

X-Viber

Data logging



Version 1.00
VMI AB 26 Mars 2006

DATA LOGGING

The **Data Logging** option can be used to collect the Total value and the first 10th highest peaks in a log file. The file can be transferred using the “Data Logging File” command in the X-TREND “**Transfer**” menu. The contents of the log file will be transferred to a MS EXCEL file with format (.csv).

The Logging function can be very useful to “spy” the running of a defective machine.

It can also be used to “spy” on the machine in various working conditions (starting, un-loaded, half-loaded, full-loaded, etc.).

The **Data Logging** menu is available on the 5th line of the **MAIN MENU**.

Move the black line with the **Up** or **Down**  buttons to **Data Logger** and press the **OK** button.



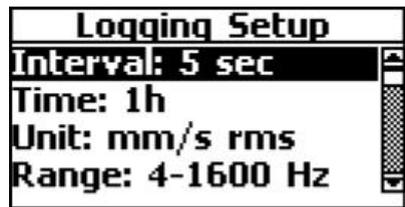
The logging introduction screen will appear:

Move the black line with the **Up** or **Down**  buttons to **Setup Logging** and press the **OK** button



Logging Setup allows the user to customize the data acquisition as follows:

Press the **Side arrow**  buttons to change the settings.



Interval – The time between two storages. You can select one of following: Fastest, 5 sec, 10 sec, 30 sec, 1 min, 5 min, 10 min, 30 min. If Fastest is selected, each measurement will be saved in the logging file. In this case the sample interval will be 1 – 2 seconds.

Time – The Total acquisition time. You can select one of the following: 1, 2, 5, 8, 16 or 24 hours.

Unit – The unit for the measurement. You can select any of the available units in the instrument. Note, the available units depend on the settings of METRIC or IMPERIAL in the main settings menu.

Range: The frequency range for the Total value measurement. Use the lowest possible frequency range suitable for the machine. This will increase the frequency accuracy.

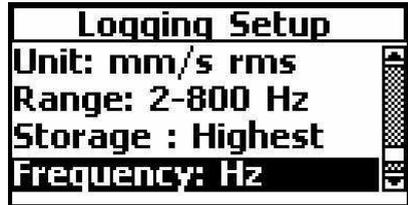
Storage type.

Normal: X-Viber is measuring and storing the data at the selected time interval

Average: X-Viber is measuring at full speed (fastest) and calculates an average of all measurements within the measuring interval. The stored time will be the time when the measurement is stored and not the middle of the interval.

Highest: X-Viber is measuring at full speed (fastest) but is only storing the measurement with the highest total value within the measuring interval. The stored time will be the time when the measurement is stored and not the time at the highest measurement. Using “Highest” has the advantage that you will not miss a high value within the interval.

Frequency: The unit for frequency can be Hz or CPM.



Note:

At Data Logging the processor will run for a long time consuming a lot of power. Use the charger, otherwise you might loose measurements.

Press the **Escape**  button to go back to the **Logging** menu.

When the settings are made we can start to measure.

Move the black line with the **Up** or **Down**  buttons to **New Session** and press the **OK** button.

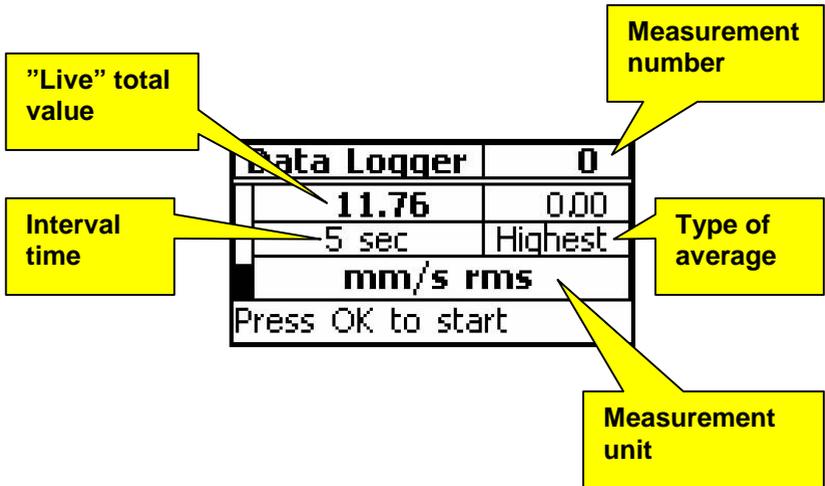


Press the **Side arrow**  buttons to change to **YES**.



Note!
If you answer **YES** the existing session will be deleted.
X-Viber can only store one session at a time.

X-Viber will start to measure but no data is saved



Press the  **OK** button and X-Viber will start the logging session.

Data Logger		11
11.68		11.68
5 sec		Highest
mm/s rms		
Started		

Number of stored measurements so far.

Total level of last stored measurement.

The message "Saving Data" will be displayed at the end of each interval.

This message indicates that the logging has started.

The maximum number of records depends on the used memory flash card and can be 15 000 records for MultiMediaCard or 7 000 for FlashCard.

Press the **Escape**  button to stop measuring.

Select **Ongoing session** and press the **OK** button to continue with the same session.

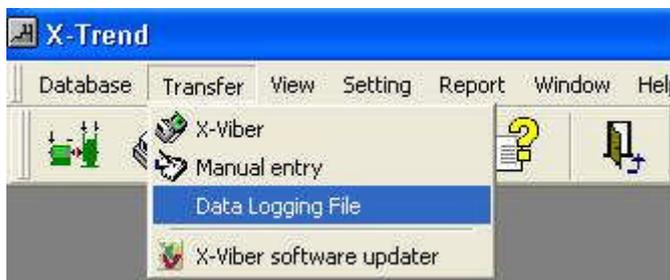
Data Logger
Ongoing Session
New Session
Setup Logging
File info

Press the **Escape**  button to go back to the **Main Menu**.

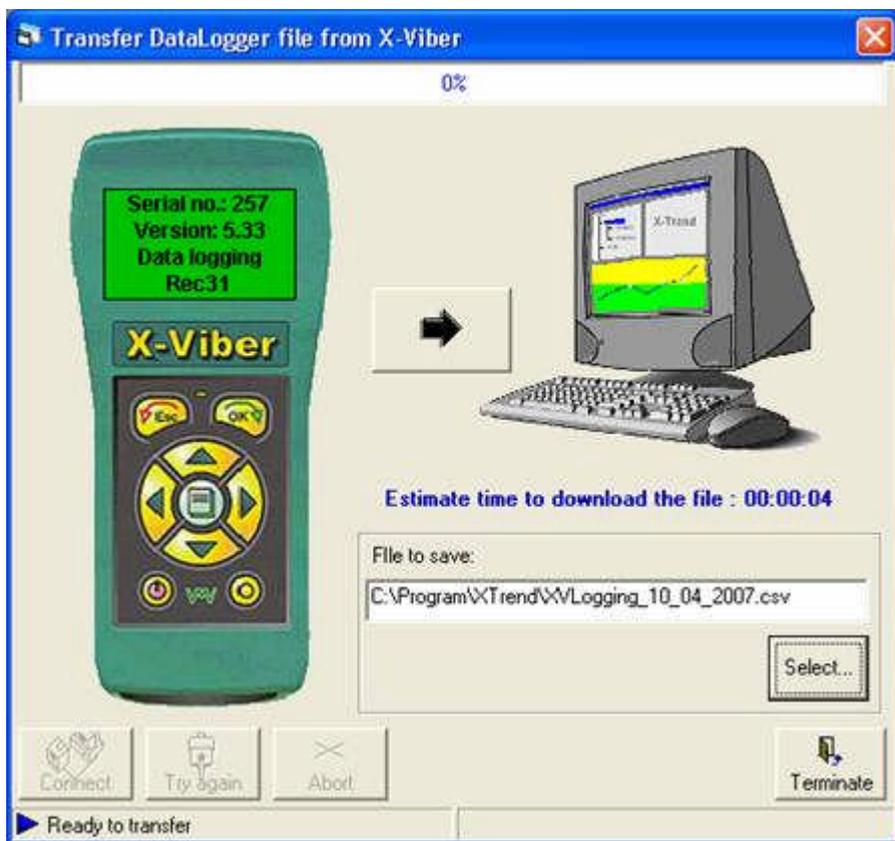
Move the black line with the **Up** or **Down**  buttons to **Communication** and press the **OK** button.

MAIN MENU
Measurements
Route
Communication
10-04-2007 16:27:22

Start X-Trend and select **Data Logging File** in the **Transfer** menu.



Connect the USB cable and this window will appear.



This window will give you information about:

- Instrument information and number of stored measurements.
- Estimated time for data transfer
- Automatically selected file name

The file name and destination can be changed by clicking on the **Select** button



Click on this button and the transfer will start



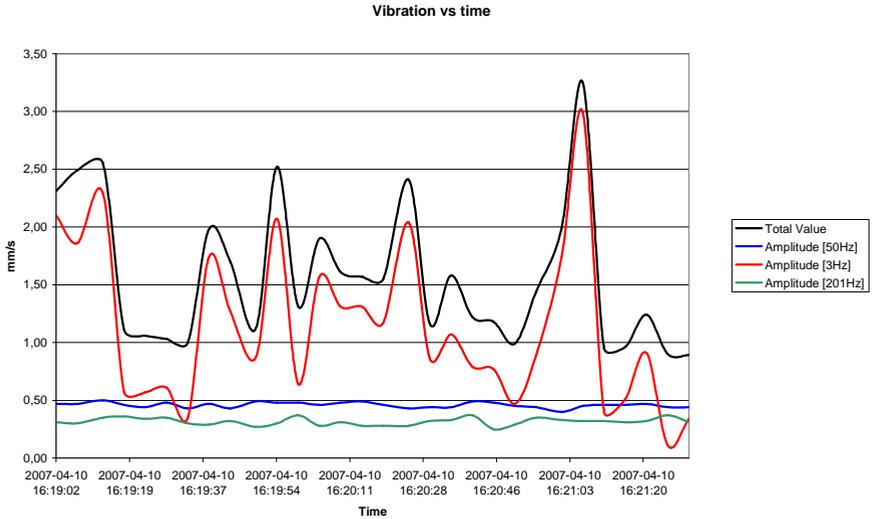
This message is displayed in the X-Trend window when the transfer is finished.

Open the EXCEL program and open the csv file and it will look like the table on the next page.

X-VIBER Data logging file

Record	Date and Time	Total Value	Meas Unit	Amplit. [1]	Freq. [1]	Amplit. [2]	Freq. [2]
1	2007-04-10 16:19:02	2,31	mm/s rms	2,1	3	0,47	50
2	2007-04-10 16:19:07	2,49	mm/s rms	1,86	4	0,47	50
3	2007-04-10 16:19:13	2,55	mm/s rms	2,29	3	0,5	50
4	2007-04-10 16:19:18	1,11	mm/s rms	0,57	3	0,46	50
5	2007-04-10 16:19:23	1,06	mm/s rms	0,57	3	0,44	50
6	2007-04-10 16:19:28	1,03	mm/s rms	0,61	3	0,48	50
7	2007-04-10 16:19:33	1	mm/s rms	0,35	3	0,43	50
8	2007-04-10 16:19:38	1,98	mm/s rms	1,74	3	0,47	50
9	2007-04-10 16:19:43	1,7	mm/s rms	1,27	3	0,43	50
10	2007-04-10 16:19:49	1,12	mm/s rms	0,87	3	0,49	50
11	2007-04-10 16:19:54	2,52	mm/s rms	2,07	3	0,48	50
12	2007-04-10 16:19:59	1,31	mm/s rms	0,64	3	0,48	50
13	2007-04-10 16:20:04	1,9	mm/s rms	1,57	3	0,46	50
14	2007-04-10 16:20:09	1,61	mm/s rms	1,31	3	0,48	50
15	2007-04-10 16:20:14	1,57	mm/s rms	1,31	3	0,49	50
16	2007-04-10 16:20:19	1,55	mm/s rms	1,17	3	0,46	50
17	2007-04-10 16:20:25	2,41	mm/s rms	2,04	3	0,43	50
18	2007-04-10 16:20:30	1,16	mm/s rms	0,86	3	0,44	50
19	2007-04-10 16:20:35	1,58	mm/s rms	1,07	3	0,44	50
20	2007-04-10 16:20:40	1,22	mm/s rms	0,79	3	0,49	50
21	2007-04-10 16:20:45	1,18	mm/s rms	0,77	3	0,48	50
22	2007-04-10 16:20:50	0,99	mm/s rms	0,47	3	0,45	50
23	2007-04-10 16:20:55	1,44	mm/s rms	0,89	3	0,44	50
24	2007-04-10 16:21:01	1,99	mm/s rms	1,74	3	0,4	50
25	2007-04-10 16:21:06	3,25	mm/s rms	2,99	3	0,45	50
26	2007-04-10 16:21:11	0,95	mm/s rms	0,4	3	0,46	50
27	2007-04-10 16:21:16	0,96	mm/s rms	0,51	3	0,46	50
28	2007-04-10 16:21:21	1,24	mm/s rms	0,91	3	0,47	50
29	2007-04-10 16:21:26	0,9	mm/s rms	0,11	3	0,44	50
30	2007-04-10 16:21:31	0,89	mm/s rms	0,34	3	0,44	50
			Stopped				
			by the				
31	2007-04-10 16:21:33		user				

10 of the highest peaks are stored for each measurement. Only 2 are shown in this table.



With the table as the database it is possible to analyze when a large vibration is occurring and also which frequencies that are involved.

In the diagram above we can see that the total value is closely related to a vibration at 3Hz while the two other frequencies 50Hz and 201Hz has rather stable vibrations.

