

Wrist-worn Actigraphy

Investigators' Instructions



1. Connecting to a computer

The computer provided to support this trial has, on the Desktop, a shortcut to an application called OMGUI. If you want to set up a trial or download data from a sensor, you will do it through this application. **Double-click the OMGUI shortcut to open it.** Now, **connect the AX3 device to the computer** (Fig. 1), using the USB cable provided.

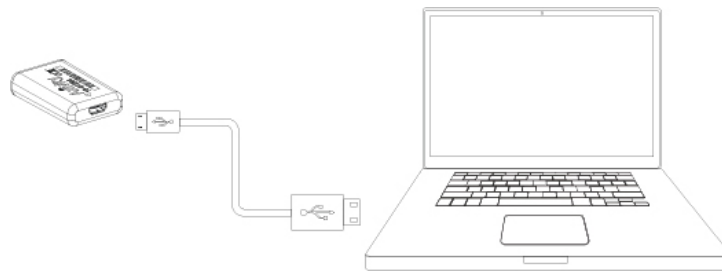


Fig. 1 Connecting AX3 device to a computer

Wait for the device to be recognized. It will appear in the **Device Browser Panel** (Fig. 2).

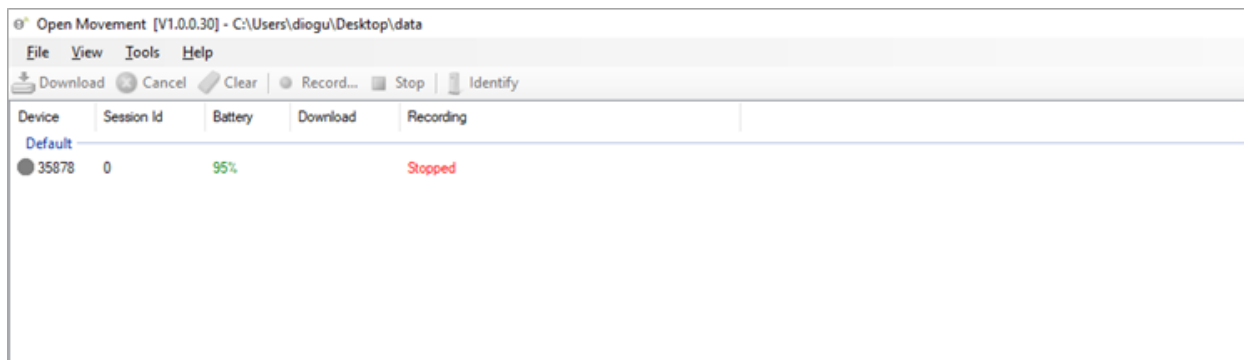


Fig. 2 OMGUI Device Browser Panel with one connected device (95% of battery, and stopped recording)

2. Learning to work with OMGUI

OMGUI (Open Movement Graphical User Interface) is the native application to operate with the AX3 activity sensor. Through it, you will be able to check the status of the devices (battery, data, and recording status), set up data collection, and download the data files from the sensor. Figure 3 shows an overview of OMGUI main screen.

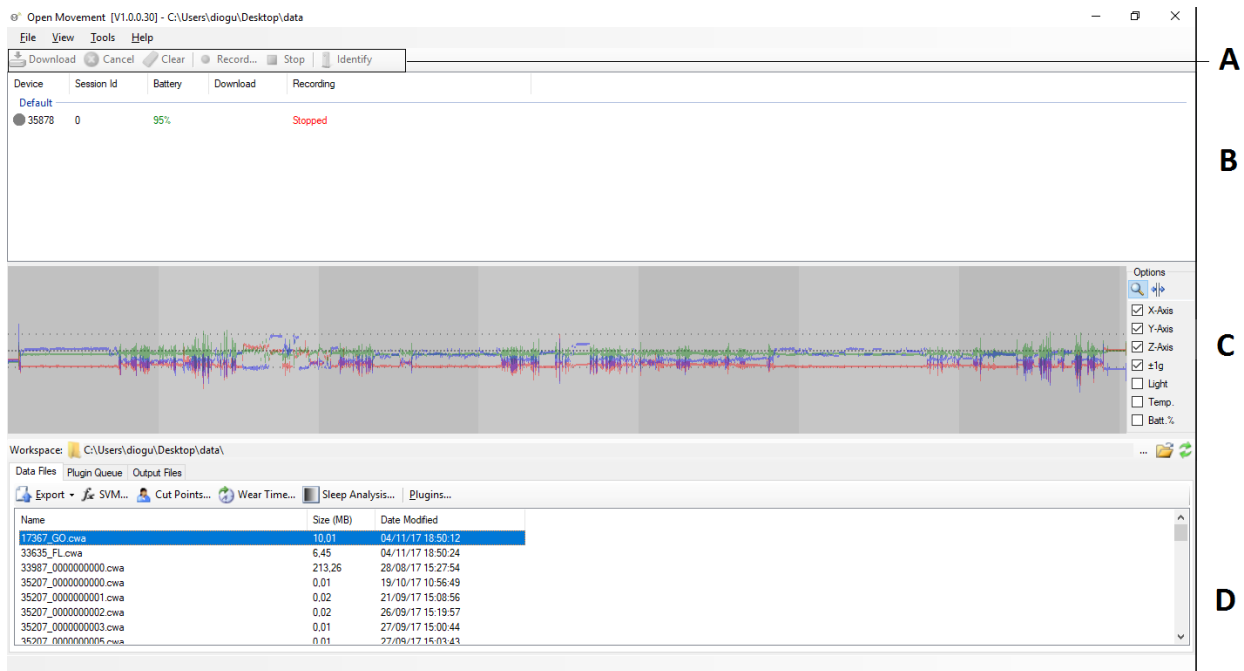


Fig. 3 OMGUI screenshot. **A)** Top Menu, **B)** Device Browser Panel, **C)** Data Preview Panel, **D)** Data Workspace

OMGUI presents a top menu and three main areas:

- In the Device Browser Panel (B), you will be able to see a list of the AX3 devices connected to the computer and their statuses. You can select a device by clicking on its row. If the device has data, you will see it plotted in area C.
- Once a device is selected, the top menu (A) will become interactive. Options will appear to Download data from a device, Clear the data from the device, Schedule a recording, Stop a recording, among others.



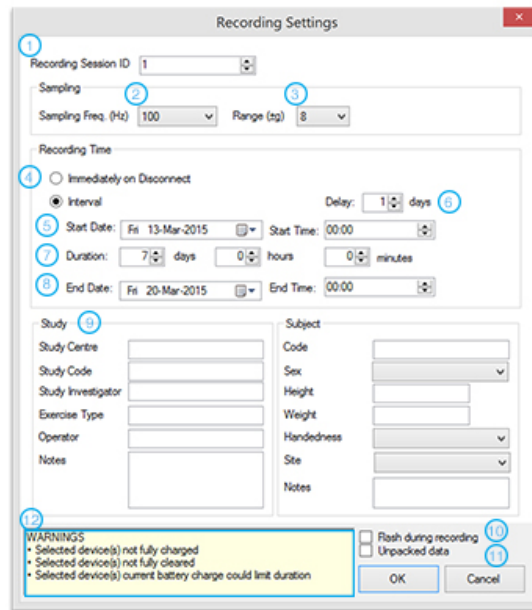
Fig. 4 Top Menu options (in this case, disabled. They become interactive when a device is selected).

- The Data Preview Panel allows you to see an overview of the data on a device.
- In the Data Workspace (D), you will be able to set up where you want your files to be saved, and to see the list of downloaded files.

3. Setting up Data Collection

Before you hand a device to a patient, you will need to set up data collection. In parallel, while the device is connected, it will be charging. To have the device ready, you should do the following:

- Open OMGUI and connect the AX3 sensor to the computer with the USB cable;
- Select the device in the Device Browser Panel;
- If the battery is low, keep it connected until it charges completely (a value above 85% is considered acceptable to issue for usage);
- If the device shows to have data, press “Clear” in the Top Menu;
- Press the Record button, in the Top Menu;



The image shows the 'Recording Settings' dialogue box. It has several sections: 'Recording Session ID' (1), 'Sampling' (2) with 'Sampling Freq (Hz)' (3) set to 100 and 'Range (kg)' set to 8, 'Recording Time' (4) with 'Interval' selected and 'Delay' (6) set to 1 day, 'Start Date' (5) set to Fri 13-Mar-2015, 'Start Time' set to 00:00, 'Duration' (7) set to 7 days, 'End Date' (8) set to Fri 20-Mar-2015, and 'End Time' set to 00:00. There are also fields for 'Study' (9) and 'Subject' (10) details. At the bottom, there is a 'WARNINGS' section (12) with a yellow background and a 'Flash during recording' checkbox (11) which is unchecked. The 'OK' and 'Cancel' buttons are at the bottom right.

Fig. 5 Recording Settings dialogue.

- In the Record Settings dialogue, set up data collection as follows:
 - 1) Recording Session ID: input a unique ID. It will be the **Visit Code**.
 - 2) Sampling Frequency: the value should be of **100**.
 - 3) Sampling Range: the value should be of **8**.
 - 4) Recording Time Schedule: select **Interval**.
 - 5) Start Date: it should be **set to three days before the next onsite visit**. As an example, if the visit is on the 14th (any time), the start date will be on the 11th. **Start Time** should be set to **00:00**.
 - 6) Delay: do not change this value.
 - 7) Duration: the value should be of **3 days**.
 - 8) End Date: do not change this value.

- 9) Study and Subject: identify the **Study Centre** and **Investigator** with their **initials**. As for **Subject**, input the **subject 6-digit code**.
 - 10) Do not tick “Flash when Recording”;
 - 11) Do not tick “Unpacked data”;
 - 12) Click OK.
- You can now disconnect the device from the computer. The recording will start in the scheduled date and time. You can connect the device to the computer before handing it to the subject to guarantee it goes fully charged.
 - Insert the sensor in the bracelet with the letters (“Axivity”) and a small arrow visible to you. The arrow on the bracelet should align with the arrow on the sensor (Fig. 6).



Fig. 6 Placing the sensor into the bracelet.

4. Instructing the Trial Subjects

Subjects should be instructed to wear the bracelet, as they would use a regular watch, for a period of three complete days before the **on-site visits VR, V1B, V2B, and V3B**. They will receive a call one or two days before they have to put the bracelet on. They should wear it **continuously** on their **non-dominant arm**. The design is neutral and unisex, and is constructed from a skin safe, soft touch silicone material. The sensor is waterproof. If subjects need to take the bracelet out for some reason, they should put it back on as soon as possible. Along with the bracelet, subjects shall receive a paper file with succinct instructions on how to wear it (i.e. the *Patient Instructions*). Please go through them with the subjects and clarify doubts they may have.

5. Collecting and storing the data

When the trial subjects bring the bracelet to the visits **VR, V1B, V2B, and V3B**, you will need to download the data to the PC and copy it to an additional USB stick. To do so, follow these instructions:

- Open OMGUI and connect the sensor (after removing it from the bracelet) to an USB port on the computer;
- When the device is recognized, check the status of the recording. If it still shows as being recording, press “Stop”, in the Top Menu;
- In the Data Workspace Panel, select the folder where you want to save the data to (Figure 7).

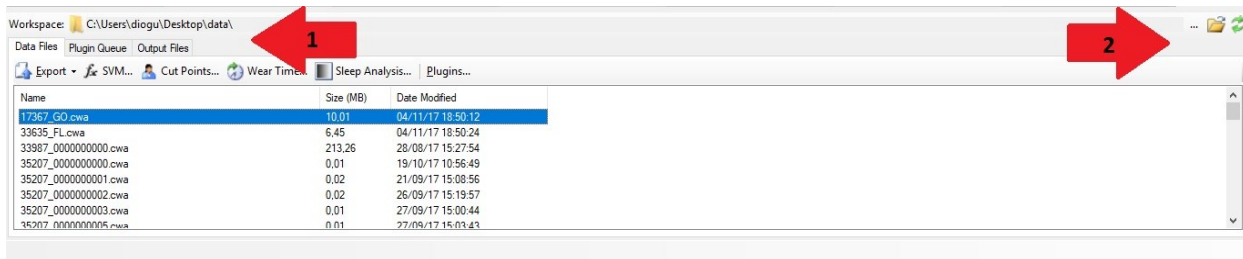


Fig. 7 Data Workspace Panel. Arrow 1 points to the current workspace. Arrow 2 points to the icons where a new workspace folder can be selected.

- In the Data Workspace Panel, select the folder where you want to save the data to (Figure 7). If they are not created, create the following folders in your desktop: there should be a top folder named “data”. Inside that folder, there should be a sub-folder for each subject, i.e., the folder is named with the 6-digit code. Inside each subject’s folder, there should be a folder for each visit (VR, V1B, V2B, and V3B). Select the folder for the current Subject and Visit.
- Press the Download button.
- Do not clear the data from the device.
- Disconnect the sensor from the USB port.
- Plugin the extra USB stick provided. Copy the collected file to the USB stick.

6. Extra Support

There is a website available with detailed instructions, screenshots and videos, for your perusal:

actigraphy.info