GROVER NOTTING CR-1 & CR-2

There's not a lot to these single-driver cross-reference monitors, but that's just the point.

Text: Andy Stewart

The smaller of the two models, the CR-1, houses a 68mm speaker that screws directly onto the 12mm MDF cabinet. The reasons for this are sonic: edge diffraction was apparently harming the clarity of a test model that was built with a recessed driver.

When it comes to choosing speakers for the express purpose of *working* with audio, one of the main dilemmas we all face is how to pick the ones that will help us translate our work into the real world. Because, in the end, it's what happens 'out there' that matters most. There's not much point having your mixes sound incredible in your own studio if it's at the expense of the listening experience everywhere else. You're never going to be able to bring the entire audience into your studio for a listening party so it's critically important that your mixes translate beyond the studio door. If your work turns into a squashed pumpkin when it's played on other people's car stereos (or 'monos'), on TV, or in the supermarket aisle, you've failed.

So how do you achieve this illusive real-world translation and, more importantly, recognise it when you do? Apart from working hard and improving your skills, one of the most common ways any studio achieves 'translation' is to have several sets of 'reference' monitors. This gives an engineer the ability to 'cross reference' a mix in an attempt to predict and mimic typical real-world listening environments.

LOST & FOUND

Unfortunately, most speaker manufacturers seem to have all but abandoned single-cone cross-reference monitors, either because they think there's no demand or, worse, no need for them. Perhaps they're simply concerned that small midrange monitors sound too 'lo-fi' to be worthy of their good name.

A Melbourne-based company, Grover Notting, is trying to address this gap in the market by providing a well constructed single cone 'speaker in a box' that's built specifically as a tool of trade. The Grover Nottings offer a high-quality crossover-free speaker that's focused on the 'intelligibility band' (the midrange). This not only provides an alternative perspective to the larger two- and three-way systems – which are typically preoccupied with 'DC to daylight' – it also creates a non-fatiguing environment for people forced to work long hours editing, prep'ing and mixing audio. There are two models in the Grover Notting range: the 'cross-reference' CR-1 and CR-2. Both are passive (i.e., *sans* amps), and each one offers that all-important 'second opinion'.

These Grover Nottings distinguish themselves from most other speakers on the market by being unashamedly 'unremarkable'. They're built to perform a specific task, not sound glamorous, look glamorous or provide a superior set of speakers to the ones you already own. In other words, they're all about *augmenting* a listening environment, not replacing your main monitors.

Both the CR-1 and CR-2 models are designed to perform a similar role to the one previously dominated by Auratones for so many years. Above all, they're designed to help answer the simple yet critical question: "What does the audio I'm working on sound like through a small 'lowest common denominator' speaker?" I'd contend that any commercial or home environment that produces audio – whether it be for money or food stamps – requires a pair of small speakers such as these to help answer this fundamental question.

QUESTIONS ANSWERED, QUESTIONS RAISED

Reviewing the Grover Nottings actually compelled me to ask a few questions of myself over the last month or so. In the time I've had these little black cubes, I've run both models alongside a mint pair of Auratones, as well as a small pair of Sansui bookshelf speakers, my Quested 2108As and Yamaha NS10s, and the question that has constantly stalked me has been: "Are they any good?"

It's a vexed question. They certainly don't sound like my Questeds, resplendent as they are in all their top-end glory and powerful bass. The Grover Nottings sound decidedly small by comparison – the CR-1s in particular, quite tiny. They provide nothing like the spectacle of the much larger and more powerful two-ways. But then, that's precisely the point, isn't it? They don't need to perform like a larger speaker – that role is already being performed by the main monitors.

"So what is their role then?" I kept asking myself… "to actually sound bad?" Well, no, they're *reference* speakers – for 'referring' your mixes to a typical lowest common denominator, while also serving to minimise fatigue during those long hours of editing and comp'ing. They're not supposed to be just plain awful sounding. But this then repeatedly led to a second question: "So if that's the case, why can't I just go down to Dick Smith and buy a pair of $19 plastic computer speakers?" Well, the reasons are two-fold…

Whatever speakers you choose have to survive the rigours of the studio environment over the *long term*, not one Summer. Moreover, they have to maintain a consistent level of performance throughout their (hopefully) long life. Secondly, whatever speaker you choose has to cope with the cut and thrust of audio production, not simply replay finished masters. So, unlike the $19 special, small commercial reference speakers still need to endure the extended dynamic range (namely, speaker excursion) that recording, mixing and mastering processes throw at them (sometimes even by accident). And in this regard, plain ol' garden variety computer speakers won't

WHY DON'T SOME MIXES TRANSLATE?

There are myriad reasons why some mixes don't translate from one replay system to the next, but two fundamental reasons that stand out are compression and tonal balance. Compression is talked about a lot in the world of pro audio, but it's rarely stated that compression is fundamental to translation. If a mix is created where the dynamic of the music is left open in order to remain 'true to the performance', it might sound incredible on your neighbour's $20,000 audiophile stereo system, but chances are it will be largely inaudible and probably quite distorted through the laptop speakers, or the mono TV. Compression reduces the dynamic range of a mix, and in doing so, not only lifts the music above the high noise floor of many real-world listening environments, it also reduces the chances of one group of frequencies completely dominating the others. A lack of compression tends to exacerbate and expose the differences in replay systems.

Tonal balance is also fundamental to translation for the obvious reason that any imbalances in your mix will again be exposed by the radically different replay options and listening environments out there. In popular music, for instance, things like bass guitar and kick drums can translate badly – becoming almost non-existent on smaller reference speakers – if they don't contain enough midrange articulation in their sound. For things to translate between big three-way speaker systems right down to single two-inch paper drivers, the midrange is critically important because, regardless of the quality, it's the midrange frequencies that are common to both. If you want your big driving bass instruments or those shiny top-end sounds to translate across the incalculable numbers of speaker varieties out there, listen to your mixes on small single-driver speakers and make sure these instruments have sufficient midrange content to remain audible when the bass and treble are ripped away by inferior systems.

survive. But an argument can certainly be put forward that mimicking 'the lowest common denominator' isn't as effective as going to a hi-fi store and simply *buying* it. As I said earlier, it's a vexed question.

The main reason why someone would be well served by small reference speakers such as these is actually pretty simple. Getting to grips with several sets of monitors that contain different-sized drivers that replay different tonal balances is one of the best ways to achieve great mixes. And importantly, at least one of these pairs should contain no crossovers, in order to allows the critical 'intelligibility band' to be free of the distortion, phase and tonal imbalances these electronic components can sometimes generate. The problem is that most of us are out there looking for the best possible speaker that covers the maximum frequency range, forgetting that these only tell half the story.

More inexperienced engineers, in particular, have a tendency to mix on the best speakers they can afford, and rarely, if *ever*, compare their mixes on other smaller systems until most of the work is done, or worse, after they've left the studio. The problem with this approach is that there's often (understandably) a reluctance to modify all that hard work later on, when it's belatedly discovered that the big, powerful, glamorous mix is sounding like a furry wombat through the small ghetto blaster back home. Developing the ability to work mixes up on small, boxy or thin-sounding speakers *throughout* the process initially takes courage – and can often cause confusion in the minds of the inexperienced – but once you're in the habit of working with several 'references' you'll become a better engineer and a force to be reckoned with.

CR-1 CONSTRUCTION & SOUND

The smaller Grover Notting model, CR-1, which physically forms a perfect cube, isn't much smaller than the one made by that notorious Hungarian brainbox, Erno Rubik. All its three dimensions are 110mm, just large enough to house the 68mm speaker in an infinite baffle (no porting) constructed of 12mm MDF. The transducer itself is screwed directly onto the front of the cabinet rather than being recessed into it, which initially struck me as looking a little crude, despite knowing that this exemplified Grover Notting's 'function over form' philosophy. But eventually I grew to prefer its look over the larger CR-2, which has a more typical recessed 100mm transducer. All 12 edges of the CR-1 are sanded into smooth curves and the whole cabinet is finished with a quality two-pack satin black paint that looks classy. Indeed, surrounded by my other monitors, they look great and, somewhat surprisingly, fit right in.

The CR-1s possess no crossovers, no electronics, no amps, just two wires that link the speakers to your choice of amplifier via spring terminals at the rear. Their sound is crisp and defined at low listening levels, with a good balance of midrange frequencies. Their lack of porting and diminutive drivers mean the speakers roll-off quite high, at around 100Hz, providing very little at all in the way of meaningful bass. At the other end of the frequency spectrum, they're far more capable, working well right up to around 15kHz before, again, rolling off. At lower listening volumes they're smooth and clear but once the levels get up over about 85dB, things start getting pretty messy. But then again, you'd expect that from small drivers forced to cope with full-range program.

CR-2 CONSTRUCTION & SOUND

The CR-2 model is an altogether larger speaker – again, a perfect cube, this time measuring 185mm. It has the same curved edges, black satin finish and infinite baffle design as its little brother (although it's constructed from 18mm MDF, not 12), but the frequency spectrum is quite different. The sound is more extended in the bottom end (rolling off at around 60Hz), but there's still nothing meaningful in the way of genuine bass. Being a single driver, this extended low range inevitably comes at the expense of the tops, which disappear above about 10kHz. The result is a boxier sounding monitor, with less clarity and imaging than the smaller, more nimble driver housed in the CR-1.

WHICH TO CHOOSE?

In the end, despite my best efforts, I couldn't decide which Grover Nottings I preferred. I came close to the CR-2 for a while, but kept wishing they possessed a whisker more presence above their 10kHz limit. I then leaned towards the smaller CR-1s but eventually found them to be just a little too small for my purposes. The CR-1s certainly possess more top-end than the CR-2s, but being a single driver, this inevitably comes at the expense of the low end. So I reckon I'll be sitting on the fence for now; until such time as I can set them all up again and have another listen...

Both models in the new Grover Notting range are credible cross-reference monitors and I have no doubt they will be taken up in droves by people who understand the value of the role they play in sound production. They're simple, well constructed, crossover-free and cost effective. There's even a flight case option that's super-sturdy and a soft carry bag for taking your speakers on holiday with you! ■

NEED TO KNOW

Price
CR-1: $299 a pair; CR-2: $399 a pair; Soft Carry Case: $199 & $279; Hard Roadcase: $469 & $499.

Contact
ATT Audio Controls
(03) 9379 1511
info@attaudiocontrols.com
www.attaudiocontrols.com

Pros
Well constructed.
Good examples of an all but forgotten design.
Cost effective.
Carry case and hard roadcase options.
Australian made.

Cons
Roadcase option costly.
Smaller CR-1s can have a tendency to slip off some surfaces if the audio cables are too heavy.

Summary
They're not awesome-sounding speakers; they're not supposed to be. They're an unusual monitor to review in many respects – their role needs to be understood before their true worth can be heard. The optional soft case is a handy option for those travelling about with their monitors, and the hard roadcase is a beast, and would likely survive a mortar attack. If your Auratones are clapped out or, indeed, if they were thrown out over a decade ago, the Grover Nottings might offer a good, and arguably superior, replacement.