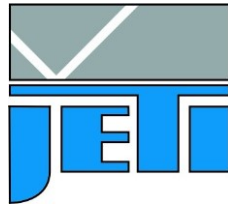


Technical Note 2



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Installation hints for the specbos xx01 series

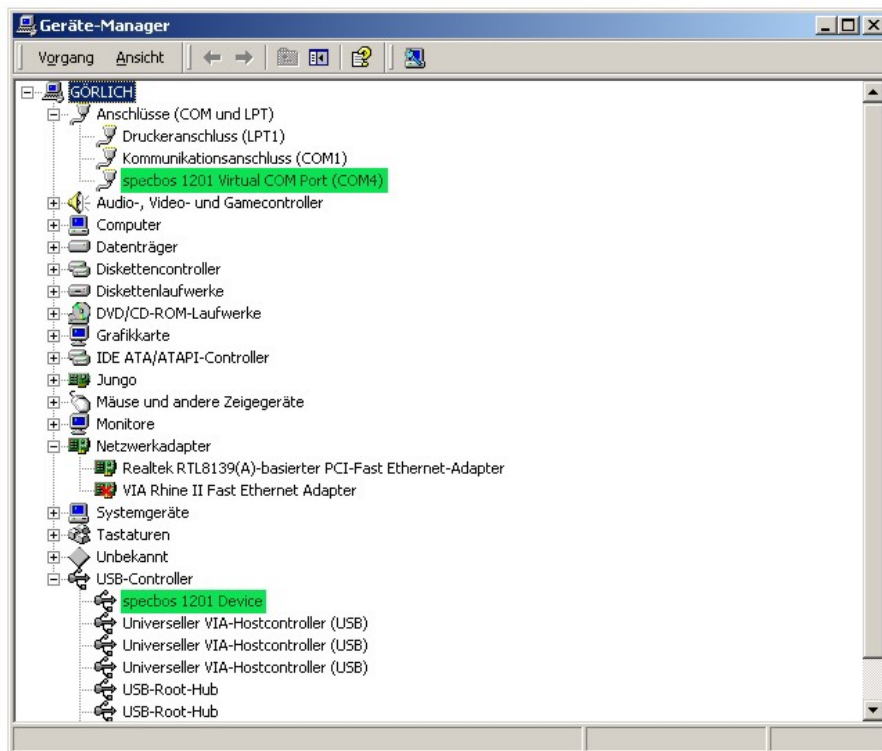
This application note deals with details of driving the specbos xx01 instruments at a PC and how to use the trigger feature.



Figure 1: Backside of specbos xx01 (right – USB, left – trigger)

Communication with device

specbos xx01 instruments contain, in contradiction to the previous series, a serial to USB converter interface circuit. Therefore, they can be operated like serial instruments. After plug in the instrument gets a virtual COM port number. This number can be checked in the device manager of the PC (or it can be changed if necessary).



Furthermore, there has to be a second entry under USB-Controller (specbos xx01 Device). Please note the marked lines in the device manager list.

The new USB solution guarantees proper function of the interface!

The USB device class of specbos xx01 is: **composite device**

- Microsoft OS cannot force composite device drivers
- The driver is not digitally signed by Microsoft.
- Don't worry, accept this and go-ahead during installation!

The following hints are suited to avoid interface problems:

- **Do not use the front side USB on desktop PC!**
Wiring to the front side is often not conform to USB standard.
- **Do not use unpowered hubs!**
The device needs app. 200mA from the USB Hub.
- **Start the JETI program only after device is plugged in and recognized by the operating system**
This will take some seconds.
- **Avoid electrostatic discharge to the device during plug in!**
Very safe is, to plug in the device if the PC is off.
- **In case of direct user access via SCPI-commands ensure to use right syntax!**
e.g. uncompleted commands may hang up the communication

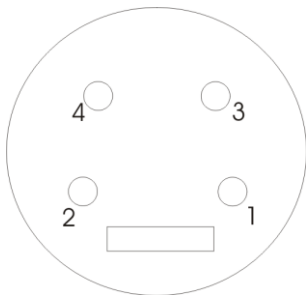
Another advantage of this solution is that the user can control the device via the interface! Details are described in application note 1.

Attention!

Instruments of the previous xx00 series cannot be operated with the new PC programs LiMes, JETI Color and Versaspec due to the changed interface solution!

Trigger

The start of a measurement of specbos xx01 instruments can also be done with a hardware trigger. The following figure shows the pinout of the connector socket at backside of the instrument.



Pin out :

- 1 Lamp out 5 V CMOS signal
(flash lamp trigger)
- 2 Meas. trigger input
- 4 Ground

Triggering a measurement is done with a short cut between pin 2 and pin 4. Furthermore, it is possible to trigger an peripheral unit with the specbos instrument, e.g. a flash lamp. This is done with the CMOS signal of pin 1 (+ ground 4).

Details of preparing the trigger functions by appropriate firmware commands are given in Application note 1 (Interface commands, paragraph Parameter commands/ Settings for peripheral units).