RØDE®
MICROPHONES



NT1-A
Instruction Guide

RØDE STUDIO CONDENSER MICROPHONES

RØDE® NT1-A

Serial Number: .....

Checked By: .....

Date: .....

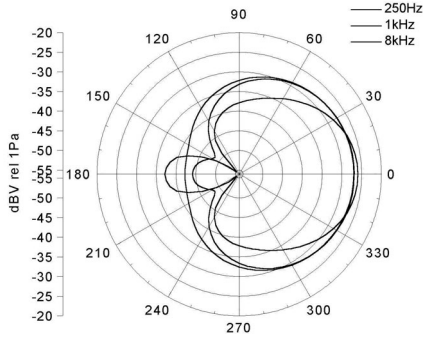
This condenser microphone has been proudly designed and manufactured by RØDE® Microphones in Sydney, Australia.

We at RØDE® thank you for investing in our product, and with the appropriate care, it will serve you well for many years to come.

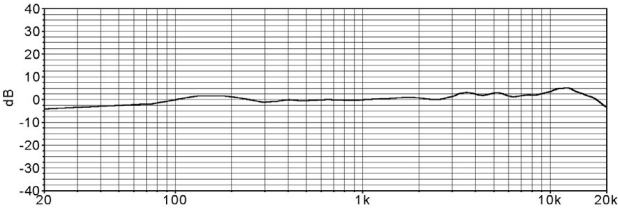
Please take the time to read the following information which will help you to achieve the best possible performance from your NT1-A.

Technical Specification:

- **Acoustic Principle:** Externally polarised 25 mm (1") condenser.
- **Active Electronics:** JFET impedance converter with bipolar output buffer.
- **Pickup Pattern:** Cardioid (see graph).
- **Frequency Response:** 20 Hz~20 kHz (see graph).
- **Output Impedance:** 100 Ω
- **Sensitivity:** -31.9 dB re 1volt/pascal 25 mV @ 94dB SPL) +/- 2 dB
- **Equivalent Noise:** 5 dBA SPL (per IEC651, IEC268-15)
- **Maximum Output:** +13.7dBu (@ 1% THD into 1kΩ)
- **Dynamic Range:** >132 dB (per IEC651, IEC268-15)
- **Maximum SPL:** 137 dB (@ 1% THD into 1kΩ)
- **Signal/Noise:** > 88 dB (1kHz rel 1 Pa; per IEC651, IEC268-15)
- **Power Requirements:** Phantom P48, P24



NT1-A Polar Response

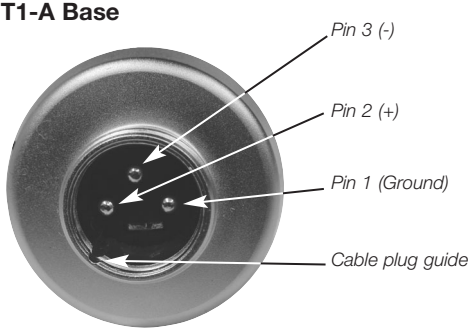


NT1-A Frequency Response

Features:

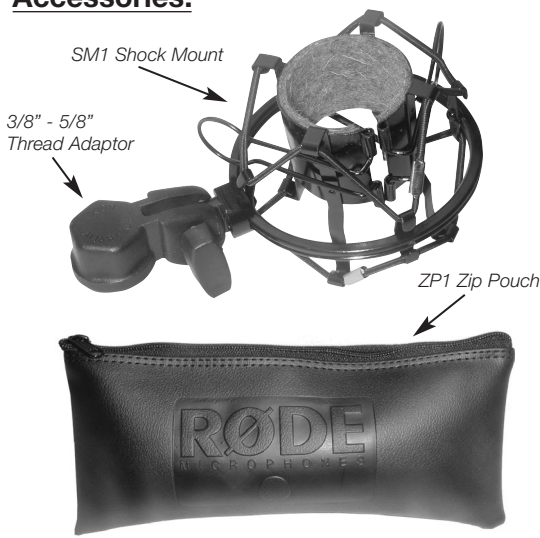
- Large Capsule (1”) with gold-plated membrane.
- Cardioid Polar Pattern.
- Ultra-low noise transformerless circuitry.
- New, state of the art surface mount electronics.
- New, heavy duty satin nickel finish.
- Monocoque sub-assembly.
- Internal shock-mounting system.
- Gold plated output connectors.
- True Condenser (externally biased).
- Full (20Hz – 20 kHz) frequency response.

RØDE NT1-A Base



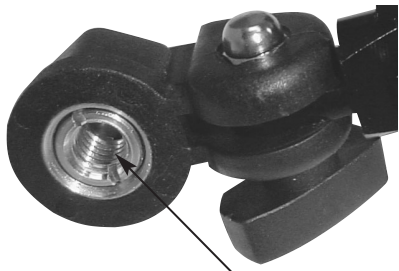
Note: Ensure cable is connected to correct pins.

Accessories:





NT1-A in SM1 Shock Mount



3/8" - 5/8" Thread Adaptor

The Power Supply:

1. Connect all cables before applying power to the microphone and never remove the microphone cable while the power is connected.

2. The NT1-A requires P48Volts or P24Volts Phantom Power.

3. If the Mixer or Pre-amp does NOT contain this Phantom Power requirement, then an external Phantom Power supply will be needed.

4. Some Phantom Power supplies do not supply the voltage at which they are rated. If the required voltage is NOT supplied, the dynamic range and general performance of the microphone will be reduced. This can easily be confirmed by a qualified technician.

5. We strongly suggest the use of a reputable high quality power supply. Damage to the NT1-A caused by a faulty power supply is not covered by the warranty.

Microphone Placement:

Microphone technique, or how to get the sound you want, requires experimentation.
We suggest that you start with the channel EQ set to 'OFF' or 'FLAT' (no boost or cut). Try to get the sound you want by placing either reflective or absorbent panels at various angles adjacent to the source being recorded.

Changing the acoustic properties of the space the microphone is in, is our recommended initial approach for obtaining the best sound quality. (Remember, you cannot change a rooms acoustic properties with EQ).

When the preferred sound has been achieved (as above) then, EQ and effects such as reverb or indeed any other signal processing can be used for enhancement, but should be used sparingly.

It is perhaps worth mentioning, that sometimes ‘cutting’ a particular frequency (sound) may be preferable to boosting another. Of course, ‘boosting’ can increase noise level, and so should be done minimally. As with many other aspects of the recording process, finding the preferred ‘sound’ is again, a matter of experimentation.

Vocals:



We strongly suggest the use of a ‘pop-filter’ for ALL vocal recording.
Plosives (‘P’s, ‘B’s and ‘C’s) can produce a sudden jet of air which can cause the capsule to ‘bottom out’ (overload) and produce a ‘popping’ sound. Pop filters help to prevent the effects of plosives.

Moisture on the capsule can cause problems for condenser microphones but the use of a pop filter reduces that risk.

Placement of the microphone and pop filter relative to the vocalist may be varied depending on several factors. These can include the acoustics of the room, the type of vocal performance, and whether the vocalist has a deep or high voice.

Perhaps a good beginning would be to place the pop filter directly in front of the vocalist, and about 15cm away from the microphone. (Remember that the front of the microphone is indicated by the gold dot). This will assist in keeping the performer at a constant minimum distance from the microphone and helps to maintain reasonable recording levels.

Experimentation should be made with the angle from which the microphone is addressed as different results can be achieved when the vocalist is 'off-axis'. (Note: ON axis = addressing the microphone directly towards the gold dot).

Electric Guitar/Bass:



To mic-up a Guitar or Bass Amplifier (as opposed to Direct Injection of that instrument) a microphone may be placed close to the loudspeaker of the amplifer, directed slightly to the side (off axis) of the speaker.

Note:

In the absence of a Pad, it may be necessary to move the microphone further from the speaker to avoid distortion when loud volume is used.

Piano:



Single microphone technique

To record a piano using a single microphone (see above), that microphone should be placed approximately 60cm (or 2') above the centre of the sound-board, aimed slightly towards the front of the piano.

To record the piano using X/Y Stereo technique, two closely matched (similar) microphones should be angled at 90-110degrees to each other, over the hammers with ONE mic aimed towards the lower strings, and the other towards the high strings.
The gold dots should be directed down, towards the piano.

An effective stereo image can be achieved, with lower frequencies being recorded on the left, and the higher frequencies on the right.

Drums:



NT1-A facing down towards drum kit

There are various ways to record drum kits. Single microphone 'overhead', two microphones overhead (eg X/Y or spaced pair), multiple microphones used close to individual drums and cymbals (ie. Close mic-ing).

Multiple microphones used close to individual drums & symbols (ie. Close mic-ing):

To record a kit with a single microphone, we suggest that you begin by placing the mic' above the centre of the kit at the same height as the kit is wide with the front of the microphone facing down.

To record the kit with TWO overhead microphones, they should be used at a similar height (as above) and depending on the size of the kit, between 1-2m apart. The mic's would would probably be equi-distant from the snare drum.

To record a kit using the X/Y stereo technique, two closely matched (similar) microphones should be placed (as above in the single microphone position) with the front of each microphone pointing down, and each at 90-110 degrees to each other.

Acoustic Guitar:



A common (single) microphone position when recording acoustic guitar, is between 20 and 30cm away from the front of the instrument where the neck and body meet. Adjust the distance and position to 'finely' tune the desired response. This desired response will depend on the instrument, the style of playing, and the sound aspired to.

An alternative popular technique is to use 'smaller' capsule microphones (eg. RØDE NT 3 3/4" capsule, or RØDE NT 5 1/2" capsule) closer to the guitar, AND a large capsule microphone such as the NT1-A further away from the instrument (perhaps 1m +/-). The sounds recorded by each microphone can then be mixed as preferred.

Storage:

After use, the NT1-A should be removed from its Shock Mount, wiped with a dry soft cloth and placed in its protective zip-pouch.

Be sure to place the moisture-absorbent crystals (supplied) at the head of the microphone. The crystals will absorb any moisture present.

Eventually this pack of crystals will need to be dried. When the crystals are pink, they are inactive.

They can easily be reactivated by placing them in an oven at between 100-150 degreesC for a few (10-12) minutes. The crystals will be active when they become blue.

Warranty:

All **RØDE**® products are warrantied for 1 year from the date of purchase.

Your purchase may be registered 'on-line' or by mailing the warranty card.

The **RØDE**® Warranty covers parts and labour that may be required to repair the microphone during the warranty period.

The Warranty excludes defects caused by normal wear, modification, shipping damage or failure to use the microphone as per this Instruction Guide.

There are no user-serviceable parts inside the NT1-A and so there will never be a reason for you to dismantle it. In fact, to do so may nullify any warranty claim.

To protect your warranty, any service that requires dismantling must be performed by an authorized **RØDE**® Service Agent.

www.rodemic.com

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