

Data Collection User Guide

2005-10-20
M 05:1123
Rev. A

Info:

This software can be used with Samba 3000 or Samba 3200 control units, and any Samba transducer.

The application is freeware and may be used on any number of computers at no charge.

Send feedback to support@samba.se.

Requirements:

800 MHZ IBM compatible PC or better

10MB hard disk space (logging large amount of data to file can require up to 50MB)

1024 x 768Color monitor

Operating system: Win2000 or WinXP

CD drive

Internet access (updates can be downloaded from www.samba.se)

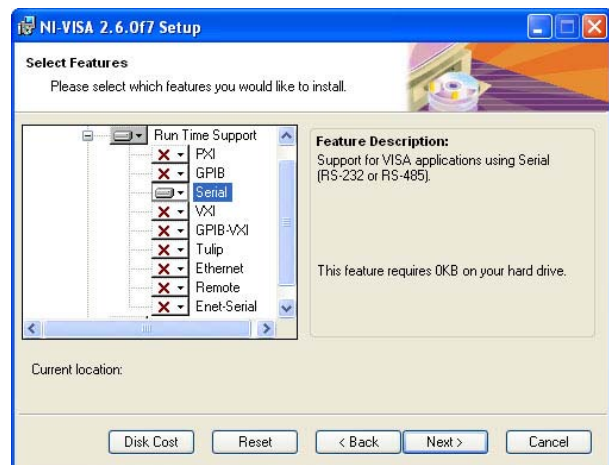
LabView 6.1 Run-time engine (delivered on CD)

One available RS232 serial COM-port (Special Serial driver included on CD)

USB to RS232 adapter may be used, we recommend Keyspan 4-port adapter.

Installation:

1. Install the LabView Run-time engine.
2. Install the serial driver, only the serial driver is required (customize setup as shown in picture).
3. Install SAMBA Data Collection appl.
(A small ini-file will be placed under c:\)
A menu item will be added to your "START" menu.



IMPORTANT NOTE:

The application must be installed on the c: partition.

Start up:

The measurement is controlled from the menus of the control unit. It is therefore important to make sure that the measurement is running on the control unit before trying to communicate with the hardware from the application. Make sure the control unit is running and that the serial cable is connected.

Power on the control unit let it go through the start up process and baseline adjustment before pressing the start/stop button [A].

Using the application:

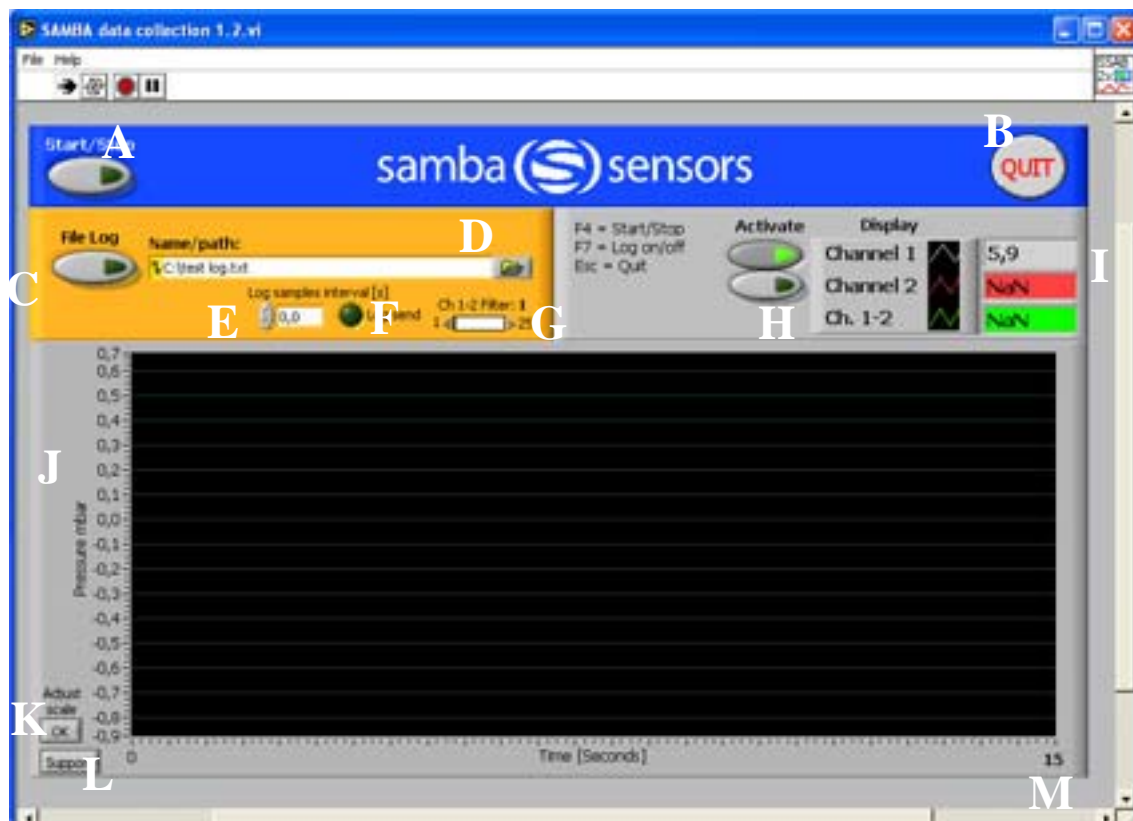
All controls have a built in help that pop up when the mouse is moved over it.

A short description of the controls is included below.

- A. Start/stop application (start collecting data)
- B. Quit Application
- C. Start logging data to file. A dialog will appear if log file exists.
- D. Specify log name or use the "Browsing" button
- E. Set the log interval (s), set this control to "0" to log all data at the selected frequency-
- F. Log indicator will light up when ever a data package is sent to file.
- G. Set the number of samples used for averaging of the deferential channel.
- H. Select which channel to use. This is done before starting the application (A)
- I. Real time pressure of the activated channels can be paused by pressing the indicator.
The indicator will start flashing if the pressure is out of range of the inserted transducer
- J. Graph scaling and unit display. Scaling can be adjusted by changing the top and bottom scaling value.
- K. Press adjust scale to zoom out to view the entire pressure range of the transducer.
- L. Activate Support button to view raw data and control signal (appears under the graph)
- M. Change the x scaling by entering the window length in seconds. Will not be accurate if data is lost.

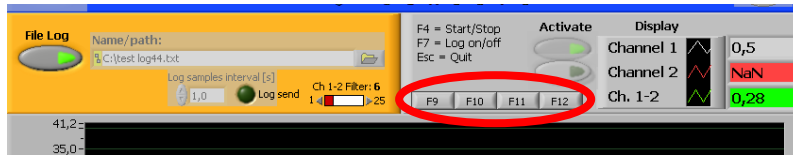
Check the activated channels and start measurement with "Start/Stop". If the control unit is not found a dialog will appear to let you change the communication settings.

The measurement loop will stop if the user enters the control unit menus, and will resume when the control unit is returned to measurement mode.



Logging data to file:

Four new buttons appear. They are used for adding markers in the log file. Markers can be added by clicking the buttons or by using the functions keys F9 – F12.



During logging most other controls are disabled and grayed out. They get available when logging stop.

Do NOT make any changes on the control unit during logging

The log files are saved as tab separated text files and can easily be opened in Excel or similar program for analysis.

```
Control Unit Ch1 S/N: 10410#Frequency Ch1: 50#Unit Ch1: mbar#Transducer S/N Ch1: 1020021#Article No. Ch1: 461040#Max pressure Ch1: 5000#Min pressure Ch1: -100#
Channel 2 Not Activated
Time#Pressure, barometer, error Ch1#Pressure, barometer, error Ch2#Diff(CH1-CH2)#Marker
Date & time: 2005-08-19 14:53:26
%%%%
0 NaN -2,1 1017,6 0 NaN 0 0 0 NaN -1,683 NaN NaN
1 NaN 1,9 1017,6 0 NaN 0 0 0 NaN 0,517 NaN NaN
```

Log file example:

The first 2 rows describe the measurement and settings of the control unit

The third row describes the measurement columns below.

The fourth row holds date and time information of the measurement.

Row five is a divider and after this is the actual data.

In this example we can see that only one channel were activated, a 5bar transducer was used and measurement frequency was 50Hz. Note that the Diff channel and channel one is not the same even though the second channel was offline. This is due to the filter level was activated (set to 6).