

Bat detector review – Peersonic

The bat detector technology of choice for an increasing number of bat workers nowadays involves the direct sampling of sounds in the ultrasonic range (also known as full spectrum recording), i.e. sounds are captured at a high sampling rate and saved to an internal memory card. This enables continuous highly detailed data capture and the scope for successfully recording bat calls and identifying species through sonogram analysis is greatly enhanced.

Detectors that utilise this technology tend to be expensive and beyond the budget of many bat enthusiasts, particularly volunteers. Peersonic have brought out a new direct sampling bat detector for under £200 for the basic unit, which looks likely to make this technology more affordable to a greater number of people. The high sampling rate of 384 kHz and 16 bit resolution result in very clear sonograms with a high signal-to-noise ratio. Frequency response appears to be fairly consistent across the frequency range. A version containing an RTC module to date- and time-stamp your recordings is available for an additional £28 and this is highly recommended for volunteer bat surveys (such as the National Bat Monitoring Programme) as well as professional surveys. A discount is available to BCT members (£12 for the basic unit/£15 for the full unit with RTC).

There are two options for capturing recordings. In manual mode, recording is triggered by pressing the button on the left-hand side of the unit. In automatic mode you can set the auto threshold for triggering recordings – any value from 0 dB (least sensitive) to -100 dB (most sensitive). It takes a few experiments in the field to find your preferred setting in order to strike the right balance between capturing recordings of most bat passes without also getting a lot of triggers from background noise, particularly on walked transects. In both recording modes you can adjust the settings to control recording duration.

There are two audio modes, both of which are purely for listening in the field – neither of these can be recorded. Frequency division can be set to a division factor of any value from 1 to 20. In heterodyne mode the background hiss is quite loud but the heterodyne signal is very pleasant and clear, enabling changes in tonal quality to be discerned quite easily when tuning around. There is no speaker so audio is heard only through headphones. This limits the use of this detector for enabling others to hear bat sounds, on a bat walk for example, but does ensure that the direct sampling recordings are not sullied with noise from the audio output. Peak frequency of the detected signal is automatically displayed which enables speedier field identification of species where this is an important clue.

The rather basic and minimalist design might initially seem a bit off-putting to some – no friendly “record” button, for example. Functionality is controlled through a menu (navigated using two buttons and the tuning dial) which is clearly laid out and after a bit of practice it’s fairly easy to find your favourite functions and settings (you can also save your preferred settings). One novel feature is the inclusion of a tripod mount. While this detector has limited scope for passive monitoring (you can’t program it to switch on and off at particular times and it doesn’t look particularly weather-proof) it’s handy to be able to mount it on a tripod while attended (e.g. on a roost emergence count) or overnight in a suitably safe and sheltered location.

There are a few slightly less satisfying features. To change the batteries you need to remove two smallish screws and manoeuvre the main body of the unit out of its casing which can be a bit fiddly, particularly in the field. Data upload is only possible via a USB lead plugged directly into the unit and is relatively slow. The two buttons that control the menu are a bit on the small side (I’ve occasionally found myself vainly pressing the similarly-sized on-off switch instead!). At present the maximum number of files you can record is 250 (regardless of remaining free space on the card) and it’s quite

possible to reach this limit before the night is out when a lot of activity is detected (setting a longer file duration can help reduce this risk). While the detector is saving a recording, the status “Finishing” is displayed on the screen, replacing other useful information, such as detected peak frequency or heterodyne tuning frequency. Normally this only lasts for a second or two but for longer recordings it can take several seconds to complete.

However, it didn’t take me long to get used to these quirks and they pale into insignificance when set against the plus points of this detector. Its ease of use in the field, excellent recording quality and relatively low cost make it a welcome addition to the crop of new detectors regularly appearing on the market. Another advantage is that the unit can be upgraded through uploading files released by Peersonic in order to implement improvements to the functionality, often in response to user feedback, so it is possible that some of the above issues will be fixed in future releases.

More information at <http://peersonic.co.uk/>.