

# Devon Bat Survey Instruction Manual 2021



## Introduction

Devon Bat Survey began through the Devon Greater Horseshoe Bat Project in summer 2016 with the aim of finding as many bats as possible. Please see [www.devonwildlifetrust.org/what-we-doour-projects/devon-greater-horseshoe-bat-project](http://www.devonwildlifetrust.org/what-we-doour-projects/devon-greater-horseshoe-bat-project) for further information. While the Devon Greater Horseshoe Bat Project has come to an end, Devon Bat Survey will be continuing in 2021, through Devon Biodiversity Records Centre (hosted by Devon Wildlife Trust). Our aim is to help Saving Devon's Treescapes find out more about all the bats which rely on ash and other trees, in some of their key project areas. For more information on Saving Devon's Treescapes, please visit: [www.devonwildlifetrust.org/what-we-doour-projects/saving-devons-treescapes](http://www.devonwildlifetrust.org/what-we-doour-projects/saving-devons-treescapes).

Full instructions are below. If you have any problems/queries concerning any of the kit or the survey process, check our FAQs document, a copy of which should be found in the bat detector kit box. A copy can also be found on our webpage, along with general FAQs about the project at [www.devonwildlifetrust.org/devon-bat-survey-2021](http://www.devonwildlifetrust.org/devon-bat-survey-2021). Here you can also find documents such as Recording Forms, landowner permission and details of Monitoring Centres.

If you have any questions please contact Elinor from the Devon Bat Survey team on 07506 219687, or email us on [bats@devonwildlifetrust.org](mailto:bats@devonwildlifetrust.org) (emails are checked Mon-Fri).

## Overview

The detector should be placed out for 3 nights in a secure location on the same afternoon that it is collected from the monitoring centre – please leave it in the same place each night. The detector kit should be returned to the centre on the 4<sup>th</sup> day **with one set of batteries charged ready for the next person**. The SD card should be returned using the pre-paid padded envelope **as soon as possible** after the survey has ended, along with your completed Recording Form. If your booking spans a period when the monitoring centre is closed, you will have a slightly longer booking slot – you can leave the detector out for the whole time.

### Step 1: check the kit

- Check that the kit contains the correct equipment as shown in the photo as well as a bamboo cane, yellow jiffy bag with a pre-paid stamp and recording sheets. If the envelope is missing, you can collect one when you return the kit. If the recording



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sheet is missing, you can download and print one from our website. **You do not need to inform us if there are no spare SD cards in the kit box.**

- **Make sure that the batteries are fully charged using the battery tester provided (they can take up to 6 hours to charge, so be sure to check them as soon as you can).** Batteries should read 'good' on the battery tester's display. If not, charge batteries



before deploying the detector (warning: batteries get hot when charging).

- There should be at least one SD card with the kit. You can test these to make sure they are empty using the SD card reader. If any SD cards contain previous WAV files, do not use these but send them back to us together with the SD card that you used to undertake your survey.



**How to test the batteries:** simply push the red slider as far to the right as it will go and insert the battery into the space (with positive charge on the right, next to the slider). Read the display to check that it says 'good'.



**How to check the SD card:** remove the plastic caps from the SD card reader and slot the SD card into the SD card reader (the writing on the SD card should be facing upwards) OR use the SD card port on your computer if you have one. Now insert the SD card reader into the USB port of your computer; a red light will

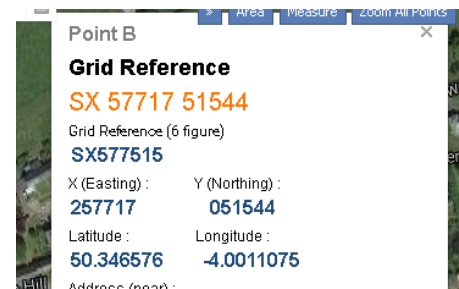
show on the SD card reader when connected. A dialogue box should appear on your screen giving a few options, and you need to select 'Open folder to view files' – check that the next window says 'This folder is empty'.

**IMPORTANT – You need to input the 4 digit Grid Reference location information into the bat detector**

To speed up the processing of the sound files recorded you need to change the file name on the bat detector. You will need the four digit grid square number for the square you selected at the booking stage (which is on the original square booking confirmation email). If you do not have this you can get it by going to

[www.gridreferencefinder.com](http://www.gridreferencefinder.com) and put in your location details. Click on the right-hand button of the mouse to drop a pin where you will

put the detector (if you are using a tablet, press and hold for 2 seconds on your site to drop the pin). This will give you a 10 and a 6 figure grid reference. Take out the 3<sup>rd</sup> and 6<sup>th</sup> number from the 6 digit grid reference to get the four digit one e.g. SX654321 would have the 4 and 1 removed to become SX6532. **Record the four digit number and the 10 digit on the recording form.**



**Inputting your grid reference into the detector**

Please DO NOT change the longitude and latitude on the detector – if you have changed it, please contact us as soon as you can.

1. Open up the detector lid and follow steps on inside lid of detector.
2. At step 4 do the following:
  - Scroll down to '**Settings**' and press enter.
  - Scroll down to '**Location**' and press enter.
  - At '**Prefix**' scroll right, to where it says **SURVEYSS1212**



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- Use the up and down keys to change the last 6 digits to your grid square. Once you have entered each character use the right arrow to move to the next character. Your entry should look something like **SURVEYSX1234**
  - Press enter until the cursor is flashing over the “-” in front of the word ‘Prefix’.
  - Use the left arrow to navigate back to the main menu.
3. Continue to follow the instructions on the lid of the detector.

If the detector screen goes blank while you are navigating the menu, you can restart it by sliding the switch on the top right side of the detector to “EXT”. Leave it for 30 seconds and then slide it back to “INT”. If this doesn’t work, please give us a call.

### Choosing the location for your bat detector

- Bats prefer quiet areas away from too much disturbance.
- Please do not put them in fields with livestock – they like to eat the microphones!

See below for some advice on potential detector locations:

Suitable locations	Unsuitable locations
<ul style="list-style-type: none"> <li>• Hedges</li> <li>• Lines of trees</li> <li>• Old trees</li> <li>• Orchards</li> <li>• Leafy gardens with lots of shrubs</li> <li>• Woodland glades</li> <li>• Banks of rivers and streams</li> </ul>	<ul style="list-style-type: none"> <li>• Centre of open fields</li> <li>• Areas where the detector is visible to the public</li> <li>• Near street lights and other well-lit areas</li> <li>• Busy roads</li> <li>• In areas without protection from livestock</li> </ul>



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## Important!

If you are placing your detector on land which you **do not** own, you **must** gain permission from the land owner first and make sure that the detector is not in danger of being stolen or removed by members of the public. You should speak to the landowner prior to selecting your grid square. A permission form and introduction letter are available on our website <https://www.devonwildlifetrust.org/devon-bat-survey-2021>



## Setting up the detector

Once you have chosen a suitable location for your detector and followed the instructions on how to enter your location, you will need to set it up ready for deployment.

1. Once the detector is set up it will say that it is going to sleep – this is normal; the detector will start to record before sunset and will go to sleep again in the morning after sunrise.
2. Attach the end of the microphone cable to the detector – this is a push fitting – then carefully twist the collar to lock it in position.
3. The microphone cable attached to the detector should be looped together with some garden wire; use this wire to attach the microphone to the bamboo cane provided. Extra wire is provided in case you want to attach the microphone to a tree instead of the cane. **Do not detach the microphone from the cable at any point.**
4. Take the detector, recording sheet and the cane out to your chosen location, push the thin end of the cane into the ground until stable.
5. Place the detector safely on the ground out of sight.
6. Secure the microphone to the thick end of the cane with the garden wire. Try to position the microphone to point outwards at a roughly 45° angle and with minimum vegetation in front of the microphone (see photo, right). This will stop rain from interfering with the microphone. The squidgy cover on the microphone should not be pushed all the way down as this will interfere with the recordings.

## Filling in the recording sheet

You only need to fill in one of the recording sheets for your chosen location.



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- You will need both the 10 figure and 4 figure grid references that you found earlier using <https://www.gridreferencefinder.com/>.
- For Site Name please write the 4 digit grid reference.

### Posting the SD card and recording sheet

The recording sheet and the SD card (placed back into its plastic case) will need to be sent back to us in the yellow freepost envelope provided **on the same day that you return the detector to the Monitoring Centre**. If you have placed the detector on private land, please also enclose the signed permission from the landowner. The data will be analysed and a results report emailed to you. This can take up to 8 weeks, so please be patient – we recommend you remember to check your junk folder if you don't receive the report by then.

### Charging the batteries

While your detector is out, **please re-charge the spare batteries ready for the next person**. The batteries will need around 6 hours to re-charge. Ensure the batteries are returned to the host centre with the charged batteries in the battery charger, and the used batteries loose in the box and not in the detector.

### Returning the detector kit

**Do not disconnect the microphone from the cable.**

Ensure that all the pieces of equipment are placed back as they were found (minus an SD card and recording sheet!). Ensure that the bamboo cane is returned and the wire looped back around the microphone lead. Return the kit to the centre in time for the next person to pick it up the following day (check opening times of the centre to avoid problems – these can be found on our website and on the kit box).

**PLEASE READ THE ENCLOSED RISK ASSESSMENT CAREFULLY AND HAVE IT AVAILABLE TO REFER TO DURING THE SURVEY**



**We hope you enjoy the survey and thanks for taking part in the **Devon Bat Survey!****

**If you have any questions please contact Elinor from the Devon Bat Survey Team on 07506 219687, or email us on [bats@devonwildlifetrust.org](mailto:bats@devonwildlifetrust.org). (emails are checked Mon-Fri).**



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