

review

RØDE NT2000

Condenser Microphone

BY MATT
ZLATEN



A newcomer from Australia offers surprising controllability

RØDE Microphones of Australia has been importing microphones into the US for quite some time. From the price-busting NT1 to the affordable tube classic NTV, RØDE has broken down barriers and surprised a lot of people. RØDE's latest mic, the NT2000, brings us another great surprise: continuously variable mic controls, including polar pattern.

Before we get into the novel new features RØDE has built into the NT2000, let's cover the basics.

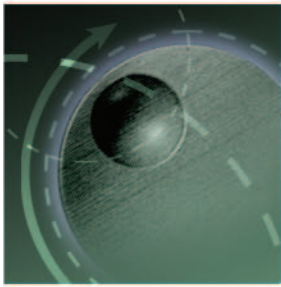
The basics

The NT2000 is a large-diaphragm multipattern condenser microphone. The one-inch, dual diaphragms feature a 20 Hz to 20 KHz frequency response (no deviation given) and can handle 157 dB SPL with the pad fully engaged. The mic can operate on either 24 or 48 volts DC phantom power. The NT2000 is a transformerless design, and the mic includes a heavy-duty spider-type shockmount and a pretty serious carrying case that looks like it could survive having a truck drive over it.

The NT2000 is over a foot long, quite hefty, and has a very rugged look to it. The machining of the body seems to be of a very high quality. A glance inside the mic shows a blue PCB with that "built by robots" look, superclean and flawless.

The most unusual thing you'll see on the NT2000's body is three small dials, one each for polar pattern, bass rolloff, and pad. From top to bottom, the first knob is the polar pattern adjustment. The knob swings from omni at the farthest left to figure-8 at the farthest right, with cardioid at the detent in the middle, and an endless variation of choices in between. The second knob selects the frequency at which the bass cut kicks in, from 20 Hz to 150 Hz. The bass cut is -3 dB at the selected frequency, and slopes off from there at 6 dB/octave. The third knob is the pad control, starting at -0 dB at the far left to -10 at the far right.

When you take a look at the included frequency response graphs (omni and cardioid), there is a bump at 12 kHz, nearly 2 dB, and in cardioid mode, a 2 dB bump at about 4 kHz. At first listen (just with my own voice), I did notice that the mic is a bit bright, but nothing to find offensive, just typical for a large-diaphragm condenser mic. When listening, there seems to be a slight rolloff in the low bass, which is confirmed by the response graph.



review

RØDE NT2000 Condenser Microphone

In Use

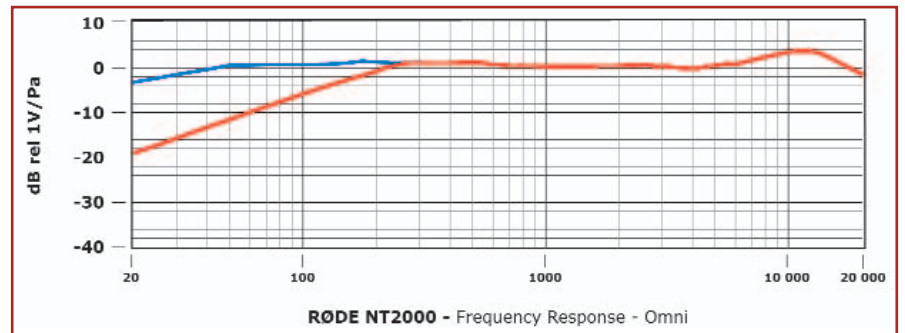
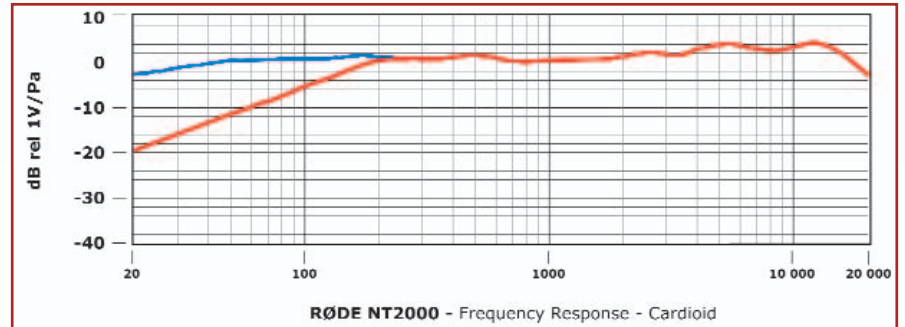
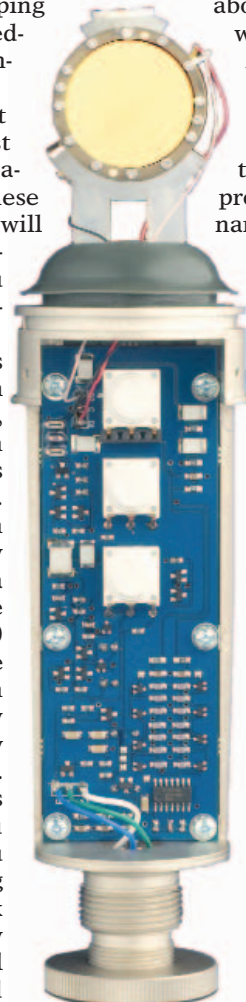
When you first pick up this hefty mic, you want to start twiddling those knobs. My perception was that they don't feel quite as solid as the rest of the mic, but they never let me down, and RØDE tells us that they are custom manufactured to the highest standards.

Adjusting these knobs creates some interesting results. The pad knob provides continuous level reduction up to -10 dB, in perfect silence, with no noticeable degradation in the audio quality. The filter provides a simple roll-off that becomes a deeper cut at higher frequencies as you move the knob. It too is completely silent and provides a lot of versatility, from reducing breath noises and P-pops at the halfway mark, to a very noticeable bass cut at the 150 Hz setting, one that would be very useful for dampening proximity effect or for keeping bass instruments from bleeding into the mic for "all-in-one-room" sessions.

The pattern adjustment knob is probably the most unusual and interesting feature you'll find on a mic these days. While plenty of mics will do cardioid, omni and figure-8, very few will let you get into the nooks and crannies in between.

The pattern knob provides a lot of options. Starting with a very well balanced omni, you can basically tune in more or less room sound as you head towards cardioid. At about 10 or 11 o'clock on the knob, you get a really nice wide cardioid, with a great sweet spot when the mic is aimed about 30 degrees off-center from the sound source. This was an awesome vocal sound for my voice, and should work really well in many vocal situations.

The cardioid setting has no surprises but as you head towards figure-8, you find some pretty interesting options. At about 2 o'clock you get a sound that is very much like a hand-held vocal mic with a hypercardioid



pattern. It is an instantly recognizable sound, and could be useful in emulating that effect, with the high fidelity provided by the NT2000.

As you move closer to figure-8, about 6 o'clock, you encounter a wonderfully convincing "Big Announcer Voice™" kind of sound, similar to an Electro-Voice RE20 or Shure SM7. Once at figure-8, you get the typical figure-8 sound, lots of proximity effect and a really narrow pattern, but one that works nicely for Mid-Side (M-S) work, which we'll discuss later.

The only issue I had with the pattern knob was that there are small clicks heard as the mic transfers from one pattern to another. If you turn the knob fast enough, you hear the clicks and you can hear the pattern change, slower than your knob turn. This is not really a significant issue, since rarely would you ever want to change the pattern on the fly, but it is something to be aware of.

Out and Recording

The first recordings I made with the NT2000 were with a drum kit, a nice Pearl kit, set up a little on the jazz side, with a solid front head on the kick drum. I first set up a pair of NT2000s as spaced overheads, about 18

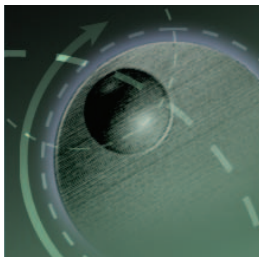
inches over the toms, 2 feet apart, aimed straight down, both set to a cardioid pattern.

The resulting recording was, to be completely honest, awesome. There was an incredibly satisfying balance of the elements of the kit, with a nice bit of room sound, and enough kick that a dedicated mic would have been used only for sweetening. I was truly blown away.

I also set up one of the NT2000s as a kick mic in cardioid. The kick mic sounded really good, no distortion at all, but was definitely more of a jazz sound than a pop sound. Finally I set the pair of NT2000s in M-S centered over the kit. The stereo field was really great, nice and wide; some of the impact I heard in the spaced-overheads recording was lost, but both were excellent and usable sounds.

I also recorded a grand piano, a handmade German Schimmel. First I recorded the piano with the mics as a spaced pair, one over the low strings, one over the highs. The NT2000s captured a very dynamic and beautiful sound, a full and rich tone that a solo classical pianist would find inspiring. I also tried recording the piano in M-S and I was a bit disappointed. The stereo field was nice, but once again the amazing impact and dynamics that were found with the mics in cardioid was lost in M-S.

I recorded some electric guitar tracks, using my Les Paul with a Roland Blues Cube amp. The mic was placed about 2 inches off the grille cloth, about an inch below the center of the speaker. Both with clean sounds and distorted sounds, the recording with the



NT2000 was clear, present and, once again, the impact and dynamics of the sound were really amazing. This is a great guitar amp mic.

Finally I recorded my own voice with the NT2000. On vocals this mic is very present, with a bit of exaggerated sibilance, but for the most part it has a nice, even tone to the vocal. There really isn't too much P-popping or overbearing proximity effect in the cardioid mode, but if you want to add a bit, just dial it a little toward figure-8. As I mentioned previously, there is a really great sweet spot just off center when the mic is set to a wider cardioid.



So...

The NT2000 is an amazingly versatile mic, and sounds really good. It's pretty amazing to find a mic that has an expansive feature set like this one, that sounds great (and I mean *really* great—there are few mics I have found that can compare, even ones costing nearly \$3000) and doesn't break the bank. Once you consider that the multipattern ability of this mic could only be replicated with a system mic such as the BLUE Bottle and four or five mic heads in different patterns, it is truly a great deal.

Price: \$899

More from: RØDE Microphones US, LLC, P.O. Box 3279, Torrance, CA 90510. 877/328-7456 or 310/328-7456, fax 310/328 7180, www.rodemic.com.

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RØDE NT2000

Where mics are concerned, one size definitely doesn't fit all – but have you considered one that offers variable polar response? **Pete Crisp** hits the Røde...

Being fortunate enough to own a high-end 'classic' mic will, for many of us, have to remain something of a pipe dream. There is, however, little reason in this day and age why we shouldn't all be able to afford a model that'll give great results without having to break the bank.

This has been largely down to manufacturers such as Røde, which manages to produce a seemingly never-ending stream of top-notch mics at highly reasonable prices. The latest addition to the range certainly appears to fall into this bracket: a large diaphragm condenser offering almost unlimited control over some of the most important recording parameters.

Shock and awe

The NT2000 arrives complete with large shockmount and a rigid plastic carry case. You could initially be forgiven for thinking that the mount looks a little fragile as it's constructed almost entirely from plastic. However, it performed well throughout testing, absorbing extraneous noise impeccably. It's helped in its task by the mic's own internal shock absorber that holds the one-inch, gold-sputtered dual diaphragm in place.

The gently tapered casing is finished in satin nickel – in keeping with the high standards we've come to expect from this company – with the steel mesh cage providing ample protection to the capsule.

To keep costs down, Røde has, on some of its other models, gone for simplicity in terms of features – single-pattern pickup and no low-cut switch, for example. That's certainly not the case here, however. The NT2000 sports three rather intriguing dials lined up vertically along its length. The lower two enable variable pad and high-pass settings to be adjusted, while the uppermost dial offers up to 10dB of attenuation.

The low-cut threshold is controlled by the centre pot, offering

a very useful 20Hz–150Hz range which will easily take care of the most common causes of low-end noise. You could also use it creatively, as the upper end of the range extends well into the frequency band of some instruments – although any sort of EQ should ideally be left until mixing, if at all possible.

Continuous control

However useful these controls are, it's the last of the three that gives the NT2000 its unique selling point. Rather than offering switchable polar patterns, the NT2000 enables you to continuously vary the polar response between omni, cardioid and figure-of-eight patterns. This means that you can fine tune a cardioid pattern, for example, to give a little extra rear sensitivity than you'd normally expect.

We tested the NT2000 against both Røde's own NT1A and a trusty Audio Technica AT4033. These are both cardioid-only models, so it was in this area that the first comparisons were made. The NT2000 was immediately richer when set to vocal duties, picking up subtle nuances that the other two – while they did a fine job – seemed to miss. Overall, the mic offers a very natural tone and the more you 'work' the proximity effect, the cosier the mic gets (but without becoming damagingly muddy). An acoustic guitar was next under the spotlight and here the NT2000 really shone, capturing everything with sharp definition. Experimenting with the controls enabled a wide variety of different results to be recorded from just a single mic placement.

Once again, Røde has come up with a mic that, in terms of quality, exceeds the price tag. There's a great deal of flexibility in the NT2000, making it a fine choice if you need a mic that will handle a multitude of different recording applications. Certainly, no one looking for multiple-pattern response and working to a tight budget can afford to ignore it. **MTM**



MUSIC TECH MAGAZINE
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NT2000

Manufacturer **RØDE**

Price **£450**

Contact **HHB**
020 8962 5000

www.rode.com.au

SUMMARY

KEY FEATURES

- Variable polar pattern, pad, high-pass filter
- Phantom powered
- 1-inch gold sputtered dual diaphragm
- 20Hz–20kHz frequency response
- 136dB dynamic range
- Shockmount and case included

WHY BUY

- Natural tone
- Highly flexible
- Affordable

WALK ON BY

- Slightly different tonality back to front in figure-of-eight mode

VERDICT

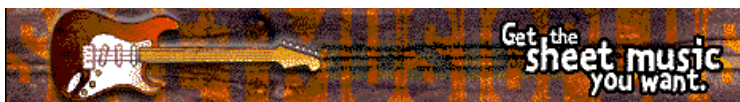
A lovely sounding, versatile mic that won't break the bank.



METHOD SPOT

Write on the button

Being able to vary the polar response and low-cut so finely really makes the NT2000 a mic with huge potential. This can be a time-consuming task, but thankfully Røde has included a page in the manual that enables you to jot down any combinations of settings that you might otherwise forget.



Rode NT2000 & NT1A : May 2004

In this article:[NT2000 Multi-pattern Mic](#)[NT1A Fixed-cardioid Mic](#)[In The Studio](#)[Overall Impressions](#)**Rode NT2000 £399****pros**

- Fully variable polar-pattern, roll-off and pad controls.
- Clear, well-balanced sound.
- Comes with rigid case and shockmount.

cons

- Weight may cause cheap mic stands to droop.

summary

Rode's new NT2000 proves is a cost-effective, high-quality mic which not only sounds good, but which is also extremely quiet.

Rode NT1A £179**pros**

- Transparent, classy sound.
- Extremely low noise.
- Nicely engineered.
- Included shockmount.

cons

- May lack the 'pose value' of some of the more chunky-looking capacitor mics.
- No hard case.

summary

The NT1A may have an entry-level price, but it's performance is anything but entry level. It has a great sound, it is extremely quiet and it comes with a good shockmount.

information

F NT2000, £399; NT1A, £179. Prices include VAT.

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Rode NT2000 & NT1A

Capacitor Microphones

Reviews : Microphone

Published in SOS May 2004

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Two new large-diaphragm mics from Rode improve on their previous technology for a classy sound with exceptionally low noise.

Paul White

Ever since the NT2, Rode have been stirring up the mic market, and their range now includes a variety of respectable valve and solid-state models priced for the project studio owner. It's been a while since the last time I reviewed anything from Rode — I looked at the NT4 and NT5 back in August 2002 — so when the NT2000 and NT1A turned up for review I was keen to see how their technology had advanced.

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NT2000 Multi-pattern Mic

There's no mistaking the NT2000 — its distinctive three-dial control panel is quite unlike anything else on the market! This solid-state microphone uses a low-noise JFET design with bipolar transistor output buffers, so there's no transformer in the signal path. Rather than having switchable polar patterns, the uppermost knob allows the pattern to be varied continuously from omni, through the centre-detented cardioid position, to figure of eight. The mic can run from 24-48V phantom power.

The JFET preamp, which makes use of surfacemount technology, is extremely quiet, with just 7dBa equivalent input noise, and the mic's frequency graph shows a full 20Hz-20kHz frequency range with a gentle presence peak at around 12kHz. In cardioid mode there's also a lesser secondary presence lift at around 5kHz and, where the low end needs to be rolled off to compensate for the proximity effect (which affects cardioid and figure-of-eight patterns only), the centre knob is used to adjust the low-cut turnover frequency from 20Hz (effectively bypassed) to 150Hz. This 'continuously variable' theme also carries over to the pad knob, which goes from zero to 10dB of cut. With the pad switched out, the maximum SPL is an impressive 147dB, increasing to a massive 157dB with the pad in. Overall, the dynamic range of the mic is 136dB and the signal-to-noise ratio works out at a very healthy 84dB.

The mic is very solidly built and chunky, with a machined all-metal body finished in satin nickel plate. The controls make the body a little longer than usual, which in turn makes the mic quite weighty, so you'll need a good mic stand to avoid getting the droops! The capsule is protected and shielded by the usual dual mesh structure, and the capsule itself is shockmounted to further improve the isolation from stand-borne vibrations. A locking ring at the bottom secures the mic to the included SM2 shockmount, and the whole kit comes in a bespoke moulded plastic case. Dismantling the mic reveals a very tidy surfacemount circuit board with the Rode manufacturing logo, while the internal standard of metalwork finish is also good.

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NT1A Fixed-cardioid Mic

Rode's NT1A looks physically similar to the original NT1 — other than the finish, which is now satin nickel rather than grey lacquer. It is supplied in a cardboard box rather than a fancy case, and looks less macho than some of its competitors, but it comes with a good metal shockmount and a soft zip-up storage pouch. Like the original NT1, the NT1A is a cardioid-pattern, large-diaphragm capacitor mic with a gold-sputtered one-inch diaphragm.

Despite the similarities with its precursor, the NT1A is no minor update — the circuitry is completely new, and the capsule has a much-extended frequency response compared with the original, giving it full 20Hz-20kHz coverage. By contrast, the NT1 started to roll off above 16kHz. The response is also flatter than that of most large-diaphragm mics, as the presence peak is less pronounced and quite broad, but there's also a hint of low-end lift at around 120Hz, which gives the mic a very subtle 'smile EQ' characteristic, the practical outcome of which is that the sound is mildly flattering but still very natural sounding.

Transformerless JFET circuitry is used to amplify the signal from the capsule, and the circuit board employs surfacemount components. Niceties such as gold-plated XLR pins and a heavy machined locking ring for fixing the mic to the shockmount have been retained, even though this is still Rode's entry-level model. A very tough stainless-steel grill protects the capsule, with a second much finer layer beneath to help reduce popping and to help protect the capsule from contamination and RF interference. However, a separate pop shield is essential for studio vocal recording (as it is with all such microphones).

There are no pad or low-cut switches on the mic body, as this is the baby of the Rode range, but it's also amongst the quietest mics I've ever used, with an equivalent input noise of just 5dB, which

Photos: Mark Ewing



The Rode NT2000.

The Rode NT2000.



The Rode NT1A.

The Rode NT1A.

translates to a signal-to-noise ratio of 88dB. By comparison, many large-diaphragm mics have a signal-to-noise ratio of between 75-80dB. The sensitivity of the mic is quoted as -31.9dB (with a 1V/Pa reference) and the sensitivity was subjectively very similar to other capacitor mics in my collection. The maximum SPL is 137dB, which is about as good as it gets for a capacitor mic with no pad switch, and the NT1A will work on 24-48V phantom power.

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In The Studio

I tested both these mics side by side and found that the sound in cardioid mode was quite similar — there was a wonderful sense of high-end detail, but without the sound becoming thin or harsh. In fact I'd say both models produce what you'd expect from a well-designed transformerless FET mic, but with rather lower background noise than most of the competition. The somewhat constricted character that most cardioid mics exhibit to some degree seems less noticeable in these new Rode designs, but when you switch the NT2000 to its omni pattern, you quickly realise that omni-pattern mics still sound more open and natural than cardioids. The same is true of the figure-of-eight mode, which sounds very clean and pure.

Of course many people buy large-diaphragm mics because of their character, and some models have much more of a 'sound' than others. To me, these new Rode designs are characterised by a very open and detailed high end, which is nevertheless properly balanced by the low end. There's nothing thin or edgy about the sound and, because there's no excessive inherent coloration, they respond well to EQ — you're not constantly trying to fight the mic's in-built character. On most voices, the sound comes over as gently flattering and well focused, and of course this attribute bodes well when you come to mic acoustic guitars and other instruments.

I like the idea of the continually variable controls on the NT2000, the only slight downside being that settings become less repeatable if you pick up a session months after starting it. However, the manual does include a blank settings page you can photocopy to write down your custom settings. There's also a lot of practical advice in the manual about using the mic, including a reminder that you still need to buy a separate pop shield for studio vocal recording.

As an all-round instrument mic, the NT1A has a brighter, more articulate high end than the original NT1, but the low end remains well balanced, resulting in a clear, believable sound. However, I suspect most users will buy the NT1A predominantly for use as a vocal mic, where it delivers a very modern sound, balancing transparency and airiness with a supportive lower mid-range. There's certainly nothing budget or second class about the sound of this microphone, and where you do need to emulate the somewhat warmer, more middly sound of the original NT1, a little high-end EQ cut gets you pretty close.

From a practical viewpoint, the NT1A is a little lighter than many of its contemporaries, which makes mic-stand sag less of a problem, and the very low noise means it won't struggle when recording quieter instruments or when working at a moderate distance from the sound source. It's transparent high end also enables it to do a great job on acoustic guitar and hand percussion.

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Overall Impressions

Rode's new designs have really increased expectations of what can be achieved in microphones at this UK price, particularly when it comes to circuit noise — they are typically 6-10dB quieter than most of the competition. You don't get the fudgy warmth of a tube mic or even a transformer-coupled model, but to my ears this makes it easier to place the vocals at the front of a mix without using excessive volume.

Despite its low cost, the NT1A delivers professional performance, both for vocal recording and for general instrument use. The lack of any heavy-handed presence boost makes the sound well suited for use with a range of singers and vocal styles and makes it's also easy to fine-tune using modest amounts of EQ. At the same time, the high end is as open and detailed as you could wish for, so if you like a vocal sound with a modern breathy quality, you can achieve it using little or no EQ.

If you need a good all-round, multi-pattern mic that will do justice to just about anything you ask of it, in addition to delivering pristine vocals, then the NT2000 is one mic you shouldn't miss checking out, but if you're one of the many people for whom a cardioid-only mic is perfectly adequate, then the cheaper Rode NT1A has a very similar character, with extended bandwidth, extremely low noise and a classy subjective sound. [SOS](#)

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