EVS(Environmental Vibration & Sound) Measurement

Operating Manual

Ⅰ Edition(Ver. 3.0)

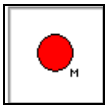
SV Corporation

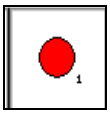
[ICON of the EVS]

: EVS(Environmental vibration and sound) measurement mode selection


: Transducer option


: Trigger option


: (M) Manual recording mode -> Manual start-stop recording without trigger option


: (S) Single recording mode -> Auto single recording with trigger option


: (C) Continuous recording mode -> Auto continuous recording with trigger option

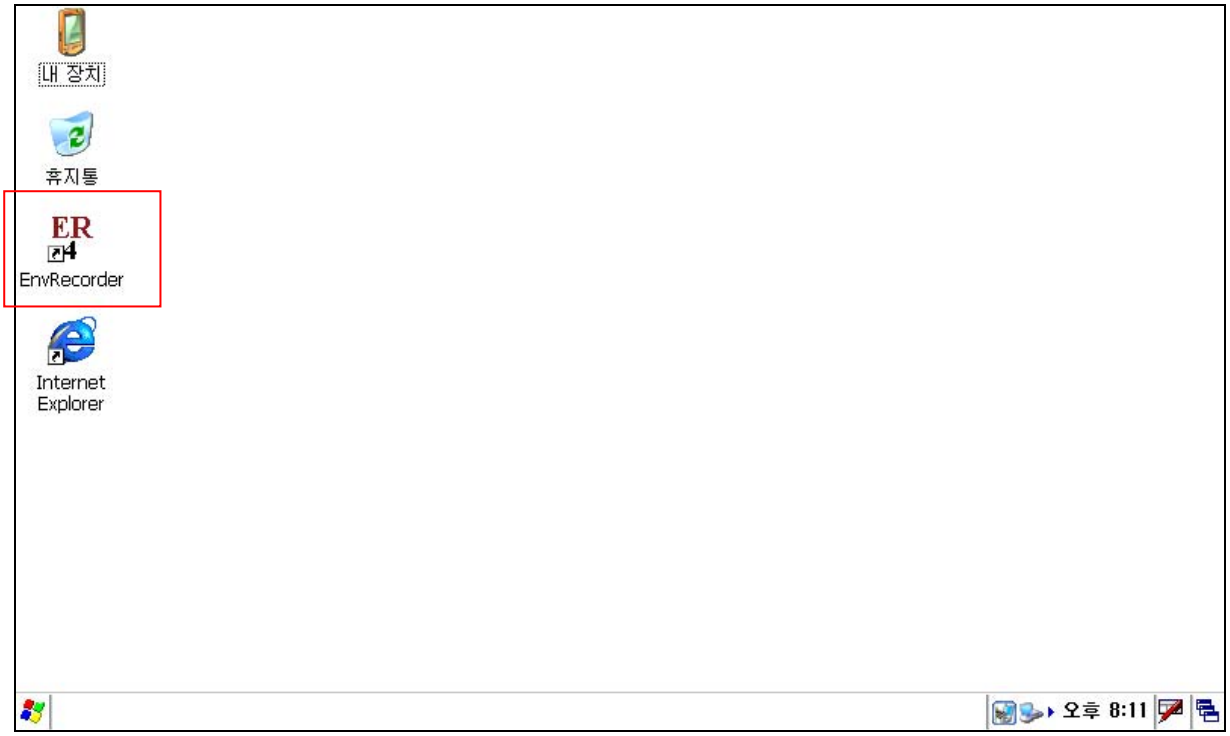

: Manual Stop


: Open the saved result

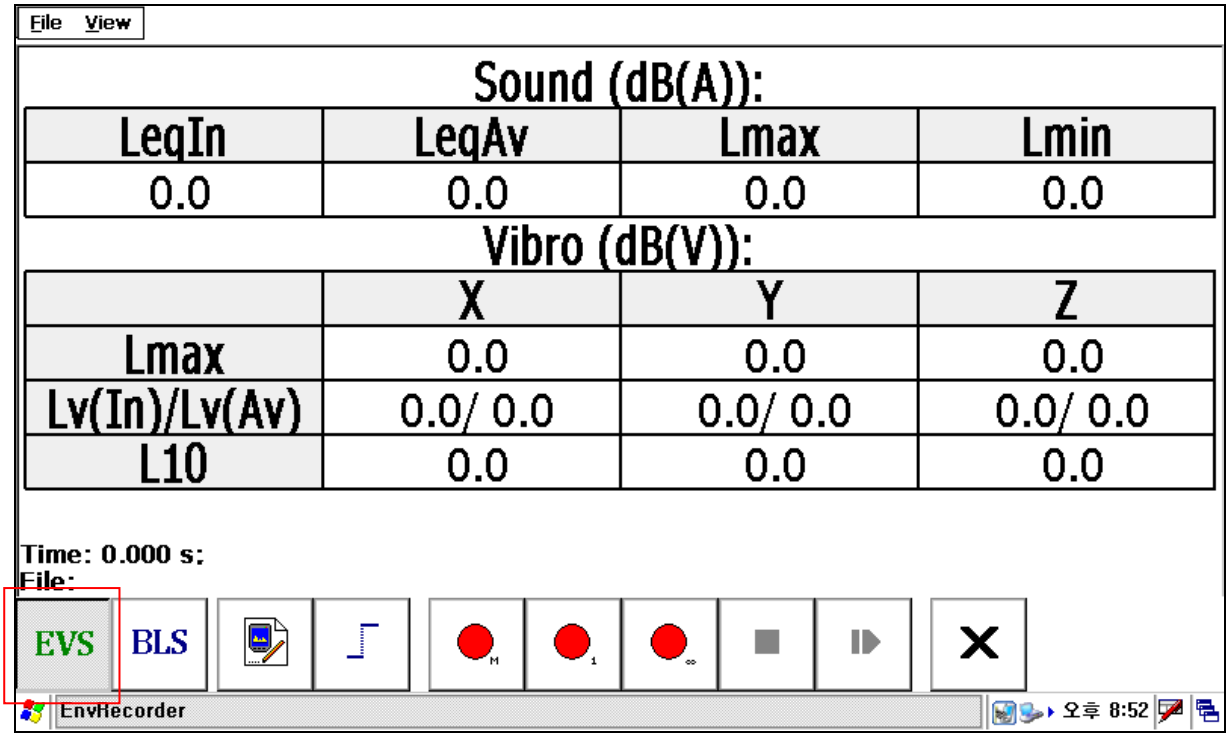

: Exit from program

[Procedure of the EVS]

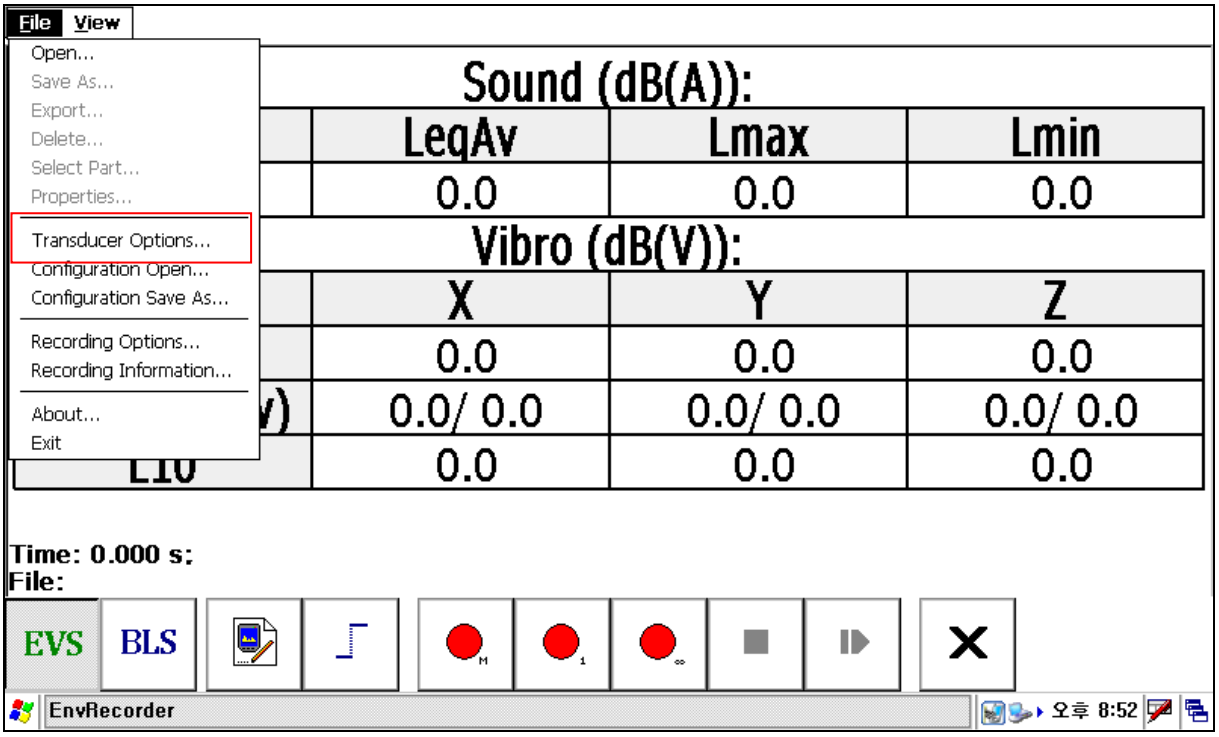
1. You can see the window if you turn on.
2. Please Double click “EnvRecorder” Icon.



3. Please click “EVS” and then “File” if it display as bellow window.

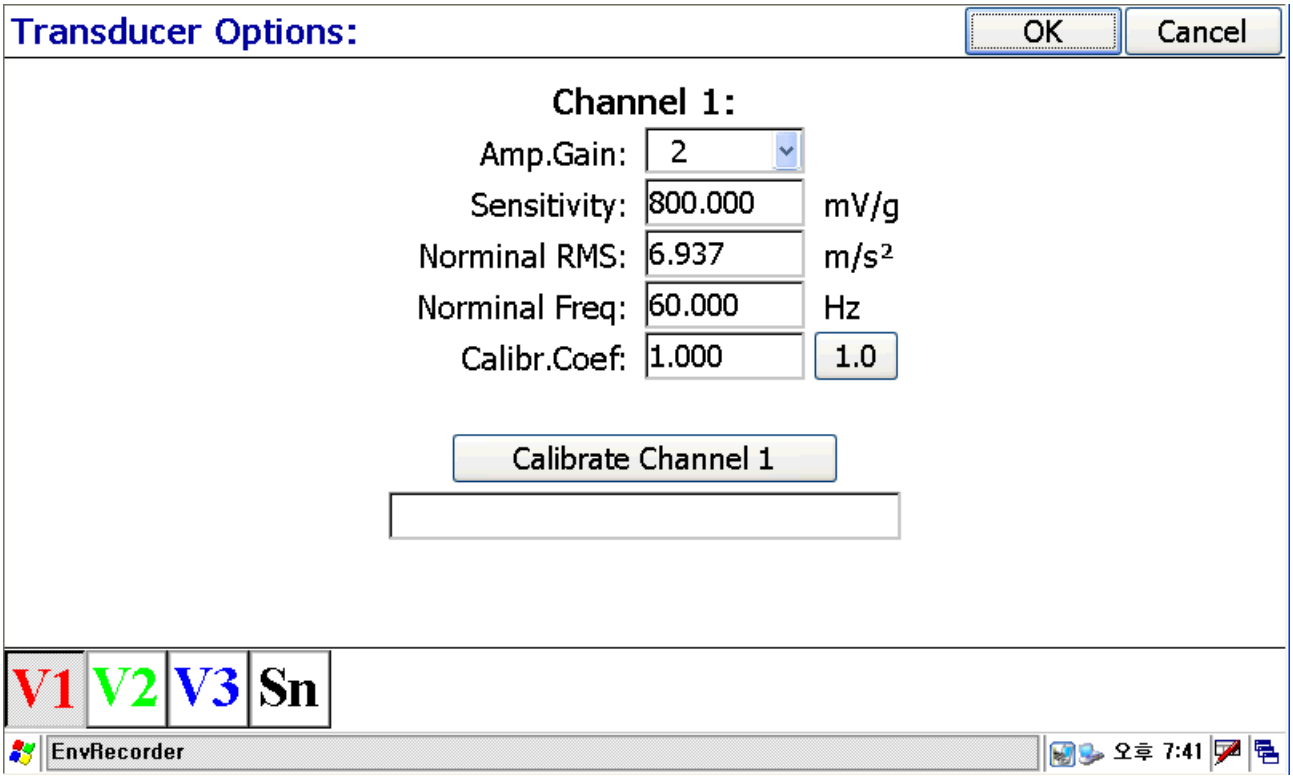


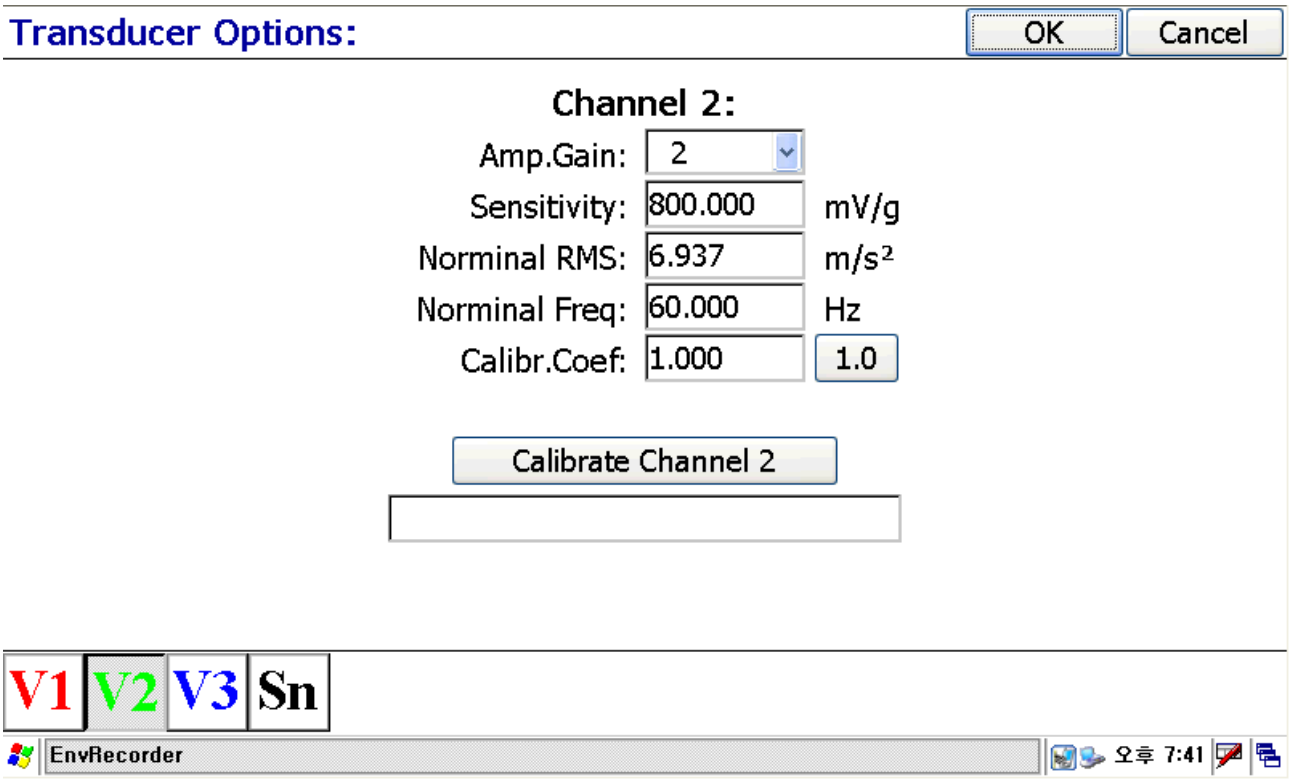
4. To set up Sensor, Please do “Transducer Options” in the file.

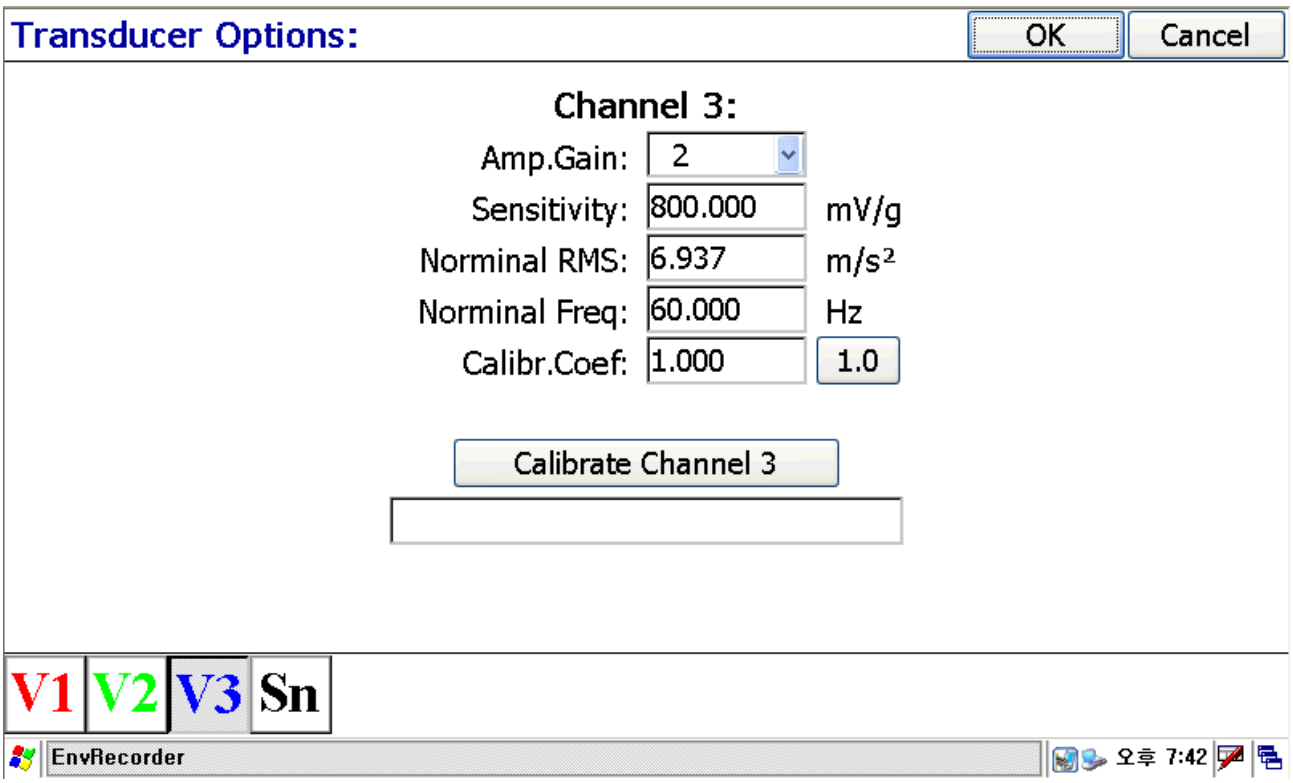


5. Please select “V1” at the bottom to set up “Channel 1”. Put the Sensitivity of sensor, with the calibrator, please put the “Norminal RMS” value and “Nominal Frequency” that the output of vibration calibrator was from, Please fix the vibration sensor with “X” direction, and then give the calibration signal, do the “Claibration channel 1” at the bottom, the channel 1 will automatically calibrate with the “Calibr. Coef” value. You can manually do the calibration if you meet an error. Manually to do the calibration, please put the sensitivity of the sensor and give the calibration signal, and then click “OK”, and move the “Measurement window” to check the measuring value and put the “Calibra. Coef.” value to be corresponded with the calibration signal value.

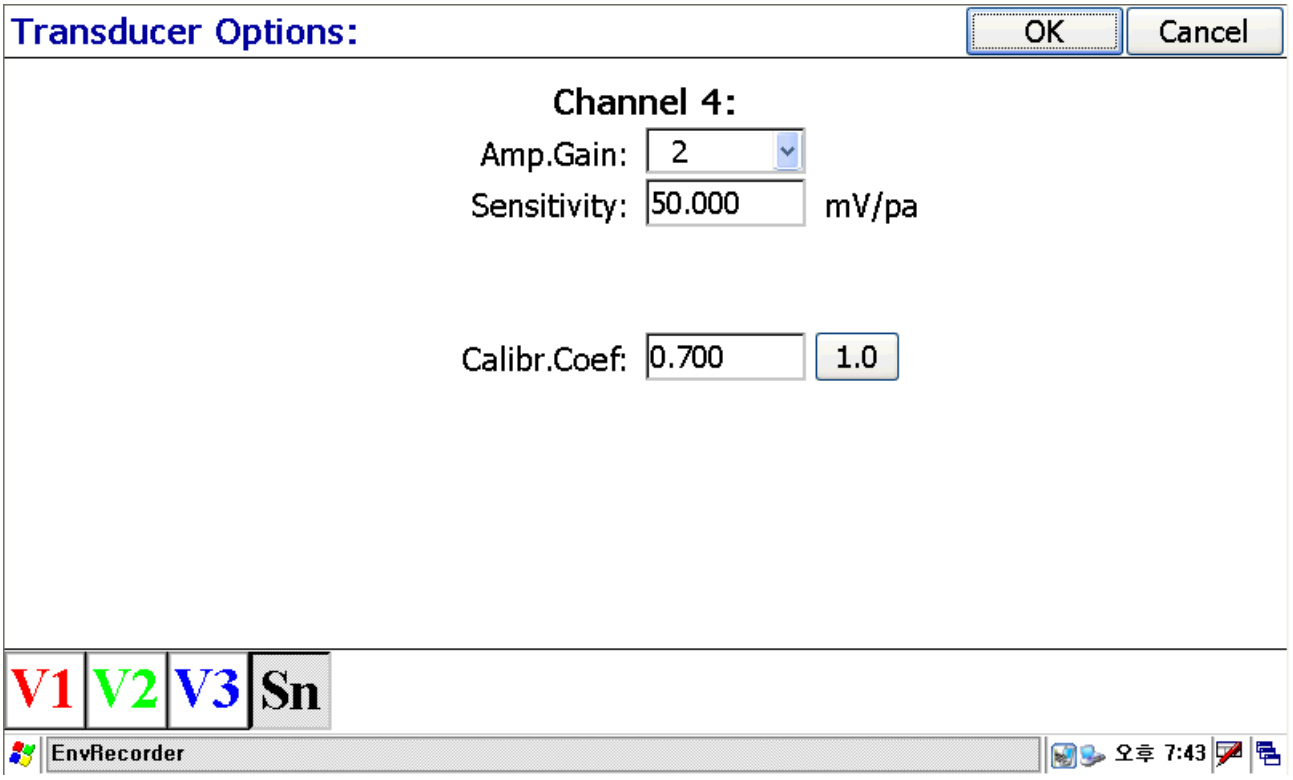
6. for the “V2”(Channle 2), “V3”(Channel 3), Please put the sensivity of vibration sensor’s “Y’ and “Z” axis, and put the “Calibr. Coef.” Value as “X” axis.


Transducer Options:
OK
Cancel
Channel 1:
Amp.Gain:
2
Sensitivity:
800.000
mV/g
Norminal RMS:
6.937
m/s²
Norminal Freq:
60.000
Hz
Calibr.Coef:
1.000
1.0
Calibrate Channel 1
V1
V2
V3
Sn
EnvRecorder
오후 7:41


Transducer Options:
OK
Cancel
Channel 2:
Amp.Gain:
2
Sensitivity:
800.000
mV/g
Norminal RMS:
6.937
m/s²
Norminal Freq:
60.000
Hz
Calibr.Coef:
1.000
1.0
Calibrate Channel 2
V1
V2
V3
Sn
EnvRecorder
오후 7:41



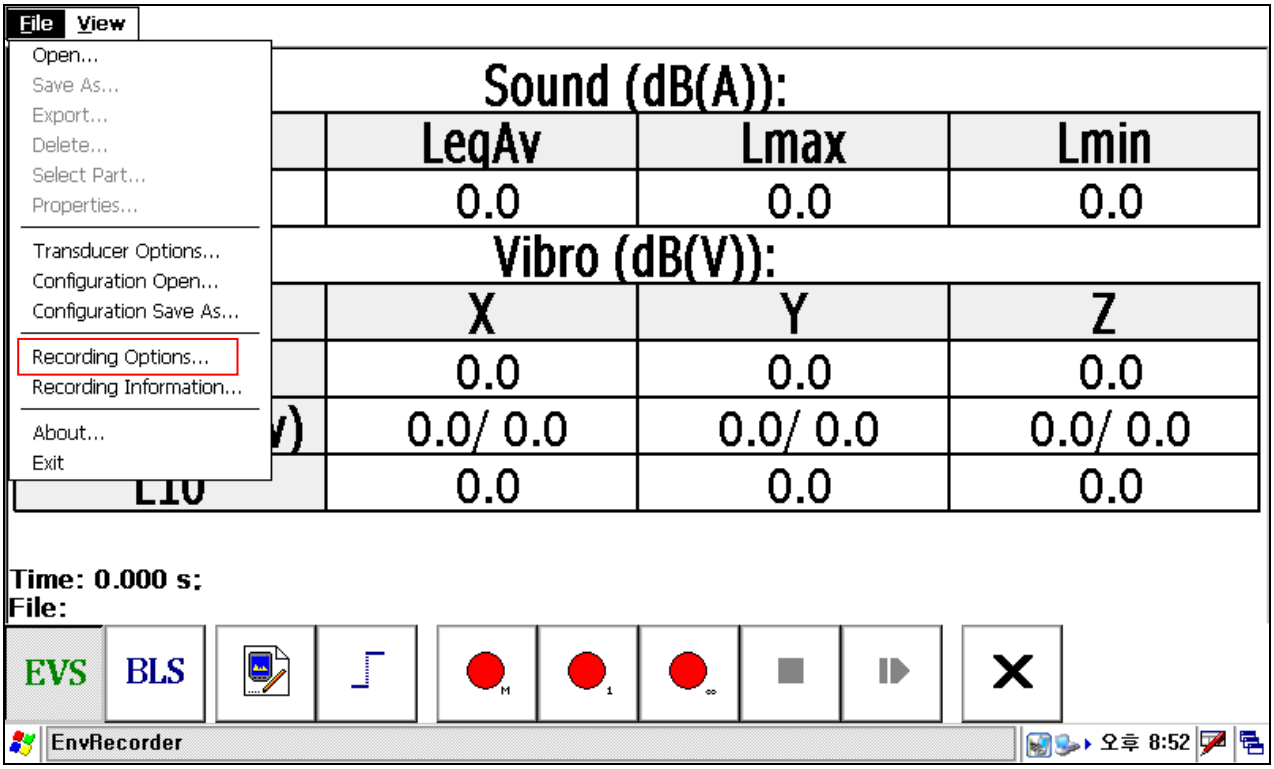
7. “Please put the sensivity of the microphone for the Sn”(Channel 4), and connect the sound calibrator with 94dB output at 1kHz to the microphone, and generate standard signal, and click “OK” to move measurement window, and check the measuring value, please put “Calibra. Coef” value to be corresponded with that Leq value is 94dBw. If you finished all channels, please click “OK” to exit.

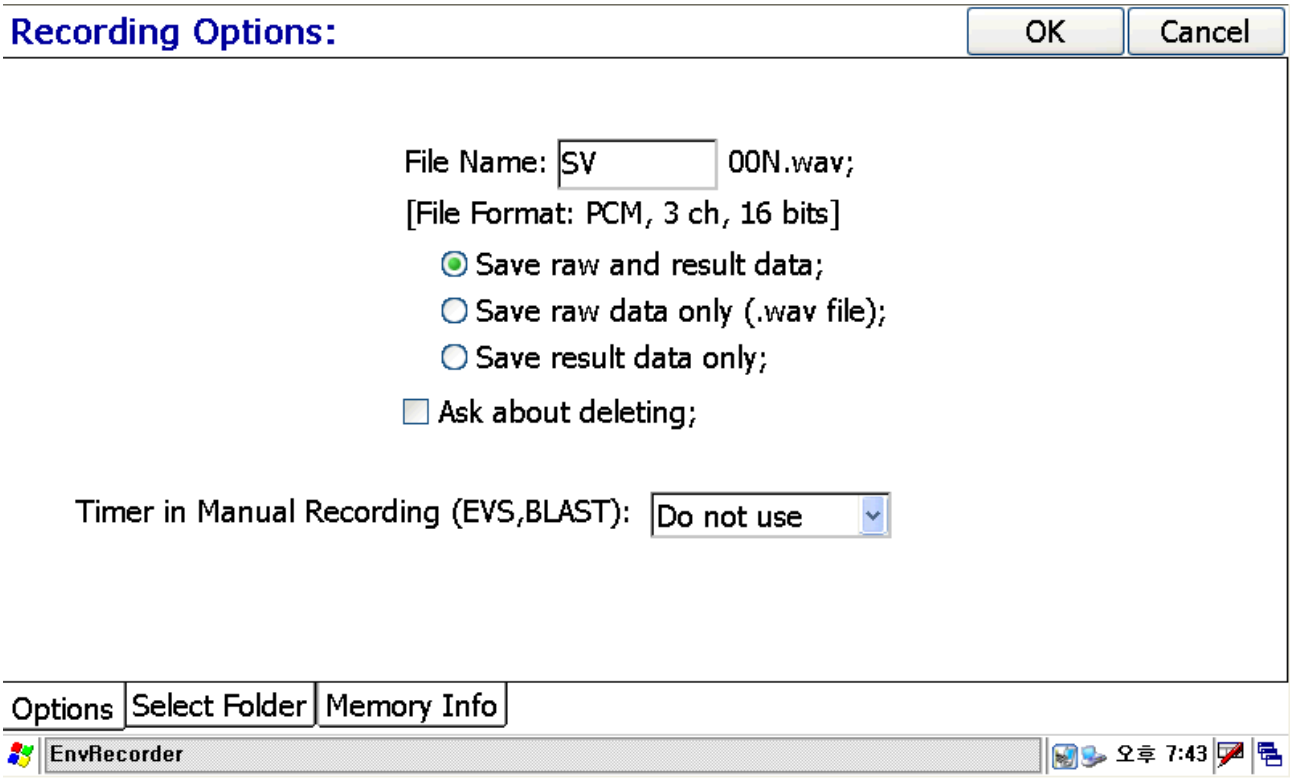


8. Please move “File” menu again to do “Recording Option”.

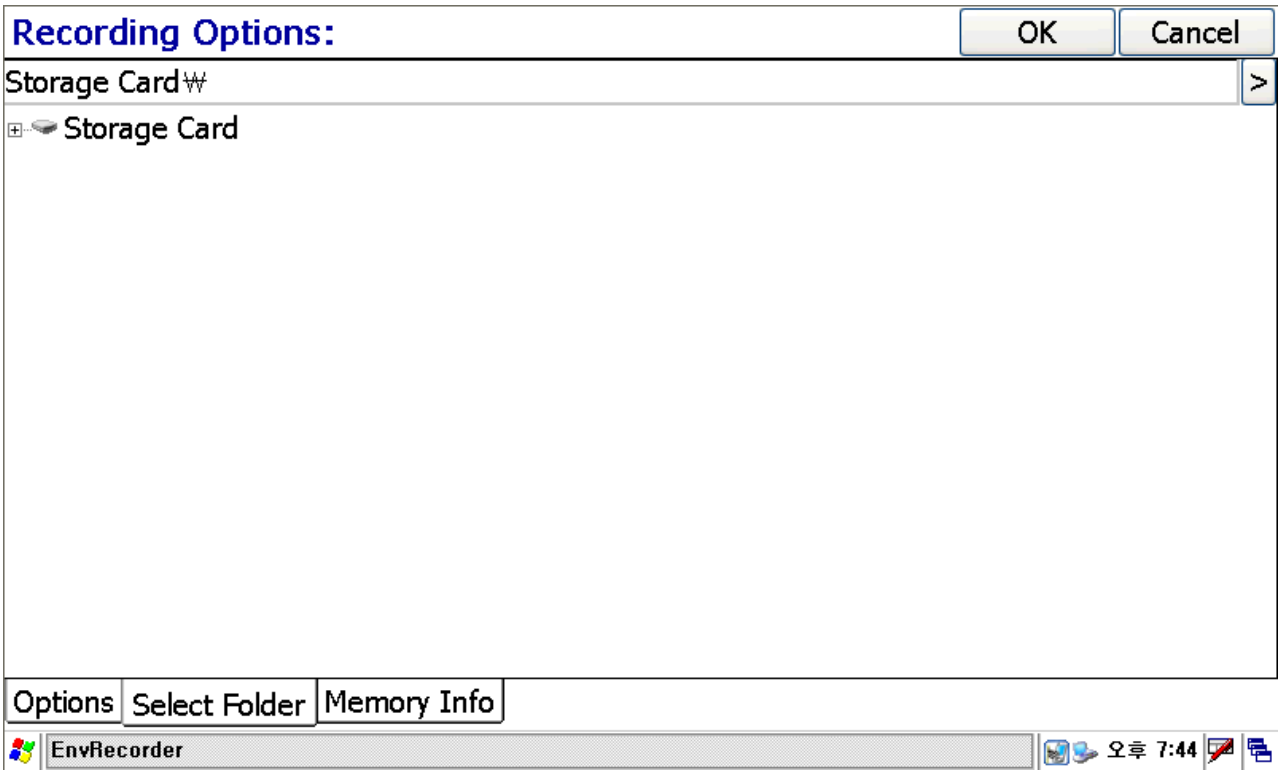
(1) File Name : write the file name to be stored

(2) File Format, PCM : select the file format to be stored.

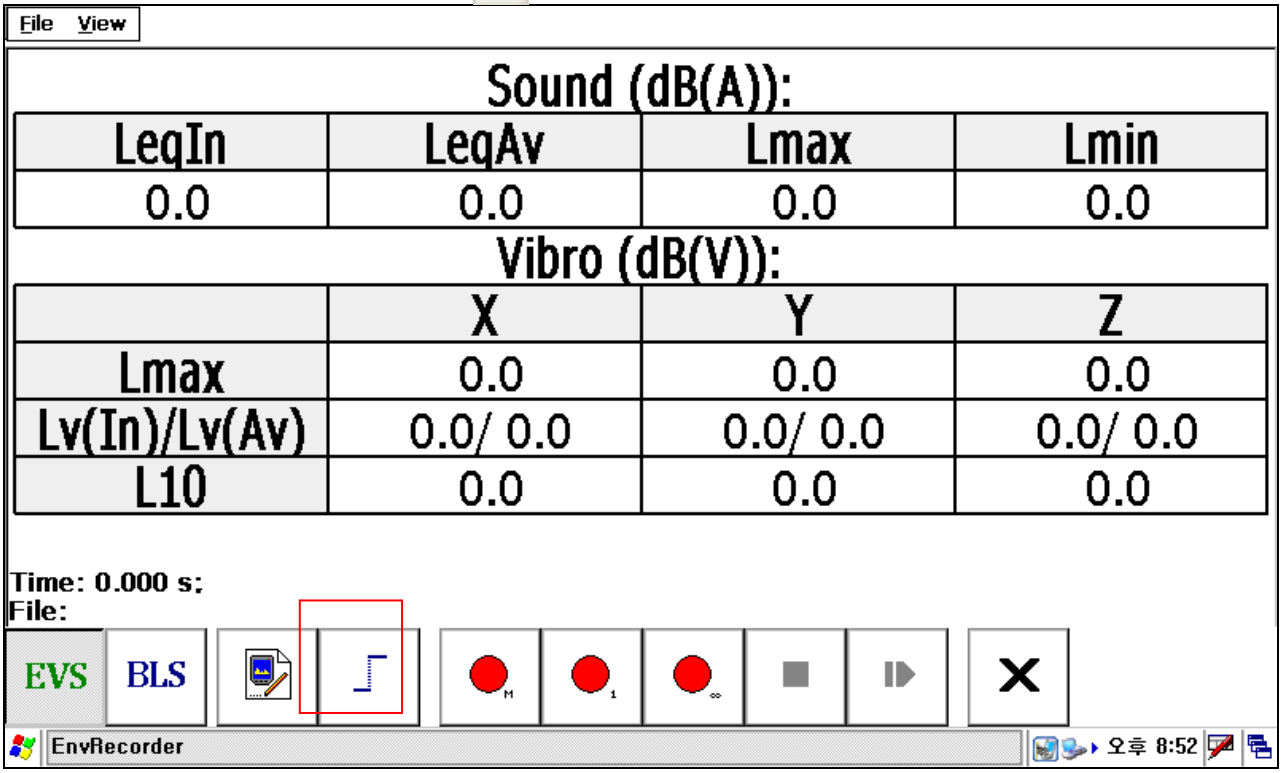




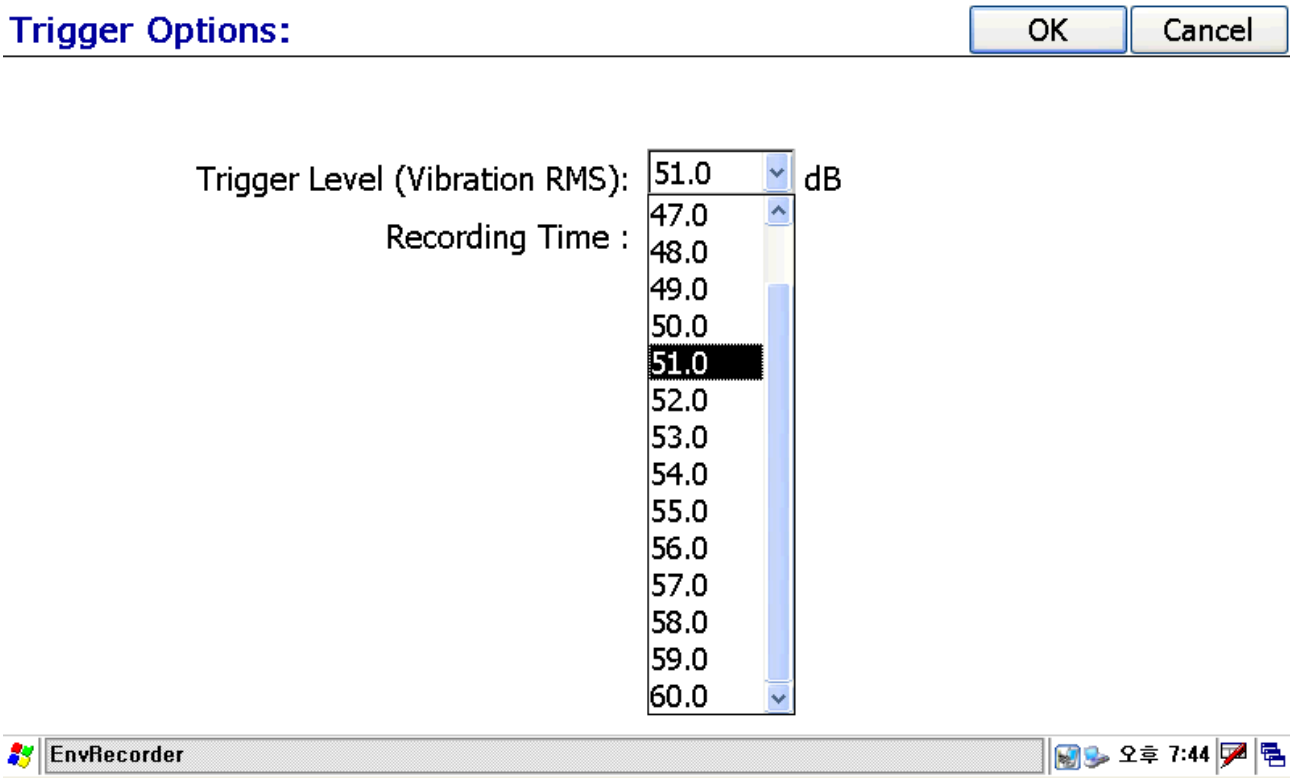
9. Select “Folder” at the bottom in the “Recording Options”, and select the position to save the file. The data has to be saved in the SD Memory by our program.

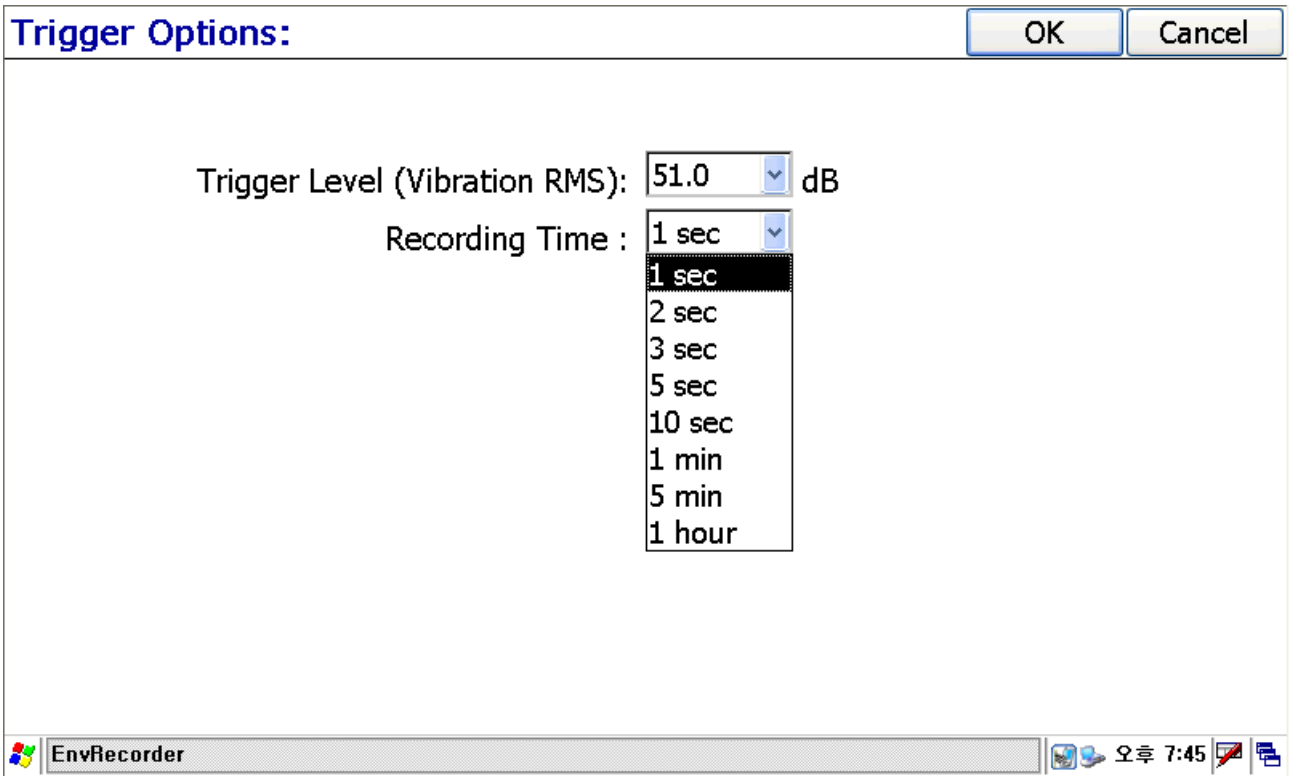


10. If display measurement window, c Icon at the bottom.

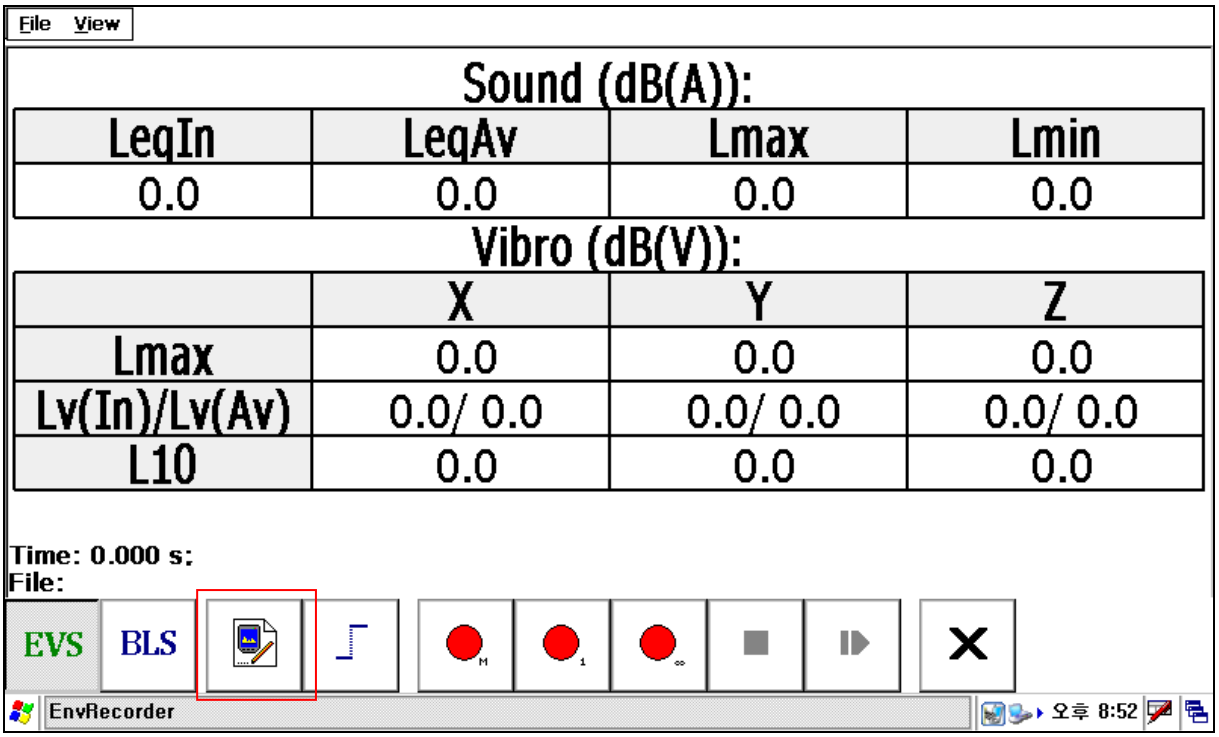


11. Move “Trigger Options” window, and set up “trigger level” with dB by “Vibration RMS”, and select “Recording Time”. You can select “Trigger Level” by 1 dB step from 45dB to 60dB, Recording Time can be selected among 1s, 2s, 3s, 5s, 10s, 1min, 5min, 1hour. Please click “OK”.



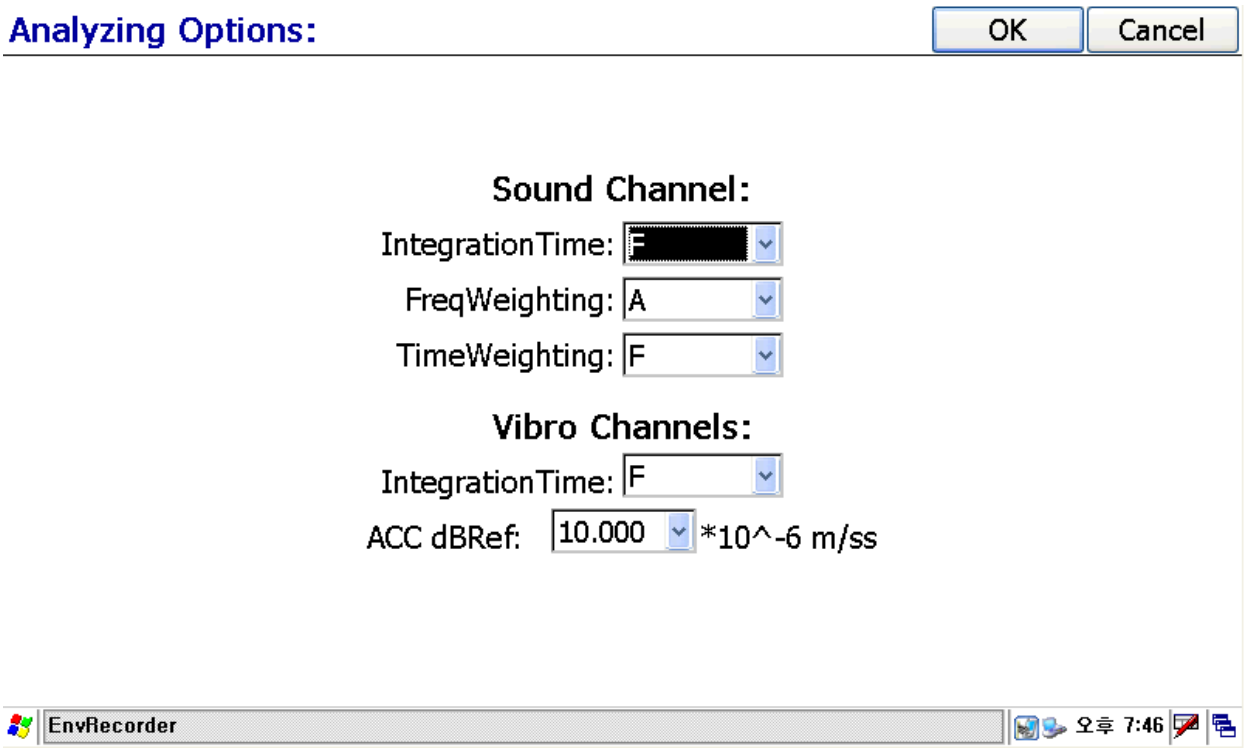


12. Click the Icon at the bc  in the measurement window again.

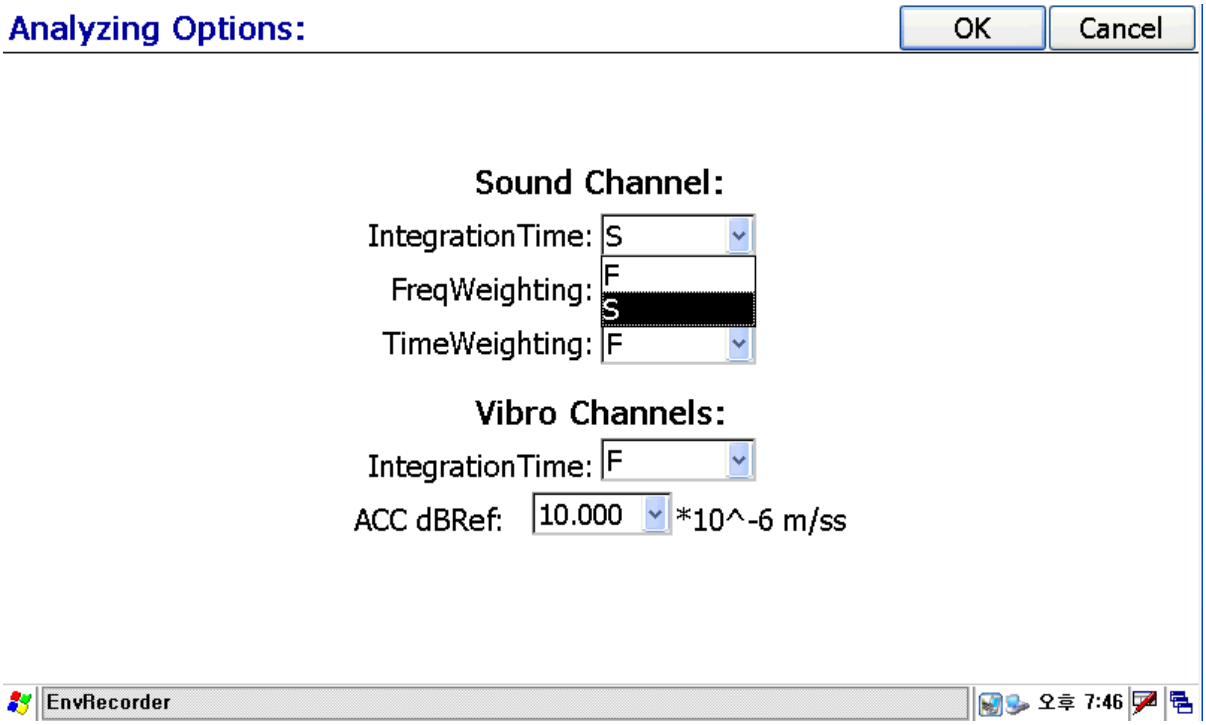


13. Move to “Analyzing Options” window, and set up the options of Sound channel and Vibration channels.

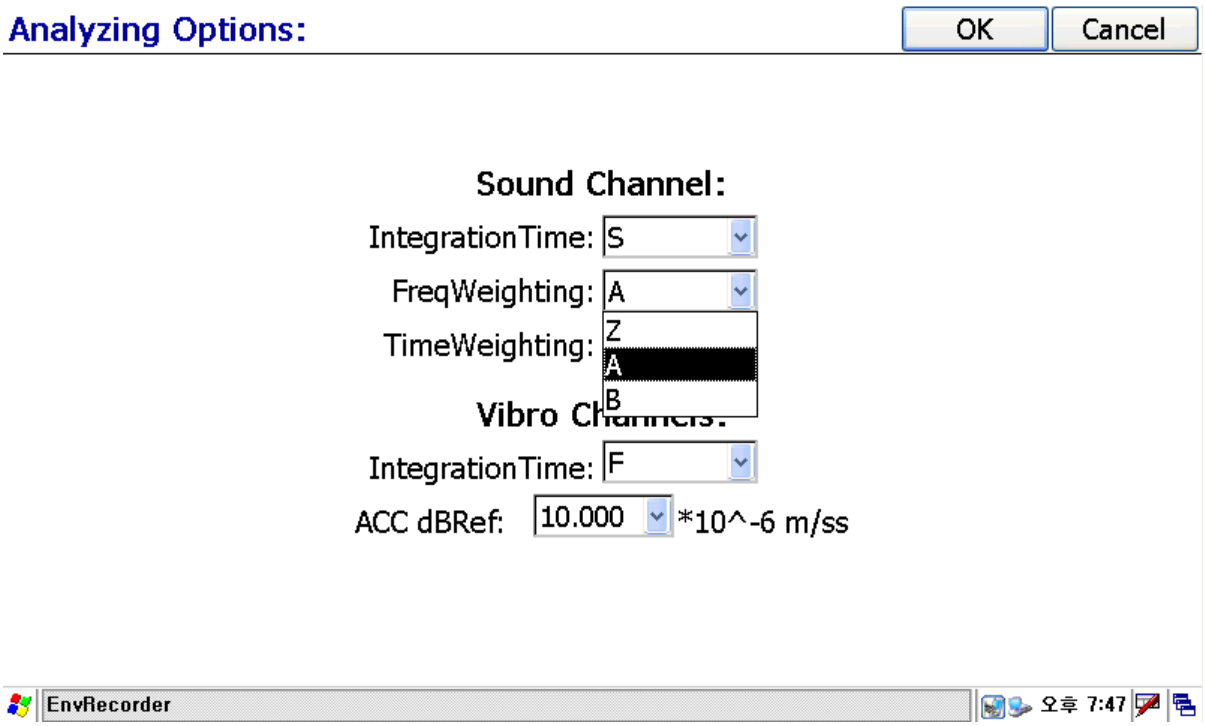
(1) Sound Channel : setect “Integration time(F, S)”, “Frequency Weighting (Z, A, B)”, “Time Weighting(S, F, I, U)”. Usually, please select “Fast” for the “Integration time”, and select “A” for the “Frequency Weighting” , and select “Fast” for the “Time Weighting”.



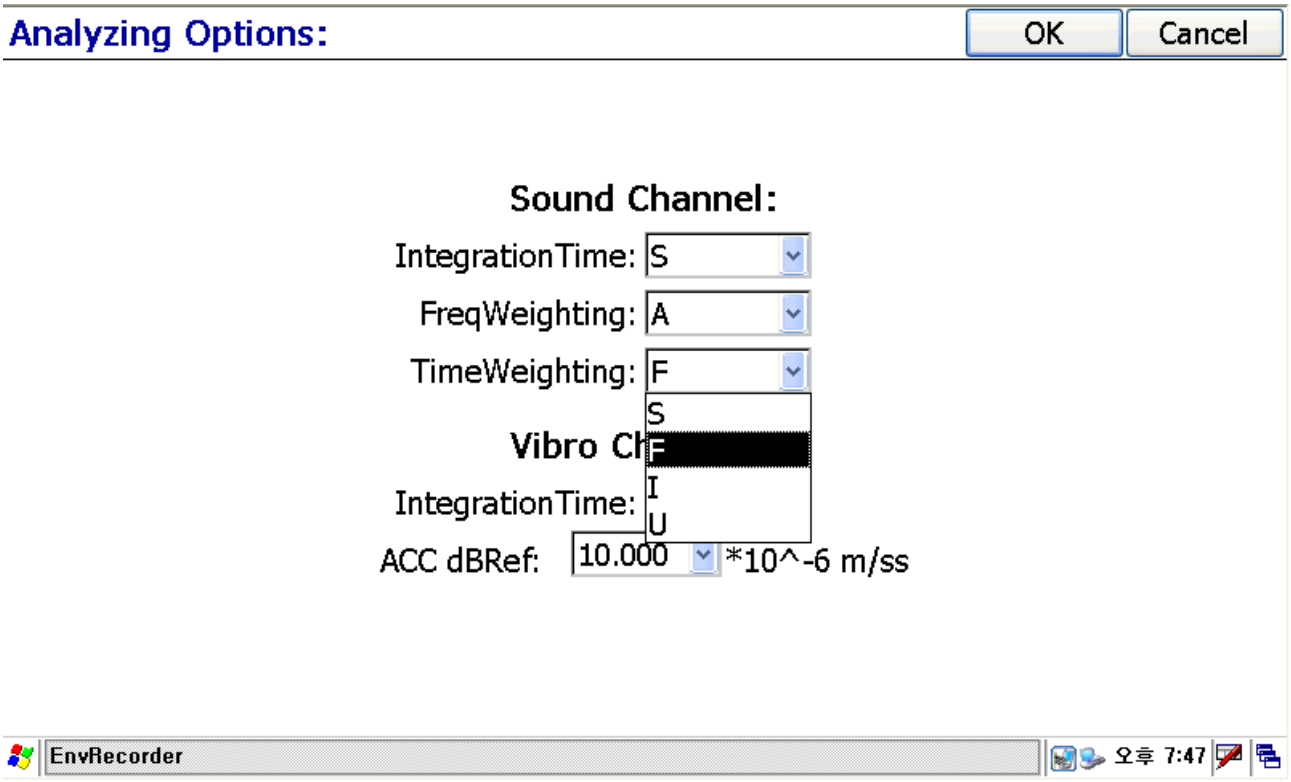
(2) Vibration Channel : Set up “Integration Time(F, S)” and “dBref” value of vibration. Generally, select “Slow”, and put 10 * 10^-6 m/ss for ACC dBref value. And click “OK”.



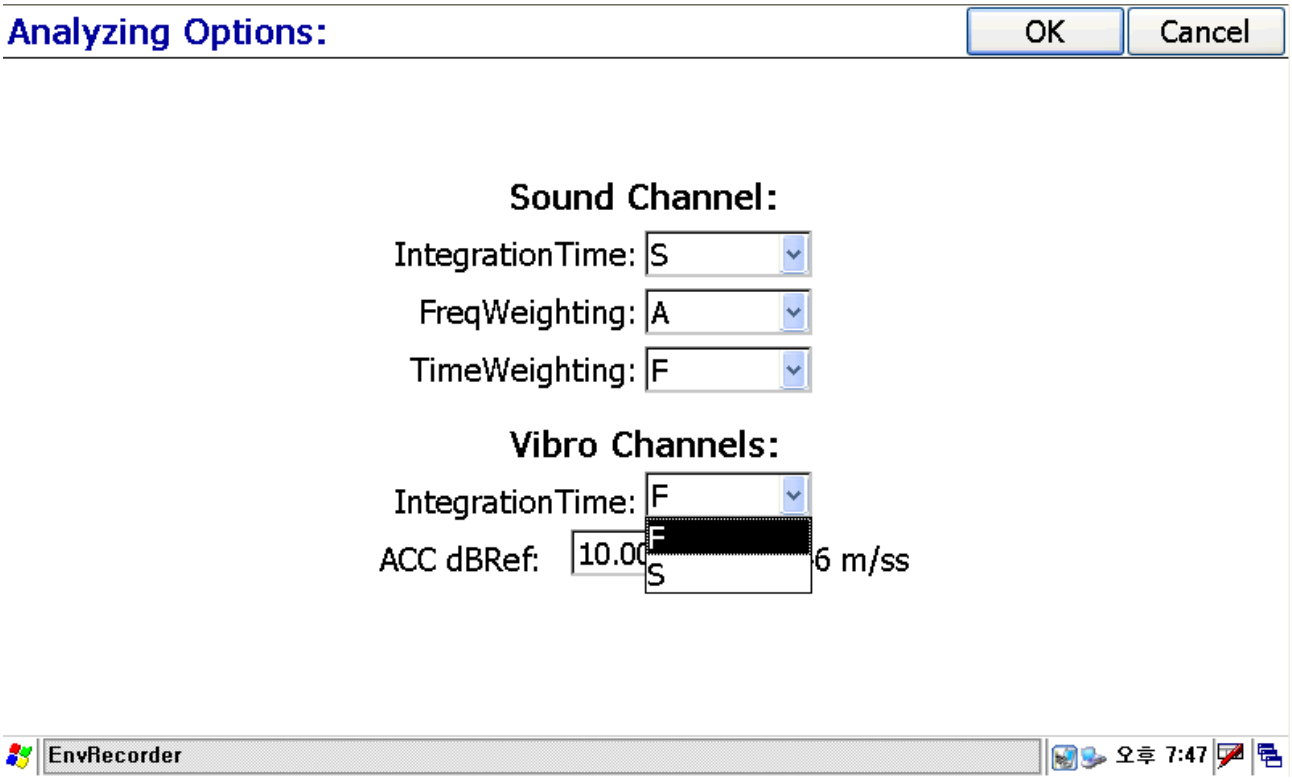
[참조] Sound Channel-Integration Time : S(Slow) integrate every 1 second, F(Fast) integrate every 125ms, and calculate Euivalent Sound Level(Leq).



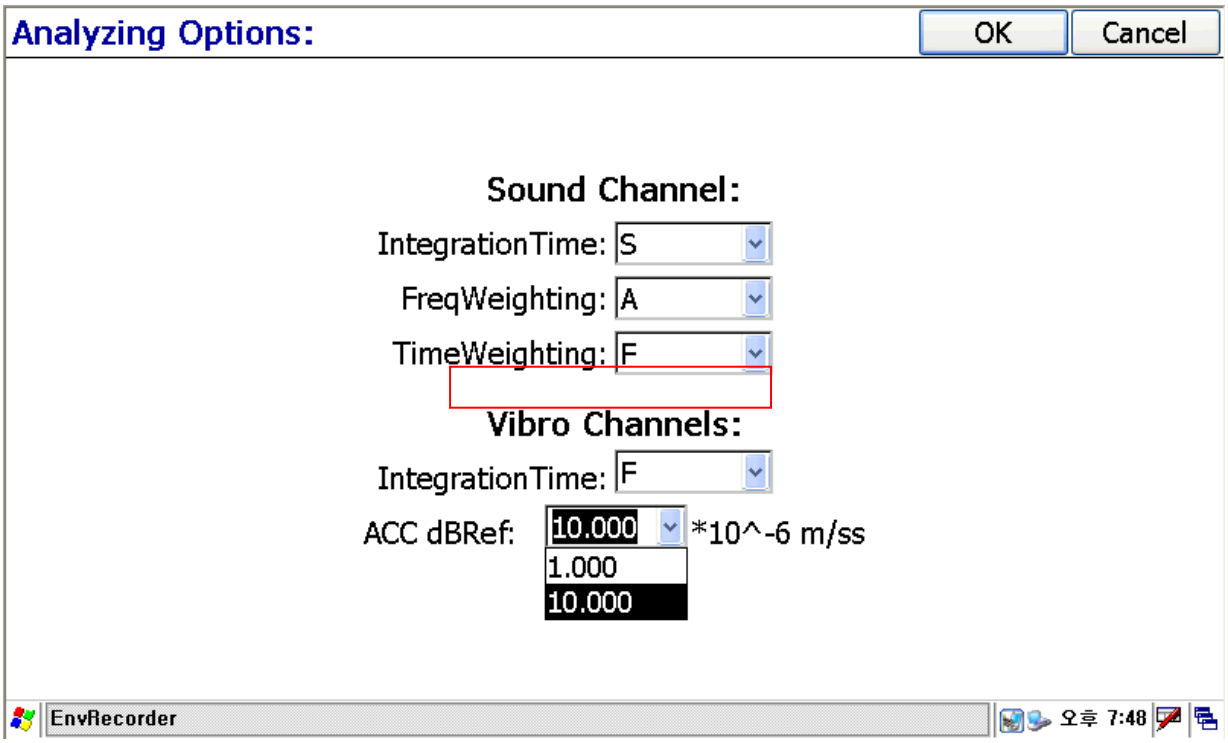
[Example] Sound Channel-FreqWeighting : Select the frequency weighting among Z, A, B. A frequency weighting is designed to meet with human ear.



[Example] Sound Channel-TimeWeighting : Time weighting is weighted by time F(Fast) is sampled every 125ms, S(Slow) is sampled every 1 sec, I(Impulse)is sampled every 35ms.

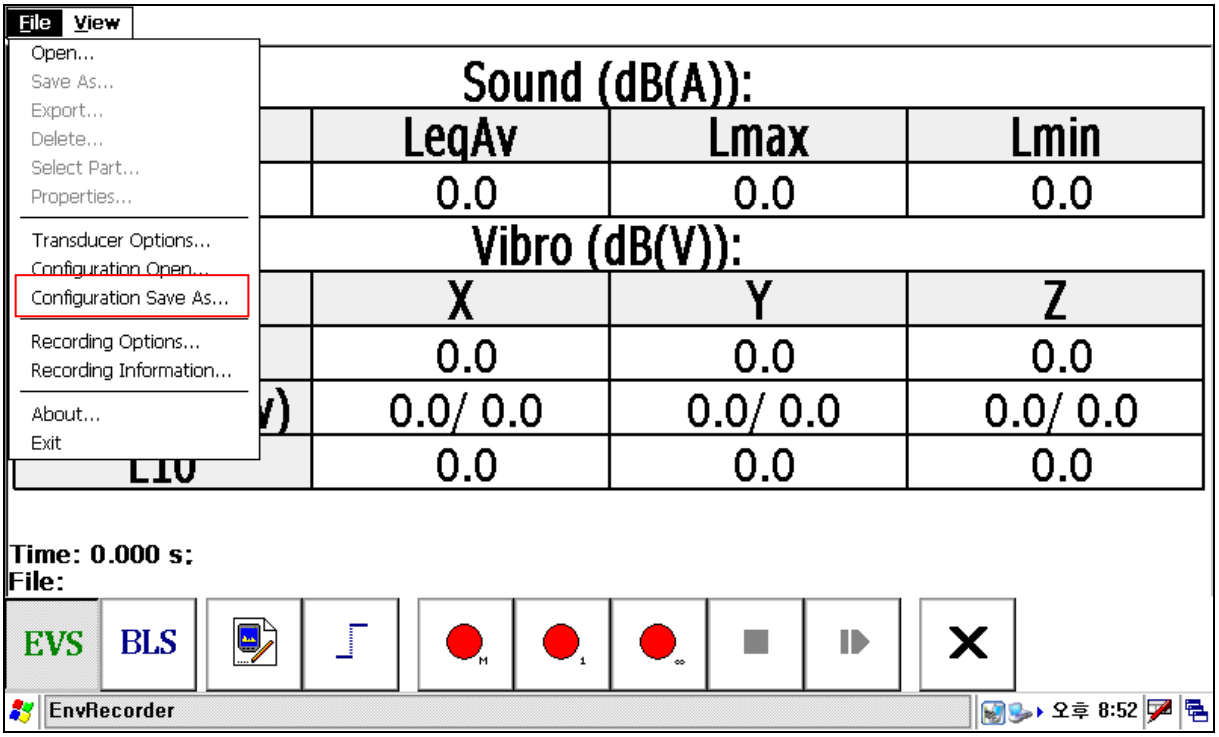


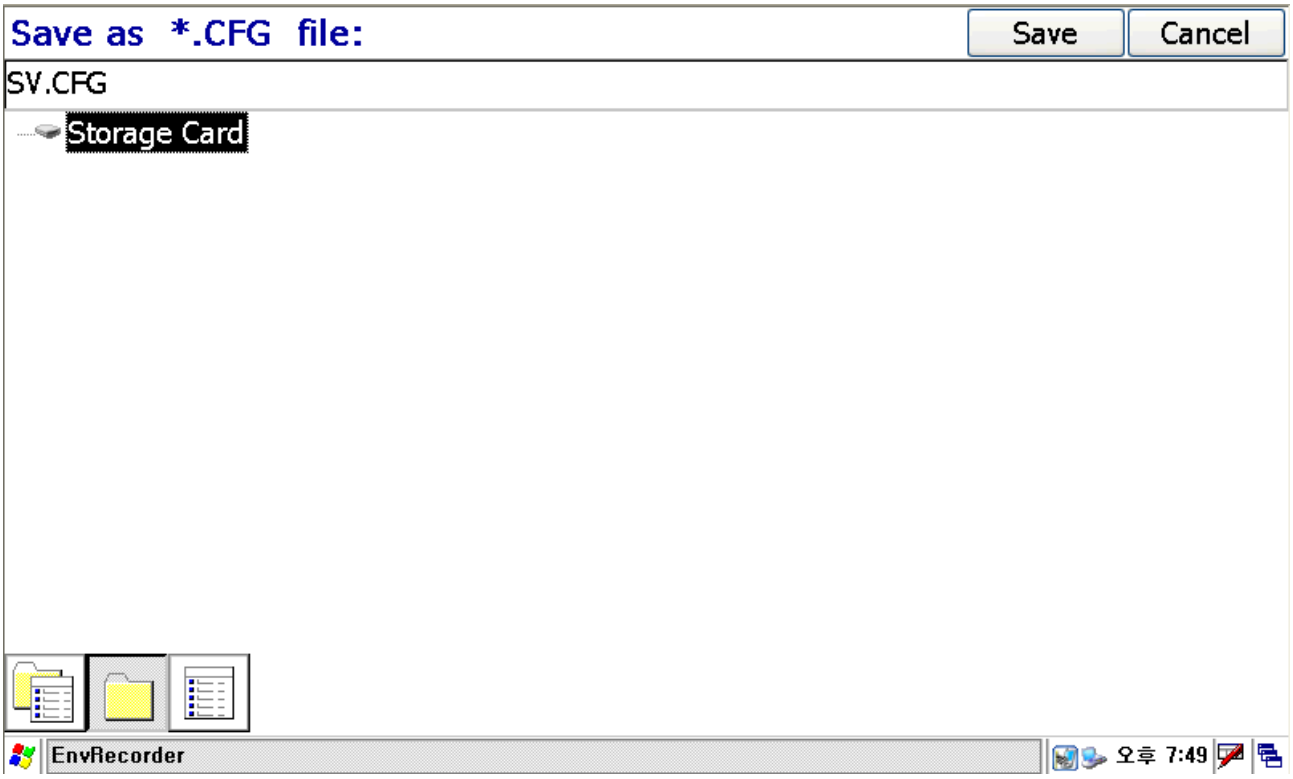
[Example] Vibro Channels-IntegrationTime : Set up Integration time for the vibration channels. F(Fast) has 100ms of integration time, S(Slow) has 1 sec of Integration time.

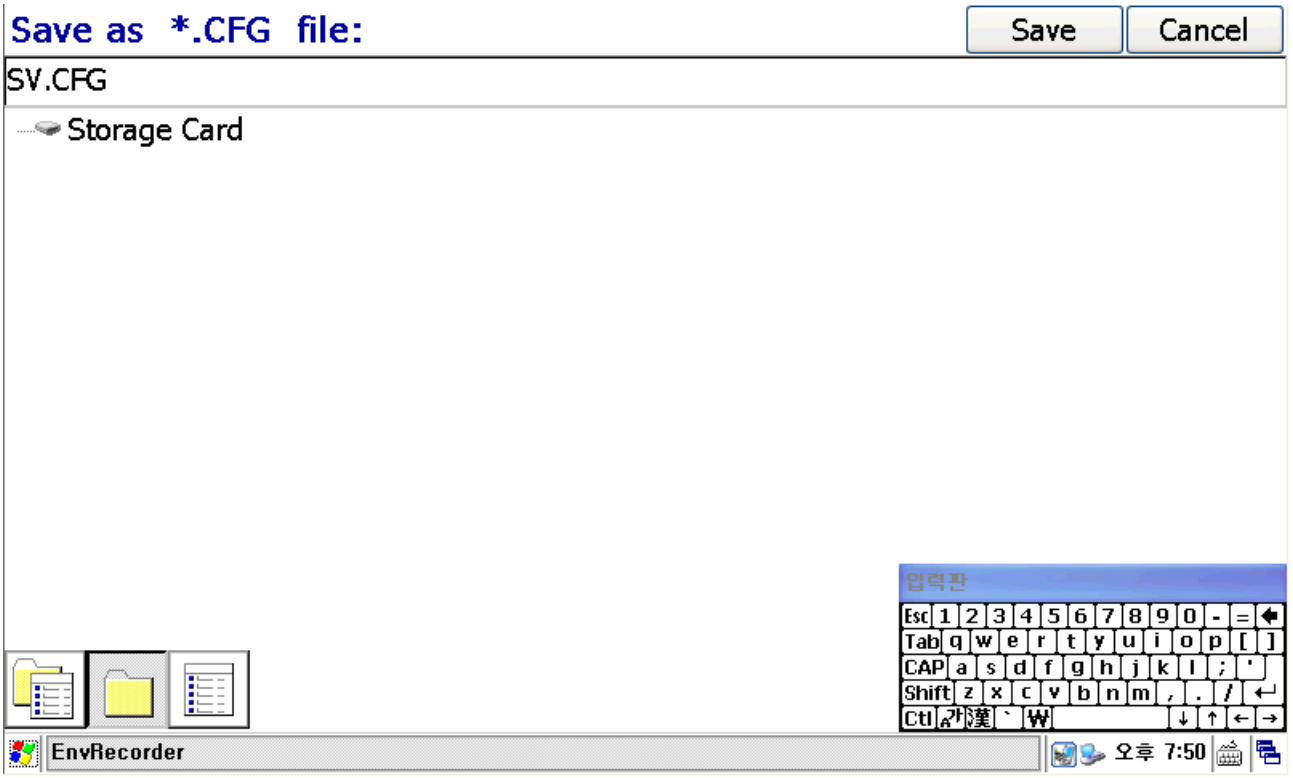


[Example] Vibro Channels : Please select between 1 and 10, Usually 1 is used in Europe as a vibration reference value, Korea and Japan are used 10.

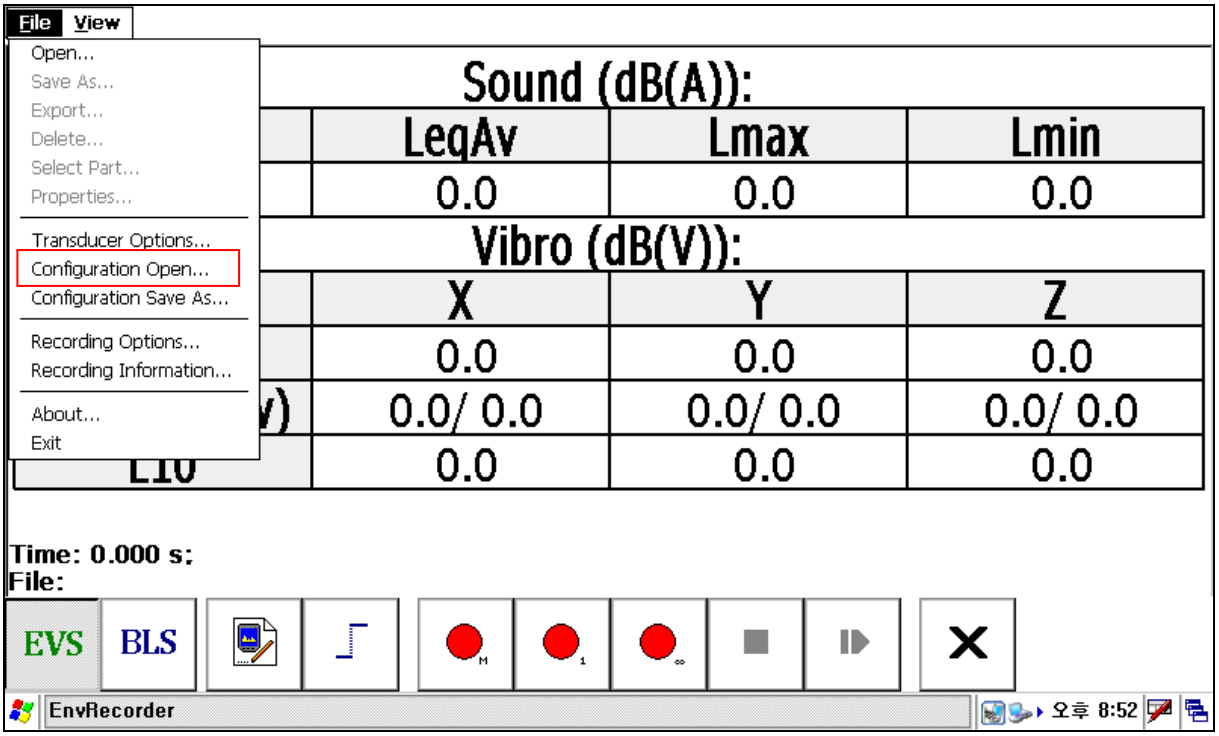
14. After set up all, do “Configuration Save As” at the file menu. Select the position to be saved the “Configuration file”, and write file name using the touch key board at the bottom, and click “Save”. To call the saved configuration file, do and call “File-Configuration Open”.

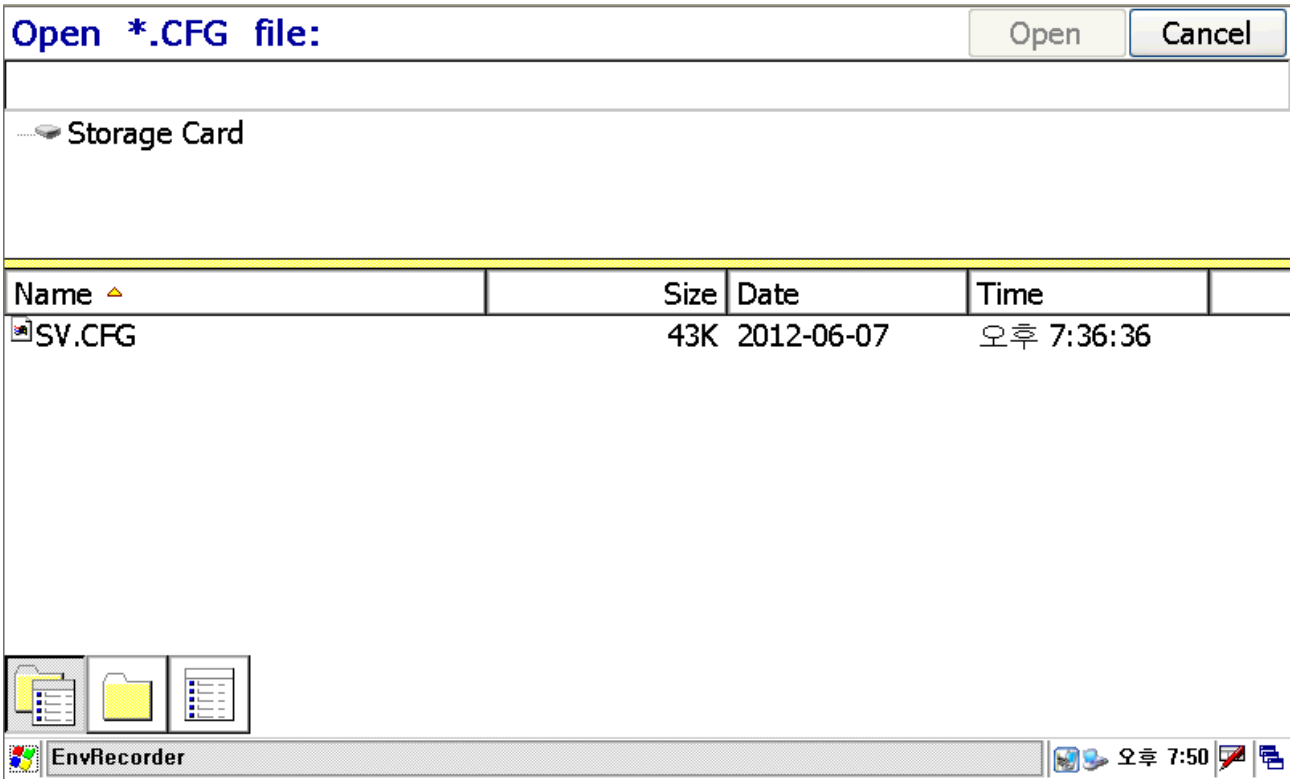






[Example] Click Key board Icon at the right side of bottom, to remove the key board icon from the display, select the key board disappear by pressing the key board icon.


File
View
Open...
Save As...
Export...
Delete...
Select Part...
Properties...
Transducer Options...
Configuration Open...
Configuration Save As...
Recording Options...
Recording Information...
About...
Exit
Sound (dB(A)):
LeqAv
Lmax
Lmin
0.0
0.0
0.0
Vibro (dB(V)):
X
Y
Z
0.0
0.0
0.0
0.0/ 0.0
0.0/ 0.0
0.0/ 0.0
L10
0.0
0.0
0.0
Time: 0.000 s;
File:
EVS
BLS
EnvRecorder
오후 8:52

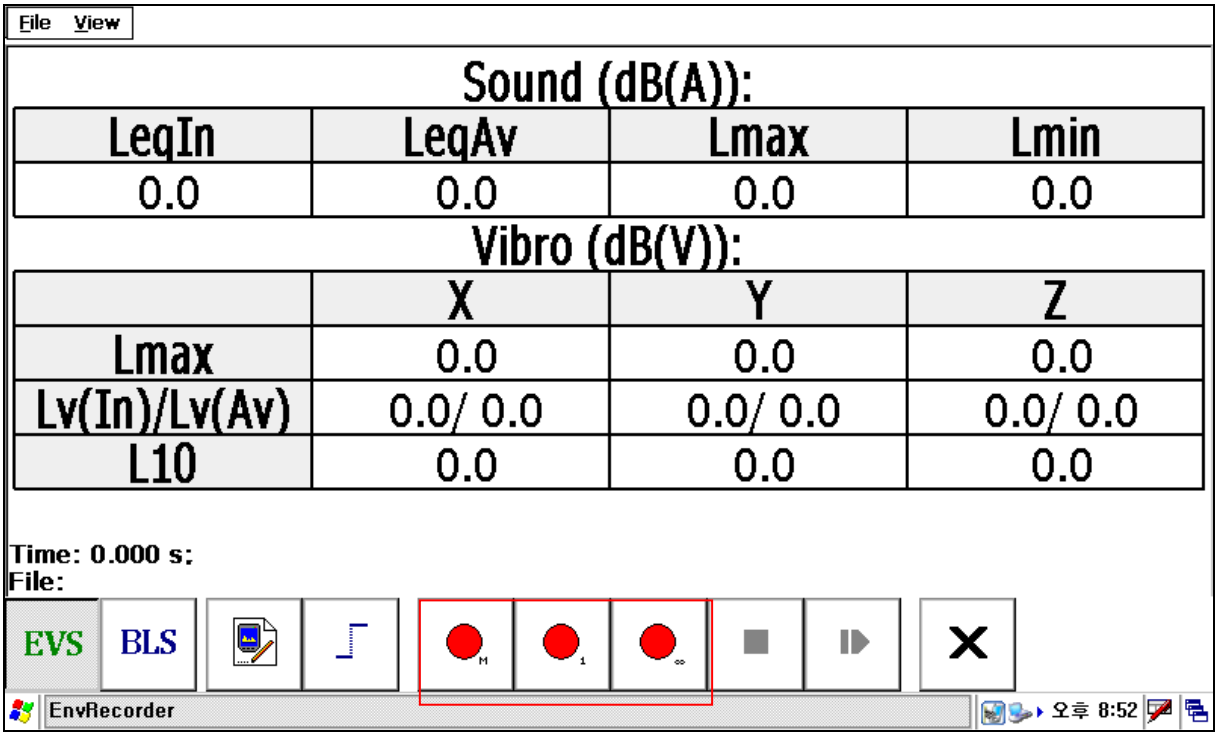

Open *.CFG file:
Open
Cancel
Storage Card
Name
Size
Date
Time
SV.CFG
43K
2012-06-07
오후 7:36:36
EnvRecorder
오후 7:50

15. To do measurement and saving the measured data, use “Red recording” Icon.

(1) Recording M : Click “Manual”. Then you can measure and save till click “Stop”

(2) Recording 1 : with “Single-shot recording option”, it will be measured and saved by the recording time defined at Position 11.

(3) Recording ∞ : If click “recording” Icon, It will start the data acquisition by the trigger level, and stop the data acquisition by defined time, and wait the next Trigger Level. If meet “Trigger Level” signal, it will measure and save the data till you click “Stop”, continuously it will be doing the measurement and save the data repeatly.

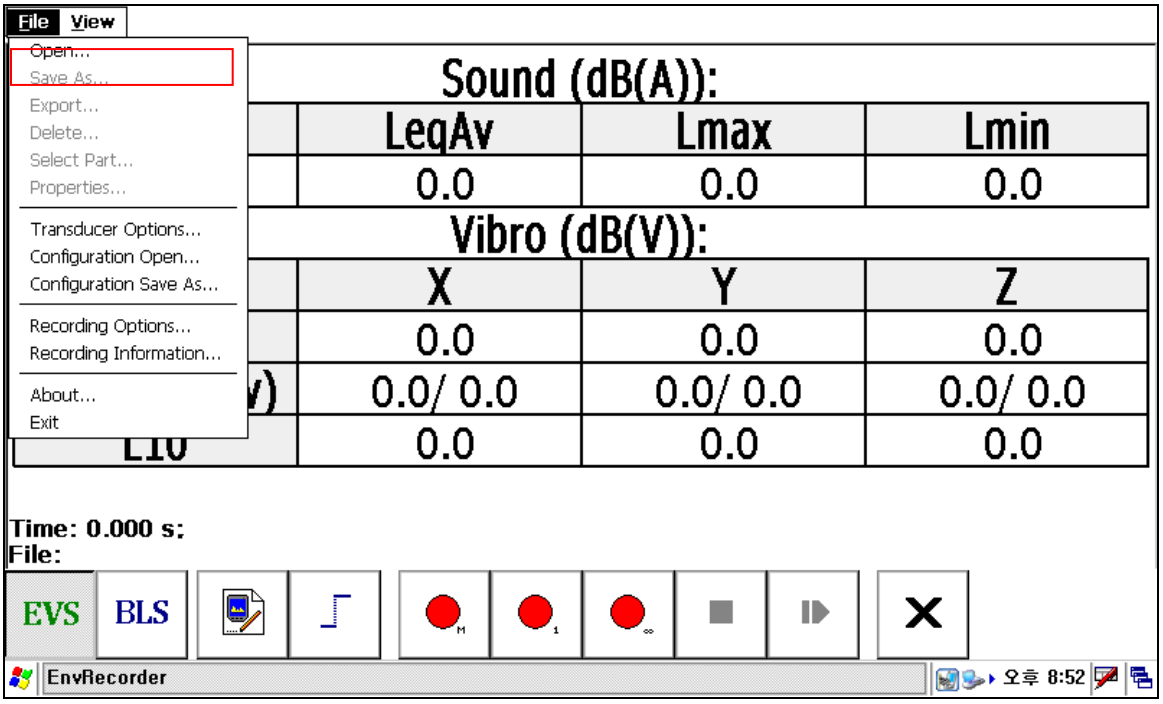


16. The saved data will be stored in the SD memory cad, you can move the saved data of the SD memory card to your PC, and you can analyze the data with the PC EVS analysis software.

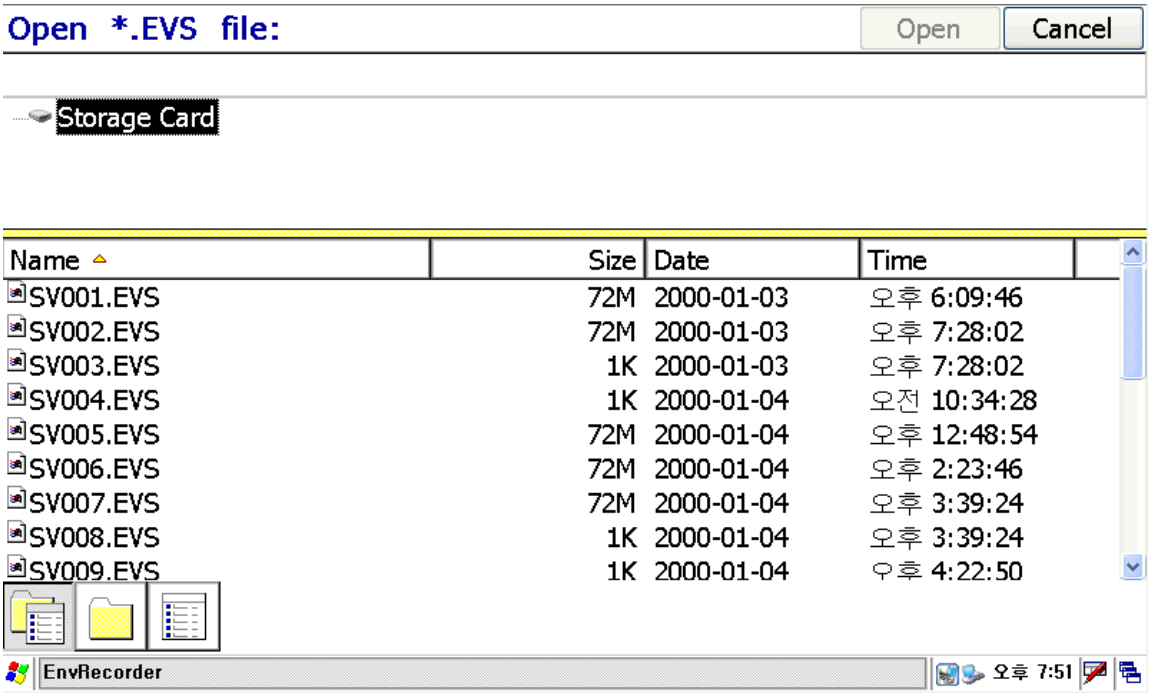
[Appendix]

1. To open the saved data and to display the file information

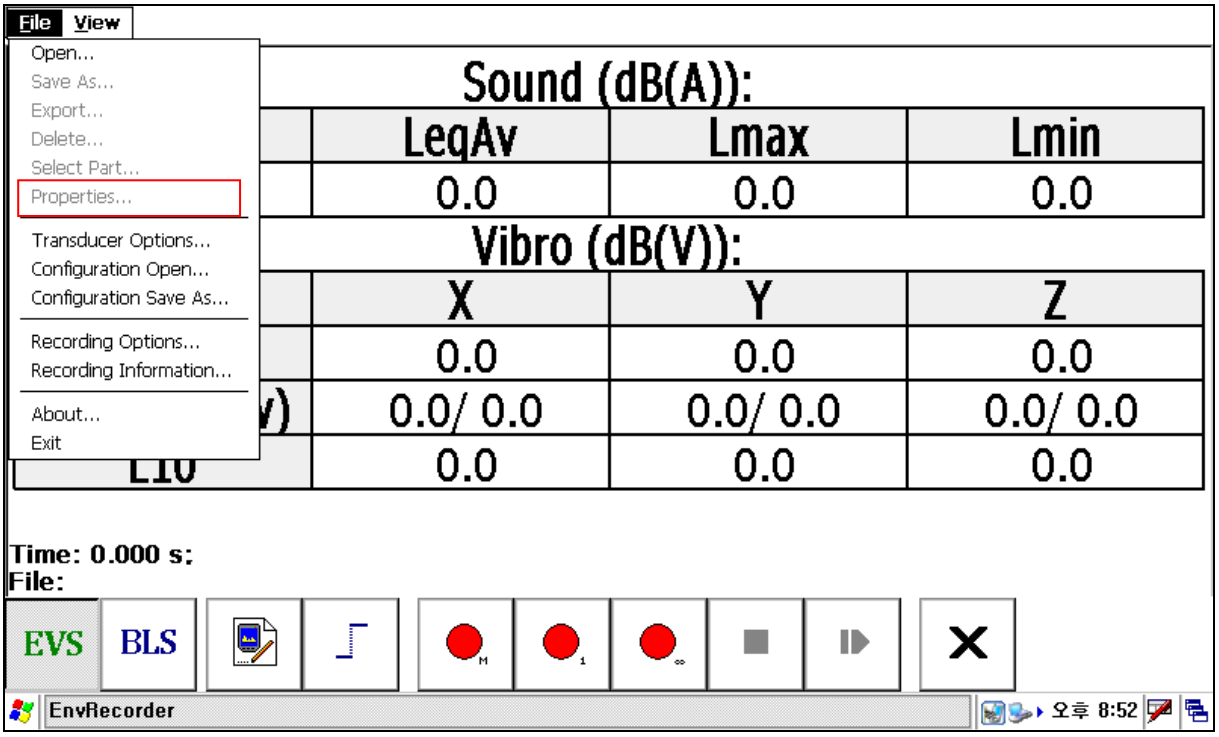
(1) Please do “File-Open”.

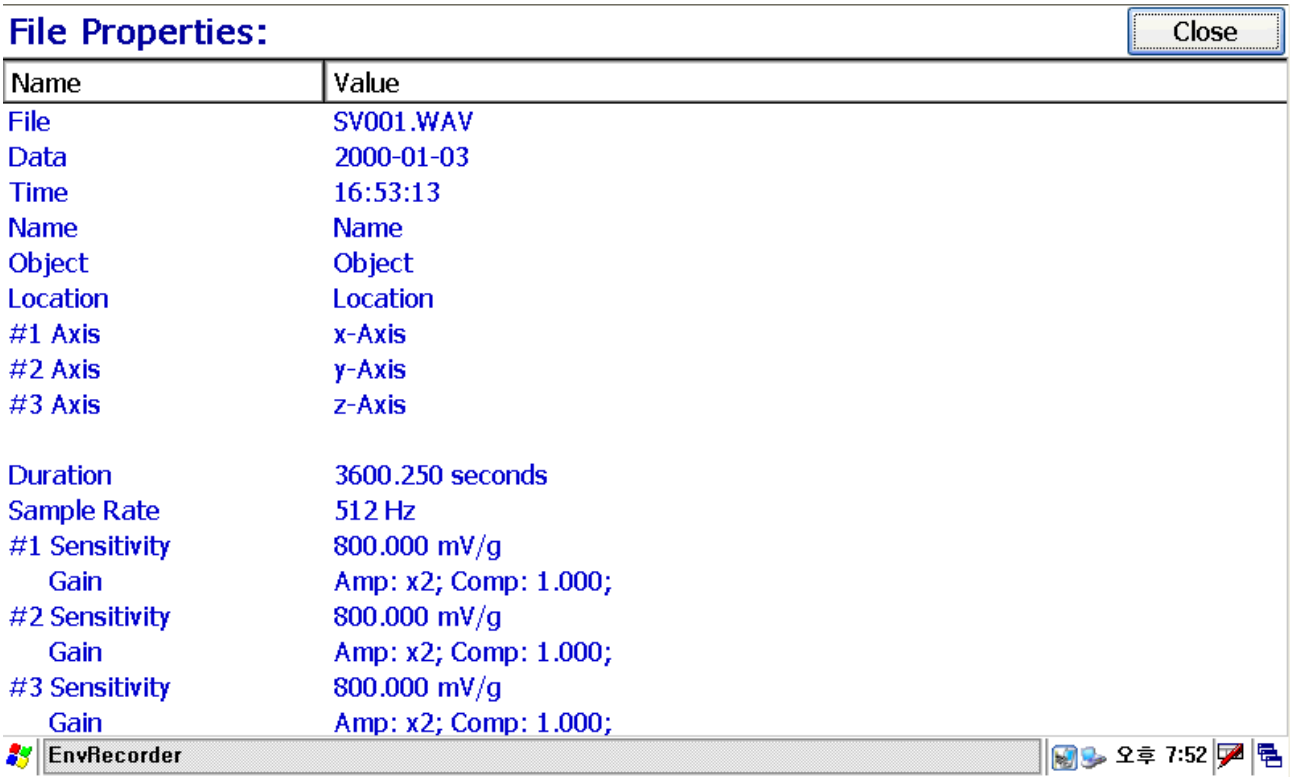


(2) Select the data to be opening, click “Open”.



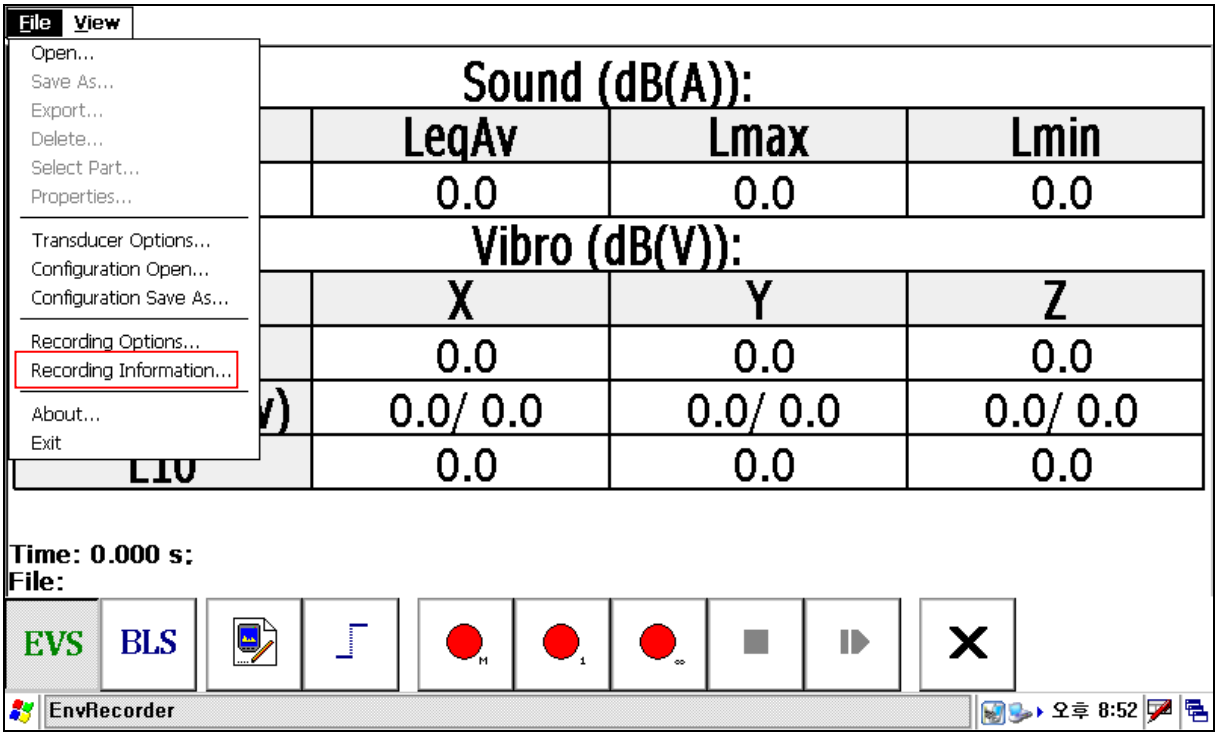
(3) Please do “File-Properties”, you can see the saved file information Open.



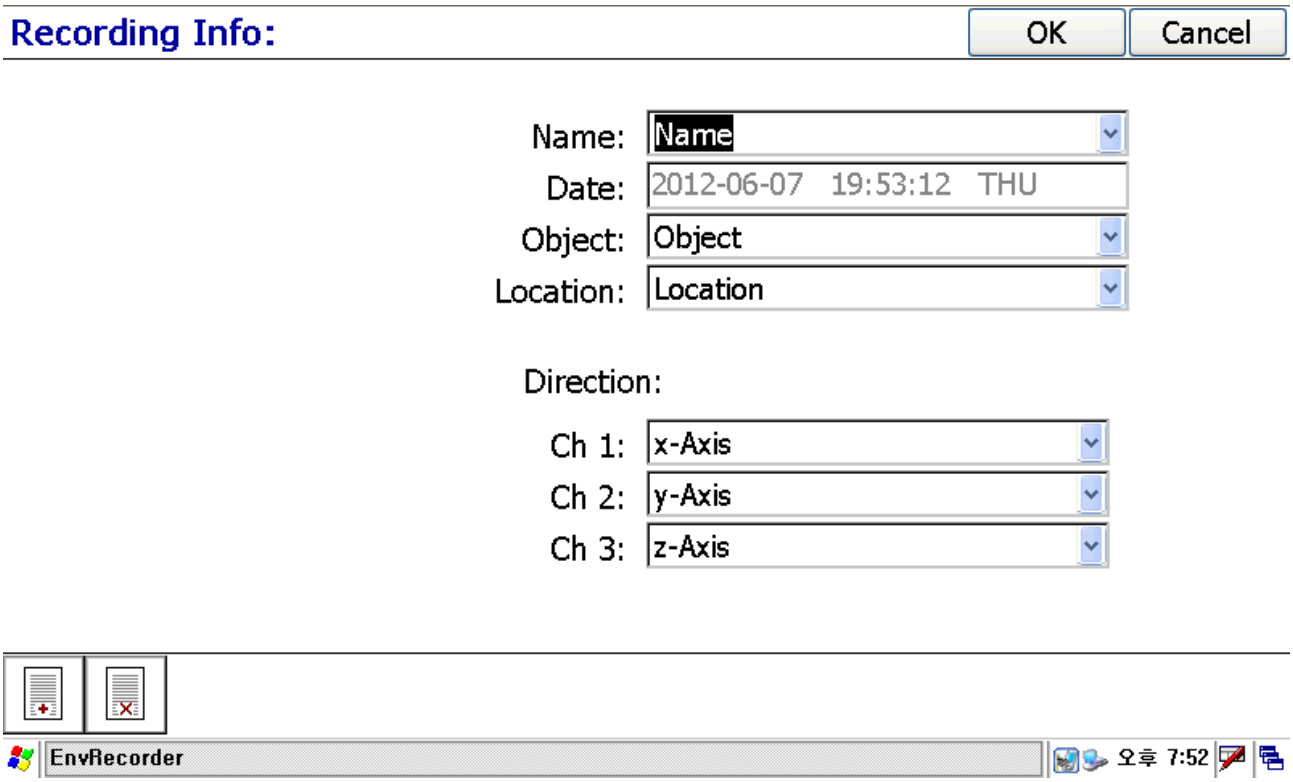


2. Set up “Recording Information” for the data to be saving

(1) Please do “File-Recording Information”.

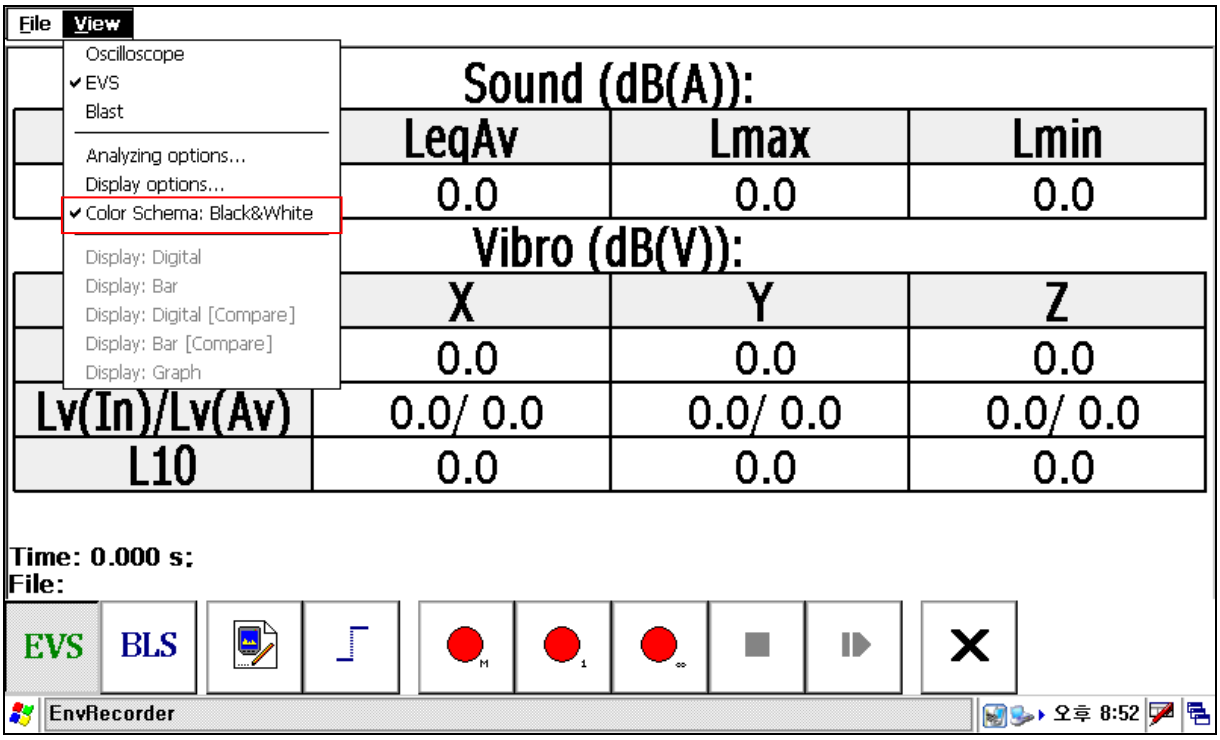


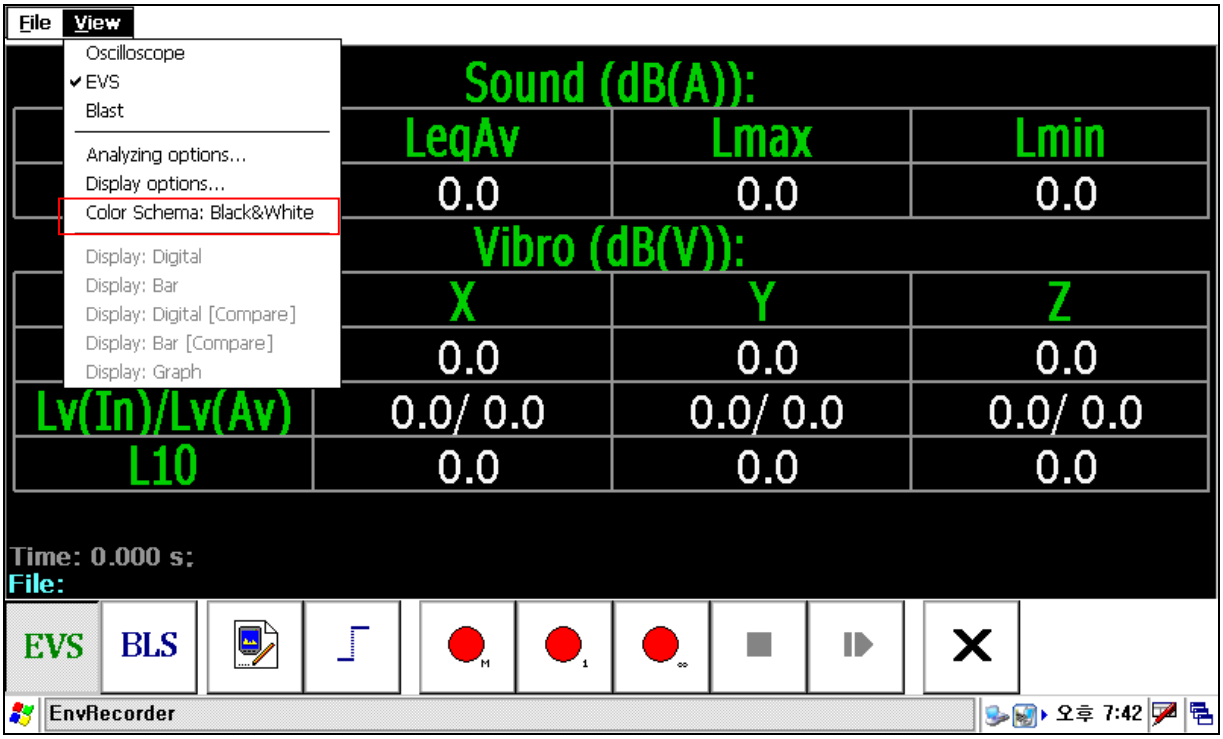
(2) Put the saving information for the data. Name of person, Object of measurement, measuring position, Axis direction information of 1,2,3 channels for vibration name.



3. to change the background color of the display

(1) View-Color Schema: If select “Black&White” Background color will be white and letter will be black, if not select it, background will be black and letter will be green. Under shine, it will illegible, So please check the “Black&White”.





4. Display the information of the measuring system

(1) If do “File-About”, you can find the software version and hardware firmware version of the measuring system.