SE ELECTRONICS RN17

Condenser Microphone

The RN17 sparkles, says ANDREW GRAEME, though not in the way you'd immediately expect…

Following on from the success of the active ribbon microphone, the RNR1, Rupert Neve and sE Electronics have got together to create a small condenser mic with interchangeable capsules for different applications and polar patterns, creating, in effect, a completely new range of microphones. The body of the mic has an interesting looking bulge that contains the active electronics and transformer.

The complete stereo kit comes in a very attractive case, with the two mic bodies in their own wooden box and each capsule in a small metal tube and with two shock mounts. The impression of every part of the package is one of absolute quality. Even the little tubes used for housing the capsules are beautifully made with perfectly engineered screw-on caps.

The shock mounts not only look good and feel extremely solid, but are exceptionally effective. Thumping and banging against the mic stand transmitted almost no sound through the mount and, although I was not able to do an A/B comparison with every possible shock mount on the market, these may just be the best shock mounts I have ever come across.

As a result of perfect mechanical engineering, changing the capsules is quick and easy (unlike some mics I could mention!) and obviously a great deal of thought has been given to the hard-pressed engineer, possibly working in the dark on some location recording, where time to fiddle with unusual or badly fitting screw-threads is just not an option. It was a pleasure to 'find' the thread of the capsule first time, every time, and have the thing fitted in seconds.

I used the mics over a one-week period as drum overheads on a jazz trio and in various roles for piano and guitars on a blues band. Once the musicians had packed up everything except the empties, a broken guitar string and a digital tuner that didn't work, I tested the mics using our R&S and HP audio test rigs.

Cardioid

The very first impression, using the cardioid capsules and alongside other small diaphragm condenser mics, was that they were not as 'sparkly' as other similar models. At first, I put this down to a lack of top end, but in the mix, they sounded considerably better and had a 'silky' quality to their sound. Later testing showed that they have plenty of top end and are more or less linear (+/-3dB) up to 22kHz, albeit with a peak between 7-11kHz and useful response up to 24kHz.

The cardioid capsule was remarkable, in that the 90-degree off-axis response was almost exactly -6dB uniformly across all frequencies above 200Hz and slightly less below. Rear rejection was somewhere in excess of 30dB and when used in anger in our live room, rear rejection was just the function of the room reflections. This uniformity of off-axis response resulted in some of the best stereo imaging I have heard.

There is also a hyper-cardioid, which, other than being more directional, sounds remarkably similar to the cardioid. It is linear to 18kHz and has useful response to 25kHz.

Omni

The omni capsule is linear to 18kHz, after which it gently drifts south and continues to have some useful frequency response up to 27kHz. Used on our grand piano, it gave a full-bodied sound that did full justice to the instrument.

The laws of physics tend to hinder the building of the perfect omni-directional microphone, as the body of the mic itself acts as a baffle to higher frequencies coming directly from the rear. For this reason, it is all the more remarkable that the omni capsule, when pointed directly away from a sound source, shows a drop of only 4dB above 10kHz and nothing below. More importantly, at 90 degrees, it shows no drop in response whatsoever at any frequency and no strange resonances or dips. This makes it the ideal candidate as the mid in mid-side recording.

Eights

At this point, I have to mention the figure of eight, as it makes an ideal match for the cardioid and the omni in particular when you are out hunting for that perfect M-S combination, and gave some of the best M-S imaging I have heard. This capsule is linear to 16kHz and drops off at 20kHz. The off-axis rejection at 90 degrees is excellent and, like the cardioid at 180 degrees, when used in the live room, side noises were just from room reflections.

There was absolutely no difference in response between one side of the figure-of-eight and the other and here, as with all the capsules, no hint of distortion.

All the capsules showed excellent bass response, giving a lie to the mistaken belief that small diaphragm mics can't do bass (many cheaper and some specialist models cannot, but that is a different story!) Of course the bass-cut capsule gently slopes off below about 150Hz, to be about -7dB at 80Hz. When used as a stereo pair, two RN17s recording our all-acoustic blues group, gave an excellent stereo image with plenty of bass-fiddle sound, all on their own.

Conclusion

The RN17 gives the user a clean sound in a way that is almost shocking. This does not hit you at first and you may even be tempted to think that they lack top end – but when you work these mics with a good EQ, you get to hear just how pure the output really is.

You only really know if a microphone is any good or not, when it comes to mixing and in particular, when you start throwing EQ around the place. Those sparkling highs from some microphones that impress so easily on first listen can refuse to sit in the mix and may even start to 'spit' when boosted. The RN17 sounds neutral and you might even think that it is without character – until you start to twiddle knobs and push faders. Then you get all the character you want.

This microphone, we are told, is to be followed by a tube mic – the RNT-1. This could get interesting! AM

INFORMATION

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