

The art of seduction

C-ducer review reprinted from NZ MUSICIAN

This review has its origins in my own search for a transducer suitable for live piano recording late last year. In the event I was lucky - an unusually good instrument and some judicious mic placement got us through the night. All the same, the ongoing challenge of recording jazz and acoustic ensembles in the studio, never mind live, found me ever vigilant for an alternative approach that didn't involve putting musicians in separate rooms.

C-ducers have been around since the early eighties, and persistent inquiries with PA companies, music shops etc not to mention the original agents for the product, failed to turn up any leads. No one seemed to know if the company even existed any more. It was getting a little too Marlowe-esque. Finally it was an idle glance in a back copy of none other than this most august publication - OK you get a raise, Ed. - that revealed a small as directly announcing that this, the Holy Grail of Transducers, might be obtained from The Music Works of Upper Hutt.

As the name implies, C-ducers are a kind of transducer, employing both capacitive and pressure effects to convert the mechanical vibration of an instrument's shell or soundboard into electronic impulses. One of the C-ducer's designers has described it as "not too dissimilar to a co-axial cable that has been run over by a truck". Physically, the device comprises a short tape that is attached directly to the instrument, usually by double-sided sticky tape, from which a moulded lead extends, usually to a pre-amp built into either a jack or XLR type connector. C-ducers come in various configurations: different lengths, different power sources and output impedance, and recently preset equalisation has also become an option. Originally developed for drums, the tapes are advertised for a host of applications from violins through to harps and thunder-sheets as used by the Royal Shakespeare Company. But what about guitars, I hear you cry? More on them later.

My own initial interest lay with the piano. An imminent session with John Key's ensemble - piano, drums, acoustic bass, sax and vocals - was going to be an ideal workout. Steve Garden, engineering this session, found the piano difficult to record with mics alone as they tended to pick up a lot of spill from the drums. Soloed, the drums sounded great. Flip up the piano faders and now you've got the sound of drums from, well... inside a wooden box somewhere.

John had gone to some lengths getting his preferred instrument - a Yamaha upright - up onto Progressive's second floor. Our own Bechstein came in the window by crane, but that's another story. He was understandably keen for us to do some justice on tape.

“very dry, clean, punchy, and plenty of bite - but without sacrificing the piano's naturally subtle response”

By themselves the C-ducers sounded a little bit like a MIDI piano module - very dry, clean, punchy, and plenty of bite - but without sacrificing the piano's naturally subtle response. For guitarists amongst us - no it doesn't sound anything like a Piezo-Electric Bridge type pickup. Anyway, more on them later.

Back in the studio, it was only going to take a small amount of level from a couple of Crown PZMs - Pressure Zone Microphones - to add a little 'air' to the C-ducer sound, and Steve had captured the essential sound of the Yamaha: light and bright.

Some weeks later, a writing/demo session with UK producer Robyn Smith and singer Margaret Urlich looked like a good opportunity to experiment with the C-ducers in a slightly different context. Live vocal/piano recording often poses a challenge as there is typically a lot of bleed between piano and vocal mics, muddying the sound of both voice and instrument. The instrument in question was the studio's Bechstein nine foot grand. As for the Yamaha, recommended placement is on the back of the soundboard, behind the bass and treble bridge saddles, which in this case found me clambering around underneath quite a bit.

As with microphones, the positioning of C-ducers is reputedly quite critical. And, similarly, a thorough soundcheck of any delicate acoustic instrument can often benefit from moving the transducer around while wearing headphones. Particularly useful if you can get someone in the control room to mono the monitoring occasionally, to check phase coherence! As it happened I didn't get to do any of that stuff this time round. Nonetheless the sound off the pickups was quite even, and very little EQ was called for. As complementary mics the PZMs (or boundary mics as they are generically known), worked well with the C-ducers and more particularly with the vocal mic, an AKG 414.

The C-ducer's credits are impressive, including Dave Brubeck, Herbie Hancock, Chick Corea, the BBC, the Grand Ole Opry etc, which represents much of the device's most obvious market: jazz and acoustic artists, with many of the applications being live.

But what about the guitarists? What about the guitarists indeed. More on them later. The testimony of many users, such as 92 Montreux jazz festival crew, is that...live, C-ducers are highly immune to feedback.

“From experience to date I would have to add that the separation they can provide would have to be good for studio or stage.”

Many rock keyboardists will no doubt prefer the portability, and sheer sonic crunch of a digital module. Most classical pianists will have little interest in amplification of any kind, and purists of all faiths may have difficulty with the idea of plugging in that which was created without an XLR socket. For solo or overdubbed piano in the studio, I'd probably plump for a pair of large condenser mics every time. However, for most ensemble situations I'd have to put money on the C-ducers.

Getting a handle on positioning these things is going to take some time, but already I've started to get a sense of just how liberating a C-ducer session can be. Previous vocal/piano projects for example, have meant virtually gluing the vocalist to the ground, and miking everything fairly 'in yer face'. However, in conjunction with a C-ducer, a microphone's role actually becomes more ambient, because it doesn't have to work so hard to get separation. Plus, I've never really been comfortable with the idea of telling musicians where they "have to stand". With a few C-ducers in the arsenal I feel that increasingly I will be asking players where they feel most comfortable.

Yep. I bought em. And I promise to write about guitars later.