

# LAMBDA USER HELP

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Connecting the RS-485 connection kit to the PC and setting the COM port



## LAMBDA Laboratory Instruments & PC-Software

LAMBDA Laboratory Instruments develops innovative, high quality lab-scale instruments with an excellent price to performance ratio for biotechnology, microbiology, food and agricultural, chemical and pharmaceutical industries, research and development as well as for general laboratory and research applications.



### **MINIFOR** laboratory fermenter & parallel bioreactor system

Highly innovative and compact fermenter - bioreactor system for laboratory scale for all types of fermentation and cell cultures.

### **OMNICOLL** fraction collector & sampler

Fraction collector and auto-sampler for chromatographic techniques and automatic liquid dispensing.

### **LAMBDA** laboratory pumps **PRECIFLOW**, **MULTIFLOW**, **HIFLOW**, **MAXIFLOW** & **MEGAFLOW**

High quality and reliable laboratory peristaltic pumps with stable and reproducible flow rates for long continuous experiments.

### **DOSER** & **Hi-DOSER** Safety powder dosing instruments

Safe controlled and reproducible dispensing or feeding of crystalline or powdery substances without spoon. Safe operation with hazardous material. Working under GMP / GLP

### **VIT-FIT** & **VIT-FIT HP** high-pressure syringe pumps

Polyvalent syringe pumps with extremely robust mechanics – programmable infusion and filling from micro syringes to large volume syringes of 150 ml without adapter.

### **MASSFLOW** gas flow measurement and control units

Precise gas flow measurement and control with data acquisition option.

### **INTEGRATOR** pump flow integrator

LAMBDA pumps and dosing unit with the electronic pump-flow integrator allows the visualization and recording of the pumped volume as a function of time.

### **PNet** PC-software

Control software for LAMBDA peristaltic pumps, VIT-FIT & VIT-FIT HP laboratory syringe pumps, DOSER powder dosing instruments and MASSFLOW gas-flow controller

### **FNet** PC-software

Fermenter control software for installation on PC to control up to 6 LAMBDA MINIFOR fermentors and bioreactors, 12 LAMBDA INTEGRATORS and 6 LAMBDA laboratory pumps

### **SIAM** PC-software

Industrial fermentation and automation software for Parallel bioreactor systems LAMBDA MINIFOR, Automatic gas mix station LAMBDA MINI-4-GAS and all instruments written above

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## 1 SETTING UP RS-485 CONNECTION KIT

For connecting the LAMBDA laboratory instrument to the USB port of the PC, you use the RS-485 connection kit:

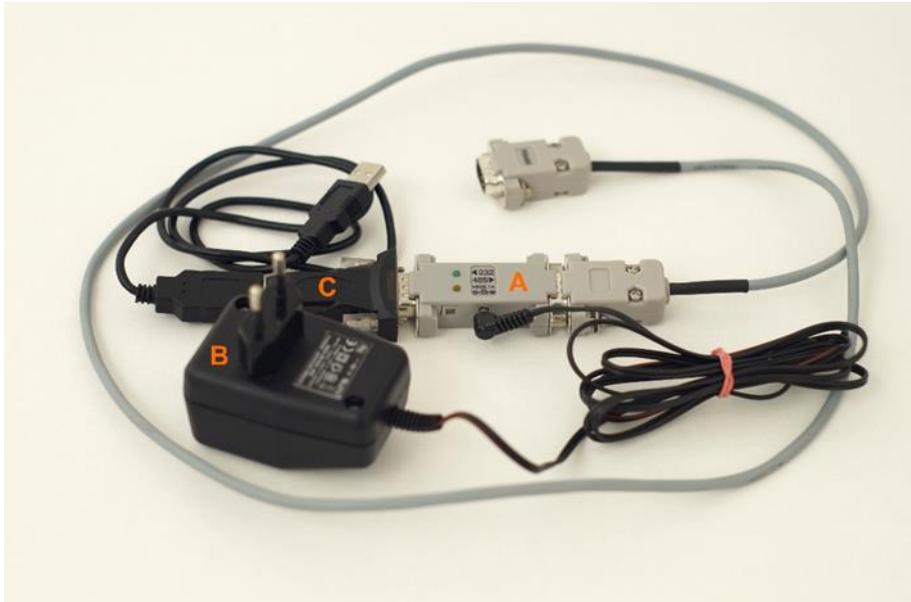


Figure 1 LAMBDA RS-485 CONNECTION KIT:

- (A) RS-232/485 converter
- (B) Power supply for RS-232/485 converter (5 V / 1 W)
- (C) PC connection cable

- One end of the RS-485 cable has to be connected to the RS-232/485 converter (A), and the other end connected to the laboratory instrument.
- The RS-232/485 converter (A) has to be connected to the PC using the serial or USB port - with the help of the provided USB connector (C).

## 2 CHECKLIST BEFORE PC-SETTINGS

Check the connections between your laboratory instrument and your PC, please:

- Connect the RS-485-RS-232-USB converter (A+C in Fig.1) to a USB port of your PC.
- Install the corresponding USB Serial Port driver on your PC.
- The RS-485-RS-232 (A in Fig.1) should be powered with the supplied power supply (B in Fig.1)

Check power supply	LED Signal on the RS converter (A in Fig. 1)
The converter (A) is powered with the supplied power supply (B)	The yellow LED is lighted

### 3 PC SETTINGS (DEVICE MANAGER, COM-PORT)

This section is available as video manual on [www.lambda-instruments.com/?pages=video-software](http://www.lambda-instruments.com/?pages=video-software).

- Open the *Device Manager* of your Windows operating system:

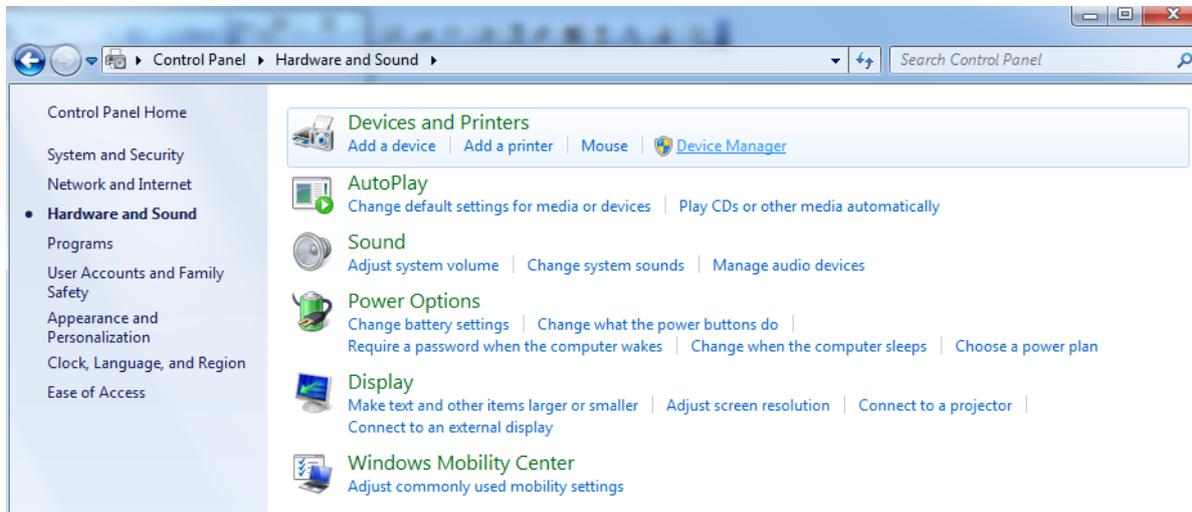


Figure 2 Screenshot of Windows Device Manager  
(Control Panel / Hardware and Sound / Devices and Printers: Device Manager)

- Check the corresponding correct working of the *USB Serial Port*.  
The COM port should be selected to be *COM 1*, *COM 2*, *COM 3* or *COM 4*.

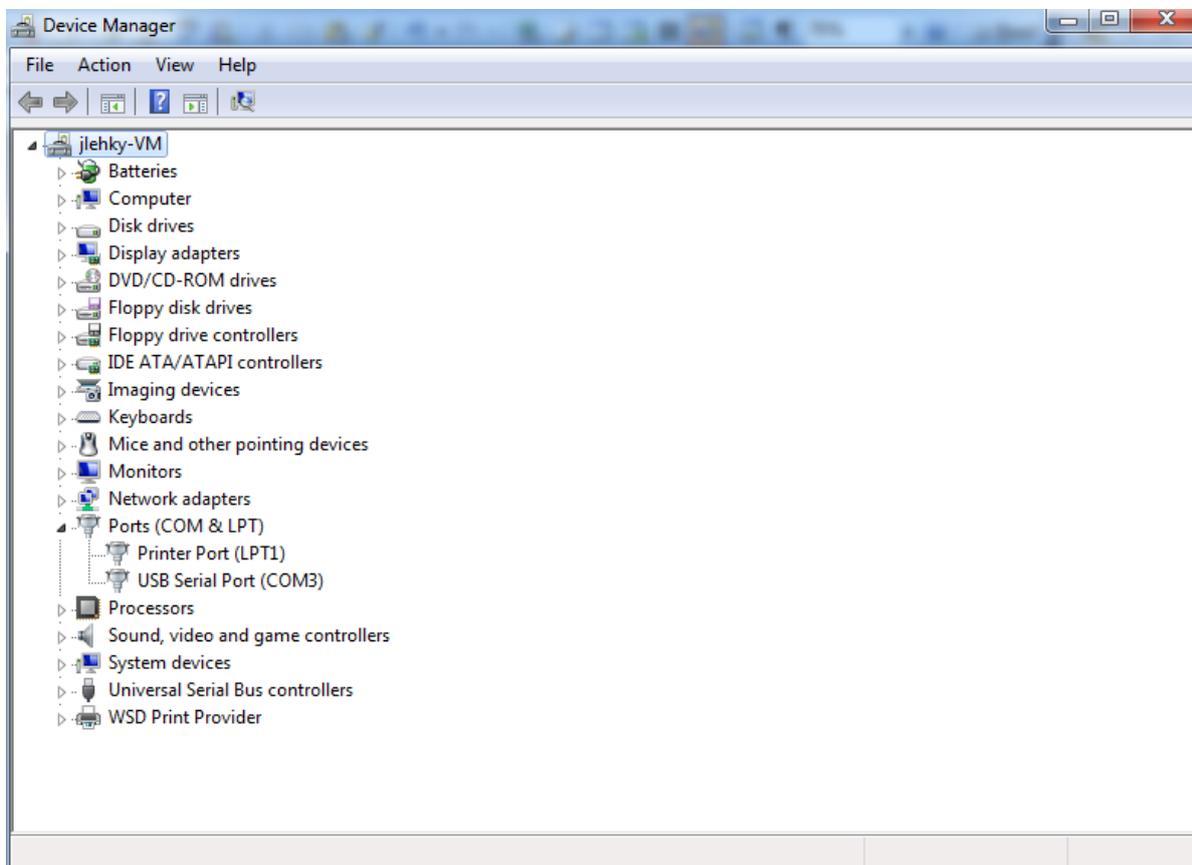


Figure 3 Screenshot Windows Device Manager: Device "Ports", *USB Serial Port (COM3)*

- **Set the communication port properties of your USB serial port** in tab *Port Settings* as follows:
  - *Bits per second: 2400*
  - *Data bits: 8*
  - *Parity: Odd*
  - *Stop bits: 1*
  - *Flow control: None*

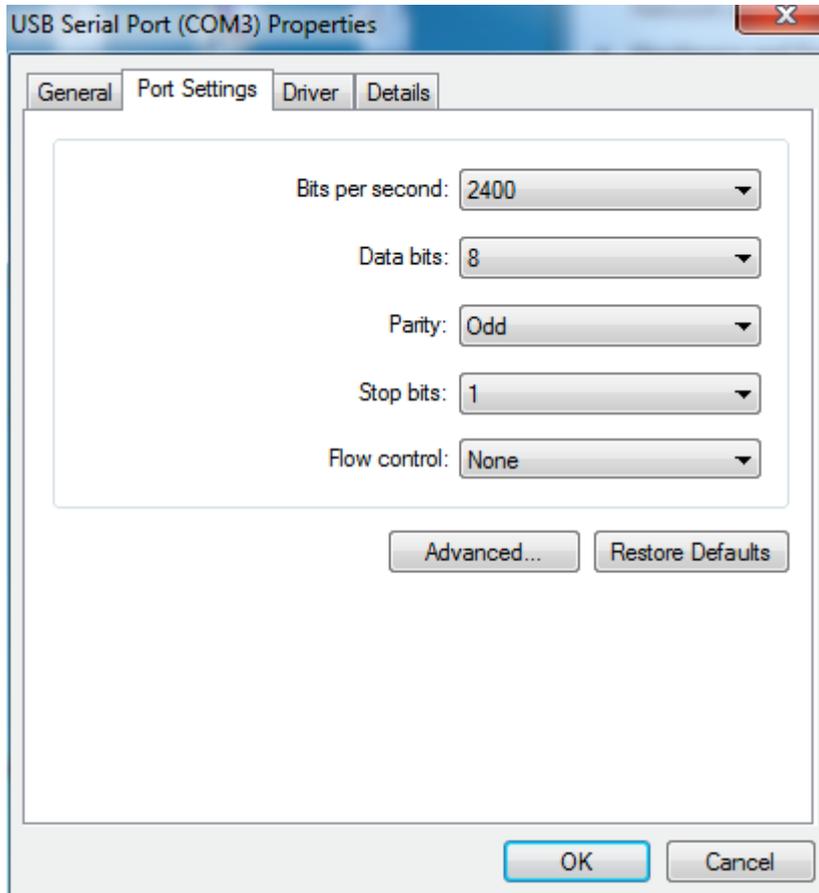


Figure 4 Screenshot Windows *USB Serial Port Properties* for setting of *Port Settings*

- Press *OK* to save the COM port settings of your USB Serial Port.

## 4 LED ACTIVITIES

When operating the laboratory instrument with the PC control software (e.g. PNet, FNet or SIAM), you will see the following LED activity on the converter:

Activity	LED Signal on the RS converter (A in Fig. 1)
A command is sent from the PC to the laboratory instrument	The yellow LED of the RS-converter is flashing.
Communication is coming from the instrument to the PC	The green LED of the RS-converter is flashing

## 5 PC-SOFTWARE - CONFIGURATION OF INSTRUMENTS

For details about the configuration of LAMBDA Laboratory Instruments in PC-Software you can watch our video manual on [www.lambda-instruments.com/?pages=video-software](http://www.lambda-instruments.com/?pages=video-software) (example configuration of LAMBDA pumps in PNet).

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