

10MHz controller - Record, display and read data



Revision History

Date	Version	Description
07/11/2023	1.1	Removed references to .edh files
29/03/2022	1.0	First version of document



Supported data formats

The 10MHz controller can save data in two file formats:

- Raw .dat files format;
- Axon Binary File (.abf) format version 2.0.

Dat format

Binary files in .dat format consist of a continuous series of IEEE 754 single-precision binary floating-point values, with no header. The data is arranged in groups of $\text{CurrentChannelsNumber}+1$ values. Each group consists of $\text{CurrentChannelsNumber}$ current samples (ordered by channel number) followed by 1 voltage sample corresponding to a given time instant. Groups are arranged in temporal order.

E.g. for a 4 channels device the values will be:

IChan1Sample1, IChan2Sample1, IChan3Sample1, IChan4Sample1, VChanSample1,
IChan1Sample2, IChan2Sample2, IChan3Sample2, IChan4Sample2, VChanSample2,
and so on.

Abf format

It's the Axon file format used by pClamp software.


Data is saved in "gap-free" acquisition mode.

Recording controls

After connecting to the device, the 10MHz controller starts acquiring and displaying data in real time in the plot window.

All the controls to record the acquired data are available in the Voltage stimulus widget.

Start and stop recording

To start recording data click the recording button . During the recording the button will change icon and the timer will start increasing according to the recording time.






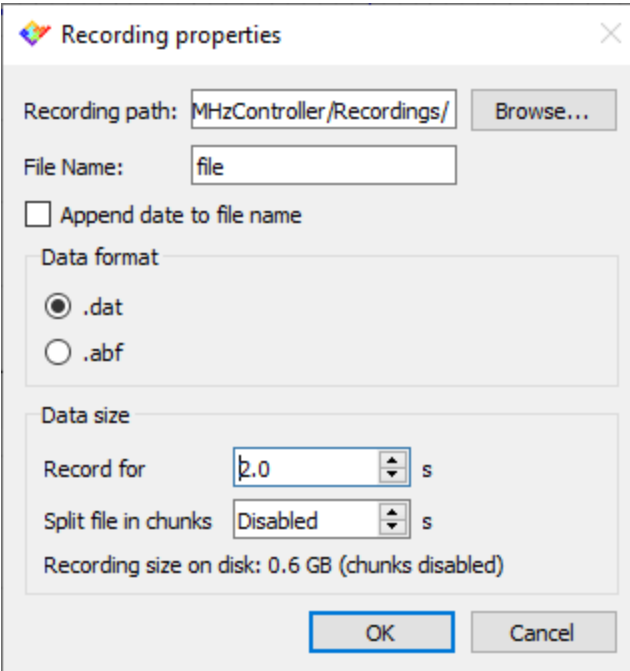
Click the stop recording button  to stop recording.

The path and name of the recorded file are available just below the buttons. The recorded file location is quickly available by clicking on it.

Recording path: C:/Users/FCona/Ok10MHzController,
File: file/file

Recording preferences

In order to select the recording settings click the corresponding button .



The dialog box titled "Recording properties" contains the following fields and options:

- Recording path: MHzController/Recordings/ (with a "Browse..." button)
- File Name: file
- Append date to file name
- Data format:
 - .dat
 - .abf
- Data size:
 - Record for: 2.0 s
 - Split file in chunks: Disabled s
 - Recording size on disk: 0.6 GB (chunks disabled)
- Buttons: OK, Cancel

Users will also automatically be prompted here the very first time a recording is started. Here the user will be able to select the recording path and filename, the format and size. These settings are saved across recordings and also across multiple sessions.

Recorded files

Multiple records will be saved with the set name followed by the progressive number (e.g. file, file_1, file_2 and so on) so the user doesn't need to change the recording name everytime a new recording is started.



The 10MHz controller creates a new folder in the location chosen by the user with the same name of the recording files. In this new folder the software stores the recorded data files.

The data files suffix (_000) increases if the “Split files in chunks” option is selected, so the first chunk will end in _000, the second chunk in _001 and so on.

Be careful to have enough disk space to save data and avoid recording data directly into network drive or Cloud storage service.