

Pettersson u384 USB Ultrasound Microphone

Quick Start Guide



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Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment under FCC rules.

Petterson u384 USB Ultrasound Microphone

INTRODUCTION

The u384 USB Ultrasound Microphone enables you to make high-quality, full spectrum recordings of bat calls or other ultrasonic signals with a wide variety of computers/laptops/tablets/smartphones (referred to as 'computers' below), using the sound recording software of your choice. The u384 uses standard sound device drivers and does not require installation of any custom drivers.

The u384 comes in a small and durable aluminium enclosure. It is equipped with a micro-USB plug which allows it to be connected directly to a smartphone, without the need for a cable. It also ships with a micro-USB to USB type-A adapter, to which various types of USB cables can be connected, enabling usage of devices with, for example, USB type-C and Lightning ports.

In order to plug the u384 directly into a USB type-C port, we recommend this adapter: <https://batsound.com/product/micro-usb-to-usb-c-adapter/>. Other adapters are likely not to work.

The u384 can be connected to iOS/Lightning devices if a "Lightning to USB Camera Adapter" (MD821ZM/A) is used.

Low-noise technology, high sampling frequency and efficient anti-aliasing filter provide high quality recordings.

SYSTEM REQUIREMENTS

The u384 works with most operating systems, e.g. Windows, OS X, iOS, Linux and Android, and on most computer devices. Due to the large number of possible combinations, it is not possible to guarantee full functionality on all computers and operating systems, though.

Specifically, the hardware and software used to record from the u384 must support recording at a sampling frequency of 384 kHz and a resolution of 16 bits. A USB 2 or USB 3 (OTG/host enabled) with USB bus power is also required. For information on this, please consult the specifications for the computer and recording software.

In order to reduce the load on the processor and increase the performance, we recommend you to:

- Run only the sound recording program/app. Close all other programs/apps, if possible.
- Disable anti-virus scanning, if an anti-virus program is used.
- Disable computer functions such as WiFi, Bluetooth and Power Saving features. Set the device in "flight mode", if available.

USING THE u384

Getting started

First, you need a sound recording software. There are quite a few suitable programs - both free and paid - on the market. The Petterson BatSound Touch is one example for Windows devices. BatSound Touch Lite is free and can be downloaded from Petterson's web site, www.batsound.com. Audacity is another popular program available in versions for Windows, OS X and Linux. For Android devices, the app 'Bat Recorder' is available at Google Play Store. As mentioned, the program/app you choose, must support recording via USB at 384 kHz sampling frequency and 16 bits resolution. Most programs have to be specifically set up to use these recording parameters.

Next, connect the u384 to your device, either directly to a micro-USB port, or to a port of a different type through a suitable adapter. Usually, the computer will acknowledge this, e.g. with a sound. This process may take a few seconds. The u384 is now ready to be used.

If no "USB device connected" acknowledgement sound is heard, please disconnect the u384 a few seconds and then connect it again and wait to let it establish the USB connection.

Please note that some devices may require that you first turn on the USB port in the device's settings menu.

The way recordings are made, depends on the recording software. Please refer to the software manual for information about this.

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Handling precautions

The u384 is not waterproof and should be protected against the elements if used e.g. under humid conditions. The housing and circuit board are relatively insensitive to humidity, but the microphone element and USB connector may require protection.

The USB plug should be handled with care. Applying excessive force on the plug is likely to cause damage. This is particularly important when the microphone is plugged into a host device (e.g. a smartphone).

u384 Specifications

Microphone:	MEMS
Recording format:	384 kHz/16 bits
Interface:	USB 2.0, 3.0, 3.1
Anti-aliasing filter:	Yes
Frequency range:	1 kHz - 192 kHz
Size:	43 x 35 x 13 mm
Weight:	25 g
Power:	USB bus powered (5 V, 28 mA)