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**PLACID PMNU21
USER MANUAL**

PLACID USB MEASUREMENT
MICROPHONE

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PLC/PMNU21/M/24/V1



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PLACID PMNU21

CLASS 1 USB MEASUREMENT MICROPHONE
USER MANUAL



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PLACID PMNU 21 USER MANUAL

1 Overview

PLACID PMNU21, Class 1 USB measurement microphone integrates a Class 1 Condensor microphone, microphone preamplifier, a 24-bit A/D converter and USB interface, it transmits measurement data seamlessly to a PC or a mobile phone/tablet terminal through a USB cable. The Class 1 microphone carries out high-performance noise measurements with analysing software.

PRODUCT FEATURES

- Direct power supply from a PC or mobile terminal without the need of an additional external power supply.
- Compatible with Windows, Mac OS, as well as Android operating system. It's fully plug-and-play, no need to install any additional driver.
- The PMNU21 Class 1 USB microphone includes 2 channels, one for low sensitivity and one for high sensitivity. Depending on the application the appropriate channel can be selected.



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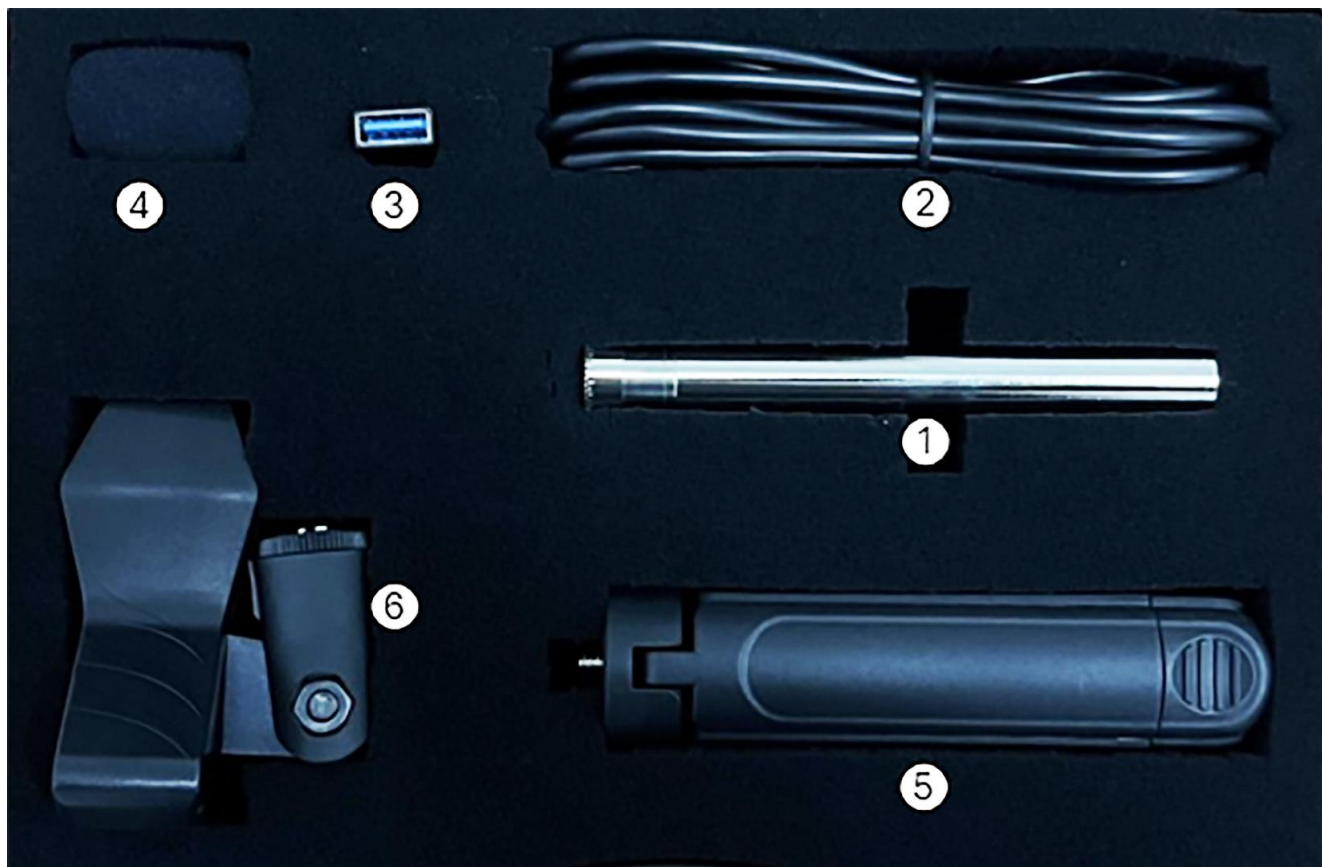
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1 Overview



CLASS 1 USB MICROPHONE SET

1. 1 x class 1 USB microphone
2. 1 x standard Micro USB cable (2m)
3. 1 x USB-C adapter
4. 1 x windscreen
5. 1x desktop mini tripod
6. 1 x Microphone holder (with 1 / 4 "adapter nut)



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2 Getting Started

1. CONNECTING TO A COMPUTER

Plug one end of the USB cable into the Micro USB port at the bottom of the microphone and the other end to the computer with a USB port.

Once plugged in, the microphone should be automatically recognized by the PC and should appear under Input device in Sound settings of your System.

Windows: Settings > Sound > Input > Select PMNU21 as your audio input device

Mac OS: System Preferences > Sound > Input > Select PMNU21 as your audio input device.

Make sure that your input volume or input level is not muted. We recommend starting with the input level at around 50% and slowly adjusting the volume as appropriate to prevent damaging the device.

2. CONNECTING TO A SMARTPHONE OR TABLET

Use the USB-C adapter that is included in the package to connect the microphone to your smartphone or tablet. If your device does not have USB-C port, you will need to find a compatible adapter.

Once plugged into your device, the microphone should be automatically set as audio input.

3. USING WITH DAW AND AUDIO SOFTWARE

Open up your choice of DAW or sound recording and analyzing software. Recheck the audio settings of the software, and make sure that the audio input is still using PMNU21.

4. SOUND LEVEL CALIBRATION

For measurement purposes, the sound level reading from the microphone and the sound system need to be verified. Use a sound calibrator e.g. PLACID CA-01 or the one you know the reference level to calibrate the microphone and the sound system. Connect the sound calibrator to the PMNU microphone and make sure the level reading on the audio software is matching the sound calibrator level.



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3 Advance Setup

1. INPUT FORMAT

Some systems may allow you to adjust advanced settings of the input device, for example, choosing sampling rates and bits. The microphone has a sampling frequency or sampling rate of 48KHz and sampling bits of 16 bit.

We recommend matching the system settings with the microphone specifications.

Windows: Settings > Sound > Input > Select PMNU2151 > click the right arrow (>) to enter Properties > Input settings > Format > 16 bit, 48000 Hz (or lower the sampling rate if your computer faces lacking problems).

Mac OS: You may change the digital audio settings inside the DAW or audio software.

2. MEASUREMENT CHANNELS

The PMNU 21 provides 2 measurement channels, Low sense and High sense with different sensitivity and dynamic range (please see the microphone sensitivity on the included certificate).

The low-sensitivity channel is suitable for loud noise measurement due to the higher dynamic range sound level, while the high-sensitivity channel picks up low-volume noise better. You may switch the measurement channel you want to use in the recording or analyzing software (some software might not have the option available).



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4 Technical Specification

- Microphone: 1/2 inch pre-polarized condenser microphone
- Frequency range: 20Hz – 20 kHz
- Nominal sensitivity: 50mV / Pa
- Dynamic range: 26dB 126dB
- Sampling frequency: 48 kHz
- Sampling bits: 16bit
- USB standard: 0, downward compatible with USB1.1
- USB power supply: 5V
- Overall dimension: total length 118 mm, diameter 13 mm, outer diameter 13 mm
- Weight: 40g



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5 Safety Instruction

1. Do not disassemble the microphone or remove the microphone protection grid. Removing the grid may permanently damage the microphone diaphragm.
2. Do not expose the microphone to water or extreme temperatures.
3. Do not drop the microphone from height or strongly hit the microphone.
4. Use the provided USB cable and connectors from the package. Ensure to use a standardized brand for the USB cable and any additional accessories to prevent damage to the internal A/D system.
5. Exposure to extremely high noise levels above the dynamic range may cause damage to the microphone.



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