

# Baton user guide

- Frequency division bat detector
- Real-time sonograms
- No tuning required
- Unique design
- Analysis Software included  
(with sample bat calls)



See inside for Instructions

# Baton instruction guide

The Baton is a simple but versatile bat detector having a monitor speaker allowing reduction of frequencies between 20kHz to 120kHz. The division factor is 10, reducing the sounds of a 50kHz bat to 5kHz.

The unit comes with a version of BatScan sound analysis software, developed especially for the Baton.

In addition, if attached to the soundcard of a computer by a stereo lead from the 'line out' of the Baton, it will produce real-time sonograms, allowing detailed analysis of calls when used with BatScan software. The Baton retains the original amplitude of the calls recorded, allowing 3D analysis of bat calls. (time, frequency and intensity).

Calls can also be recorded on other devices such as MP3 or minidisc for later analysis. MP3 files will have to be converted to WAV files before Batscan will be able to load them.

The Baton is also ideal for listening to *orthoptera* (grasshoppers and crickets) whose communication is in the upper part of, or above human hearing.

One PP3 9V battery lasts for up to 30hrs (alkaline)

## INSTRUCTIONS

When changing the battery, make sure that you insert it the right way round, as per the polarity marks inside the battery compartment.

To turn the unit on, just press the button on the panel. You will hear a slight hissing noise from the unit. This is 'white noise' and is normal during operation. Press the same button to switch off.

The four blue dots around the switch are a further indication of the 'on' state. During daylight these will appear dimly but at night will be much brighter.

Because the whole spectrum of ultrasound between 17kHz and 120kHz is being monitored, there is no need to tune in to various bat species.

The Baton will hear all species within that range simultaneously.

When using the Baton the speaker (bulbous end) faces the user. At the other end, the ultrasound microphone (the tiny silver coloured lozenge shape) is a very sensitive and fragile component, so do not allow any sharp objects or excessive moisture near to it. Always return the Baton to its pouch before putting into a pocket.

When in use, hold the Baton firmly as movement of skin against the case will produce ultrasound, as will walking through long grass, where pointing the Baton upwards will reduce interference from this source.

Identifying bat species will become better with experience but without computer analysis of recordings made with the Baton, many bats sound the same when using frequency division.

### **COMPUTER ANALYSIS**

When connected to a PC laptop soundcard the Baton can produce real-time sonograms (through BatScan) where analysis of calls makes identification much easier. For locations where it is possible to place a laptop in the field i.e. garden, vehicle, site-building etc., the Baton makes an ideal monitoring device. Do not use the baton or your laptop in adverse weather conditions.

### **Loading BatScan**

Insert the BatScan CD into your CD drive. Click 'Start', then 'Run'. Open the file on the disc called 'baton\_batscan\_setup.exe' and the Windows installer will do the rest. A BatScan icon will be placed on the desktop. To open BatScan just click this icon.

### **Using BatScan**

Plug the Baton, via a 3.5mm stereo audio connecting cable (not supplied), into the 'Line-in' socket of the laptop sound card.

You may need to configure the sound card to enable the Line-in socket. Follow the guide for this in the 'help' file of BatScan.

Once you have connection, from the 'Function' menu check the 'on' in 'automatic save'.

You will now be asked to select a sample filename. You can create a new one or select an existing one for saving the recording. Click 'save'

As soon as you press F1, the input (Baton) is being scanned and, depending on your laptop, you may hear the sound transferred through your PC speakers. (Some laptop soundcards do not allow audio monitoring of the input). Although the lead is stereo, the same signal is sent to both channels, so the software should see the signal as mono.

By pressing the 'space bar' you can start and stop writing to the file that you have just created. You will see the text in red 'recording WAV file', when recording is taking place.

