

3 CLIO INSTALLATION

3.1 MINIMUM PC CONFIGURATION

The CLIO FW-02 USB interface running the CLIO 12 software can be installed in any personal computer with the following minimum system requirements:

- Processor: single-core @ 2GHz clock or dual-core (suggested)
- One free USB 2.0 port
- 1024x786 video adapter
- Microsoft Windows XP, Vista, 7, 8 or 10

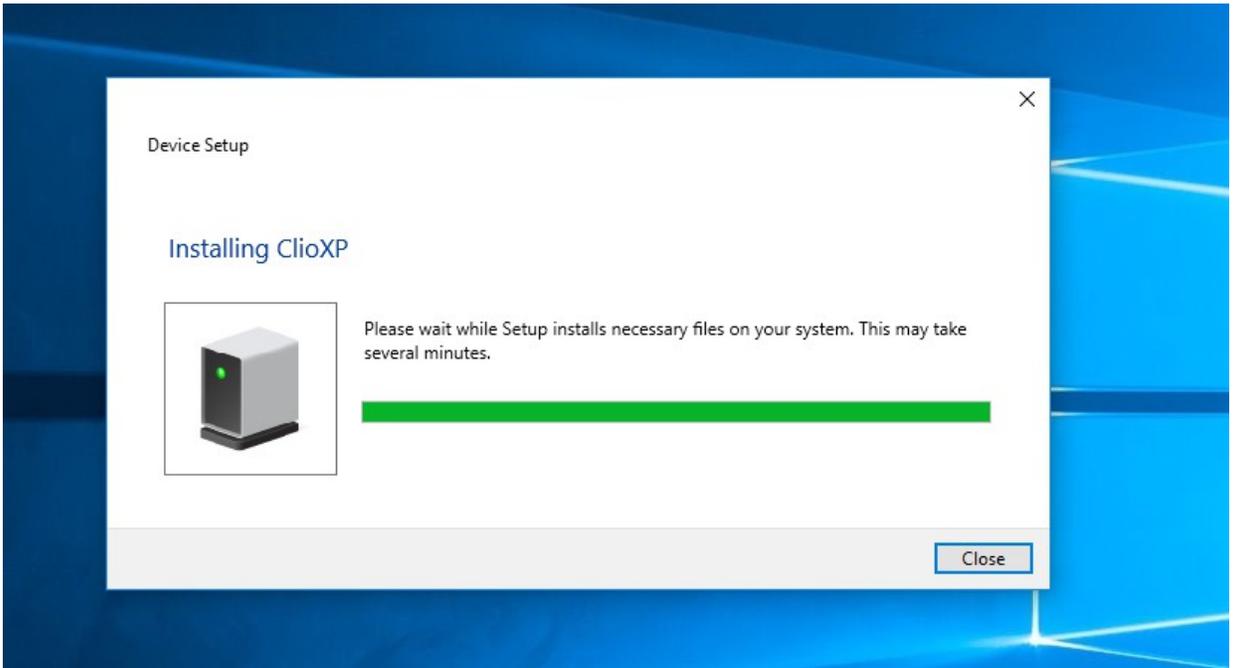
BE SURE TO HAVE ADMINISTRATIVE RIGHTS WHEN INSTALLING!

3.2 FW-02 DRIVERS INSTALLATION

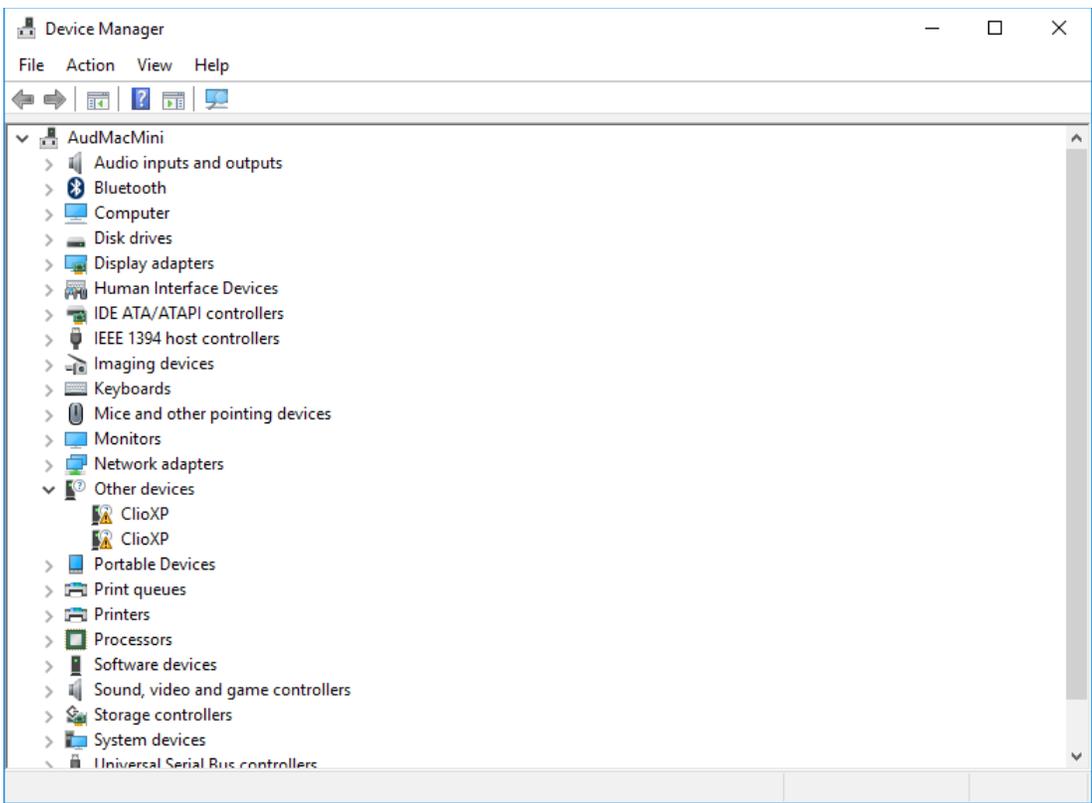
To install the FW-02 drivers in your computer you should follow the instructions presented below:

1) Connect the FW-02 to a free USB 2.0 port on your PC and power it with its 12V supply. You should hear the classical sound of plug and play devices.

NOTE: ClioXP is the nickname of the FW-02 device seen by Windows.

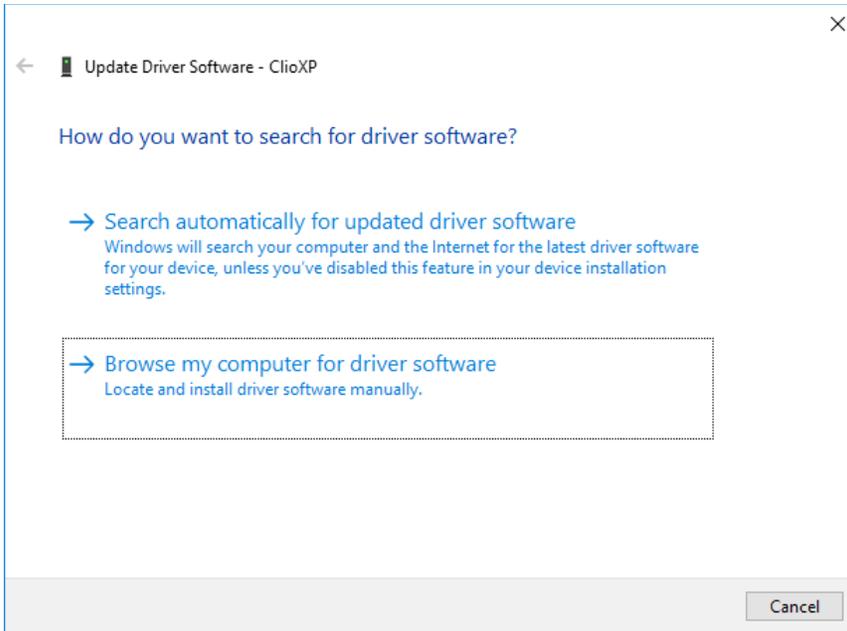


2) After the initial automatic driver detection only one device should be found and properly installed by Windows, the USB Composite Device; two more devices, named ClioXP will need to be installed manually. Open Device Manager (type *devmgmt.msc* from Run prompt or click Control Panel>System>Device Manager); you should find this situation:

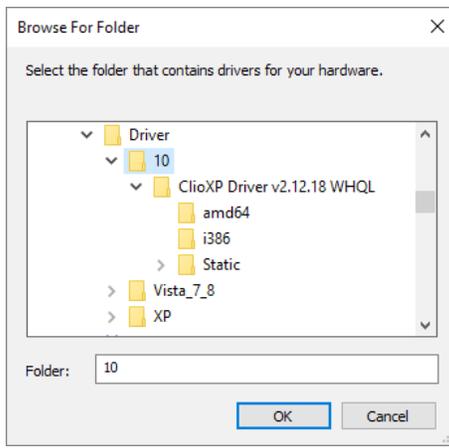


3) Insert the CLIO 12 installation CD-ROM in the PC.

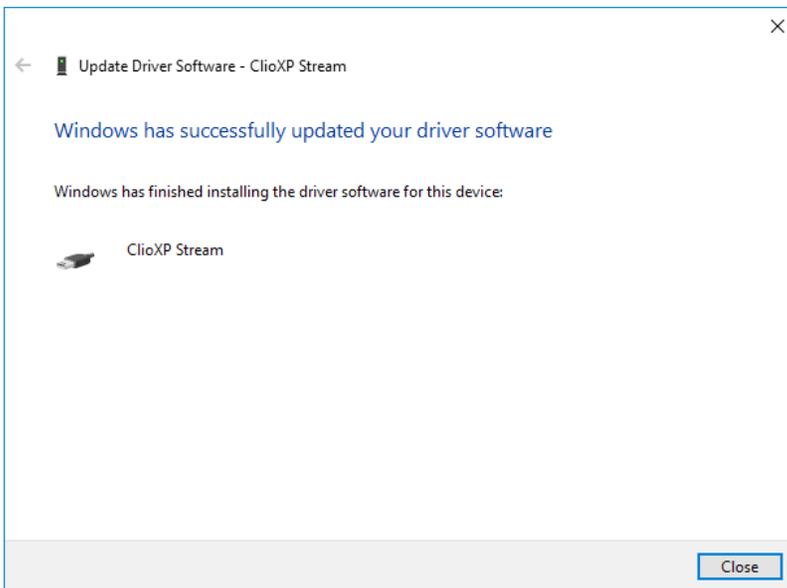
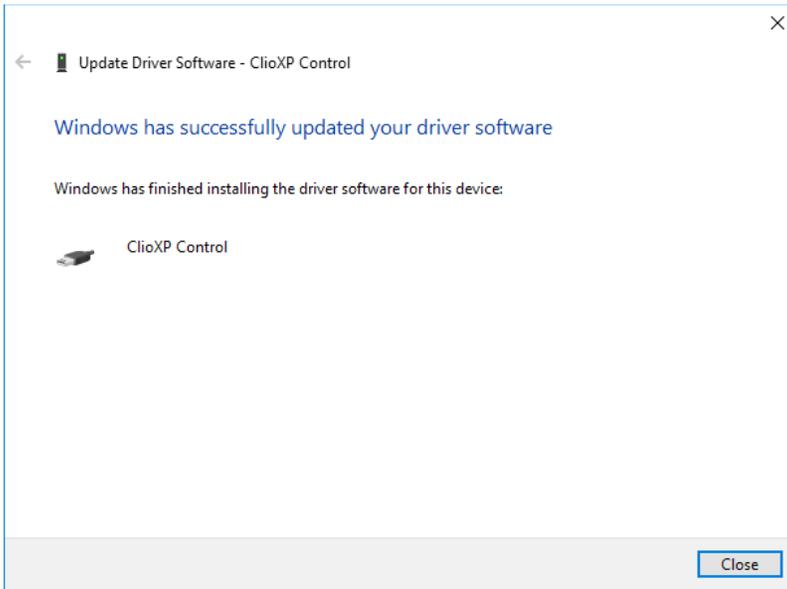
4) Right-Click on each ClioXP device under Other Devices and choose Update Driver Software. At the successive prompt:



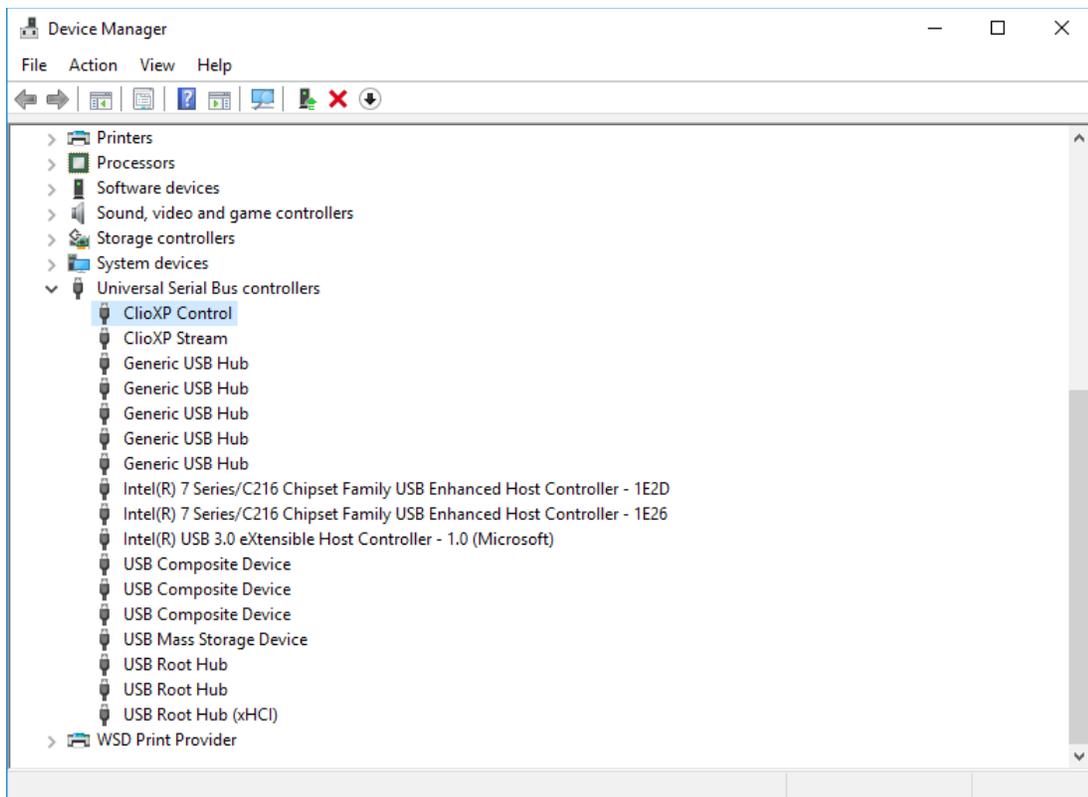
5) Browse your computer and point to the folder inside the installation CD where the proper drivers are located (for example \Driver\10).



Ignore any Microsoft's warning message about Digital Signature or Publisher and reach the end of the wizard.



6) Inspecting again the Device manager confirms you the proper ClioXP Control and ClioXP Stream entries under USB controllers category:



Your driver installation was successful!

3.3 FW-02 DRIVERS INSTALLATION UNDER WINDOWS XP

- 1) Connect the FW-02 to a free USB 2.0 port on your PC and power it with its 12V supply. You should hear the classical sound of plug and play devices.
NOTE: ClioXP is the nickname of the FW-02 device seen by Windows.
- 2) The Found New Hardware Wizard detects the CLIO XP device:



As the CLIOXP drivers are unknown to Windows you will be prompted with this search window:



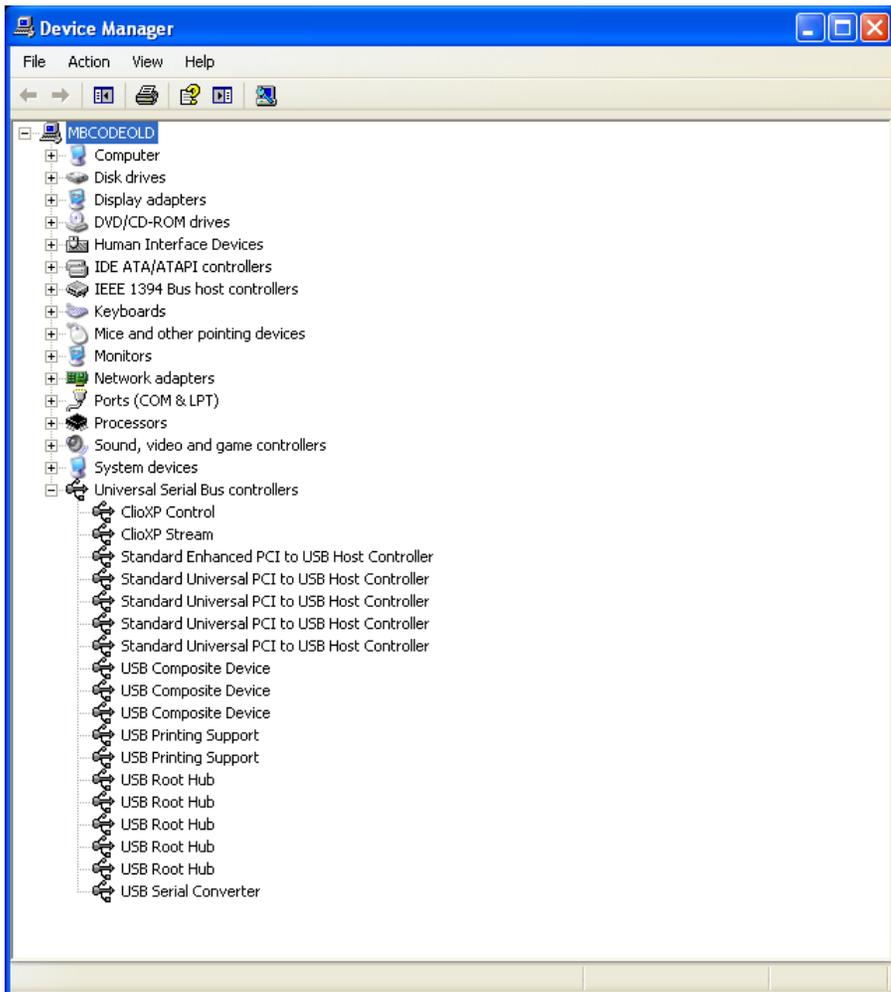
- 3) Insert the CLIO 12 installation CD-ROM in the PC.
Search in the proper CD folder (for example Drivers\XP)



- 5) Do not stop to Microsoft Warning about Windows Logo testing.



6) Open Device Manager (type *devmgmt.msc* from Run prompt or click Control Panel>System>Device Manager); you should find this situation:



Your driver installation was successful!

3.5 SOFTWARE INSTALLATION

This paragraph deals with **software installation**.

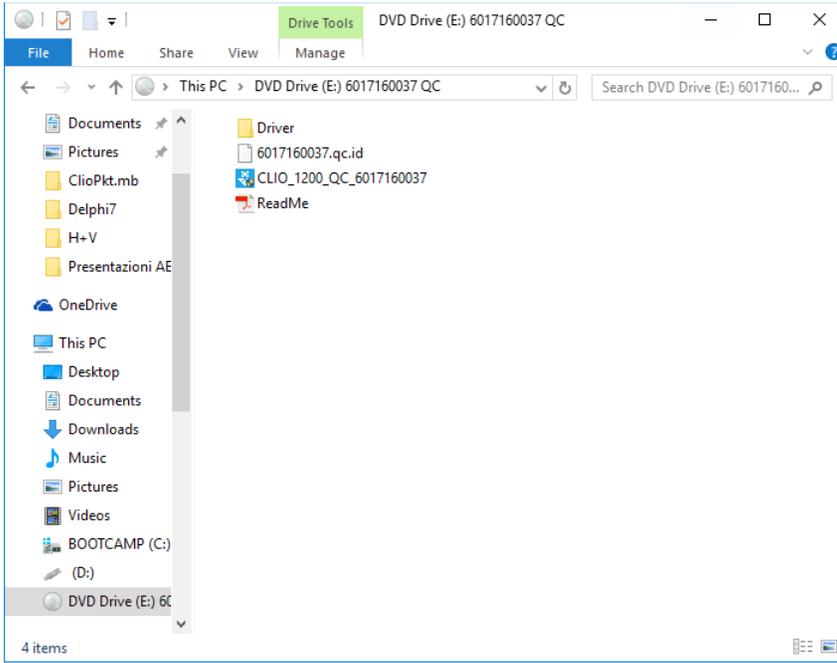
Be sure to have administrative rights when installing CLIO.

The CLIO software is provided either on its own CD-ROM, SD card or, in electronic

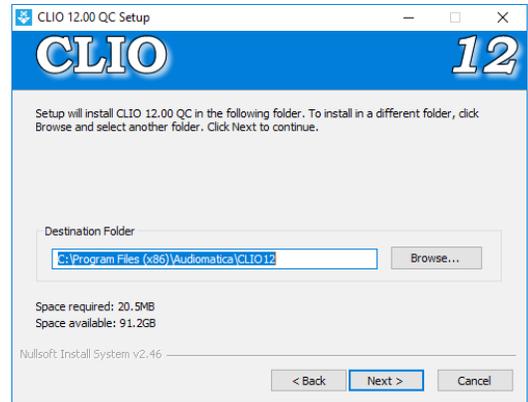
format, as a single, self-extracting, executable file.

To install the CLIO 12 software in your computer you should follow the instructions presented below:

1) Insert the CLIO 12 CD ROM in the computer.



3) Choose CLIO 12 installer to start installation.



The procedure is completely automatic and will only request you to accept the Software End User's License Agreement and input some information in order to correctly install CLIO 12; the software installer will also check your operating system version.

After successfully completing this procedure take note of the installation directory of CLIO (usually C:\Program Files\Audiomatica\CLIO12 or C:\Program Files (x86)\Audiomatica\CLIO12).

3.6 RUNNING CLIO FOR THE FIRST TIME

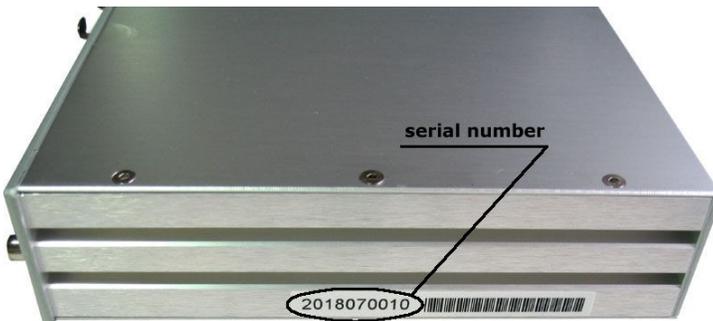
If you have completed the preceding installation procedure, you are ready to run CLIO!

3.6.1 THE 'CLIO BOX' AND CLIO SERIAL NUMBER

A few words about the FW-02 USB interface.



This unit is needed to correctly interface analog signals to your PC; it is also important as it has an internal reference used to calibrate the system and also stores the system's serial number inside its internal EEPROM; Figure below shows where is located your CLIO system serial number.



The CLIO serial number is very important and should be mentioned each time you get in contact with Audiomatica, either for technical support or for software upgrade.

Also the CLIO system accessories have their serial numbers; keep track of those but mention to technical support **ONLY UPON REQUEST**.

When using your CLIO system you will normally use the FW-02 front connectors. As you'll become extremely familiar with this hardware unit we are going to give it a nickname: from now on we will call it **'the CLIO Box'**. Also the CLIO software refers to it with this nickname.

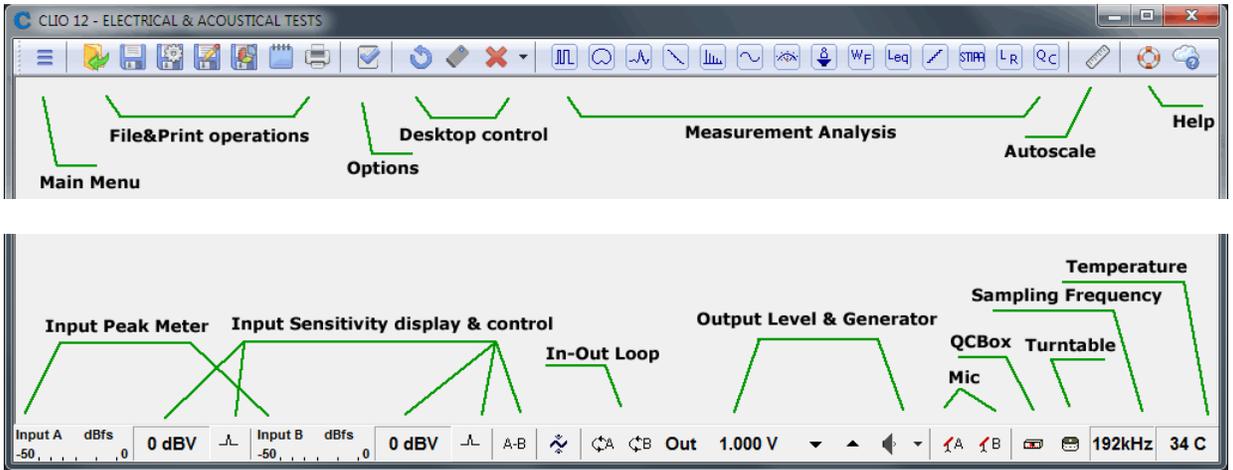
3.6.2 THE FIRST RUN

The following steps will guide you through a complete verification of the system performance and operation.

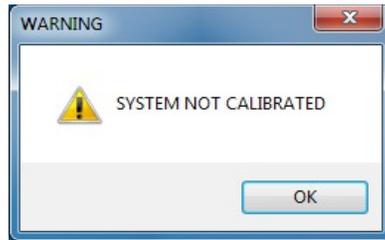
From the **Start Menu** choose **Programs**, then **CLIO 12** and click on the CLIO icon.



The program should start smoothly and present the main desktop.



If the system is not calibrated, as the first time you run it, you will receive the following message.

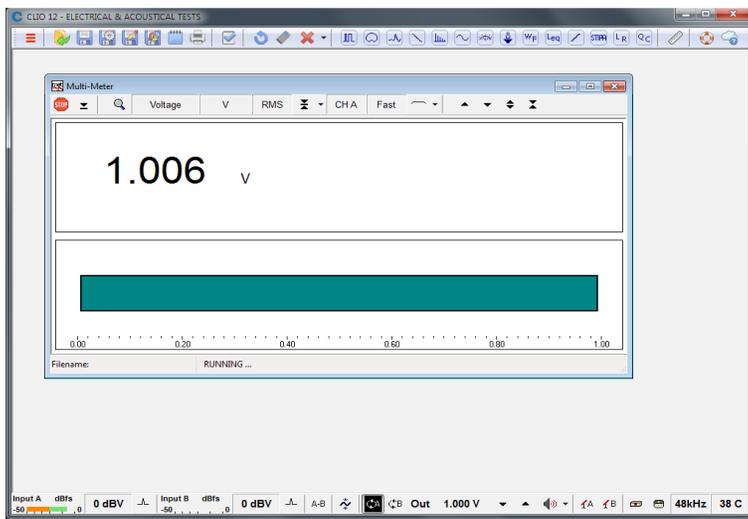


Should CLIO display an error message take note of it and go to the troubleshooting section.

3.6.3 INITIAL TEST MEASUREMENT

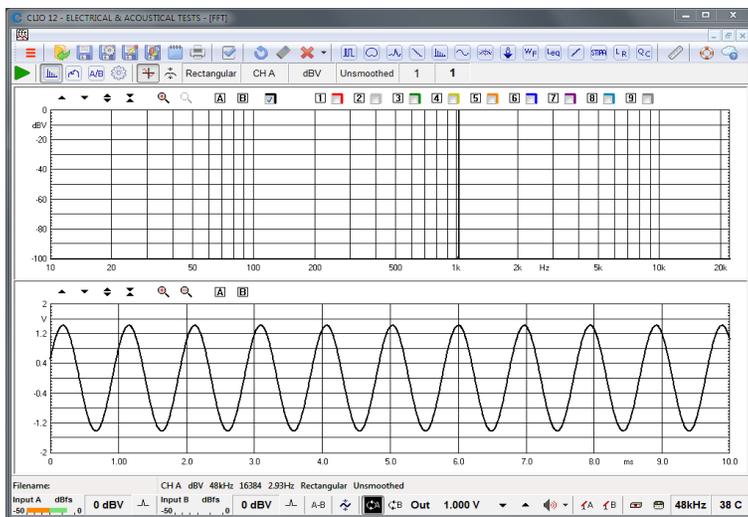
Let's now execute our first test measurement - play and capture a 1kHz sinusoid. First of all click on the In-Out Loop  button for channel A; in this way the CLIO Box connects output A with input A with an internal relay. This connection is very important as it lets you capture and analyze a signal generated by CLIO without the need for an external connecting cable.

Then click on the generator icon  to play the 1kHz sinusoid (1031.25Hz to be exact; more on this later, it's the default signal). Then press the **F4** keystroke to invoke the Multi-Meter as in Figure.



If everything is OK you should obtain a reading of circa 1V, variable between a minimum of 0.95V and a maximum of 1.05V, which is the mean output level of a sinusoidal signal when the system is not calibrated.

Now press the FFT  button (or **CTRL-F**), then press the Oscilloscope  button and finally the  GoButton.



The result you should obtain is an FFT analysis of the 1kHz sinusoid (one spectral line @ 1kHz at 0dBV) and its time representation given by its oscillogram.

Both Multimeter and FFT results must present stable and repeatable; the oscillogram should display a sinusoid without spikes or drops of any kind.

IMPORTANT NOTE: Only if these two initial tests gave correct results, as described, go to the following paragraph and execute the system calibration; if you are not able to obtain these results and they seem in any way corrupted **do not execute calibration** and contact technical support.

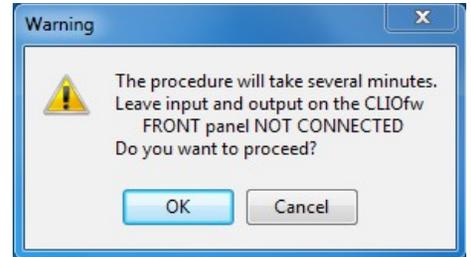
3.7 SYSTEM CALIBRATION

This section describes how to perform the system calibration.

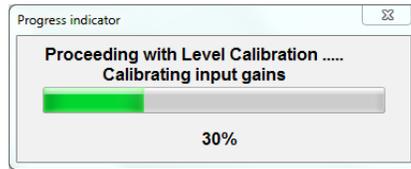
Be sure that, any time you perform a calibration, the system has warmed up for, at least 15-20 minutes.

Select **Calibration** from the **Main** menu ;

Leave the CLIO Box front plugs unconnected.

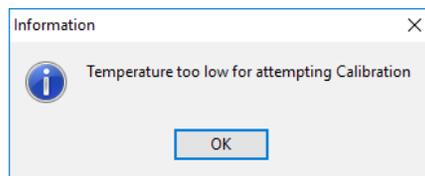


Answer **OK** to the initial prompt; this will run an automatic procedure that will last several minutes. The calibration procedure is completely automatic and several progress indicators will accompany all the executed measurements. At the end of it your CLIO system should be calibrated and ready to carry out measurements.

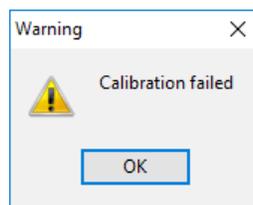


Software won't allow calibration if **internal temperature** lies outside a predetermined range (between 30 to 45 degrees).

So it is normal to receive a message like:



It is also normal to receive the following message:

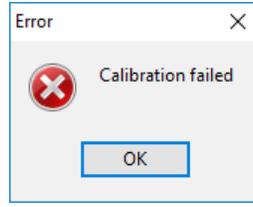


This is normally due to the calibration parameters that do not match the internally stored parameters that have been measured at Audiomatica laboratory and that ensure the highest precision of the instrument. In such a case either wait to repeat calibration if instrument is too cold for it to warm, or wait for the device to cool if too hot.

At the end of the calibration process it is always mandatory to verify the calibration itself; this is done by two simple measurements as described in the following

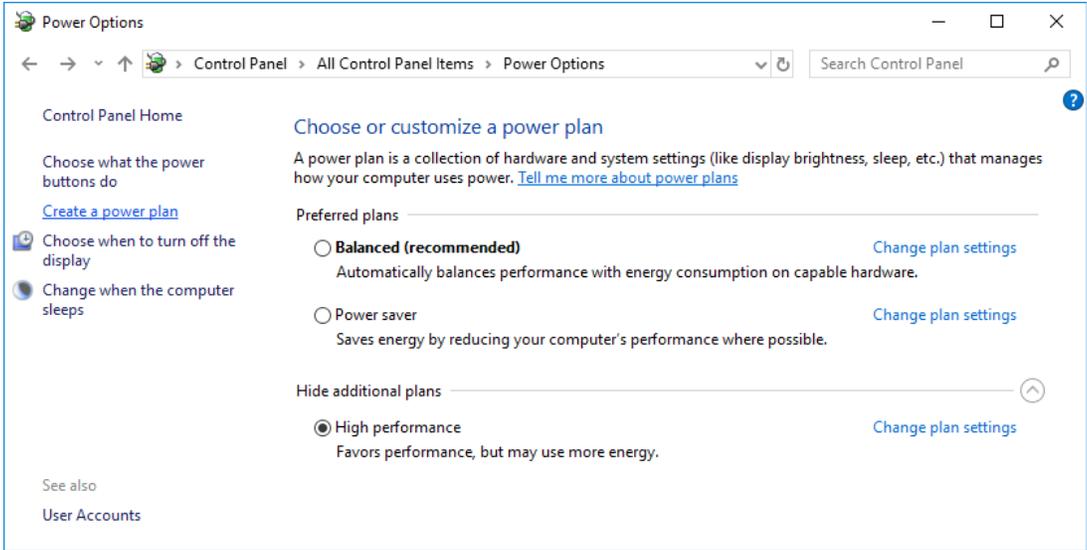
paragraph 3.7.1 CALIBRATION VALIDATION.

Only if this message appears consider to take proper action:

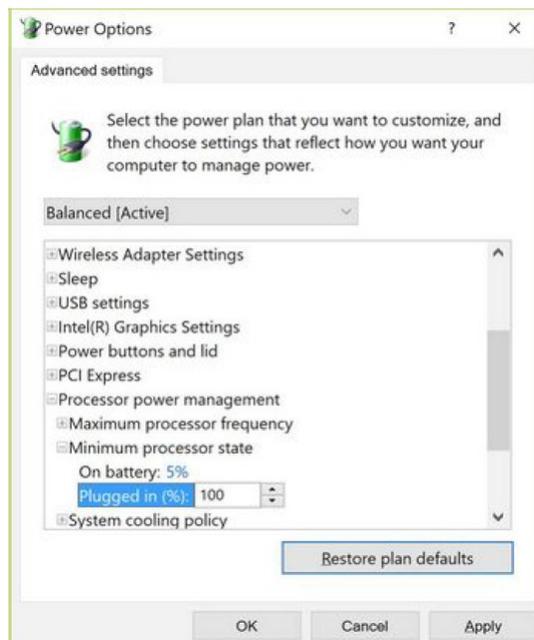


Calibration is a computer system resources demanding task.

Your computer would be best operated at high performance level:



When using a notebook **never run on batteries**, always hook it to AC mains, as power saving schemes greatly reduce performances. As ultimate resource these are Recommended Advanced Power Settings, i.e. set 100% the Minimum processor state:



If you are not able to perform calibration please follow procedures given in 3.9 TROUBLESHOOTING CLIO INSTALLATION to get in contact with Audiomatica technical support.

CLIO has been designed to give the user a high degree of precision, while maintaining ease of use thus ensuring confidence in the measurements taken. Calibration check plays a key role in all this. Note that, as calibration needs to be performed under controlled conditions, **calibration should be attempted the least times possible**; calibration, on the other side, should be **verified** as needed or requested all the times the user wants following instructions given next; verification, not calibration, of your hardware gives maximum confidence when taking measurements.

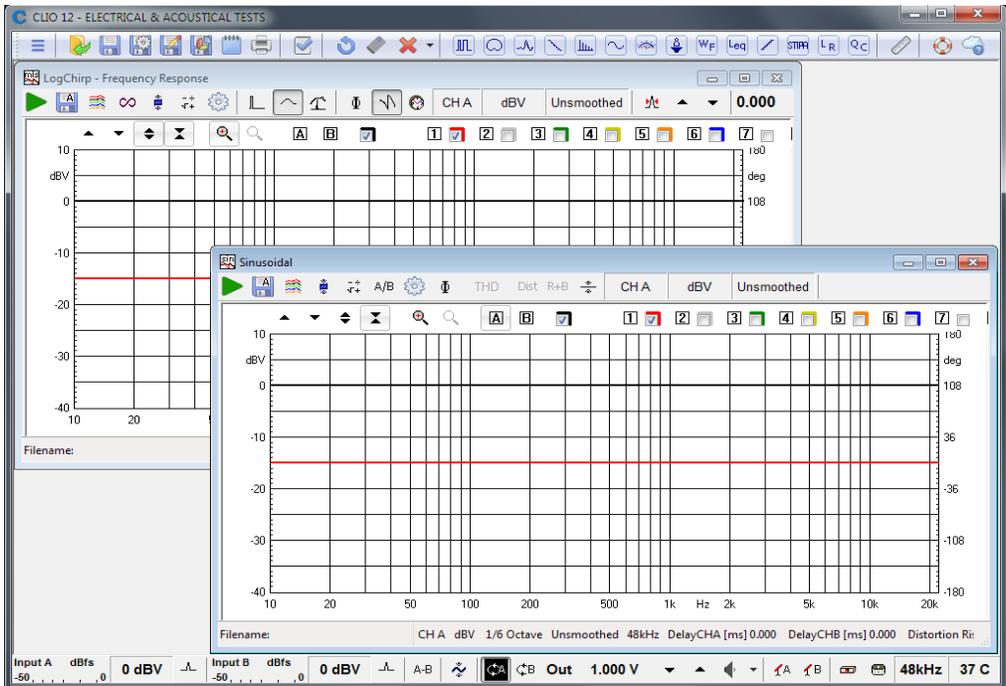
3.7.1 CALIBRATION VALIDATION

To verify the calibration, first check that the generator output level is set to 1V (refer to chapter 4 for details).

Press the channel A In-Out Loop button .

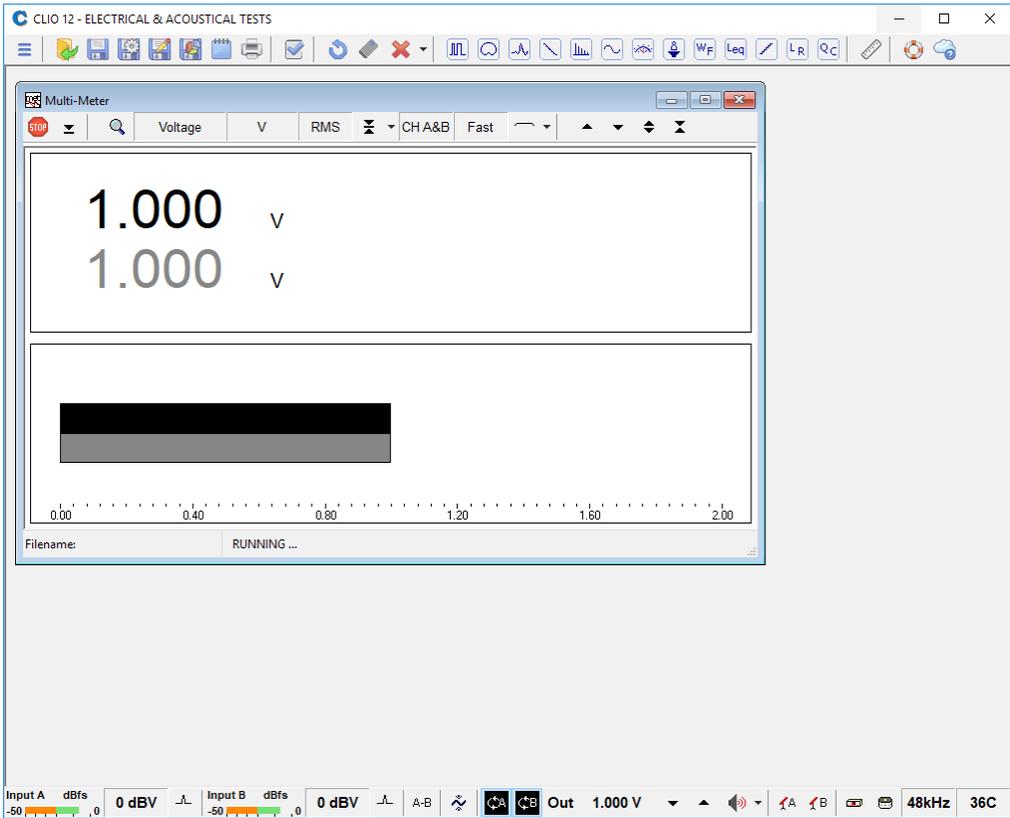
Then click on the MLS&LogChirp button  to invoke the MLS&LogChirp control panel. Press the Go  button to execute a LogChirp frequency response measurement; after about **1 second** you should obtain the desired result, a straight line (black) as in Figure. You can click on the graph and inspect the amplitude of the measured signal: you should obtain a reading around 0dBV, this is the correct output level of the LogChirp signal with the generator output set to 1V.

Now click on the Sinusoidal button  to invoke the Sinusoidal control panel as in Figure. Press the Go  button to execute a Sinusoidal frequency response measurement; after about **3 seconds** you should obtain the desired result, again a straight line (black) as in Figure. You can click on the graph and inspect the amplitude of the measured signal: you should obtain a reading around 0dBV.



To ensure a 100% correct calibration you also need to inspect the phase responses of both measurements. To do this press the phase button  and verify that you obtain a straight line (red curves) the readings in this case should be around zero degrees in both cases.

As a final test click on the In-Out Loop  button for channel A; then click on the In-Out Loop  button for channel B; then be sure that both input sensitivity are at 0dBV; click on the generator icon  to play the 1kHz sinusoid; at last press the **F4** keystroke to invoke again the Multi-Meter; the expected result is shown now.



3.8 CLIO SERIAL NUMBER AND DEMO MODE

Each CLIO system has its own **serial number** which plays an important role since the CLIO software is hardware protected and relies on a correct serialization in order to run.

Refer to 3.6 to identify your system's serial number.

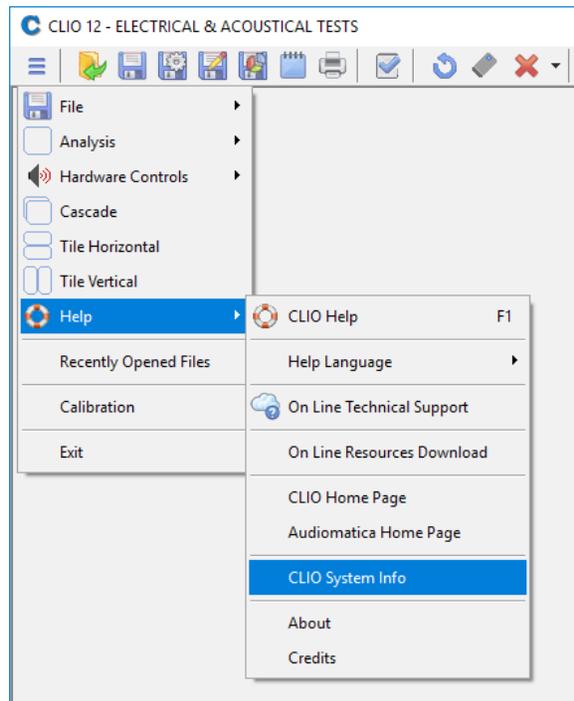
If the CLIO software doesn't find a CLIO Box with a correct serial number it gives a warning message and enters what is called **DEMO mode**; in this way it is possible to run CLIO in a PC where the CLIO hardware is not installed while still allowing you to perform post-processing and other off line jobs.

3.9 TROUBLESHOOTING CLIO INSTALLATION

To receive assistance please contact Audiomatica at support@audiomatica.com or connect to our website www.audiomatica.com.

NEVER FORGET TO SIGNAL PROPER SERIAL NUMBER OF YOUR CLIO!

When getting in contact with us please always send, as attachment to your email, the System Info file of your CLIO system.



To create this file choose MainMenu>Help>SystemInfo. **If your system has not completed calibration create the system info file right after the calibration has failed.**