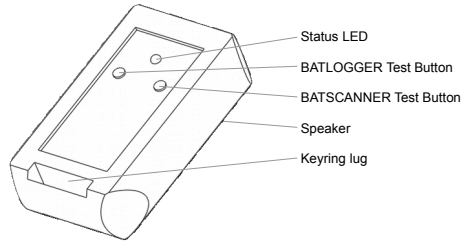


Microphone Tester Pulse Manual



elekon

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Thank you for purchasing Elekon AG's Microphone Tester Pulse.

The Microphone Tester Pulse is an ultrasonic microphone test device. It emits ultrasonic test pulses that can be used to check the functioning of your bat detector. There are two test sequences to check different device types – BATLOGGER and BATSCANNER. The device is intended for usage with Elekon's BATLOGGER and BATSCANNER devices, however, it may function with other bat detectors and ultrasonic devices as well. It is the ideal test device to have always with you for a quick check ahead of your bat walk.

1 Notes



Instructions for safe use:

Please read this manual carefully and entirely before using this product. The product must be properly installed before usage.



Warning:

The device must be protected from rain and generally from liquids and any environmental influences.



Battery:

Only use standard CR2032 button cell batteries. Follow the instructions in chapter 6 to change the battery. Repairs should only be carried out by a qualified customer care centre.



Frequency-response:

Due to the small size and therefore limited power of the device it is not possible to output a flat frequency-response curve. The device is intended to quickly check the general functionality of a bat detector, not to perform detailed measurements or even calibrations.

2 Package Contents

- Microphone Tester Pulse (incl. CR2032 button cell battery)
- This manual

3 Features

- Emits ultrasonic test pulses
- Bat detector mode
- Bat recorder mode
- Status indication LED

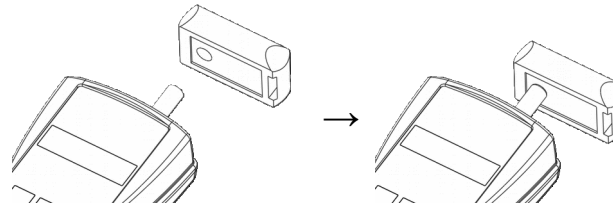
4 General usage

1. Go to a quiet place for best results.
2. Place the device with the speaker opening directly on top of the ultrasonic microphone to test.
3. Press the 'BATLOGGER' or 'BATSCANNER' button according to the device to test (see below).
4. The Status LED indicates the ultrasonic output
5. Check if the test pulses are recorded or transformed into audible range as expected (see below).

5 Test modes

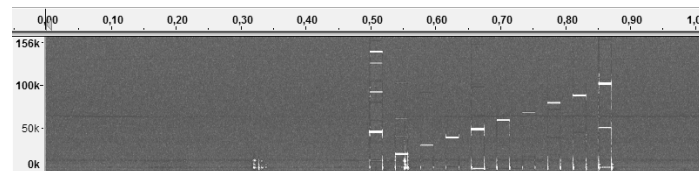
The device features two test modes with different pulse sequences.

5.1 BATLOGGER mode



This mode is intended for ultrasonic recording devices such as a BATLOGGER M. A short sequence (ca. 380 ms) of ultrasonic pulses is output. The BATLOGGER records this sequence to the SD card. To check the correct functioning of the BATLOGGER, this recording can be analysed on a computer.

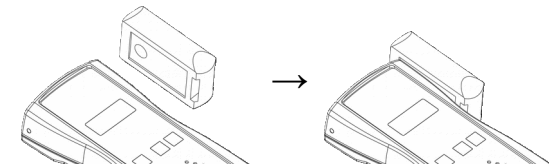
1. Place the device with the speaker opening directly on top of the ultrasonic microphone (see illustrations above).
2. Press the 'BATLOGGER' button to start the sequence. The LED flashes red.
3. The BATLOGGER should trigger a new recording automatically (with default settings). If a BATLOGGER device with live monitoring function is used, a short beep should be heard on the headphones/speaker.
4. When the sequence is done, the LED turns off and the recording is stored onto the SD card.
5. Place the SD card into a computer, open the recording file (WAV) with an audio application (e.g. Audacity ©) and analyse the recording. Check if all the pulses were recorded properly. A spectrogram should look like this:



One pulse at approx. 45 kHz for 20 ms to trigger the recording

Each one pulse at approx. 20, 30, 40, 50, 60, 70, 80, 90, 100 kHz for 20 ms to test the frequency response.

5.2 BATSCANNER mode



This mode is intended for bat detector devices such as a BATSCANNER or BATSCANNER STEREO. Nine short ultrasonic pulses with varying frequencies and 500 ms duration are output. The BATSCANNER triggers to these pulses and transforms them into audible range.

1. Place the device with the speaker opening directly on top of the ultrasonic microphone (see illustrations above).
2. Press the 'BATSCANNER' button to start the sequence.
3. The first ultrasonic pulse (20 kHz, 500 ms) is output and the LED flashes red.
4. The BATSCANNER should trigger to approx. 20 kHz and a beep should be heard on the headphones/speaker.
5. For each frequency (20, 30, 40, 50, 60, 70, 80, 90, 100 kHz) a pulse is output in the same way.
6. The BATSCANNER should trigger to each frequency (approx.) and beep.

6 Troubleshooting

- LED does not light up when a button is pressed:
 - Check/replace battery
- Device under test does not trigger to the pulses:
 - Check trigger settings, use default settings
 - Microphone may be defective, check microphone with higher-grade test equipment
- Not all pulses trigger correctly:
 - Check placement of the device to the microphone
 - Repeat test in a quiet environment
 - Microphone sensitivity may be affected, check microphone with higher-grade test equipment
- Replace battery:
 1. Use a flat-head screwdriver on the gap on the left side of the housing to carefully open it.
 2. Replace the CR2032 button cell battery.
 3. Place circuit board back into the cap and close the housing by pushing the cap onto the base until you hear a "click".

7 Specifications

Dimensions L×W×H, Weight	60×40×19 mm, 25 g
Weather protection	IP40
Power supply	1× CR2032 button cell battery
Operating environment	0°C to 40°C, < 80% RH
Display	LED
Speaker	Piezo, max. 33dB at 10cm / 20kHz, Range: 20 – 100 kHz (-30dB)

8 Disclaimer

- Unauthorized reproduction of this manual is prohibited.
- Changes to the information as well as technical specifications and design of the product reserved.
- The illustrations used in this manual may differ from the actual product.
- Notwithstanding the foregoing Elekon AG can not be held liable for losses, arising from the use of this product.



Made in Switzerland
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