Relative Pitch* course US$349. Contact EarTraining.com for shipping details.

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