3B SCIENTIFIC® PHYSICS



Microphone 1000565

Instruction sheet

10/15 Hh



1. Safety instructions

• Do not expose the microphone to sound levels in excess of 110 dB!

2. Scope of delivery

- 1 Microphone box
- 1 Table microphone
- 1 Mini DIN connecting lead 8-pin, 60 cm length

3. Description

The microphone is suitable for measurements of relative sound pressure, for examination of sound waves and sound frequencies, e.g. those of voices and musical instruments (fundamental tone and overtones), for determination of sound velocity in air, as well as for the examination of beats and the Doppler effect.

It consists of a microphone box with amplifier and an electret table microphone on a base, with detachable gooseneck stand.

4. Technical data

Table microphone with 3.5 mm stereo jack
plugCable length:1.8 mImpedance: $1.4 \text{ k}\Omega$

Frequency range:30 Hz - 16 kHzType:Omni-directional

5. Operation

- Connect the microphone to the microphone box and connect the latter to one of the two analog inputs A or B of the 3B NET/og[™] unit via the mini DIN lead
- Select "Vdc" as the operating mode for the selected input.

6. Sample experiment

Measuring the sound wave to fork	from a tuning
Equipment needed:	
1 3B NET <i>log</i> ™ @ 230 V	1000540
or	
1 3B NET <i>log</i> ™ @ 115 V	1000539
1 3B NET <i>lab</i> ™	1000544
1 Microphone	1000565
1 Tuning fork 440 Hz, on resonance box	1002613



Fig. 2: Amplitude of sound wave from a tuning fork as a function of time



Fig. 1: Measuring the sound wave of a tuning fork

- Mount the 440 Hz tuning fork on the resonance box and position the microphone in front of the resonance box's sound hole.
- Select an analog input on the 3B NET/og[™] module and activate the tuning fork experiment (template) in the 3B NET/ab[™] software. This provides all the necessary output settings.
- Conduct and analyse the experiment.