Barbieri Densitometers:
Transferring measurements to a
Microsoft Windows Application
using "232key Plus" software

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Introduction:

This document describes how to transfer measurements made with a Barbieri Densitometer trough serial port connection to a Microsoft Windows PC.

By using the 3rd party software "232key Plus", data received from the densitometer is captured from the serial RS-232 port (COM port) and transformed into keystrokes. This allows insertion of measuring data into the currently active application (Microsoft Excel, Worde, etc.)

This documentation applies to the following Densitometer models equipped with serial port:
Handheld color Densitometers: Densy 150USB Series 4, 150E, 250E, 450E, 460
Tabletop densitometers: Densy 501, 511, 521
B/W densitometers: Densy 210, 230E, 231E

The mentioned "232key Plus" software is produced and available from Smartlux SARL.
Link: https://www.232key.com/versions/plus.html

Densitometer connection

Connect your Densitometer to the serial COM port of your computer by using a DB9 Null-Modem Cable.

In case your Computer is not equipped with a serial COM port, you may use a USB to serial adapter like the following:

https://ftdichip.com/products/us232r-10-bulk/

The serial port number can then be determined by the Windows Device Manager:

Densitometer Setup

In the densitometer menu select "Install Serial port"

- Custom
- Select Baudrate: 1200
- CTS Signal: OFF
- Expanded Format: OFF
- Line Feed: OFF
- Color Sequence: R G B
- Deciman Point: ON
- Auto Id: ON
- Send Visual: OFF (or as you like)

232key Application Setup

Input Tab:

- Select Device: "Generic measuring instrument"
- Press "Customize" button and insert the following exact string (please copy/paste):
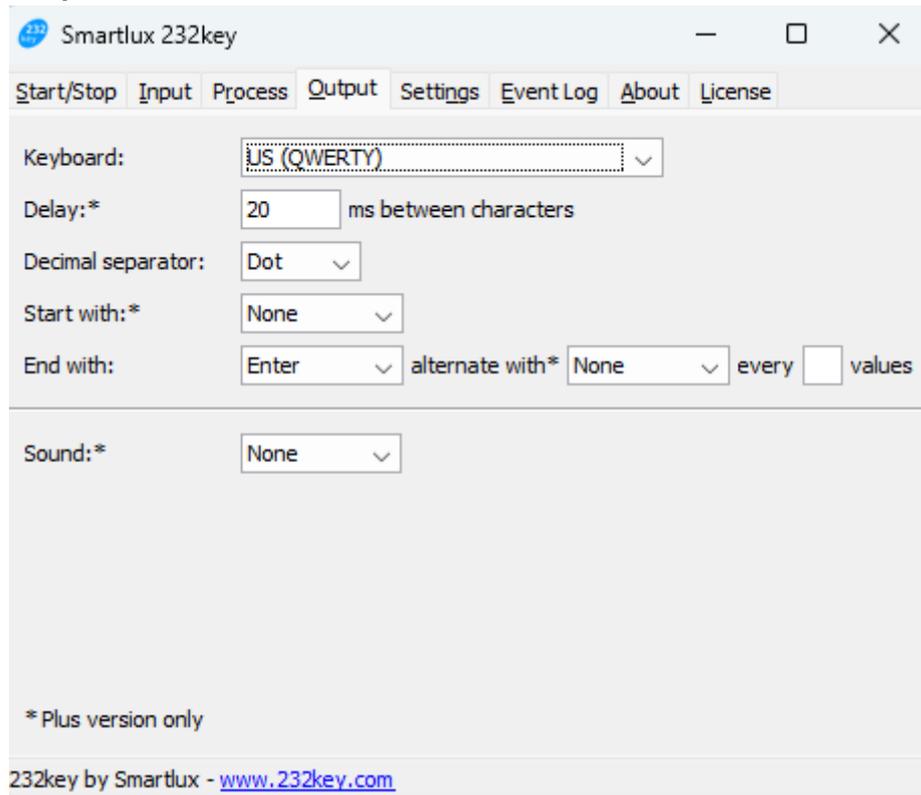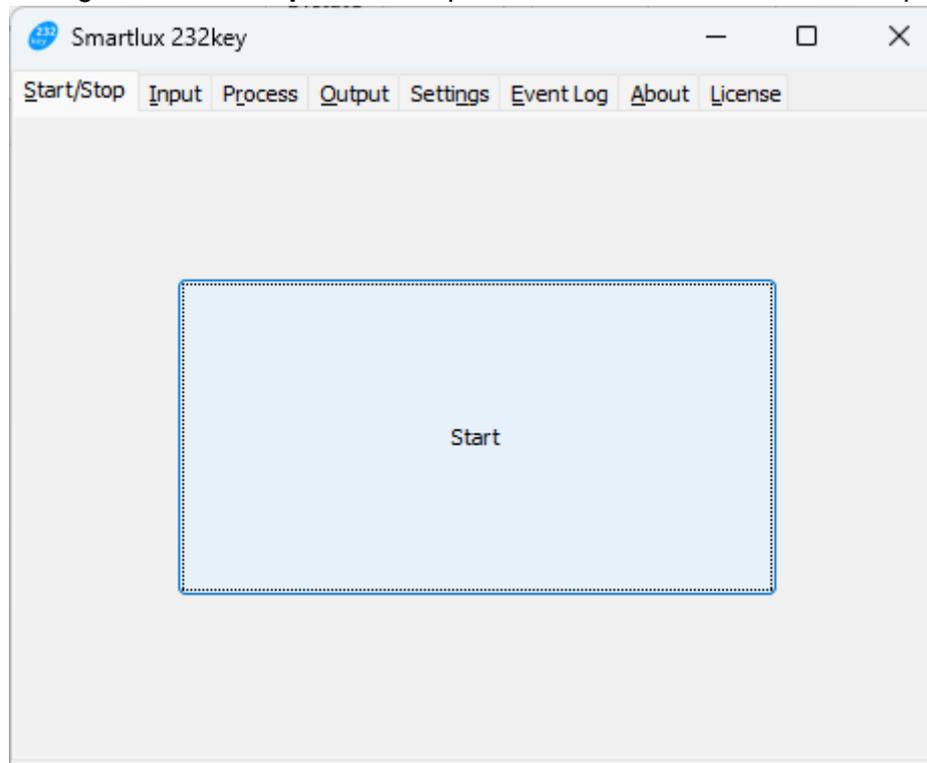
    `([-+]?\s*[0-9]*[\.,]?[0-9]+)`

- Set "Terminator" to: 13 <CR>
- Set remaining parameters as in picture

Output Tab:

- Set End with to "Enter" (or as you prefer)

Now go to **"Start/Stop" Tab** and press "Start" button to start data capture
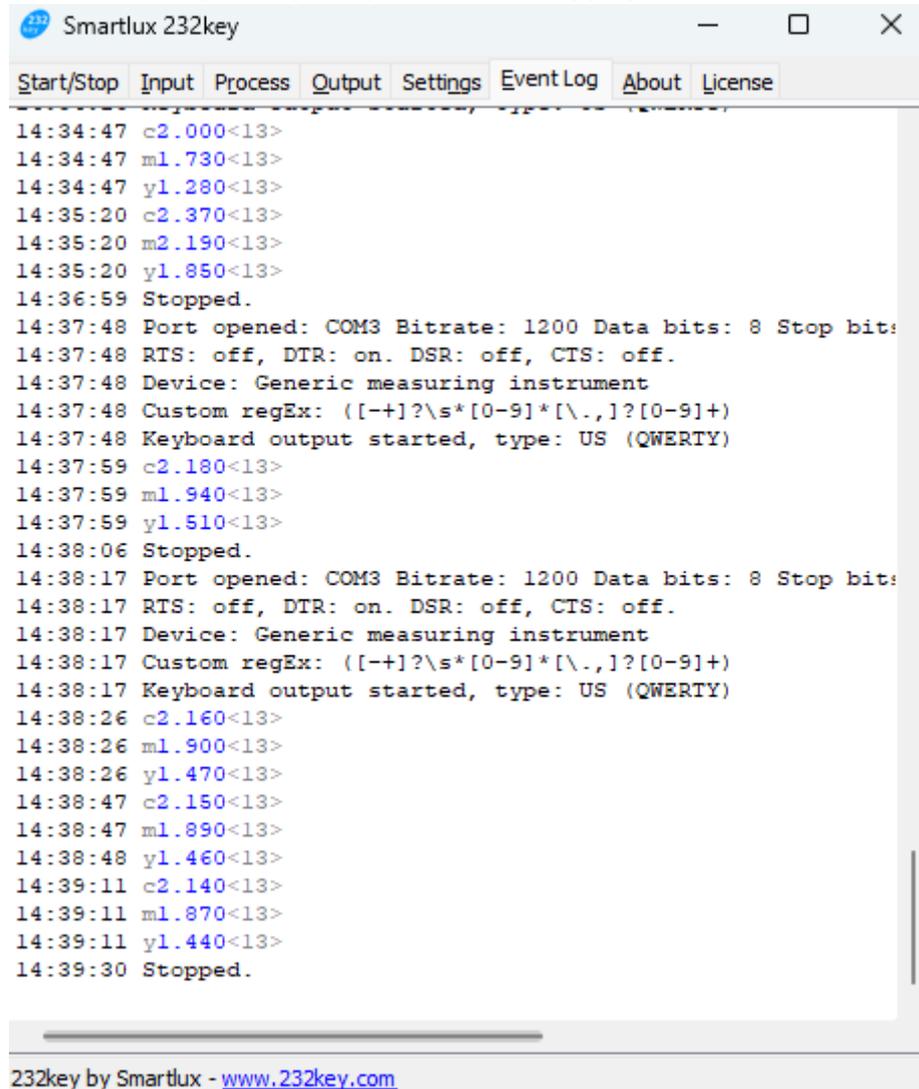
Operation

Bring your preffered application which should receive the data in front

When making a measurmeent on the densitometer, the measuring data will now appear in the application:

Alternatively, you can capture the 3 values in rows with the following Output Tab Setup:

Smartlux 232key

Start/Stop Input Process **Output** Settings Event Log About License

Keyboard: US (QWERTY)

Delay:*   20   ms between characters

Decimal separator: Dot

Start with:*   None

End with: TAB   alternate with*   Enter   every 3   values

Sound:*   None

* Plus version only

232key by Smartlux - www.232key.com

	A	B	C
1	2.140	1.870	1.440
2			
3			
4			

In case of problems:

The "Event Log" Tab gives you some debugging information

Please read the application instructions in case you experience problems.