

# RØDE<sup>®</sup>

M I C R O P H O N E S



## NT2000 Instruction Manual



[www.rodemic.com](http://www.rodemic.com)

CE (EMC, LVD)

# Introduction

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Thank you for investing in the **RØDE** NT2000 seamlessly variable studio condenser microphone.

We are extremely proud of the NT2000. It is not only the world's first large diaphragm condenser studio microphone with seamlessly variable polar pattern, filter and PAD located conveniently on the microphone body, but it also represents the culmination of many years of dedicated research into the art of recording microphone technology.

I use the word 'art' because a studio microphone cannot be judged simply by electrical or acoustical measurements alone. While the NT2000 surpasses technical specifications only attained by the superlative class microphones of the world, we at **RØDE** know that once you hear this remarkable transducer you will agree that **RØDE** has created a new benchmark by which all others will be judged.

Please take the time to visit [www.rodemic.com](http://www.rodemic.com) and register your microphone for a full ten year warranty.

While there you can view studio tips and techniques, as well as browse the comprehensive range of accessories for **RØDE** microphones.



Peter Freedman

**RØDE** Microphones  
Sydney, Australia

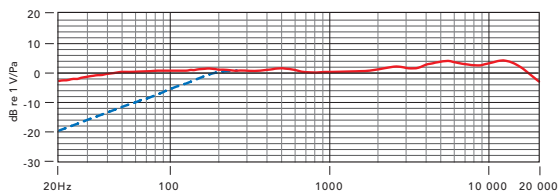
# Specifications

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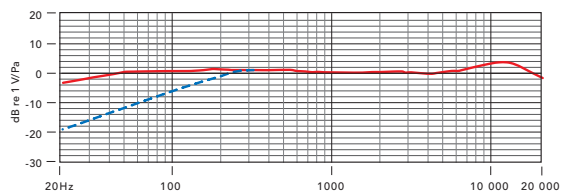
<b>Acoustic Principle:</b>	Externally polarised 25mm (1") dual diaphragm condenser
<b>Active Electronics:</b>	JFET impedance converter with bipolar output buffer
<b>Directional Pattern:</b>	Continuously variable multi pattern - Omni, through Cardioid to Figure 8 (see graphs)
<b>Frequency Range:</b>	20Hz ~ 20kHz (see graph)
<b>Output Impedance:</b>	200 $\Omega$
<b>Sensitivity:</b>	-36dB re 1V/Pa @ 1kHz (16mV @ 94dB SPL) $\pm$ 2dB @ 1kHz
<b>Equivalent Noise:</b>	7dBA SPL (per IEC651)
<b>Maximum Output:</b>	+15dBu (@ 1kHz, 1% THD into 1k $\Omega$ )
<b>Dynamic Range:</b>	140dB (per IEC651)
<b>Maximum SPL:</b>	147dB (or 157dB with maximum PAD) (@ 1kHz, 1% THD into 1k $\Omega$ )
<b>Signal/Noise:</b>	87dB SPL (@ 1kHz, rel 1Pa per IEC651)
<b>Power Requirement:</b>	Phantom P48, P24
<b>Output Connection:</b>	3-pin XLR, , balanced output between pin 2 (+), 3 (-) and pin 1 (ground)
<b>Net Weight:</b>	831g

# Specifications

## Frequency Response



Cardioid



Omni

## Polar Response

Cardioid

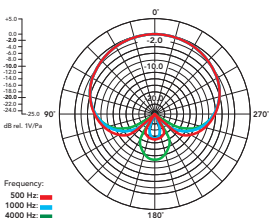
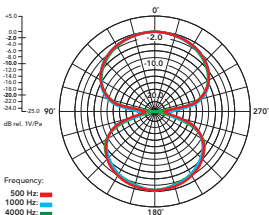
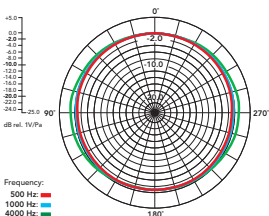


Figure 8



Omni



# Features

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- Large 1" (25mm) HF1 gold sputtered capsule
- Continuously variable polar pattern, from Omni to Cardioid to Figure 8 controlled on the mic
- Continuously variable PAD and High-Pass Filter
- Ultra low noise, transformerless SMT circuitry
- Wide dynamic range
- High strength welded and heat treated steel mesh head
- Internal shock mounting system
- Designed & manufactured in Australia
- Full 10 year guarantee\*

# Accessories

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SM2 shock mount



RC1 carry case



WS2 wind shield  
(optional)

\*Online product registration required.

# Using the NT2000

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## Selecting the polar pattern

- The polar pattern or 'pick-up' of the microphone can be adjusted by moving the top of the three dials on the microphone.

Polar pattern control dial



- The gold dot on the face of the NT2000 indicates the front of the microphone, and the primary pick-up area for the cardioid pattern.

## Using the PAD

- The PAD reduces the input level to the microphone's in-built pre-amp and can be adjusted by moving the lower of the three dials on the microphone.

PAD control dial



- When the dial is in the far left position there is no reduction in the level of the recorded source. When the dial is in the far right position the level of the recorded source is lowered by 10dB.
- Any position between 0 and -10dB can be selected, but note that a level of -3dB reduces the level by 50%.
- The PAD is very useful when recording loud sound sources (such as close miking of drums or amplifiers) to avoid overloading the microphone's pre-amplifier.

# Using the NT2000

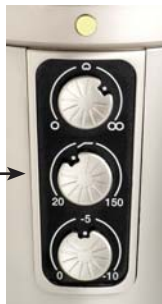
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## Using the High-Pass Filter

- The High-Pass Filter controls the bass frequencies. Sometimes referred to as a 'bass cut', this will reduce the selected bass frequency and all frequencies below that.

The HPF can be adjusted by moving the middle of the three dials on the microphone.

HPF control dial



- When the dial is in the far left position there is no reduction of the bass frequencies and so the microphone will deliver a full response.
- When the filter is in the far right position the level is dropped by 3dB at 150Hz and below, which is certainly audible and will have a direct effect on most sound sources.
- You may choose any setting between 20Hz and 150Hz to cut the level of the selected frequency and below by 3dB.
- This control is useful for selecting the cut-off point for potentially offending low frequencies (eg. traffic noise, floor vibrations etc). It can also be used on vocals where you may want a limited response for a 'different' sound.
- The best way to set this control is to listen to the microphone while recording the source. If it is vocals for example, set the mic to fully anti-clockwise then listen to the vocal sound as you start to move the filter in the clockwise position.

# Using the NT2000

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When you begin to notice the change, turn it back to a lower frequency 'cut off' where you can't hear the difference and you will have the optimum setting for that source. This is important as the NT2000 features a very wide frequency response which can pick up sounds below 20Hz.

## General usage

- Connect all cables before applying power to the microphone and never remove the microphone cable while the power is connected.
- The NT2000 requires P48 volts or P24 volts phantom power.
- If the mixer or preamp does not contain this phantom power requirement, then an external phantom power supply is needed.
- 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.
- We strongly suggest the use of a reputable high quality power supply. Damage caused by a faulty power supply is not covered by the warranty.
- 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.



# Using the NT2000

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- Changing the acoustic properties of the space around the microphone is our recommended initial approach for obtaining best sound quality. Remember you cannot change a room's acoustic properties with EQ.

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

- It is 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 a matter of experimentation.

## Storing the NT2000

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- After use the NT2000 should be removed from its shock mount, wiped with a dry, soft cloth and placed in its protective case.
- Be sure to place the moisture-absorbent crystals (supplied) at the head of the microphone(s), so as to absorb any moisture present.

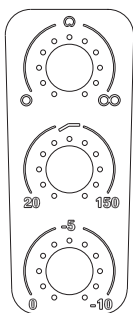
Eventually this pack of crystals will need to be dried. This is indicated by the crystals turning pink in colour.

They can easily be re-used by placing them in an oven at 100 - 150 degrees celsius for approximately ten minutes. The crystals will operate effectively again once they have turned blue.

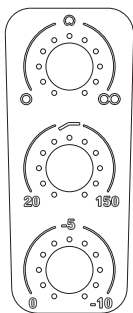
# Notes

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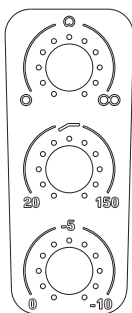
These diagrams are for you to write down any settings you may wish to recreate at a later date.



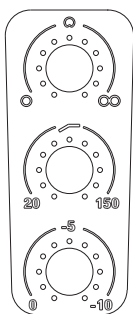
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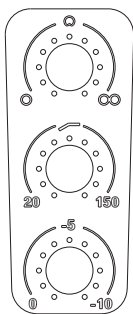
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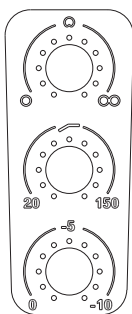
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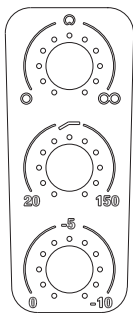
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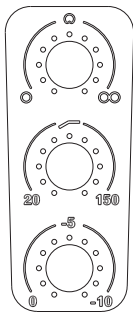
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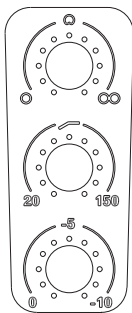
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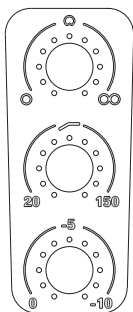


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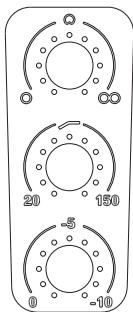
# Notes

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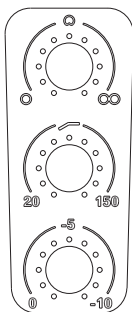
It is important to remember however that room acoustics will also dramatically effect the sound.



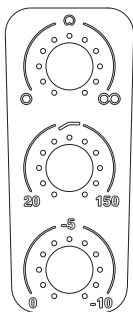
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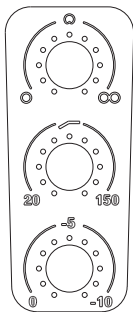
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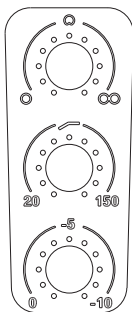
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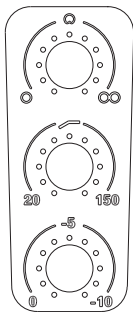
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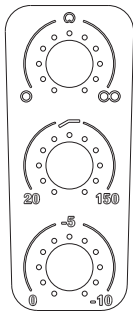
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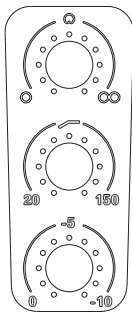
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# Warranty

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All **RØDE** microphones are warranted for one year from date of purchase. You can extend that to a full ten years if you register online at [www.rodemic.com](http://www.rodemic.com).

The 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 and tear, modification, shipping damage, or failure to use the microphone as per the instruction guide.

If you experience any problem, or have any questions regarding your **RØDE** microphone, first contact the dealer who sold it to you. If the microphone requires a factory authorised service, return will be organised by that dealer.

We have an extensive distributor/dealer network, but if you have difficulty getting the advice or assistance you require, do not hesitate to contact us directly.

## **RØDE** Microphones

### **International**

PO Box 6685  
Silverwater NSW 2128 Australia  
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Fax: +61 2 9648 2455

### **USA**

P.O. Box 4189  
Santa Barbara, CA 93140-4189  
Ph: 805 566 7777  
Fax: 805 566 0071

### **Technical Support**

For information and technical support questions contact:  
[support@rodemic.com](mailto:support@rodemic.com)

In the Unites States and Puerto Rico, contact  
[usasupport@rodemic.com](mailto:usasupport@rodemic.com) or call 425 398-1910

In Australia, contact [ozsupport@rodemic.com](mailto:ozsupport@rodemic.com) or call (02) 9648 5855

Anywhere except Australia, the United States and Puerto Rico,  
contact [support@rodemic.com](mailto:support@rodemic.com) or call +61 2 9648 5855