Antec®

ROXY EC system

Installation guide

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Symbols

The following pictogram is used in this installation guide:

Caution, calls attention to a procedure, which, if not correctly executed, could result in damage to the equipment or personal injury. Do not proceed beyond a "CAUTION" sign until the indicated conditions are fully understood and met.

General precautions

Execute periodic leak checks on LC tubing and connections. Do not allow flammable and/or toxic solvents to accumulate. Do not close or block drains. Follow a regulated, approved waste disposal program. Never dispose of such products through the municipal sewage system.

LC equipments should be used by trained laboratory personnel only. Use proper eye and skin protection when working with solvents. Additional safety requirements or protection may be necessary depending on the chemicals used in combination with this equipment. Make sure that you understand the hazards associated with the chemicals used and take appropriate measures with regards to safety and protection.

Use of this product outside the scope of this guide may present a hazard and can lead to personal injury.

Spare parts and service availability

Manufacturer provides operational spare parts of instruments and current accessories for a period of five years after shipment of the final production run of the instrument. Spare parts will be available after this five years period on an ‘as available’ basis.
Manufacturer provides a variety of services to support her customers after warranty expiration. Repair service can be provided on a time and material basis. Contact your local supplier for servicing. Technical support and training can be provided by qualified chemists on both contractual or as-needed basis.

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Note that this document is only to guide you through the installation of an ROXY EC system and by no means is a replacement of the installation sections in the user manuals supplied with the system.

- □ Check all carton boxes, inform the transport company in case of damage. Store the transport boxes as they may be needed again.

ROXY EC system is delivered as the set of the following parts:

Part no.	Description	Qty
180.0161A	ROXY LC conn. kit, EC*	1
188.0035	Dual syringe infusion pump*	1
188.0300	Syringe 1mL, TLL	2
188.0302	Syringe 100µL, TLL	1
250.0123C	Dual port USB-RS232 converter	1
210.0050	ROXY Potentiostat DCC*	1
210.0200D	ROXY Potentiostat accessory kit	1
210.9005	Dialogue for ROXY*	1
250.0125	D/R cell cable 1m	1
210.0040	ReactorCell kit (incl. MD, GC, Au Pt)*	1

* the parts indicated with asterisk are delivered with corresponding user manuals. It is recommended to familiarize with the detailed installation procedures described in the manuals.

For the latest versions of the Antec manuals in digital format, please visit our web site: www.myantec.com

It is advised to use the Installation Qualification document (p/n 210.7024) for the installation. It is a guideline for [1] the installation of the system and [2] the training/instruction of the end user. Furthermore, a completed and signed IQ document can serve as an objective proof that the installation was completed successful and is carried out to the satisfaction of both parties.

Familiarize yourself with the contents of the IQ document before further installation.

Requirements

The size requirement for an ROXY EC system are as follows:

Description	Dimensions	Weight
ROXY Potentiostat	44 (D) x 22 (W) x 44 (H) cm	14 kg
Syringe pump	11.4 (D) x 23 (W) x 14 (H) cm	2.2 kg

- □ Prior to installation, it is advised to make enough space available on the lab bench/table.
- □ Ensure that the system is installed on a stabile, flat and smooth surface and that the table has enough mechanical strength to hold the weight of the system. A full-dressed system can weigh up to 17 kg.
- □ Check that the environmental requirements for the ROXY EC system are met in the laboratory:

Parameter	Requirement
Operating temperature	10 – 35 ^{o}C
Operating humidity	20 – 80%, non-condensing

- □ Align the system components as indicated in the Fig. 1. Make sure that the air flow of fans in the equipment is not obstructed (ROXY Potentiostat: bottom) because this could impair the cooling capability.

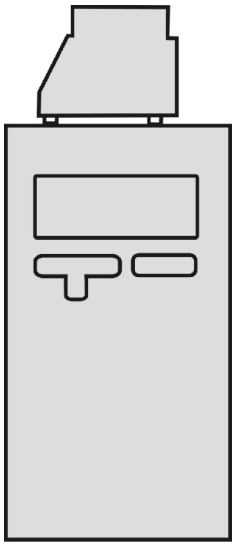

Fig. 1. Front view of the possible ROXY EC system configuration.

Fig. 2. Photograph of the ROXY EC system configuration.

Unpacking

Advice (for IQ) during unpacking of the individual system parts:

- **Check the part number, serial number on the s/n label of each unit and write it down in the IQ document.**
- **Check the contents of accessory kits etc. using the checklist supplied to assure it is complete and undamaged.**

- □ Unpack **ROXY Potentiostat** and follow installation instructions in user manual and next section of this document. **Never lift the DECADE II at its front door**, but at its sides.
- □ Unpack the **syringe pump** and follow installation instructions in user manual. The pump should placed on the top of the ROXY Potentiostat.

Electrical connections (Mains, RS232 & trigger cable)

In case it is necessary to use another mains cable then supplied make sure that the cable meets all relevant safety and EMC requirements (CE, CSA and UL). The manufacturer is not liable if power cords are used which do not meet the relevant safety and EMC requirements.

- □ Connect the cables provided in the ROXY potentiostat accessory kit: power cable, trigger cable and serial communication cable to the ROXY Potentiostat as it is shown in the Fig. 3.
- □ Connect the serial cable to the syringe pump as in the Fig. 4.
- □ Connect the equipment to the COM ports in the USB-RS232 converter (Fig. 5):
  - ROXY Potentiostat – Serial 1
  - Syringe Pump – Serial 2

Do not connect the converter to the computer yet. It is required to install the driver first. For instruction how to install the driver of th USB-to-RS232 converter read further section of the manual.

- □ Connect 1 m long cell cable (250.0125) inside the potentiostat.

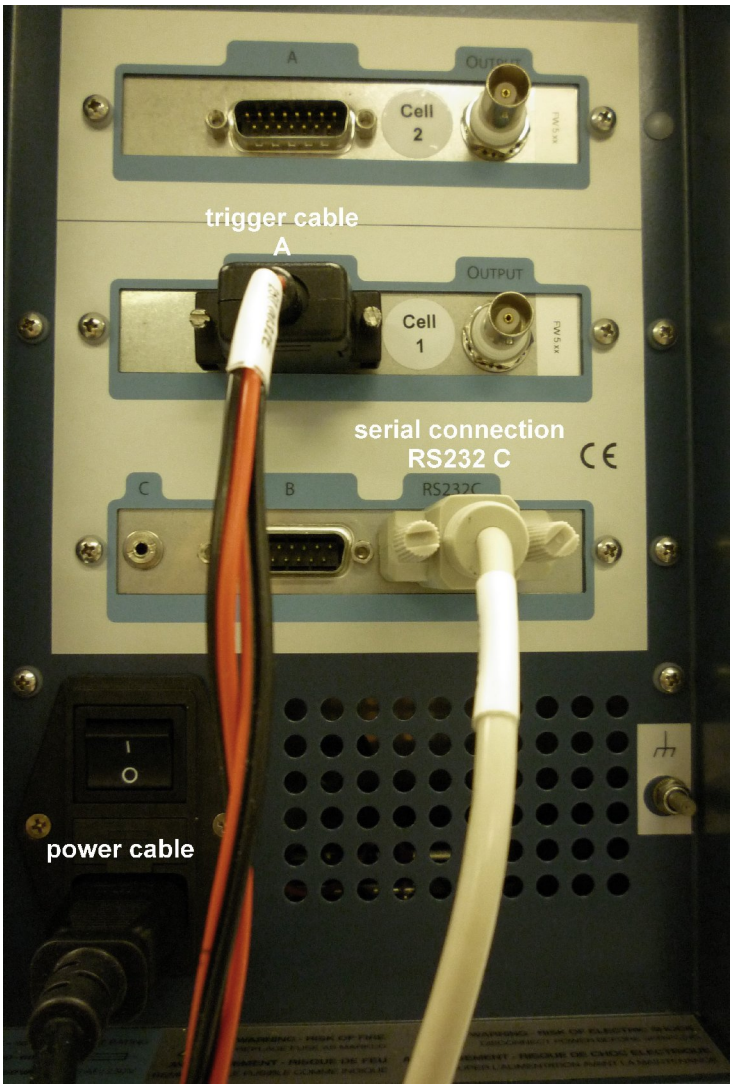

Fig. 3. Photo of the back side of a ROXY Potentiostat with serial communication cable connected to slot labeled "RS232 C" on the control board and trigger cable connected to slot "A" of the cell 1 sensor board. The Power inlet is located in the left, bottom corner.

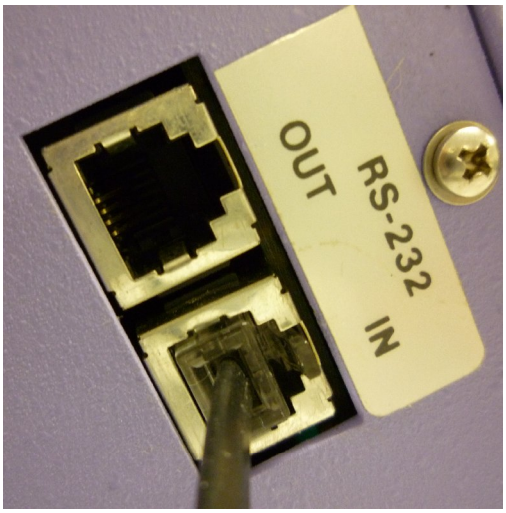

Fig. 4. Photo of the back side of a syringe pump with serial cable connected.

Fig. 5. Photo of the USB – RS232 converter with serial cables from potentiostat and syringe pump connected to Serial 1 and Serial 2, respectively. Converter is connected to computer using an USB port.

Liquid connections

- ☐ Follow the instructions in the supplied LC connection kit installation guide for installation of all liquid connections. Connect the tubing as it is shown in the drawing delivered with the connection kit (180.7161A).

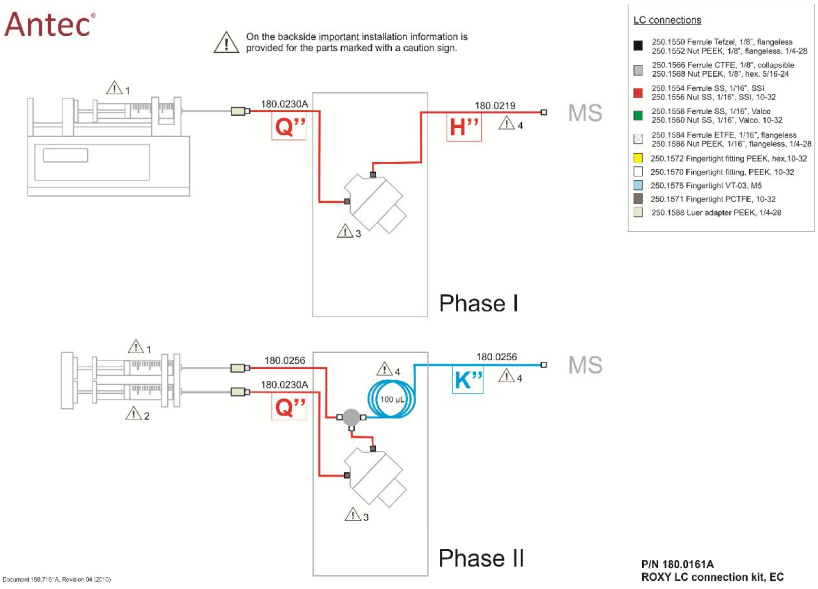

Fig. 6. As an example the front side of the schematic installation drawing of all LC connections of the ROXY EC system is shown. Every kit is delivered with a similar schematic installation drawing. This drawing is the most important guideline for the installation of all tubing assemblies of the LC connection kit. Detailed instructions can be found in the supplied LC connection kit installation guide.

Note that the contents of LC connection kits differ depending on the system purchased. Some kits contain tailor-made tubing assemblies for all connections. Other kits consist of a set of all necessary hardware (nuts, ferrules, finger tights and rolls of tubing) and instructions to make all LC connections yourself.

- ☐ Follow the ReactorCell user manual (210.7014) for installation of the ReactorCell in the system.

Installation USB-COM driver & Dialogue software

- □ Verify if the PC specifications and operating system are in compliance with the PC requirements document (p/n 210.7050). Change PC energy saving settings, virus scanner settings if necessary.
- □ If possible export the PC system info to text file and save a copy on a USB memory stick for future reference. The System info utility can be found in Windows under “Accessories → System Tools → System information”.

The RS232 – USB converter is delivered with CD containing the drivers, however, its recommended to download and use the latest version of the driver from the website: http://www.vscom.de/

Find the Support & Service/Download center find the product: VScom USB-2COM-M and download the corresponding drivers.

- □ Install the RS232 – USB converter driver.
- □ Open the Antec Software CD (p/n 250.9010) and install the Dialogue software.

Do NOT insert the Dialogue dongle before the installation process is completely finished!

The detailed instruction of the installation of the Dialogue for ROXY is in the document: Dialogue for ROXY – User Guide (p/n 210.7017)

- □ After installing the Dialogue:
  - Switch on devices
  - Run Dialogue software from Start menu (in 'Antec software')
  - AFTER running Dialogue (which installs dongle drivers), insert the license dongle and restart the software

ROXY Potentiostat should be automatically detected (If no detector is present, Dialogue software will continue running in 'demo' mode.)

- □ Go to Options → Settings → RS232 to connect the syringe pump (Fig.7).

The syringe pump must be connected by user to the proper port in the Settings window of the Dialogue program. If the port number is not listed, the number can be entered manually.

Note the COM numbers that are assigned to the ROXY potentiostat and syringe pump can differ because the numbers are generated automatically by Windows during installation. However, it is advised to assign the ROXY Potentiostat with COM number 7 and syringe pump with COM number 8.
The instruction how to change the COM number is described in the next section of this document.

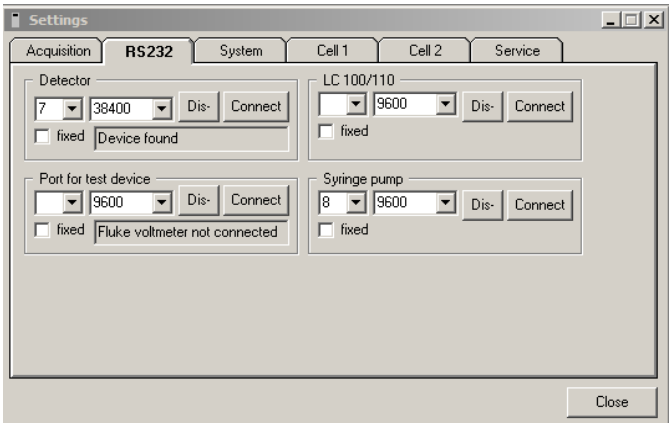

Fig. 7. Dialogue settings window (Options→Settings→RS232).

Changing the COM port number (reconnecting the devices)

To change the COM port number:

1. Go to Control Panel.
2. Open the Device Manager.
3. Go to Ports (COM & LPT). Right Click on the COM to which Potentiostat is connected and choose *Properties.*

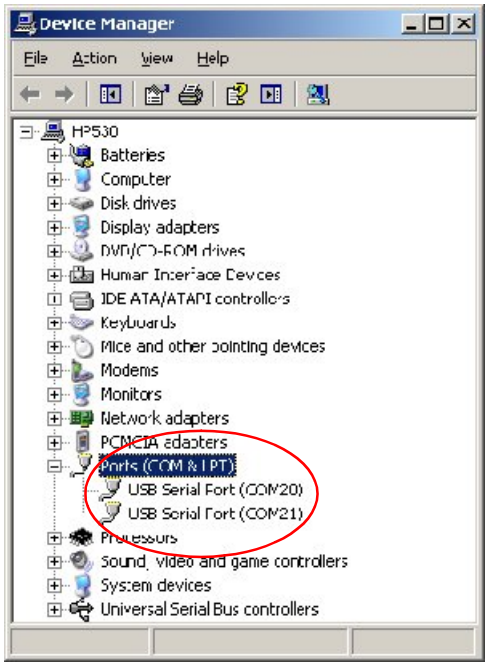

Fig. 8. Control panel COM port settings after connecting converter (COM numbers automatically assigned by Windows.

4. Go to *Port Settings→ Advanced* and choose the desired COM number (7 for ROXY Potentiostat).
5. Repeat steps 3 & 4 to assign the COM nr 8 for syringe pump.

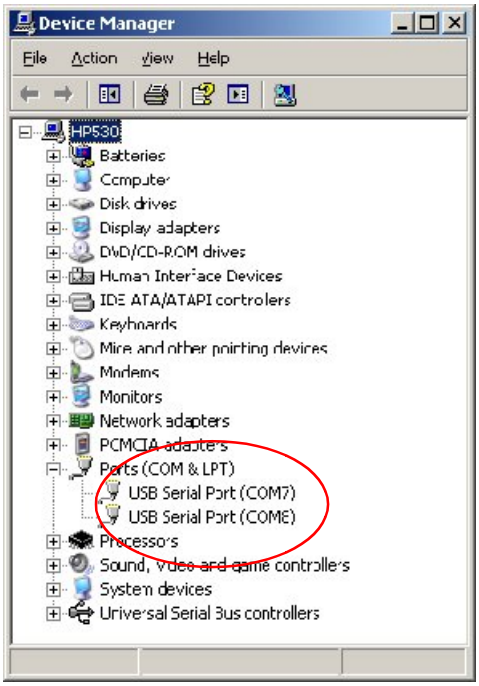

Fig. 9. Control panel COM port settings after manual change of COM port numbering.

6. Restart the PC to assure that all COM port changes are activated.
7. Restart the Dialogue and check the COM numbers in the *Options→Settings→ RS232*
8. The syringe pump COM number must be entered by user manually (enter: 8).

Once, the devices are connected click “fixed” to avoid automatic scanning all ports the next time Dialogue is opened.

Your ROXY EC system is now ready for use!

Fill in / complete the ROXY IQ document and sign it.

Dialogue for ROXY hands-on training

Information how to operate the ROXY EC system is provided in the document Dialogue for ROXY – User Guide (p/n 210.7017).

In the directory 'TRAINING' on the Antec Software CD (p/n 250.9010) a Dialogue for ROXY hands-on training is available dedicated to the ROXY EC system. The training material consist of the following files:

210_7018_xx.pdf	Manual of the hands-on training
210_7018_xx.zip	Set of Dialogue event program files

This hands-on training is intended for end-users who want to get familiar with the Dialogue software that is used for control and data-acquisition with the ROXY EC system.

It contains the following parts:

- Installation of the Dialogue for ROXY software.
- Running and updating MS Voltammogram methods.
- Application of the scan and pulse mode.

The exercises described in the hands-on training are exemplary and were created for teaching purposes only.

Check the User manuals & guides for maintenance procedure and operational details:

ReactorCell user manual	**p/n 210.7014**
µ-PrepCell user manual	**p/n 204.0010**
ROXY Potentiostat user manual	**p/n 210.7010**
ROXY EC system Quick Start-up Guide	**p/n 210.7016**