How to set and install an audiomoth

Grégoire Loïs, Yves Bas & Charlotte Roemer

Required material

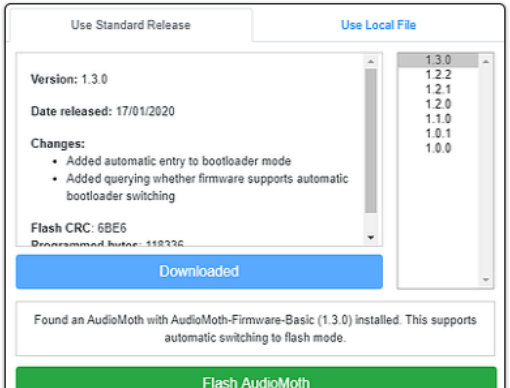
- Make sure that you inserted a microSD card that is at least 32 Go (16 Go may not last for a full night in case of high activity). The constructor recommends SanDisk cards with a writing speed class UHS-I U3 minimum, but UHS-I U1 (PNY brand) used with Audiomoths and firmware >1.2 *seem* to function correctly. It is recommended to format the card in FAT32 on your computer (once the card is inserted, right-click on the place of your card and choose Format…)

- Make sure that your batteries have a sufficient charge. Beware of recheargeable batteries a little bit too old, because some Audiomoths experienced a short-circuit.

- You can verify the charge of the batteries by connecting your Audiomoth to your computer (see hereafter)

Update your Audiomoth

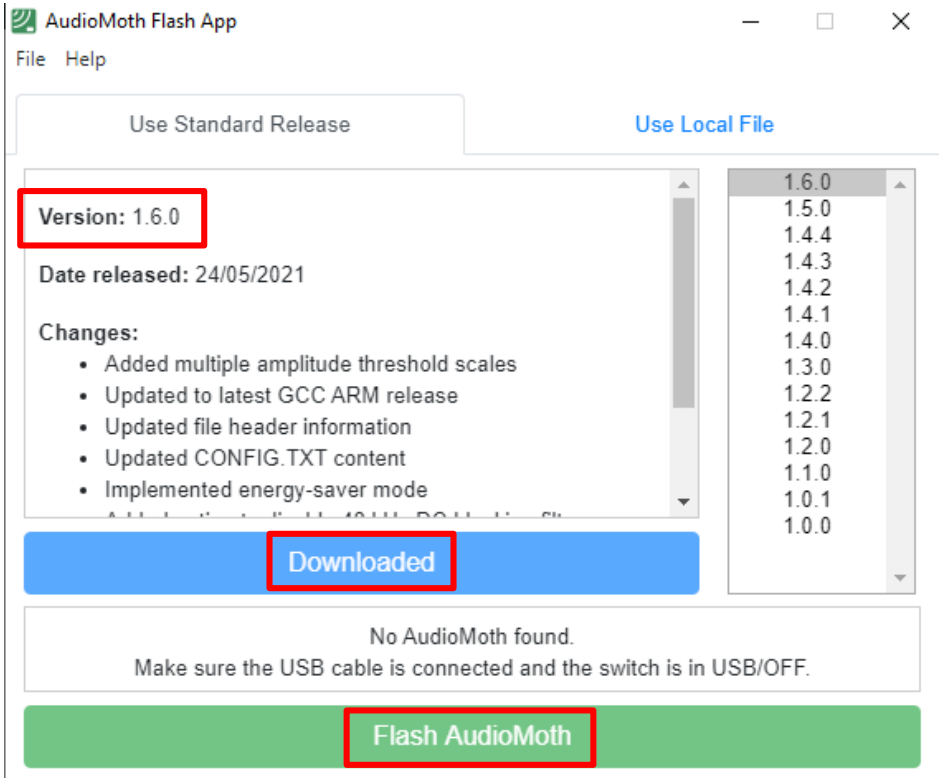
IMPORTANT but to only do once: **flashing your Audiomoth** (=update the firmware)
A specific software is required : Audiomoth Flash App to download here (different from the Audiomoth Configuration App that you will use at each deployment, see hereafter)



Update your Audiomoth

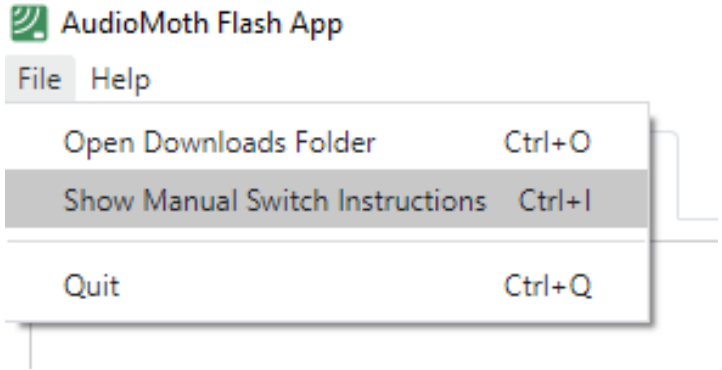
IMPORTANT but to only do once: **flashing your Audiomoth** (=update the firmware)
It is important to download the latest version (>= 1.6) to benefit from the trigger function, which allows to save a lot of space on the memory card

Once downloaded, click at the bottom on **Flash Audiomoth**



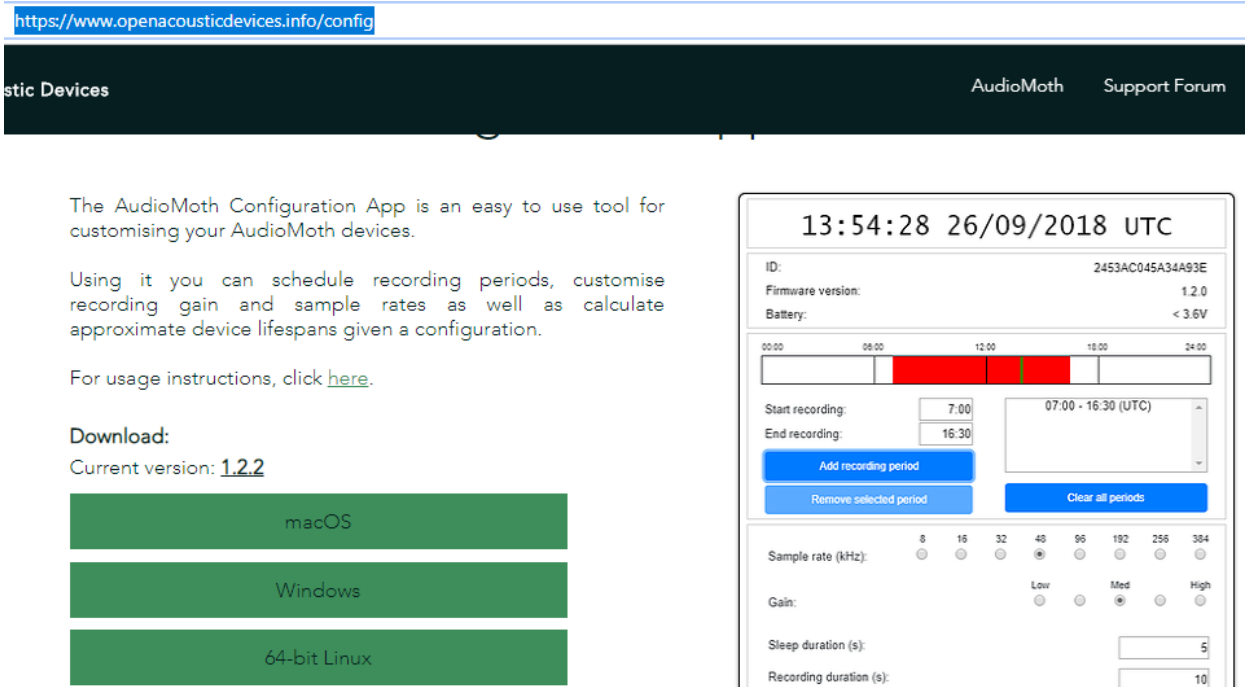
Update your Audiomoth

IMPORTANT but to only do once: **flashing your Audiomoth** (=update the firmware)
If your Audiomoth has an old firmware (< 1.3), you will need to **use a metal object such as a paper clip to make an electronic contact** that will allow the flashing. For this, follow exactly the instructions given when clicking on **File** and then on **Show Manual Switch Instructions**



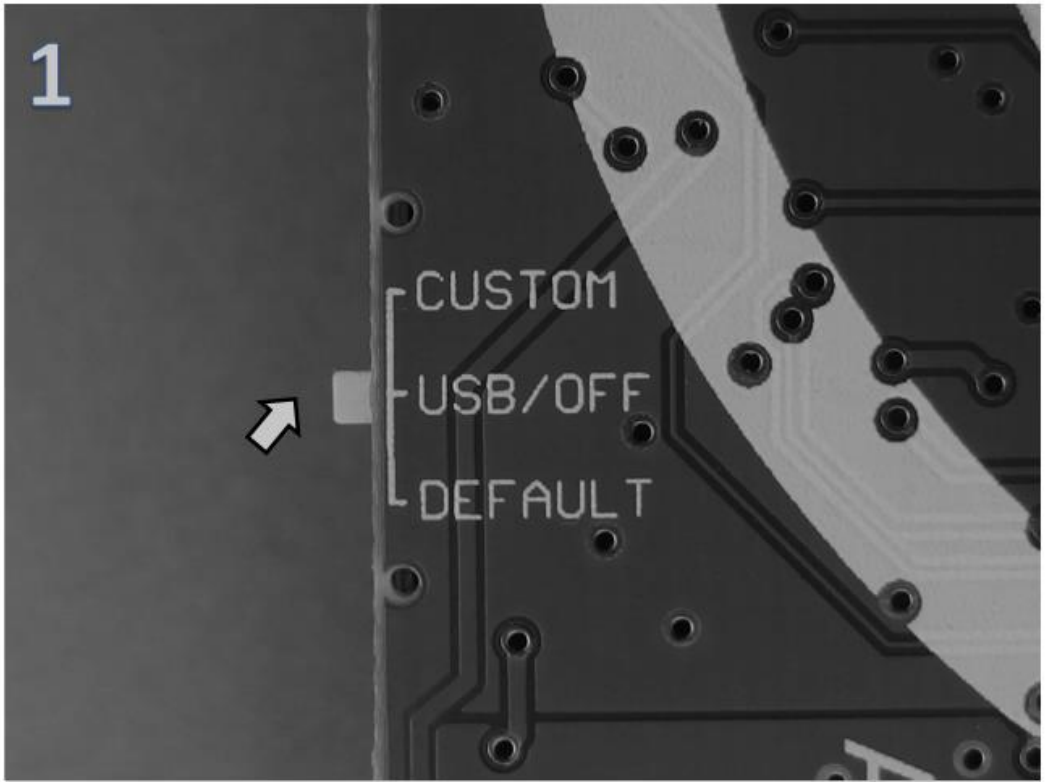
Set the Audiomoth before field work

If it is not already done, [download and install the Configuration app of the Audiomoth by clicking here]



Set the Audiomoth before field work

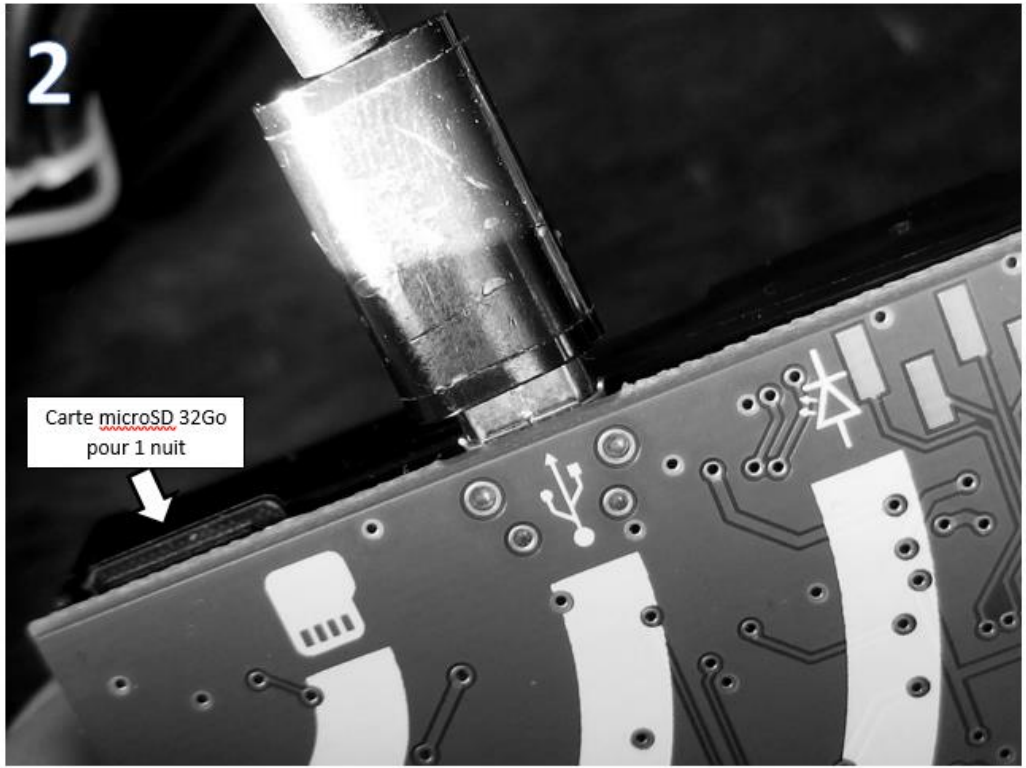
Set the switch on USB/OFF to connect it to your computer



Set the Audiomoth before field work

Insert batteries

Connect your Audiomoth to your computer using the USB cable provided



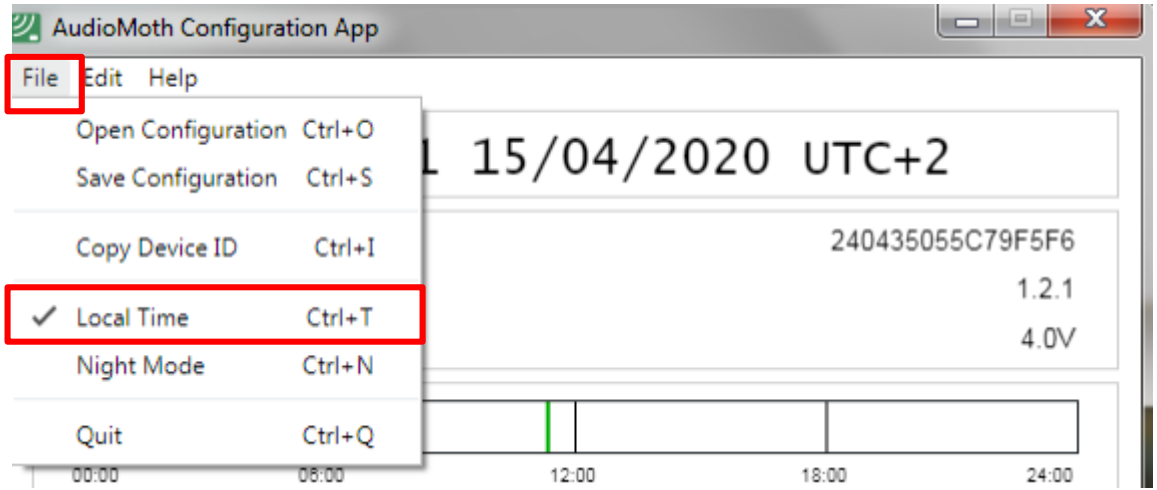
Set the Audiomoth before field work

Connect your Audiomoth to your computer using the USB cable provided

Set the Audiomoth before field work

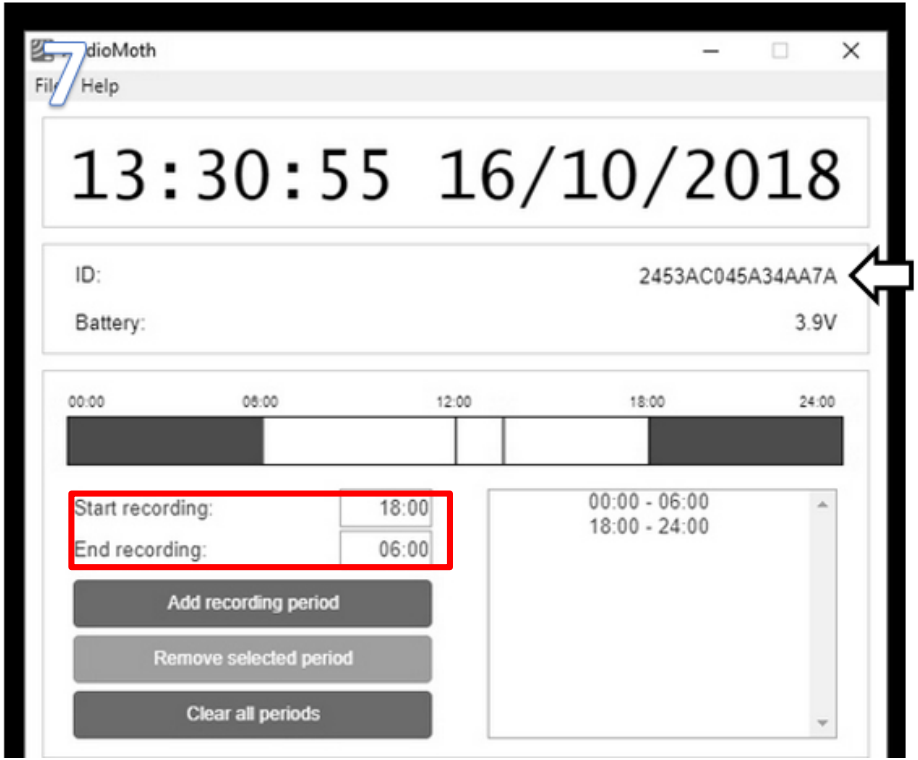
Step 1 : you need to set the time in local time. For this, click on **File** puand make sure that **Local Time** is checked.

If necessary, click on the Configure Audiomoth button to validate the time.



Set the Audiomoth before field work

Step 2 : Copy the identification number of your Audiomoth so that you can use it on the online portal of Vigie-Chiro



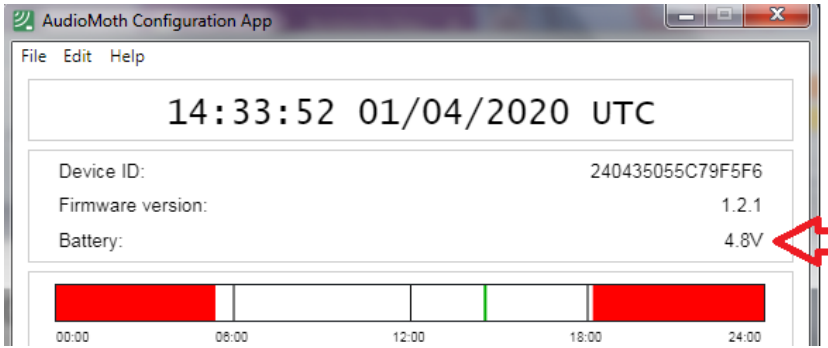
ID of the Audiomoth

Set the Audiomoth before field work

Here, you can check the charge of the batteries

A charge of 4,8V corresponds to new alcaline batteries, rather4,3 V rechargeable batteries with a mean capacity (2100 mAh)

A charge of 4,0 V seems to be the limit to last 1 full night.



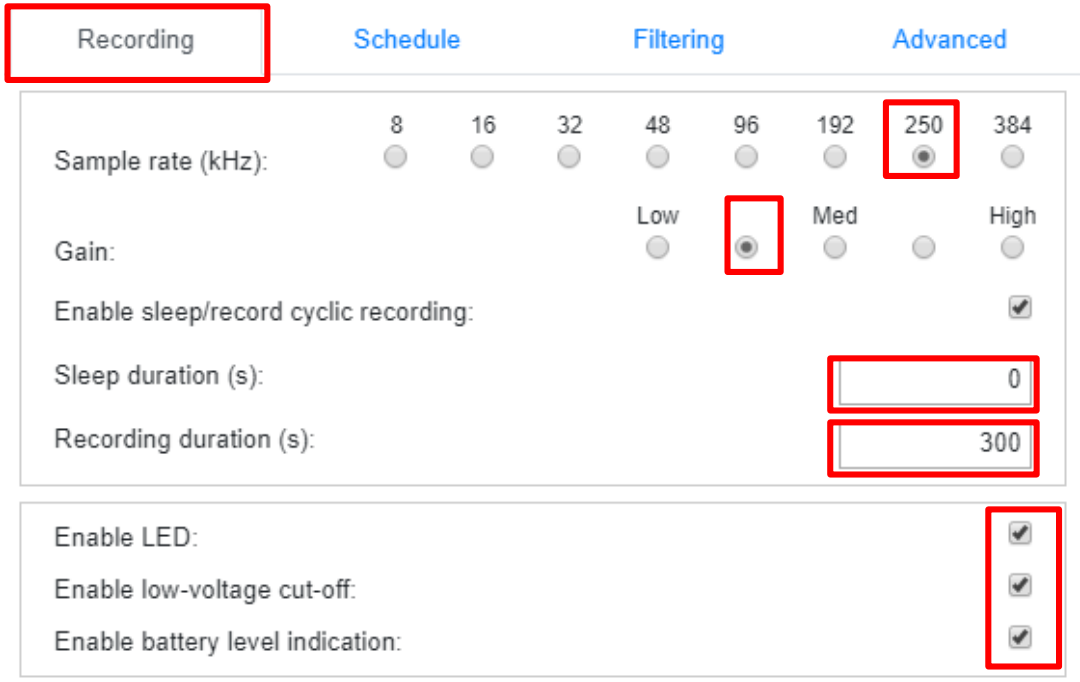
New LR6 alcaline batteries
4.1V lasts 1 night max

Set the Audiomoth before field work

Step 3 : Recording settings

Set the sample rate, the gain and the duration of files as follows :

The recording must be continuous so ***Sleep Duration*** must be 0. A warning will tell you that this setting is problematic but you can ignore it!



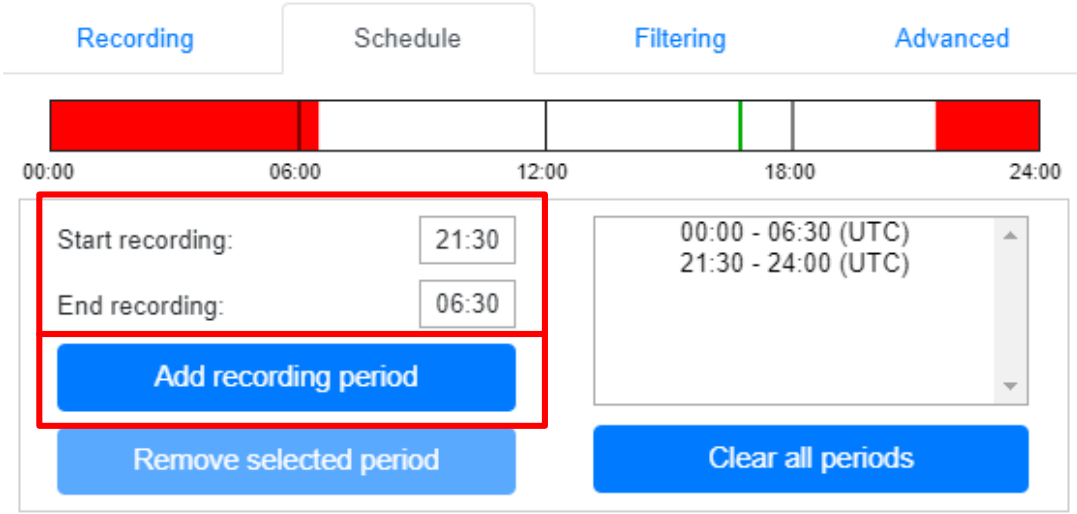
Set the Audiomoth before field work

Etape 4 : Schedule settings

Manually define the hours of start and end of recording. The Audiomoth does not calculate the time of sunset and sunrise, so you must manually choose a starting time (***Start recording***) that is before sunset and an ending time (***End recording***) that is after sunrise.

We recommend starting 30 before sunset and ending 30 min after sunrise.

To validate, click on **“add recording period”**.

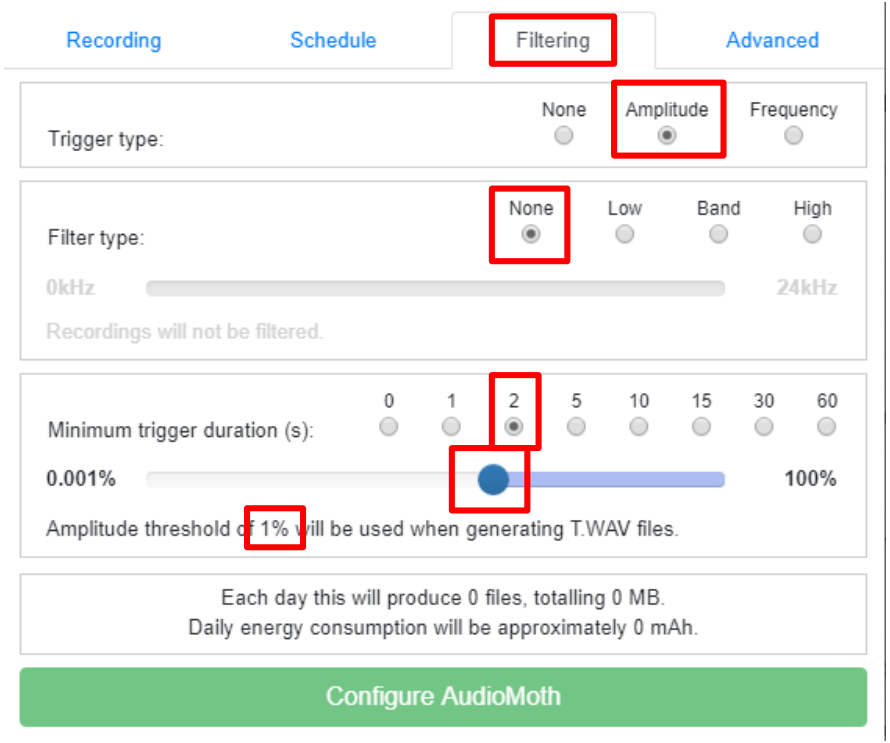


Set the Audiomoth before field work

Step 5 : Filtering settings

It is the famous new trigger function. This setting is very important and must be followed to ensure compatibility of your data accros space and time!

- Check **Enable amplitude threshold**
- And None in filter type
- Select **2** seconds
- Select a level of 1% d'amplitude threshold (the level is given below the bar)

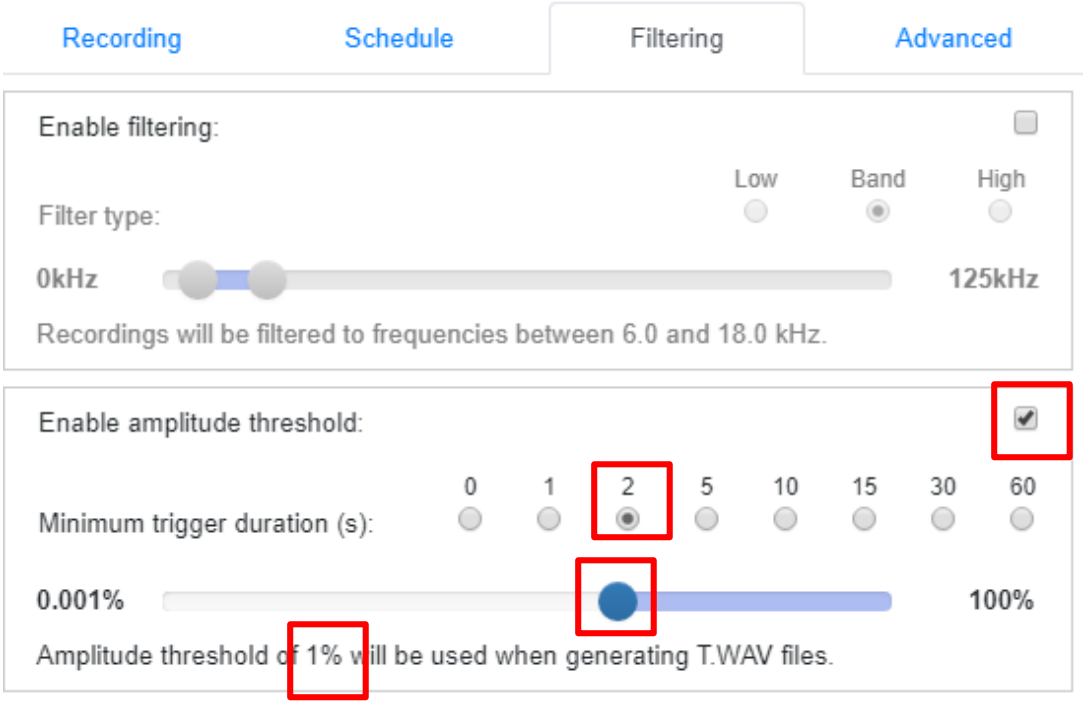


Set the Audiomoth before field work

Step 5 : Filtering settings

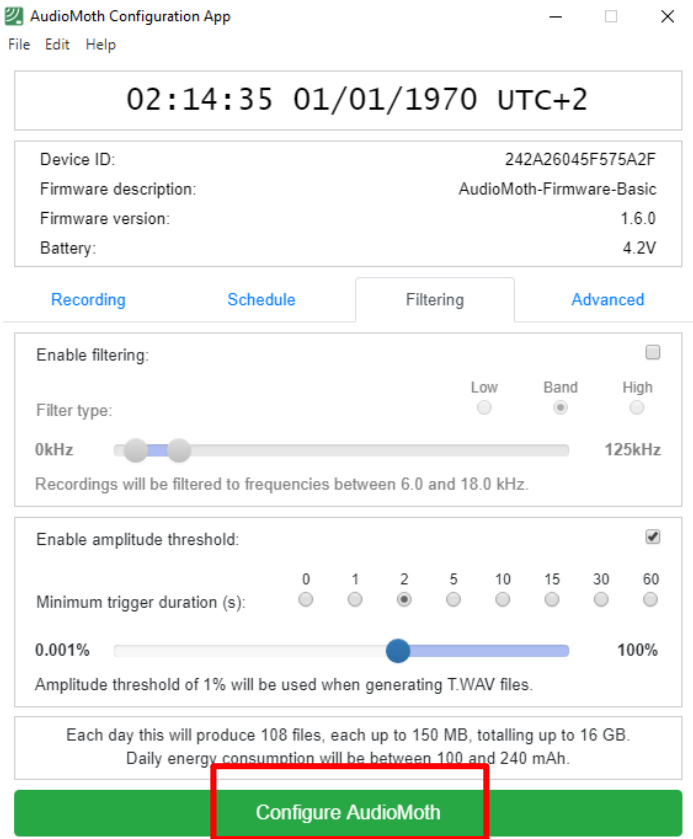
If you app is not up to date, the menu is different but the result is the same:

- Check **Enable amplitude threshold**
- Select **2** seconds
- Select a level of 1% d'amplitude threshold (the level is given below the bar)



Set the Audiomoth before field work

Step 6 (last one) : Click on the big green button **Configure Audiomoth**



Set the Audiomoth before field work

Disconnect the Audiomoth from the computer. Set the switch on CUSTOM.

Check that the LED is clicking green.

Do not remove the batteries, because the settings will disappear!

Make your Audiomoth waterproof

Required ingredients: a waterproof box and some **cellophane (=plastic sheet for food)**

Optional ingredients: big rubber band, tape, dessicant (silica gel)

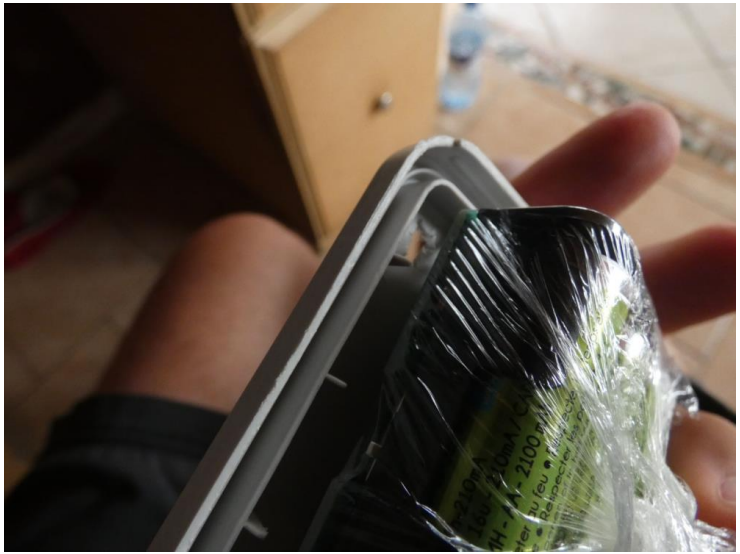
For the waterproof box, we recommend a small junction box which costs a few euros and that you can find in hardware stores. This model particularly fits the Audiomoth: https://www.materielelectrique.com/boite-de-derivation-etanche-gris-ip55-60x60x40-mm-debflex-p-327285.html

But you can also use what you have at home.

For information, Audiomoths measure 58 x 48 x 20 mm.

Make your Audiomoth waterproof

Make a small incision on the plastic cover so that the microphone fits just below this place.



Make your Audiomoth waterproof

If possible, tape the batteries so that they cannot jump out.

DO NOT COVER THE MICROPHONE WITH THE TAPE !! ;)

Make your Audiomoth waterproof

Cut a band of cellophane of about twice the width of the Audiomoth

Make your Audiomoth waterproof

Position the Audiomoth below the centre of the piece of cellophane

Make your Audiomoth waterproof

To ensure tension, it is better to twist what is left of the cellophane back

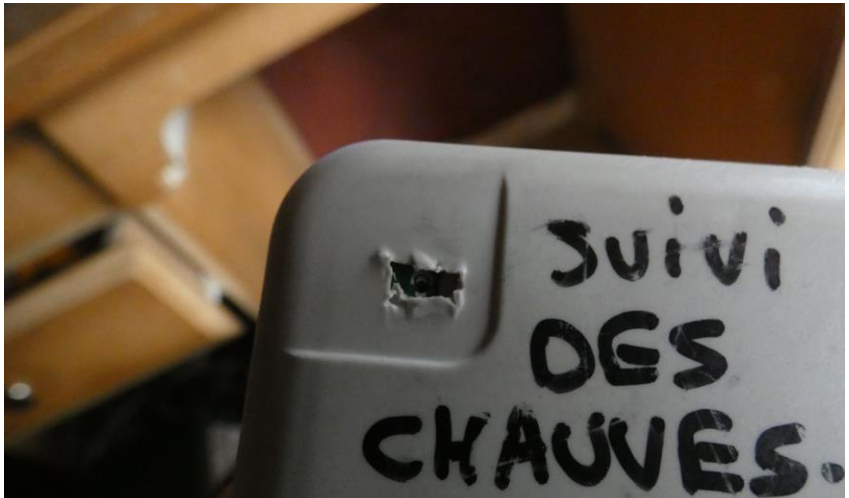
Make your Audiomoth waterproof

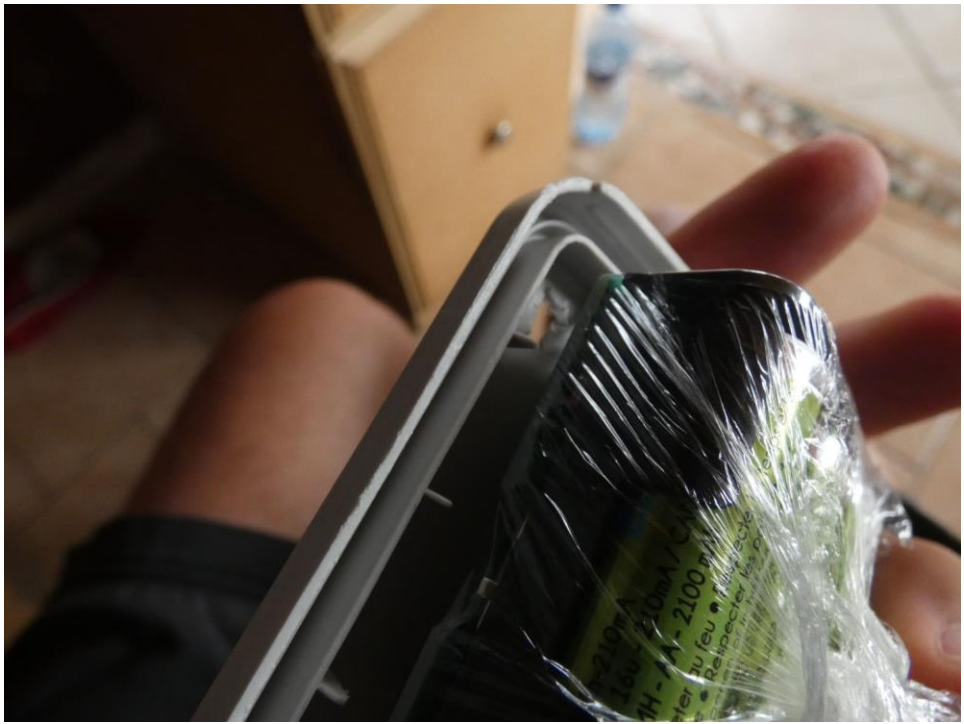
Pull the cellophane back so that it is stretched and not crumpled, particularly where the microphone is placed.

Make your Audiomoth waterproof

Put the Audiomoth against the cover with the microphone well in front of the hole

Make sure that your Audiomoth does not move after you close the cover





Make your Audiomoth waterproof

Here is another example for a different box. You can use foam to make the Audiomoth fit perfectly and you can paint it for camouflage.

Make your Audiomoth waterproof

Close the cover
You can now put it on the field!

Do not hesitate to use iron wire, tape or a big rubber band to put it on a stick or on the branch of a tree.

Usually, the more information you write on the box (purpose and telephone number), the lower the probability is for it to be stolen.

If you expect rain, put it with the microphone toward the horizont or a little bit toward the ground.