

# **RØDE**<sup>®</sup>

M I C R O P H O N E S




## **NTK**

### **Instruction Manual**



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

CE (EMC, LVD) 

# Introduction

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Thank you for investing in the multi award-winning **RØDE** NTK valve condenser microphone.

The NTK is the result of an extensive development program to create a truly superior valve condenser microphone.

The heart of the NTK is the Australian designed and manufactured HF-2 capsule. The electronic circuitry complementing this very sensitive transducer includes a hand-selected twin-triode 6922 valve and audiophile grade components and layout.

The result is an ultra-wide dynamic range, very low noise, and stunning tube warmth that has made the **RØDE** NTK a favourite in the hearts and studios of tens of thousands of audio professionals around the world.

The NTK's rich valve sound is ideal for vocals, acoustic instruments, drum overheads, guitar amps and pianos.

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

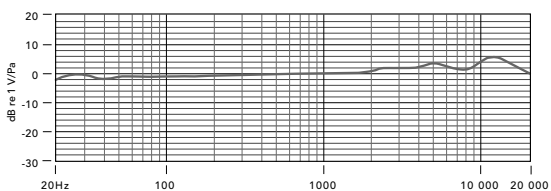
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<b>Acoustic Principle:</b>	Pressure gradient
<b>Active Electronics:</b>	Valve/tube impedance converter with bipolar output buffer
<b>Directional Pattern:</b>	Cardioid (see graph)
<b>Frequency Range:</b>	20Hz ~ 20,000Hz (see graph)
<b>Output Impedance:</b>	200 $\Omega$
<b>Sensitivity:</b>	-38dB re 1V/Pa @ 1kHz (25mV/Pa @ 94dB SPL) $\pm$ 2dB @ 1kHz
<b>Equivalent Noise:</b>	12dBA SPL (per IEC651)
<b>Maximum Output:</b>	+29dBu (@ 1kHz, 1% THD into 1k $\Omega$ )
<b>Dynamic Range:</b>	>147dB (per IEC651)
<b>Maximum SPL:</b>	>158dB (@ 1kHz, 1% THD into 1k $\Omega$ )
<b>Signal/Noise:</b>	>82dB SPL (@ 1kHz, rel 1Pa per IEC651)
<b>Power Requirement:</b>	Dedicated power supply (100-120V / 200-240V AC 50/60Hz)
<b>Net Weight:</b>	760g
<b>Dimensions:</b>	208 x 55 x 55mm

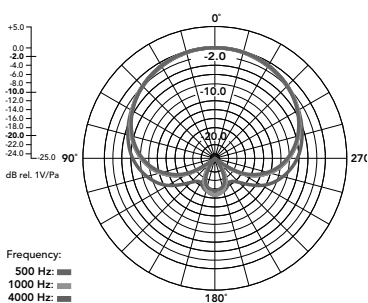
# Specifications

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## Frequency Response



## Polar Response



# Accessories

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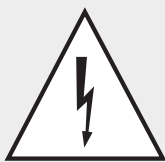
- Power supply (NTK-PS)
- NTK cable (NTK-C)
- Power cable (PL100)
- Stand adaptor (M2)

# Features

- Large capsule (1") with gold-plated diaphragm
- Class "A" valve circuitry
- Hand selected and graded 6922 twin-triode valve
- Dedicated power supply
- Ultra low noise
- Wide dynamic range
- High strength heat treated steel mesh head
- High level of RF rejection
- Designed & manufactured in Australia
- Full 10 year guarantee\*

## IMPORTANT NOTICE

DO NOT DISCONNECT THE MICROPHONE CABLE WHILE THE SYSTEM IS POWERED AS THIS MAY RESULT IN DAMAGE TO THE MICROPHONE



NEVER REMOVE THE MAINS EARTH  
DOING SO CAN HAVE LETHAL CONSEQUENCES

ACHTUNG: LEBENSGEFAHR  
ENTFERNE NIEMALS DEN SCHUTZLEITER

NON SCOLLEATE IL FILO DI TERRA  
POTREBBE ESSERE MOLTO PERICOLOSO PER IL RISCHIO DI  
SCOSSE ELETTRICHE

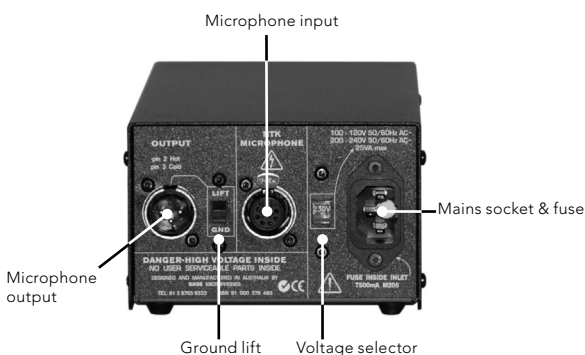
RELIEZ IMPERATIVEMENT L'ALIMENTATION A LA PRICE TERRE  
SOUS RISQUE MORTEL S'ÉLECTROCUTION

NUNCA MANIPULE LA TOMA DE TIERRA  
ESTA ACCION PUEDE TENER GRAVES CONSECUENCIAS

\*Online product registration required.

# Before using the NTK

- Ensure that your NTK has been set to the correct voltage, as used in your country. The NTK can be used with mains supply voltages of between either 110-120V 50/60Hz or 220-240V 50/60Hz.
  - To select for 110-120V use, set the voltage selector to 115V.
  - To select for 220-240V use, set the voltage selector to 230V.
- On either voltage selection the mains fuse (inside the mains socket) is always to be a T500mA slow blow fuse.
- The back panel of the NTK power supply has a microphone output socket, a ground (earth) lift, a microphone input socket, a voltage selector, and a mains power socket which also incorporates a fuse.



- The front panel of the NTK power supply has the mains power on/off switch and a blue LED to indicate power status.



# Connecting the NTK

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- Having ensured that the power supply is set to the correct voltage you can begin to connect the NTK to the power supply. **Do not connect the power to the mains before connecting the microphone.**
- Connect the male 7-pin plug of the NTK cable to the 7-pin input socket on the rear of the power supply.
- Connect the female 7-pin plug of the NTK cable to the microphone. Ensure that both plugs are correctly aligned and pushed firmly into their respective sockets.
- Now connect an XLR microphone cable to the output socket on the rear of the power supply, taking that output to your mixer/pre-amplifier.
- We suggest the use of a high quality cable, preferably with gold plated contacts. Use as short a cable as possible, as long cables can adversely affect sound quality.
- Ensure that the NTK is fixed securely (using the supplied stand mount, or optional SM2 shock mount) to a stable microphone stand. The NTK condenser microphone is a precision instrument and should be treated with care.
- Now you can connect the power supply to the mains supply and begin using the NTK microphone.

# Using the NTK

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- The gold dot on the face of the NTK indicates the front of the microphone, and the pick-up area of the cardioid pattern. Please be sure to have the side with the dot facing the sound source you wish to record.
- 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 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.



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- We strongly recommend the use of a pop shield or filter for all vocal recording. These aid in minimising plosive sounds (hard 'P', 'B', 'T' and 'K' sounds) that produce a sudden jet of air which can cause the capsule to overload and produce a 'popping' sound.
  - Any moisture on the microphone capsule can cause problems for condenser microphones, however the use of a pop shield or wind shield (optional accessory WS2) will reduce the risk of this occurring.
  - Placement of the microphone and pop shield relative to the vocalist may be varied on several factors including room acoustics, the vocal performance, and whether the vocalist has a high or deep voice.
  - An ideal reference is to begin with the pop shield directly in front of the vocalist, and approximately 15cm (6") away from the microphone. 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' to the microphone (and the gold dot).
  - If an earth loop is present (a mains frequency hum) there is a ground lift switch on the rear panel of the power supply, which should be raised to the 'lift' position. This earth loop can appear when two devices which are both earthed are connected together.

# Storage

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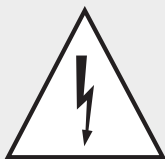
- After use the NTK should be removed from its mount, wiped with a dry, soft cloth and placed in its protective case.
- Be sure to place the moisture-absorbent crystals (supplied) at the head of the microphone, so as to absorb any moisture present.

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.

# IMPORTANT NOTICE

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**NOTE:** There are no user-serviceable parts inside the NTK supply, but there ARE potentially lethal voltages.

If the supply does not work correctly, you should consult either the dealer you purchased the microphone from, or a qualified electronic technician.

**DO NOT under any circumstance open the unit yourself!**

**ACHTUNG:** Das NTK Netzteil enthält keine Teile, die vom Benutzer repariert werden können.

Gefahr: Das Gerät enthält spannungsführende Bauteile!

Für Reparaturen suchen Sie bitte Ihren Händler oder einen qualifizierten Fachbetrieb auf.

**Auf keinen Fall dürfen Sie selbst das Gehäuse öffnen!**

**NOTA:** All'interno dell'alimentatore del NTK non ci sono parti riparabili dall'utente ma ci sono invece tensioni pericolose! Se l'alimentatore non funziona correttamente dovete consultare il rivenditore presso il quale avete acquistato il microfono oppure un tecnico elettronico qualificato.

**NON APRITE in ogni caso l'unità in quanto pericoloso!**

**AVERTISSEMENT:** N'enlevez pas le capot de l'alimentation, sous risque d'électrocution. Si l'alimentation ne fonctionne pas correctement, consultez votre revendeur, ou un technicien qualifié. **Vous ne devez sous aucun prétexte ouvrir**

**l'alimentation**

**vous-même!**

**NOTA:** No manipule internamente la fuente de alimentacion del NTK, puesto que el alto voltaje puede ser perjudicial en caso de sufrir una descarga.

Si se apreciara un funcionamiento incorrecto de la fuente de alimentacion, debera consultarlo en el establecimiento donde adquirio la unidad, solo puede ser manipulado por un servicio tecnico cualificado.

**Bajo ninguna circunstancia abra VD. la unidad.**

# 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**.

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**

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Ph: +61 2 9648 5855  
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

In the Unites States and Puerto Rico, contact  
usasupport@rodemic.com or call 805 566 7777

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

Anywhere except Australia, the United States and Puerto Rico,  
contact support@rodemic.com or call +61 2 9648 5855