Installation Sequence is Important for Success

The Gamry eQCM 10M is a plug-and-play device. Therefore, setup is easiest if you use the sequence below, installing the software before the hardware. Setup of the eQCM 10M takes about 15 minutes.

1) **Install the Gamry Framework and Gamry eQCM 10M™ Resonator® software packages on the PC.** The software controls both the eQCM 10M and a Gamry Potentiostat. The techniques available are identical to the PHE200 package that resides in Gamry’s Framework™ software. In order to perform electrochemical experiments such as cyclic voltammetry or chronoamperometry, a PHE200 license is needed.

2) **Connect the eQCM 10M to the PC.** The operating system and Gamry Resonator software will recognize the eQCM 10M automatically when you connect the USB. See page 5.

3) **Complete software setup.** You will be prompted through this task when you restart the PC after installing the software and hardware. See page 6.

When the three tasks have been completed, the eQCM 10M is ready to use.

You can run experiments and gather data with your Gamry Resonator software package.

This guide also includes instructions for installing Gamry Echem Analyst™. Gamry Echem Analyst makes it easy for you to view and manipulate experiment data.
Computer and Power Requirements

You must connect the Gamry eQCM 10M and install the Gamry Resonator in the same computer. Your instrument communicates using the Universal Serial Bus (USB). This PC must meet the requirements below.

Hardware

- A Windows-compatible personal computer
- One available USB port, revision 2.0 (preferred) or 1.1.
- Use the supplied certified USB interconnect cable with an A/B connector configuration.

Software

- Microsoft® Windows® Vista, Windows® XP, or Windows® 7, either 32-bit or 64-bit versions
- At least 1 GB of memory (2 GB recommended) and 200 MB of available hard disk space

Power

- Use the supplied AC to DC power brick

Compatibility Between Software Versions and Potentiostats

Gamry Resonator is compatible with all Gamry Potentiostats in the current generation including the Reference family, the Series G family and the FAS2™ Femtostat.

Earlier potentiostat generations (PC4, FAS1, and PC3 Potentiostats) are not compatible with Resonator.
Preparations

The pictures below and on the following page identify the items in a typical shipment from Gamry.

Standard cables are pictured on page 4.

To prepare to install your new eQCM 10 M:

1) Unpack the shipment carefully.

   Save the container the instrument arrived in. If you return the instrument to Gamry, put it in this container for shipment.

2) The contents of your "My Gamry Data" folder will not be removed when you install the Resonator software. The data in the folder will not be overwritten when you install the Gamry software.

3) No tools are needed to install the eQCM 10M.
Installation of Gamry Software Package

All the Gamry software is provided on a single CD.

Purpose of Gamry Framework Software

Gamry Framework software serves as the user interface when using a Gamry Potentiostat in stand-alone mode. Gamry Framework also installs the required drivers for the eQCM 10M. It does not control or acquire experimental data for the eQCM 10M.

Purpose of Gamry Resonator Software

Gamry Resonator software serves as the user interface to acquire experiment data using the eQCM 10M.

This Quick Start Guide assumes that you have already installed a Gamry Potentiostat or that you are not installing a Gamry Potentiostat.

Starting the Installation Process

To start the installation process:

1) Put the Gamry software CD into the drive. The Gamry setup screen will be displayed automatically, if auto-run is enabled.

2) If the Gamry software setup page is not displayed automatically, select Start > Run. In the Run window, type D:\autorun in the Open field, and then click on OK. (Substitute the letter of your CD drive for D.)

3) Click on the Install Software button to start the Installation Wizard. The Wizard will step you through the installation process. Most of the steps will be familiar; they are common to many other software installation procedures. The next subsections provide instructions for two Gamry-specific screens.

Selecting Software Packages to Install

When you get to the Select Features screen, check all the software packages (applications) that you want to install.

Installation of Gamry Echem Analyst is Recommended

Use Gamry Echem Analyst software to manipulate and interpret data gathered through experiments run with Gamry software (through the Gamry Framework user interface). Echem Analyst can be installed on the same PC as the one containing the potentiostat or on a different PC. You are licensed to install Echem Analyst on multiple computers. You can install software you have not yet purchased, as well as the software packages you did buy. For interfacing a potentiostat with an eQCM 10M, it is necessary to install PHE200. After installation, you will be able to see the standard experiments available in all installed applications. However, you will not be able to use unlicensed applications. Your Gamry shipment included Authorization Codes for the software packages you bought. You will enter those codes later in the installation process.

The installation routine assumes that at least one Gamry Potentiostat will be installed in this PC. Therefore, no potentiostats are listed on the Select Features screen. If you have ordered additional Gamry hardware that is on the list, check the name of the hardware now.

Tip: If you like what you see, and decide to buy more Gamry software packages, just contact your Gamry sales representative.

When you buy an additional software package you will get a new Authorization Code. If you have already installed the software package, you will be able to enter the Authorization Code without repeating the installation process.
Specifying Line Frequency

On the Additional Information screen, be sure to select the appropriate AC line frequency for your location. For example, in the United States, select 60 Hertz. In Europe, select 50 Hertz.

Do not restart the computer once Framework installation is complete. Gamry Resonator will be installed next.

Completing Installation

To complete software installation and get ready for hardware installation:

1) Complete the installation process via the Installation Wizard.
2) Read the Readme file at the end of the installation process. In addition to release history information and notes on software fixes, this file contains any late-breaking news about the software that is not included in the other documentation.
3) Leave the Gamry CD in the drive.
4) Shut down Microsoft Windows. Do not restart the computer yet.

Next you will install the eQCM 10M in this PC.

Connecting the eQCM 10M

Preparations

To prepare to connect the eQCM 10M:

1) Locate an available USB Port.
2) Locate an available AC outlet.

Connect the USB Cable to the Computer

Plug the USB type A-male connector into an available female type-A connector on the computer as shown. The connector is unidirectional, and cannot be plugged in incorrectly.

Connect the USB Cable to the eQCM 10M

Plug the USB type B-male connector into the USB type B-female connector on the rear of the instrument, as shown. Again, this connector is unidirectional, and cannot be plugged in incorrectly.
Connect the Power Brick to an AC Power Source

The AC to DC power brick included with your system requires power from a 110V or 220V AC power outlet. The cable included with the system is suitable for use with 110V style power outlets. A converter or cable appropriate for 220V power outlets is not included with the shipment, but any IEC C13 line socket power cord can be used.

Connect the power cord to the power brick as shown, and then plug the other end into an available AC outlet.

Connect the Power Cord to the Rear of the eQCM 10M

The instrument is powered by a DC power connector from the power brick included with the system.

To power the instrument, connect the male end of the power cable to the Power In female connector on the rear of the instrument.

Attach BNC cable to eQCM 10M

A BNC cable is shipped with the eQCM 10M. One end of the cable has a BNC-male connector. The other end of the cable has two jacks for hooking up a quartz crystal.

Turn on the eQCM 10M

After both the USB cable and the DC power cable have been attached to the rear of the potentiostat, turn on the instrument using the power toggle switch on the rear panel.

The blue power LED on the front of the instrument should turn on and stay lit. The green data LED will only flash when data are being acquired.

If the power LED does not turn on, double check your connections as described. If you have made all of the connections properly and are still unable to resolve the problem, contact Gamry Instruments for assistance.
Make Sure the eQCM 10M Has Been Detected by Windows

Because you installed the Gamry software before you installed the eQCM 10M, the instrument should be recognized automatically, and the correct software drivers installed.

To check hardware detection:

1) Turn on the PC.

2) After the operating system starts, you will see a message that an instrument from the Reference Family Instrument has been detected.

   If running Windows 7, the device drivers are installed automatically, and no dialog boxes will appear.

   If running Windows XP or Windows Vista, the “Found New Hardware Wizard” asks questions about the software installation. When asked about connecting to the Internet, select “No”. When asked about searching the computer to load drivers automatically, select “Yes”. After working through the wizard, go to the next step.

   If running Windows 2000, acknowledge the message and go to the next step.

3) If you see a message that refers only to “USB Device”, the operating system could not find the Gamry drivers.

   Try this: Unplug the USB cable connecting the eQCM 10M, shut down Windows and turn off the PC. Power up the PC and wait until Windows has completed normal startup. Shut down Windows and turn off the PC. Reinsert the USB cable. Power up the PC.

Make Sure EQCM Is Recognized by Resonator

When you restarted the PC after installing the Gamry hardware and software, you confirmed that the operating system recognized the eQCM 10M and found the appropriate software drivers.

Now confirm that the Resonator recognizes the instrument. A green LED will appear in the window when the eQCM 10M has been detected.

Resonator will also display any Gamry Potentiostat that has been authorized for use with the eQCM 10M.

Sources of More Information

Technical specifications for the eQCM 10M are in the hardware manual on the CD shipped with the instrument.

More information about the Gamry software is available in Help, accessible from the Resonator and Echem Analyst menu bars.

Gamry manuals (as .pdf files) are on the software CD. Access the files from the setup screen you used to install the Gamry software. You may also browse to the locations, or use the installation notes button on setup. For example, if your CD drive is D, the path to the setup screen is D:\autorun.

The Readme file is installed in the same folder as the Gamry software.

More information about Gamry Potentiostats, the eQCM 10M, software, and electrochemical applications is available at the Gamry Web site: http://www.gamry.com

Contacting Gamry

Do not hesitate to contact us if you have questions or problems during the installation or operation of the eQCM 10M.

E-mail: techsupport@gamry.com
Telephone: Within the USA and Canada. phone 1-877-367-4267. From other countries phone +1-215-682-9330.

The support team is available from 8:15 AM to 6:00 PM US Eastern Standard Time.
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