

**Light Weight Vibrometer
Seismic Ground Vibration & Sound Analyzer
Blast Induced Ground Vibration & Sound Analyzer
EVS(Environmental Vibration & Sound) Measurement**

User Manual

Third Edition (Ver. 3.2)



SVIB Software Technologies Pvt. Ltd

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[Does & Don'ts]

Does	Don'ts
Device Should be charge before taking the measurements	Do not start the device without SD Card
check for the SD Card in device slot	don't use sharp object to touch the screen
Make sure to have memory in SD card to save result files	If device shows empty screen. Please email to info@svibtech.net
Connect the Ground Sensor & Micro Phone to the device before taking the measurements	Don't run 2 different versions of PC software at same time
Device should be switch off while removing & inserting the SD Card	
Uninstall the old PC software before installing the new versions of PC Software	
Please install crystal report Which is given along with the package	

[ICON of the EVS]



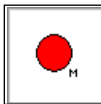
: EVS(Environmental vibration and sound) measurement mode selection



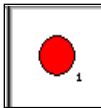
: Transducer option



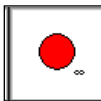
: Trigger option



: (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



: Print the saved results



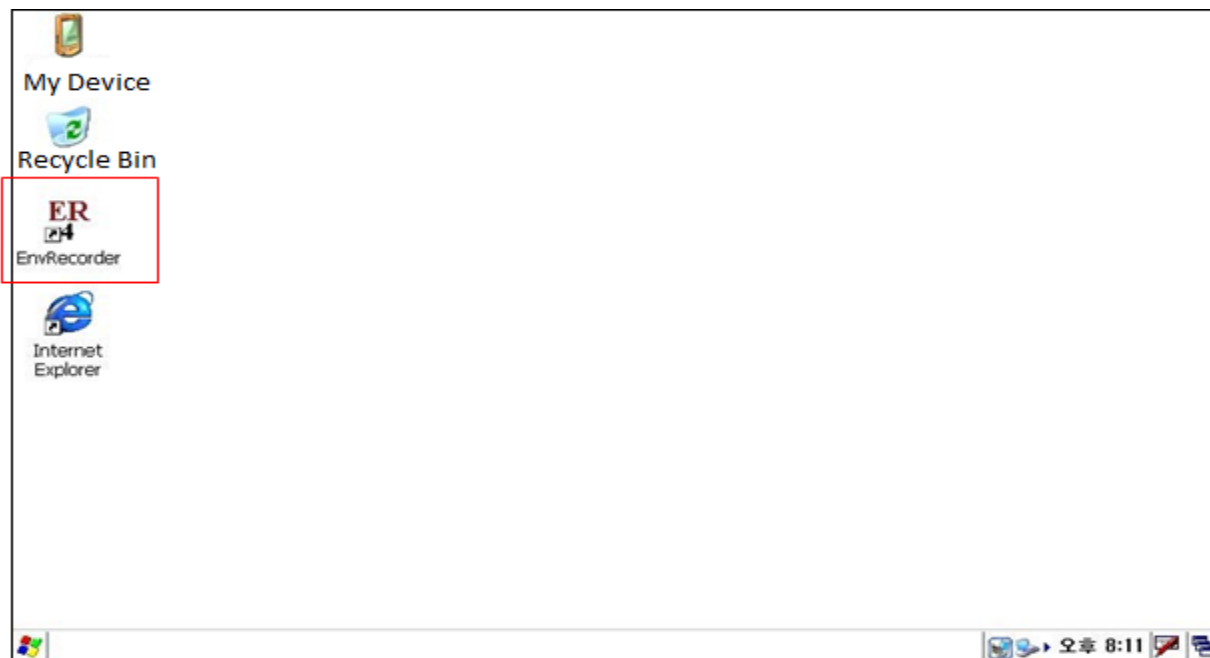
: Exit from program

[Procedure of the EVS]

1. Device Software Launching:

You can see the window if you turn on.

Please Double click "EnvRecorder" Icon.



2. EVS Settings:

Please click "EVS" and then "File" if it display as bellow window.

Sound (dB(A)):			
LeqIn	LeqAv	Lmax	Lmin
0.0	0.0	0.0	0.0
Vibro (dB(V)):			
	X	Y	Z
Lmax	0.0	0.0	0.0
Lv(In)/Lv(Av)	0.0/ 0.0	0.0/ 0.0	0.0/ 0.0
L10	0.0	0.0	0.0

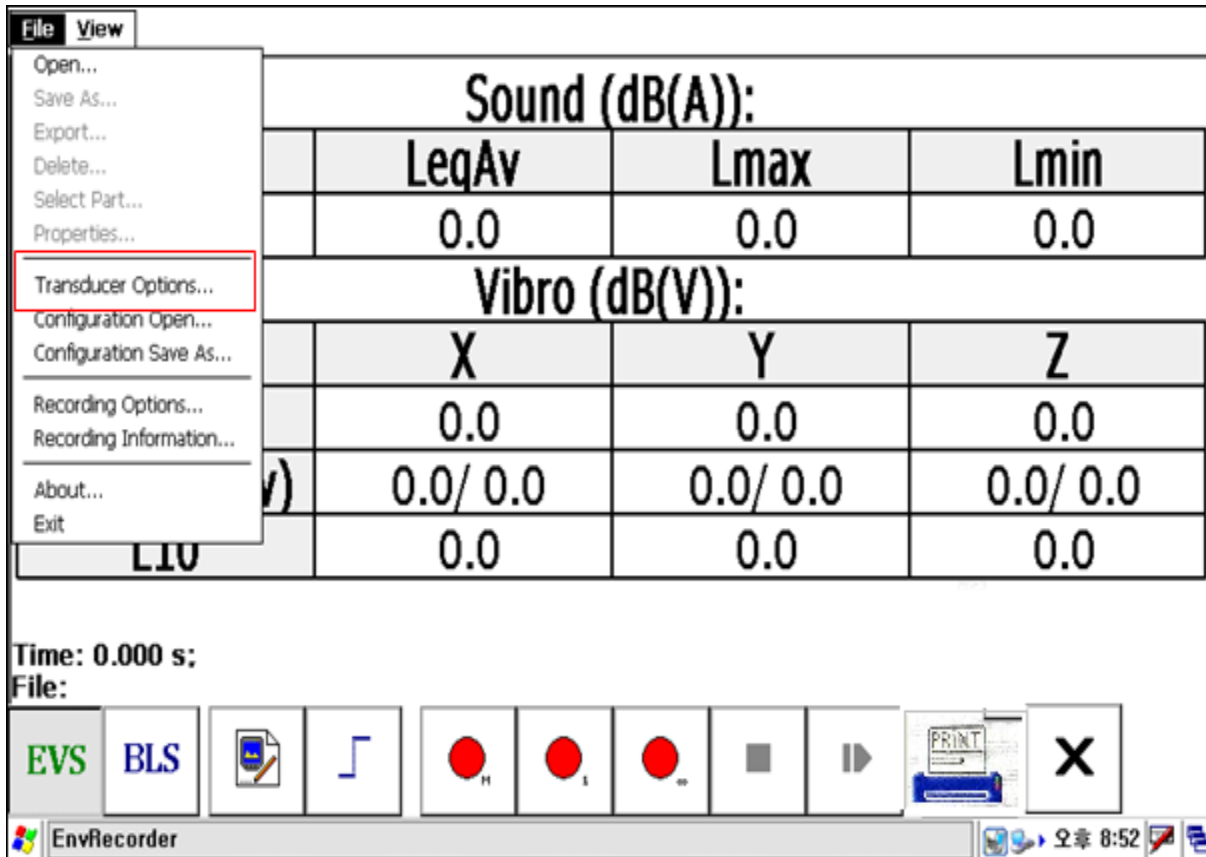
Time: 0.000 s:
File:

EVS BLS [Icon] [Icon] [Icon] [Icon] [Icon] [Icon] [Icon] [Icon]

EnvRecorder

3. Transducer Options:

To set up Sensor, Please do "Transducer Options" in the file.



3.1 Transducer Options Settings:

3.1.1. Transducer Options For V1:

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.

3.1.2. Transducer Options For V2,V3:

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

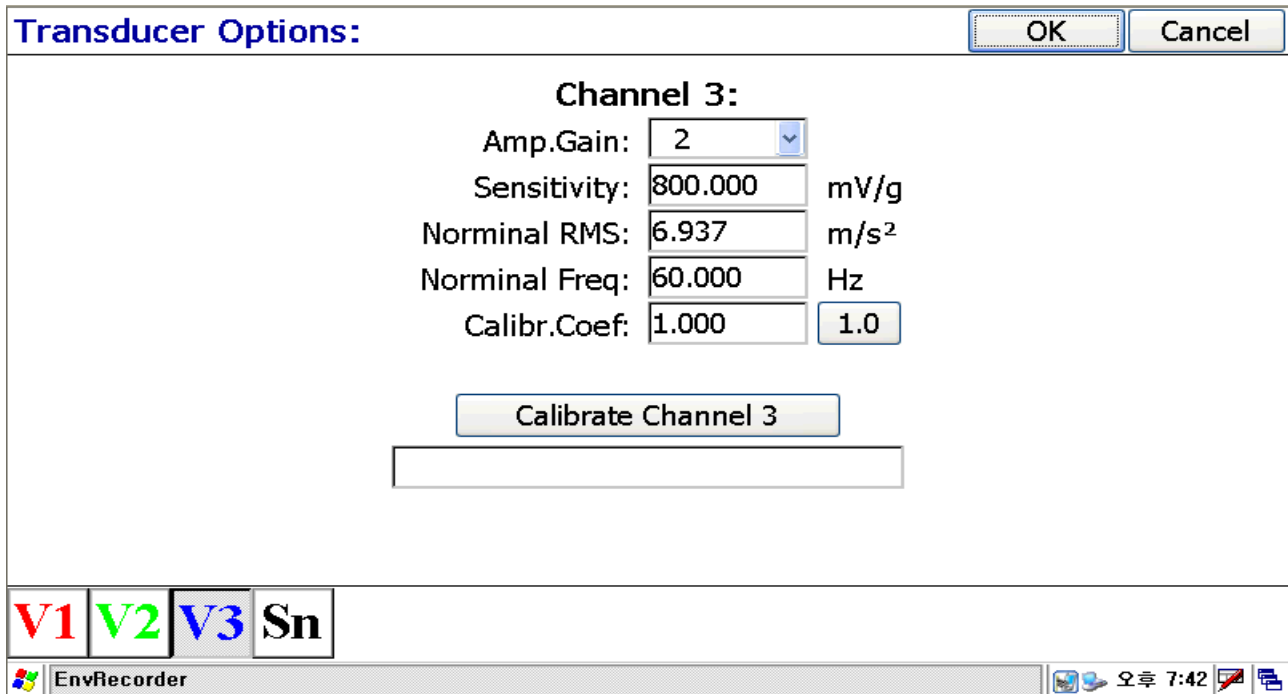
Calibr.Coef: 1.000 1.0

Calibrate Channel 2

V1 V2 V3 Sn

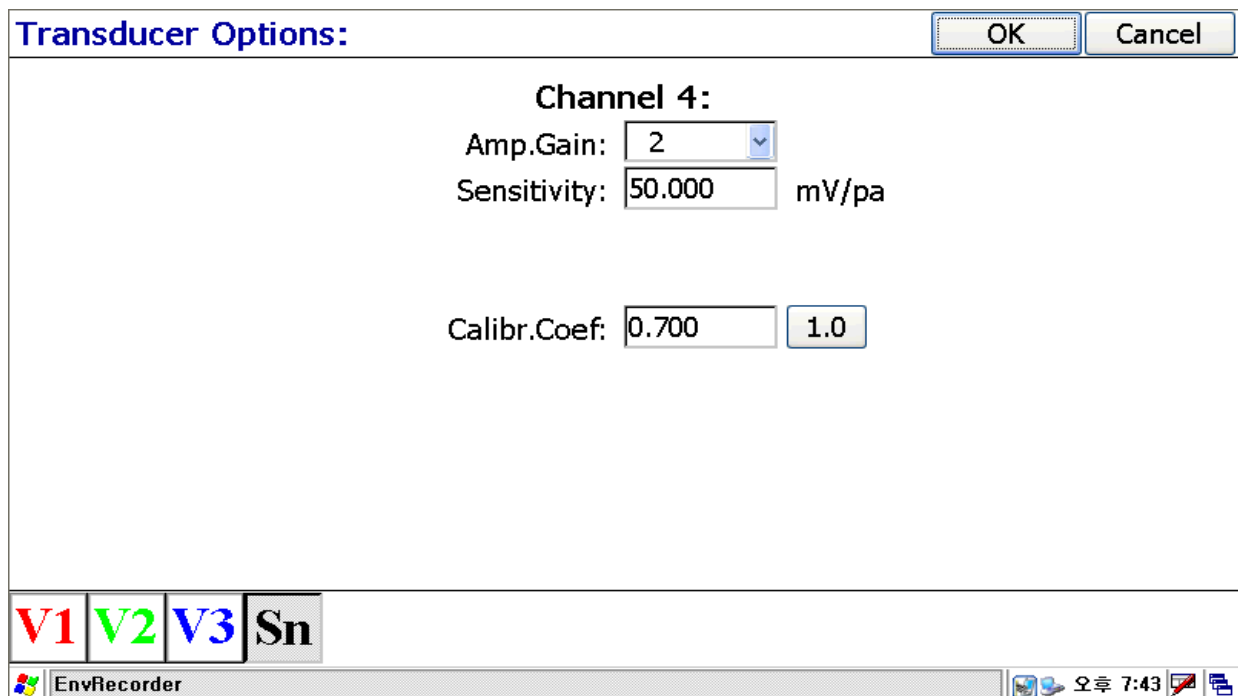
EnvRecorder

오후 7:41



3.1.3. Transducer Options for V4:

"Please put the sensitivity 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 becorresponded with that Leq value is 94dBw. If you finished all channels, please click "OK" to exit.



4. Recording Options:

Please move "File" menu again to do "Recording Option".

- a. File Name : write the file name to be stored
- b. File Format, PCM : select the file format to be stored.

The screenshot shows the EnvRecorder software interface. The 'File' menu is open, and 'Recording Options...' is highlighted. The main display area shows the following data:

Sound (dB(A)):			
	LeqAv	Lmax	Lmin
	0.0	0.0	0.0
Vibro (dB(V)):			
	X	Y	Z
	0.0	0.0	0.0
v)	0.0/ 0.0	0.0/ 0.0	0.0/ 0.0
	0.0	0.0	0.0

Time: 0.000 s
File:

The interface includes buttons for EVS, BLS, a file icon, a waveform icon, three red circular indicators, a square icon, a play button, a print button, and a close button (X). The taskbar shows the EnvRecorder application and the system clock at 8:52.

Recording Options:

OK

Cancel

File Name: 00N.wav;

[File Format: PCM, 3 ch, 16 bits]

- Save raw and result data;
- Save raw data only (.wav file);
- Save result data only;

Ask about deleting;

Timer in Manual Recording (EVS,BLAST): ▾

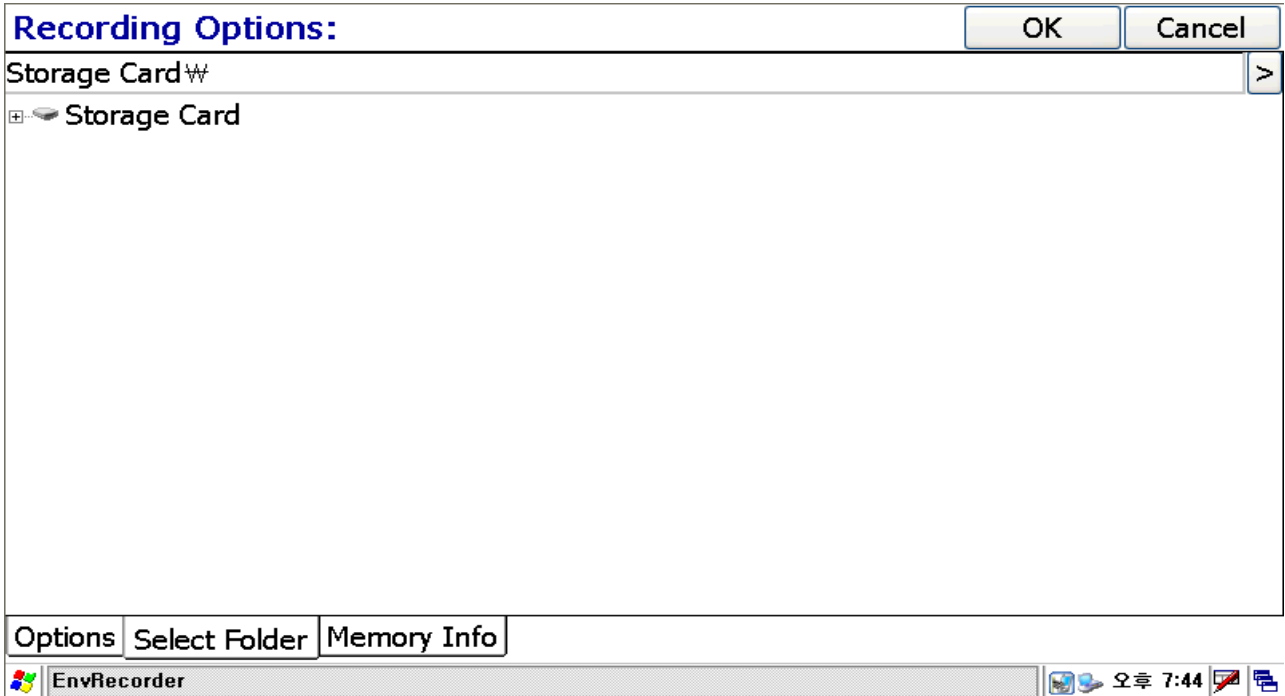
Options Select Folder Memory Info

EnvRecorder

오후 7:43

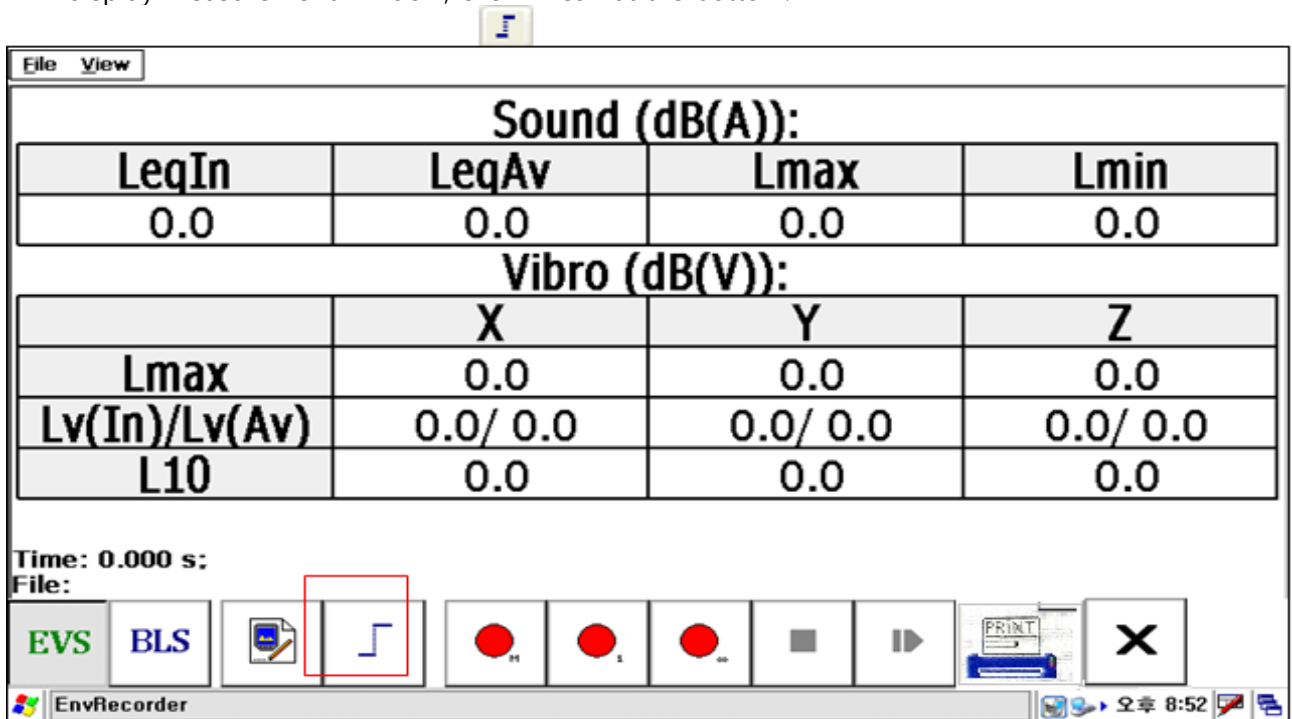
4.1. Folder selection:

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.



5. Trigger Options Display:

If display measurement window, click  icon at the bottom.



5.1. Trigger Options Settings:

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".

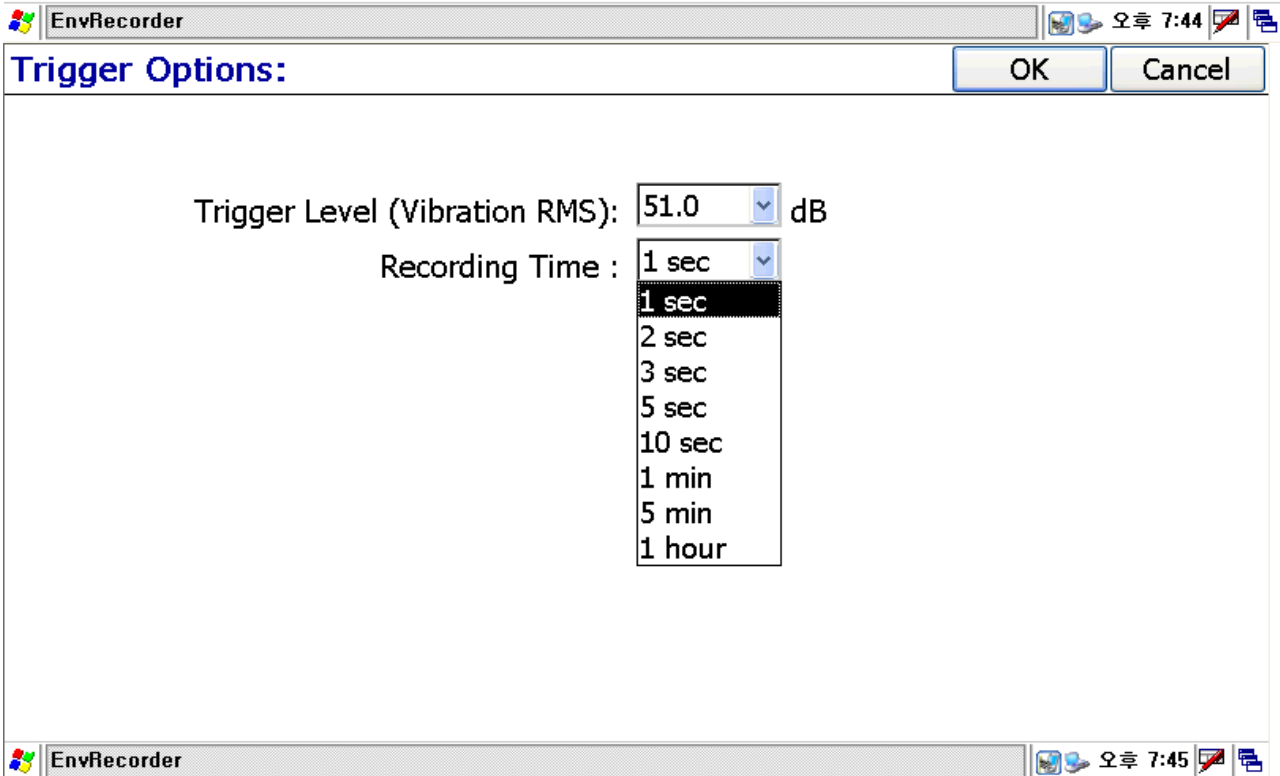
Trigger Options:



Trigger Level (Vibration RMS): 51.0 dB

Recording Time :

- 47.0
- 48.0
- 49.0
- 50.0
- 51.0**
- 52.0
- 53.0
- 54.0
- 55.0
- 56.0
- 57.0
- 58.0
- 59.0
- 60.0



The screenshot shows the "EnvRecorder" application window with the "Trigger Options" dialog box open. The dialog box has a title bar with "EnvRecorder" and "오후 7:44". The main content area contains the following settings:


- Trigger Level (Vibration RMS): 51.0 dB
- Recording Time : 1 sec

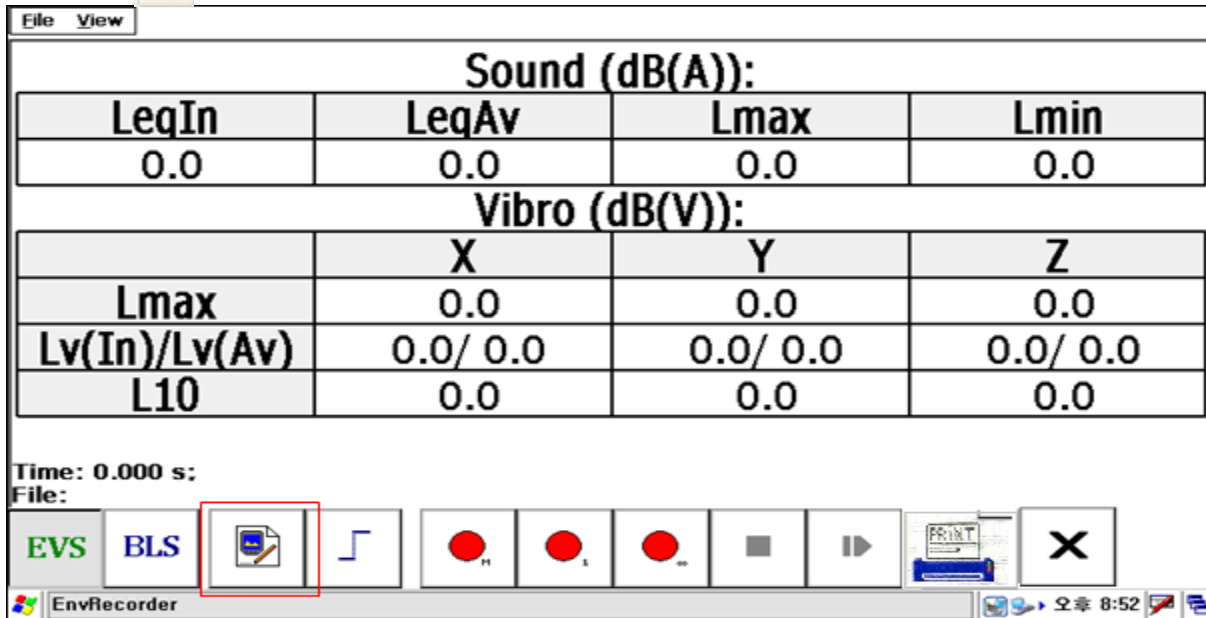
The "Recording Time" dropdown menu is open, showing the following options:

- 1 sec**
- 2 sec
- 3 sec
- 5 sec
- 10 sec
- 1 min
- 5 min
- 1 hour

The dialog box has "OK" and "Cancel" buttons in the top right corner. The taskbar at the bottom shows the "EnvRecorder" icon and the system clock "오후 7:45".

6. Analyzing Options:

Click  the Icon at the bottom in the measurement window again.



The screenshot shows the EnvRecorder software interface. At the top, there are menu options 'File' and 'View'. Below this, the 'Sound (dB(A))' section contains a table with the following data:

LeqIn	LeqAv	Lmax	Lmin
0.0	0.0	0.0	0.0

Below the sound data is the 'Vibro (dB(V))' section, which contains a table with the following data:

	X	Y	Z
Lmax	0.0	0.0	0.0
Lv(In)/Lv(Av)	0.0/ 0.0	0.0/ 0.0	0.0/ 0.0
L10	0.0	0.0	0.0

At the bottom of the window, there is a control bar with the following elements: 'Time: 0.000 s:', 'File:', 'EVS', 'BLS', a document icon (highlighted with a red box), a waveform icon, three red circular indicators, a square indicator, a play button, a 'PRINT' button, and a close button (X). The taskbar at the bottom shows 'EnvRecorder' and the system clock '오후 8:52'.

6.1. Analyzing Options Settings:

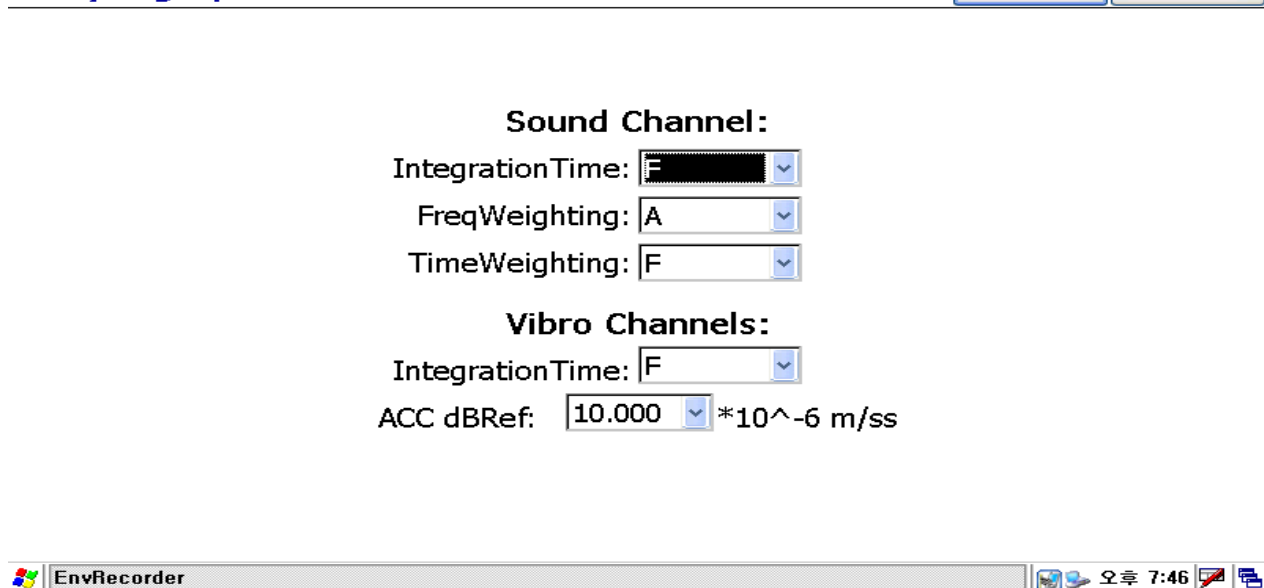
Move to "Analyzing Options" window, and set up the options of Sound channel and Vibration channels.

6.1.1. Sound Channel:

Select "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".

Analyzing Options:

OK Cancel



The 'Analyzing Options' dialog box is shown. It has two sections: 'Sound Channel' and 'Vibro Channels'. In the 'Sound Channel' section, 'IntegrationTime' is set to 'F', 'FreqWeighting' is set to 'A', and 'TimeWeighting' is set to 'F'. In the 'Vibro Channels' section, 'IntegrationTime' is set to 'F' and 'ACC dBRef' is set to '10.000 *10^-6 m/ss'. At the bottom, there are 'OK' and 'Cancel' buttons. The taskbar at the bottom shows 'EnvRecorder' and the system clock '오후 7:46'.

6.1.2. 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).

Analyzing Options:

OK Cancel

Sound Channel:
IntegrationTime: S
FreqWeighting: S
TimeWeighting: F

Vibro Channels:
IntegrationTime: F
ACC dBRef: 10.000 *10⁻⁶ m/ss

EnvRecorder 7:46

Analyzing Options:

OK Cancel

Sound Channel:
IntegrationTime: S
FreqWeighting: A
TimeWeighting: A

Vibro Channels:
IntegrationTime: F
ACC dBRef: 10.000 *10⁻⁶ m/ss

EnvRecorder 7:47

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

Analyzing Options:

OK Cancel

Sound Channel:

IntegrationTime: S

FreqWeighting: A

TimeWeighting: F

Vibro Ch

IntegrationTime: I

ACC dBRef: 10.000 *10^-6 m/ss

EnvRecorder

오후 7:47

[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.

Analyzing Options:

OK Cancel

Sound Channel:

IntegrationTime: S

FreqWeighting: A

TimeWeighting: F

Vibro Channels:

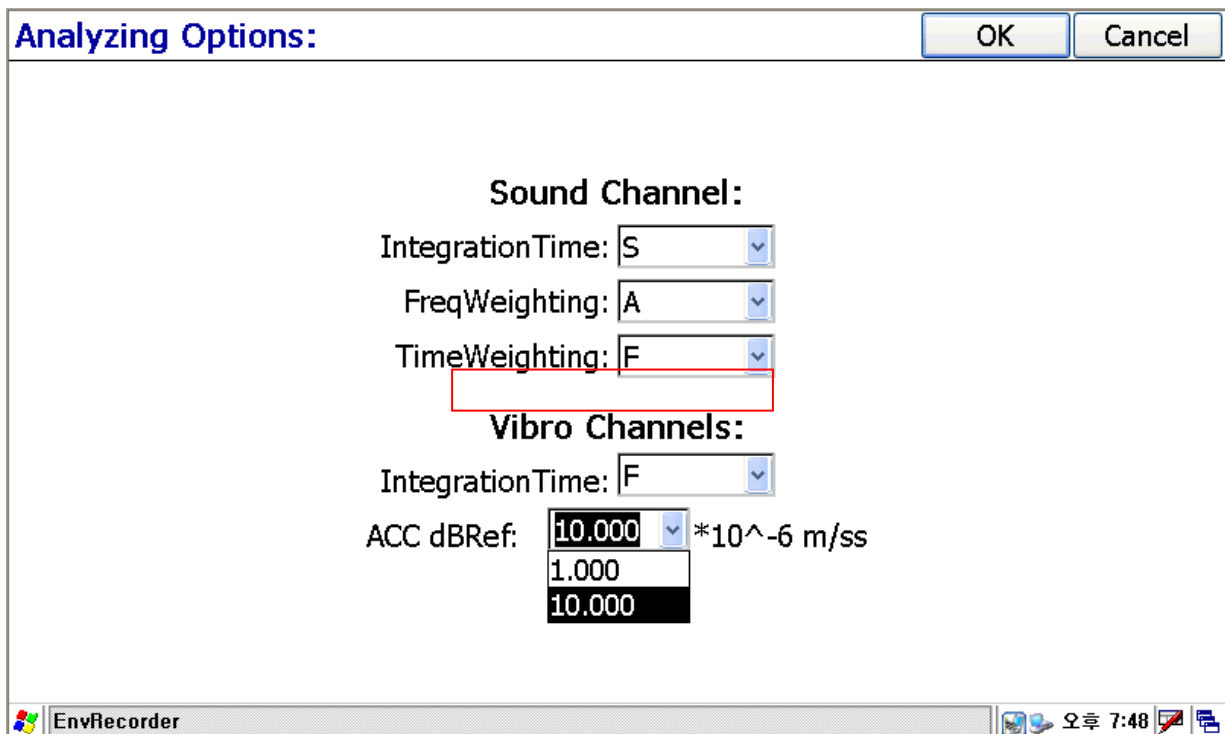
IntegrationTime: F

ACC dBRef: 10.000 *10^-6 m/ss

EnvRecorder

오후 7:47

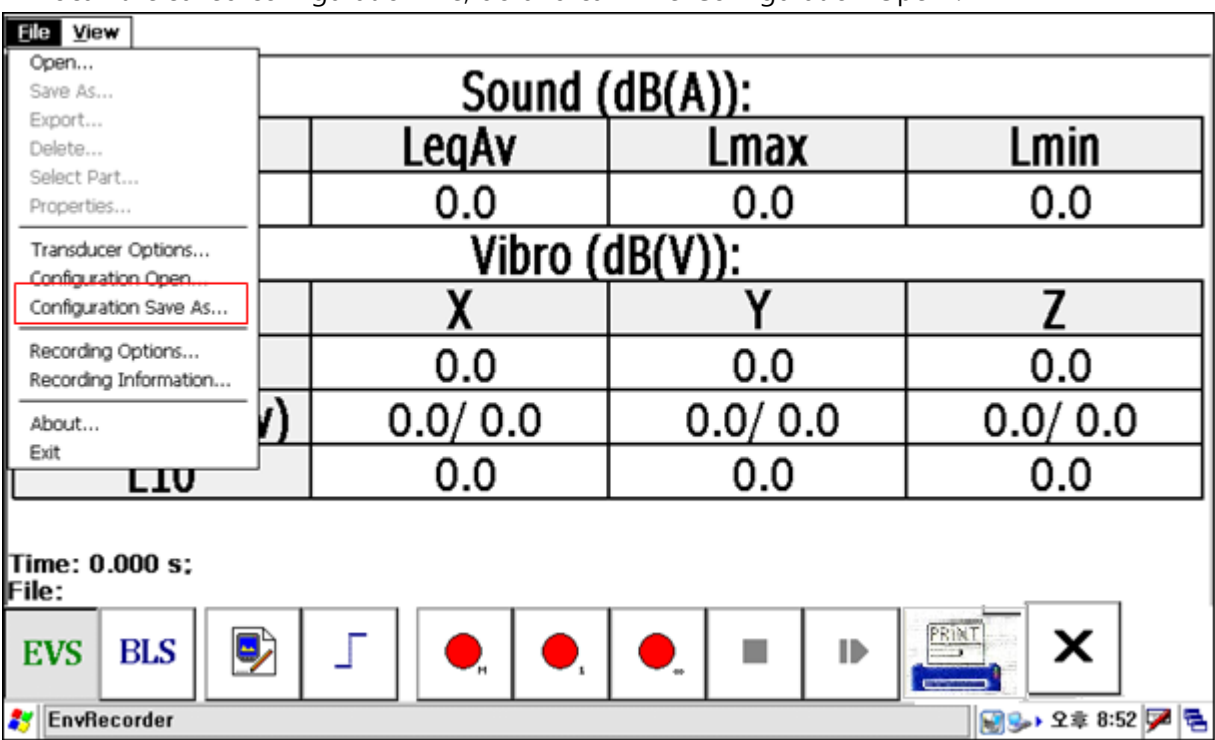
[Example] Vibro Channels-IntegrationTime : Set up Integration time for the vibration channels. F(Fast) has 100ms of integration time, S(Slow) has 1 sec of Integration time.

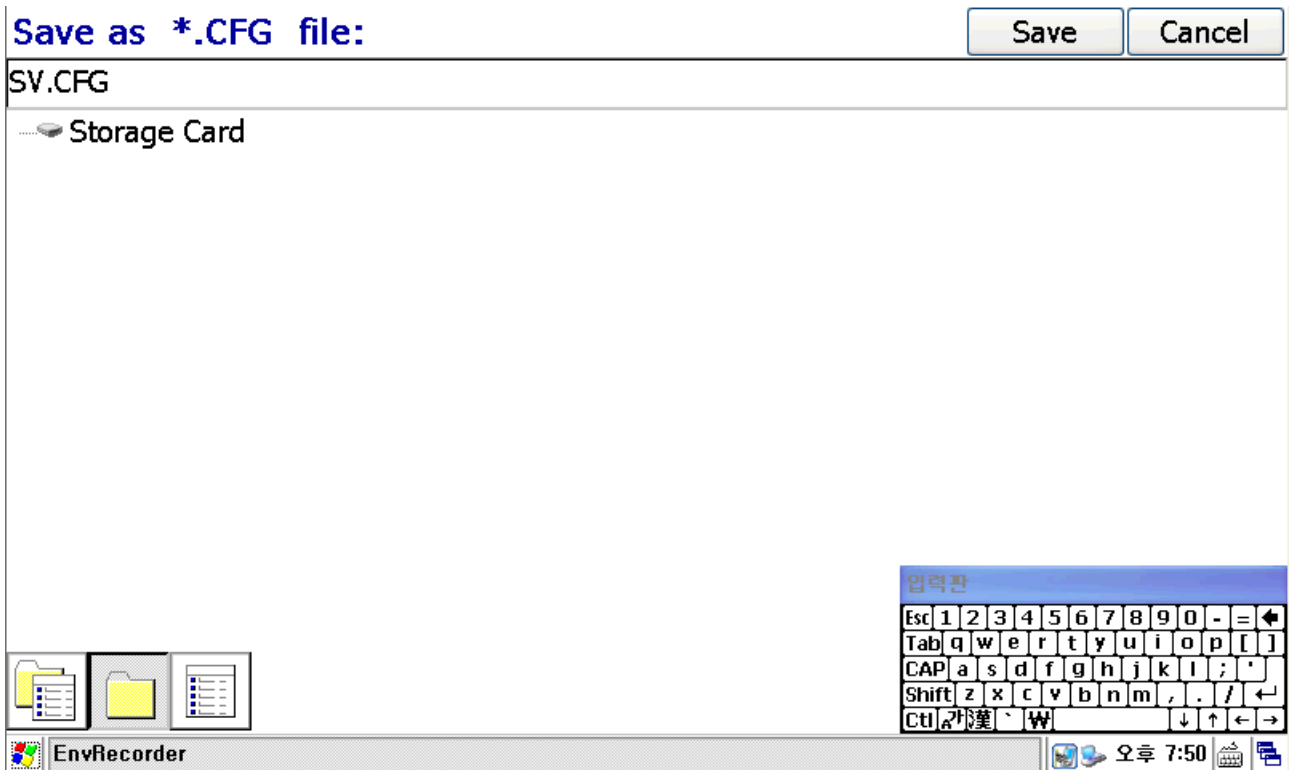
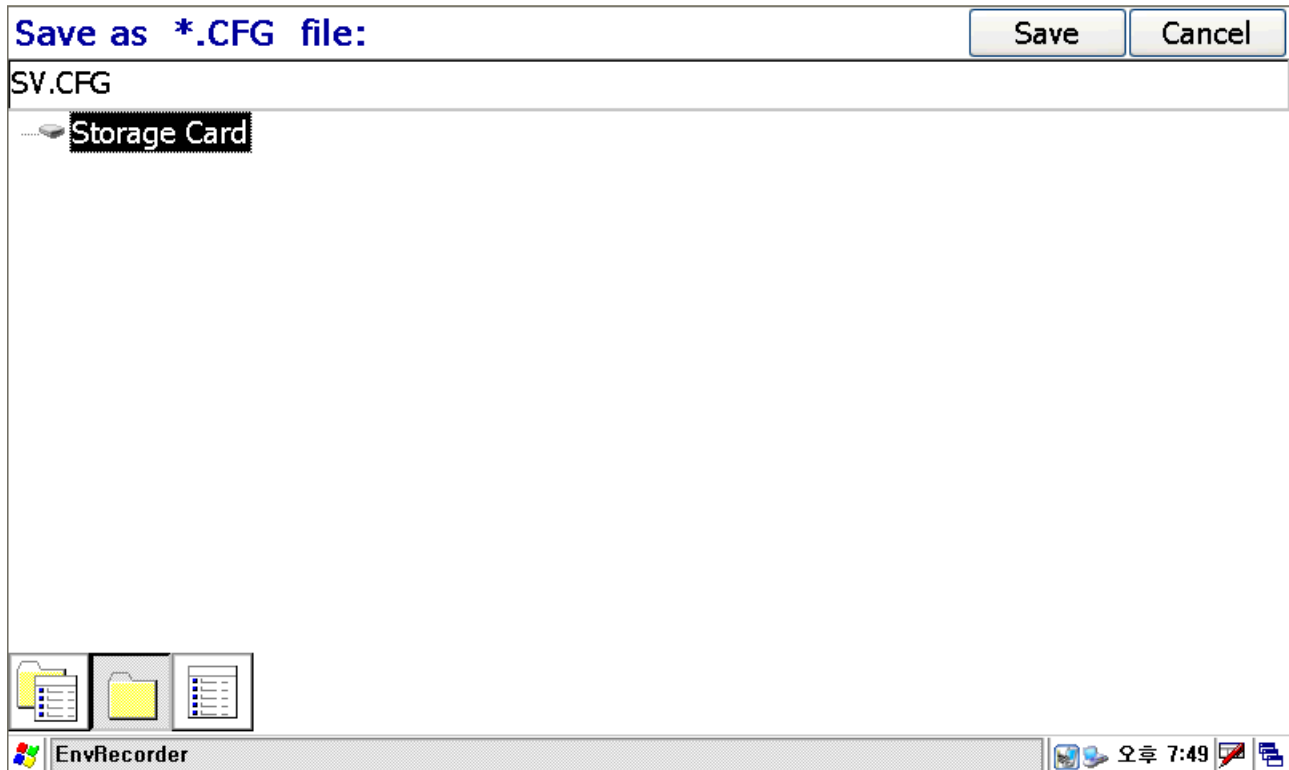


[Example] Vibro Channels : Please select between 1 and 10, Usually 1 is used in Europe as a vibration reference value, Korea and Japan are used 10.

7. Configuration Save As:

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".
 Tocal 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.

8. Configuration Open:

The screenshot shows the EnvRecorder software interface. The 'File' menu is open, and 'Configuration Open...' is highlighted. The main display area shows the following data:

Sound (dB(A)):			
	LeqAv	Lmax	Lmin
	0.0	0.0	0.0

Vibro (dB(V)):			
	X	Y	Z
	0.0	0.0	0.0
v)	0.0/ 0.0	0.0/ 0.0	0.0/ 0.0
L10	0.0	0.0	0.0

Time: 0.000 s:
File:

Buttons: EVS, BLS, [File], [Plot], [Stop], [Pause], [Print], [Close]

Taskbar: EnvRecorder, 오후 8:52

The screenshot shows the 'Open *.CFG file:' dialog box. The file list contains the following entries:

Name	Size	Date	Time
SV.CFG	43K	2012-06-07	오후 7:36:36

Buttons: Open, Cancel

Taskbar: EnvRecorder, 오후 7:50

9. Taking Measurements:

To do measurement and saving the measured data, use "Red recording" Icon.

9.1. Recording M:

Click "Manual". Then you can measure and save till click "Stop"

9.2. Recording S (1 Recording):

With "Single-shot recording option", it will be measured and saved by the recording time defined at Position 5.1.

9.3. Recording C (Continuous 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 repeatedly.

Sound (dB(A)):			
LeqIn	LeqAv	Lmax	Lmin
0.0	0.0	0.0	0.0

Vibro (dB(V)):			
	X	Y	Z
Lmax	0.0	0.0	0.0
Lv(In)/Lv(Av)	0.0/ 0.0	0.0/ 0.0	0.0/ 0.0
L10	0.0	0.0	0.0

Time: 0.000 s;
File:

Control panel icons: EVS, BLS, File, Waveform, **Red recording (H)**, **Red recording (I)**, **Red recording (M)**, Stop, Play, Print, Close.

10. Data saving to SD Card:

The saved data will be stored in the SD memory card, 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.

11. Summary Printout:

User can print only saved result file.

11.1. Steps to take Summary printout of saved result file.

- Feed the paper into the printer
- Connect the printer cable between device & Printer.
- Power on the printer.
- Select result file (menu File/Open... or toolbar or just saved file).
- Press [Print] button.

Sound (dB):			
LeqIn	LeqAv	Lmax	Lmin
0.00	0.00	~0.00	0.00

Vibro (mm/sec):			
	X	Y	Z
VelPeak (Inst)	0.00	0.00	0.00
VelPeak (Hold)	0.00	0.00	0.00

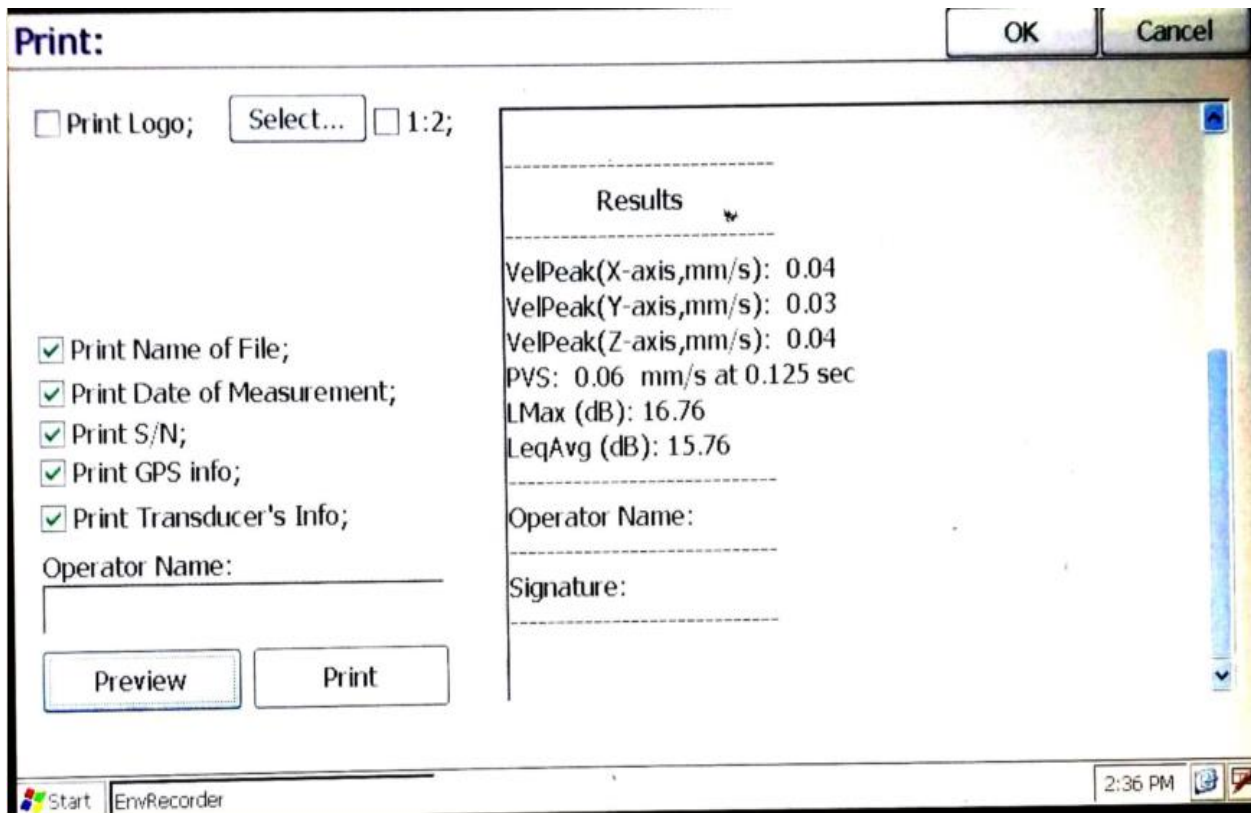
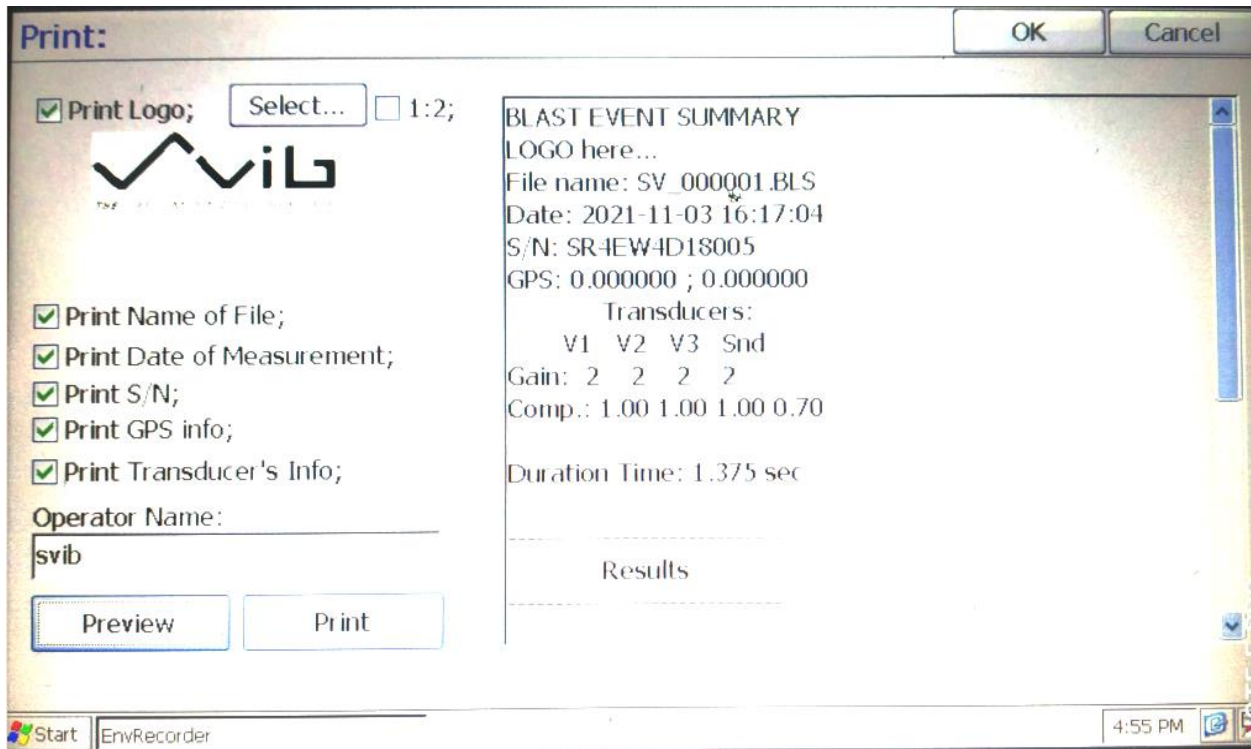
Time: 0.000 s:
File: SV_000478.WAV

EVs BLS M S C [Folder] [Folder] [Play] [PRINT] [X]

Start EnvRecorder 3:29 PM

11.2. Print Preview of summary Printout:

- Before printing the summary printout user can check file content with [Preview] function. Logo picture is not available in preview, just string "Logo here...".
- User can check all other check boxes (Print Name of File, Print Date of Measurement, Print S/N, Print GPS info, Print Transducer's info) as per user requirement.
- So the Print Preview of summary Printout will show the selected checkbox data & the result with Peak velocity of X, Y, Z, PVS, LMax, LeqAvg & operator name & Signature as shown below.
- To set logo in the summary printout user need to select the image from the device & that image should follow the rules as discussed in 11.3.



11.3. Logo picture requirement:

- Image should be Monochrome type;
- Image Width is not more 240px,
- Image Height is not more 100px;
- Width should be a multiple of 8 (preferably);

EVS app displays the selected logo-picture in its real size. But printer stretches its height into 2 times. So the selected logo image will show 2 times stretchable than the original image.

There are two ways to fix it:

11.3.1. Editing Logo image:

1. User should edit logo-image before selecting the logo image in the device by himself (compress the Logo image height in ~2 times in a picture editor, for ex. Paint)
2. Select the Checkbox "Print Logo" in Preview Window.
3. select the edited image in Preview Window.

11.3.2. select the check box option <1:2>:

1. User should select the check box option <1:2> in the preview window
2. But its Quality may be worse as compared to 11.3.1.

Note:

If printer is not connected but user press [Print] button in <Print> dialog then the app sends data to printer device anyway. User should wait of process ending (it's not possible to interrupt it). Print function takes about 10-15 sec for a file.

[Appendix]

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

(1) Please do "File-Open".

The screenshot shows the EnvRecorder software interface. The 'File' menu is open, with 'Open...' highlighted. The main display area shows a table of sound and vibration data. Below the table, the time is 0.000 s and the file name is L10. The interface includes various control buttons and a taskbar at the bottom.

Sound (dB(A)):			
	LeqAv	Lmax	Lmin
	0.0	0.0	0.0
Vibro (dB(V)):			
	X	Y	Z
	0.0	0.0	0.0
v)	0.0/ 0.0	0.0/ 0.0	0.0/ 0.0
L10	0.0	0.0	0.0

Time: 0.000 s
File: L10

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

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

The screenshot shows the EnvRecorder software interface with the 'Open *.EVS file:' dialog box open. The dialog displays a list of files on a Storage Card. The file 'SV001.EVS' is selected. The dialog includes 'Open' and 'Cancel' buttons. The taskbar at the bottom shows the time as 7:51.

Name	Size	Date	Time
SV001.EVS	72M	2000-01-03	오후 6:09:46
SV002.EVS	72M	2000-01-03	오후 7:28:02
SV003.EVS	1K	2000-01-03	오후 7:28:02
SV004.EVS	1K	2000-01-04	오전 10:34:28
SV005.EVS	72M	2000-01-04	오후 12:48:54
SV006.EVS	72M	2000-01-04	오후 2:23:46
SV007.EVS	72M	2000-01-04	오후 3:39:24
SV008.EVS	1K	2000-01-04	오후 3:39:24
SV009.EVS	1K	2000-01-04	오후 4:22:50

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
v)	0.0/ 0.0	0.0/ 0.0	0.0/ 0.0
L10	0.0	0.0	0.0

Time: 0.000 s:
File:

EV5 BLS [Icons] [PRINT] [X]

EnvRecorder [System Tray] 오후 8:52

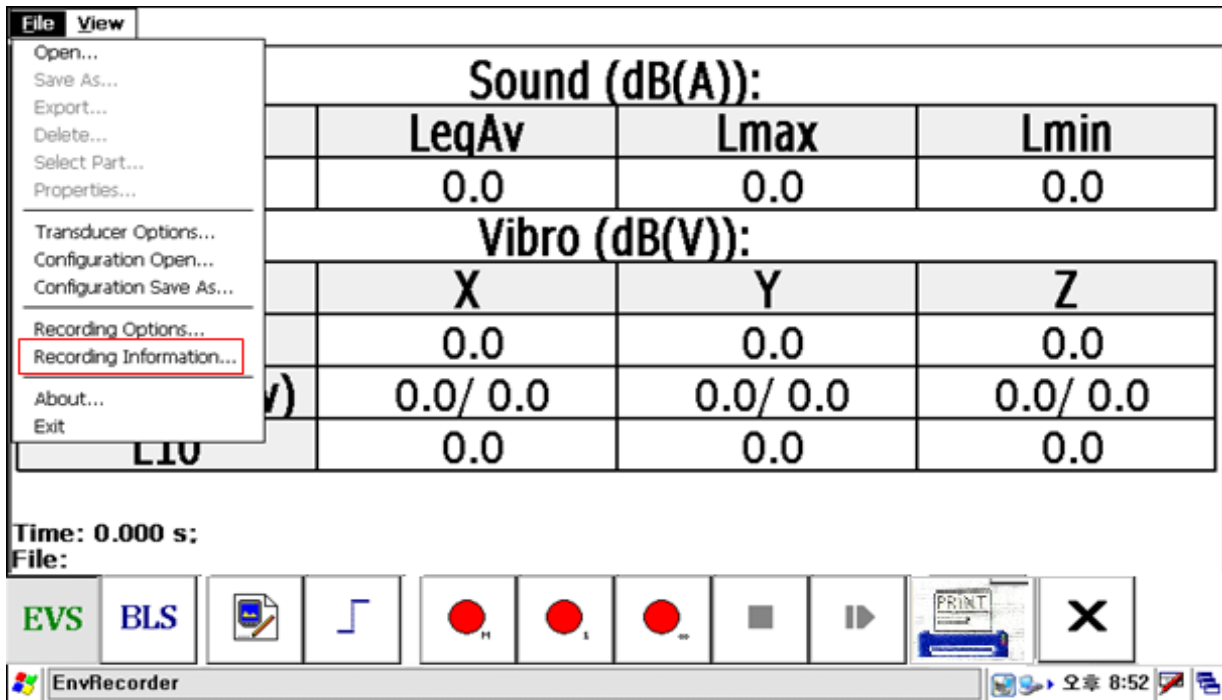
File Properties: Close

Name	Value
File	SV001.WAV
Data	2000-01-03
Time	16:53:13
Name	Name
Object	Object
Location	Location
#1 Axis	x-Axis
#2 Axis	y-Axis
#3 Axis	z-Axis
Duration	3600.250 seconds
Sample Rate	512 Hz
#1 Sensitivity	800.000 mV/g
Gain	Amp: x2; Comp: 1.000;
#2 Sensitivity	800.000 mV/g
Gain	Amp: x2; Comp: 1.000;
#3 Sensitivity	800.000 mV/g
Gain	Amp: x2; Comp: 1.000;

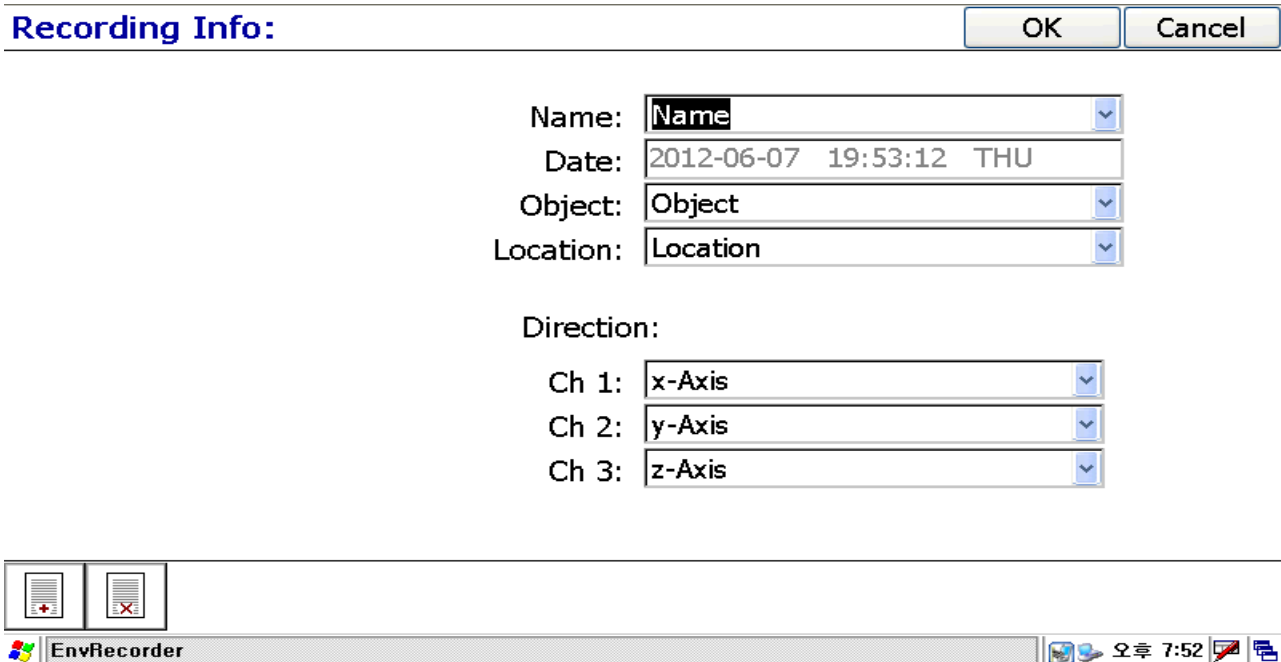
EnvRecorder [System Tray] 오후 7:52

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 Set GPS Coordinates

- (1) GPS data are related to the place where measurement is done, but not to a place where file is printing. So GPS data should be saved to the result file before the measurement starts and are printed with result data. If user doesn't set the GPS data before the measurement starts it will take the previous values.

To set GPS data in GPS dialog box go to menu View/GPS...):

The screenshot shows the EnvRecorder software interface. The 'View' menu is open, showing the 'GPS...' option. The main display area contains a table with the following data:

Sound (dB):		
LeqAv	Lmax	Lmin
0.00	0.00	0.00
Vibro (mm/sec):		
X	Y	Z
0.00	0.00	0.00
0.00	0.00	0.00

Below the table, the status bar shows 'Time: 0.000 s' and 'File: SV_000478.WAV'. The interface also includes buttons for 'EVS', 'BLS', and 'M', 'S', 'C' indicators, and a 'PRINT' button.

Below screen will appear. User can set GPS data in the blocks for each file

The screenshot shows the 'GPS:' dialog box in the EnvRecorder software. It contains two input fields for setting GPS coordinates:

Latitude: 22.954210

Longitude: 46.345329

The dialog box has 'OK' and 'Cancel' buttons at the top right. The status bar at the bottom shows 'Start | EnvRecorder' and the time '3:28 PM'.

4. 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".

Sound (dB(A)):			
LeqAv	Lmax	Lmin	
0.0	0.0	0.0	

Vibro (dB(V)):			
X	Y	Z	
0.0	0.0	0.0	

Lv(In)/Lv(Av)	0.0/ 0.0	0.0/ 0.0	0.0/ 0.0
L10	0.0	0.0	0.0

Time: 0.000 s:
File:

EnvRecorder

Sound (dB(A)):			
LeqAv	Lmax	Lmin	
0.0	0.0	0.0	

Vibro (dB(V)):			
X	Y	Z	
0.0	0.0	0.0	

Lv(In)/Lv(Av)	0.0/ 0.0	0.0/ 0.0	0.0/ 0.0
L10	0.0	0.0	0.0

Time: 0.000 s:
File:

EnvRecorder

5. Display the information of the measuring system

- c. If do "File-About", you can find the software version and hardware firmware version of the measuring system.

The screenshot shows the main interface of the EnvRecorder software. On the left, a 'File' menu is open, with 'About...' highlighted. The main display area contains two data tables. The first table, titled 'Sound (dB(A)):', has columns for 'LegAv', 'Lmax', and 'Lmin', all showing a value of 0.0. The second table, titled 'Vibro (dB(V)):', has columns for 'X', 'Y', and 'Z', each showing a value of 0.0. Below these tables, there is a status bar showing 'Time: 0.000 s;' and 'File:'. At the bottom, there is a control panel with buttons for 'EVS', 'BLS', and various measurement functions (stop, hold, play, print, close). The Windows taskbar at the bottom shows the 'EnvRecorder' application icon and the system clock at 8:52.

Sound (dB(A)):			
	LegAv	Lmax	Lmin
	0.0	0.0	0.0

Vibro (dB(V)):			
	X	Y	Z
	0.0	0.0	0.0
v)	0.0/ 0.0	0.0/ 0.0	0.0/ 0.0
	0.0	0.0	0.0

Time: 0.000 s;
File:

EnvRecorder

The screenshot shows the 'About' dialog box of the software. It contains the following information:

- 4-Channel EVS Pocket Analyzer:**
- SW Version: 3.0.5.4c (ENG)
[for CE5.0 RPA]
- Copyright (C) SVIB
www.svibtech.net
- Firmware Information:**
V3.1 401; 4 channels; MaxFS=16384Hz;
- Analyzing Library:**
Version: 2.0.2
- Device ID:**
SR4EW4D18005

The dialog box has a 'Cancel' button in the top right corner. The Windows taskbar at the bottom shows the 'Start' button, the 'EnvRecorder' application icon, and the system clock at 4:58 PM.

**Seismic Ground Vibration & Sound Analyzer
Blast Induced Ground Vibration & Sound Analyzer
EVS(Environmental Vibration & Sound) Measurement**

PC Software User Manual

Third Edition (Ver. 3.0.0.d)



SVIB Software Technologies Pvt. Ltd

[BLS PC Software]

1. Copying Files to system & Installation Steps:

Before installing the BLS Package user need to copy the result files in to the system in a particular folder.

1.1. System Requirement:

Operating System: Windows

RAM : 8GB

System Type : 64Bit

(For 32 bit different version of PC Software is need to install)

1.2: Steps for installation of BLS300 PC Software:

- Double click on .exe file click Next.
- Paste the serial key (which is given in a text file along with the .exe package) & click Next.
- For First Time installation of BLS Package it will ask for the crystal report installation
- User need to install the crystal report along with the main installation of BLS
- After installation of crystal report continue with the main installation of BLS PC Software.

Advanced Installer

BLS_300d Setup Wizard

Please enter your customer information

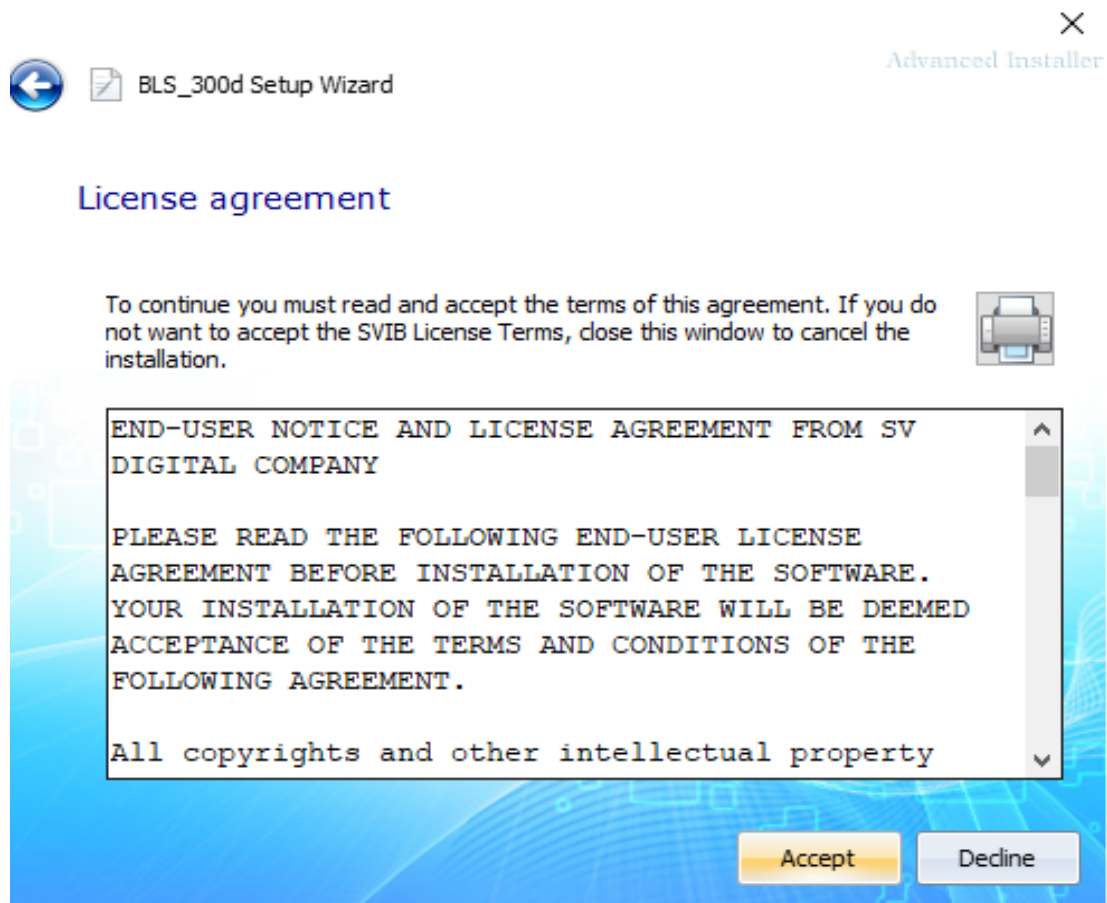
User Name:
DELL

Organization:

Serial Number:
1943-1962-0903-3495


Next > Cancel

- Then click on Accept button to accept the terms & Conditions



- Select Typical & click Next
- Then click on Install& then Finish.

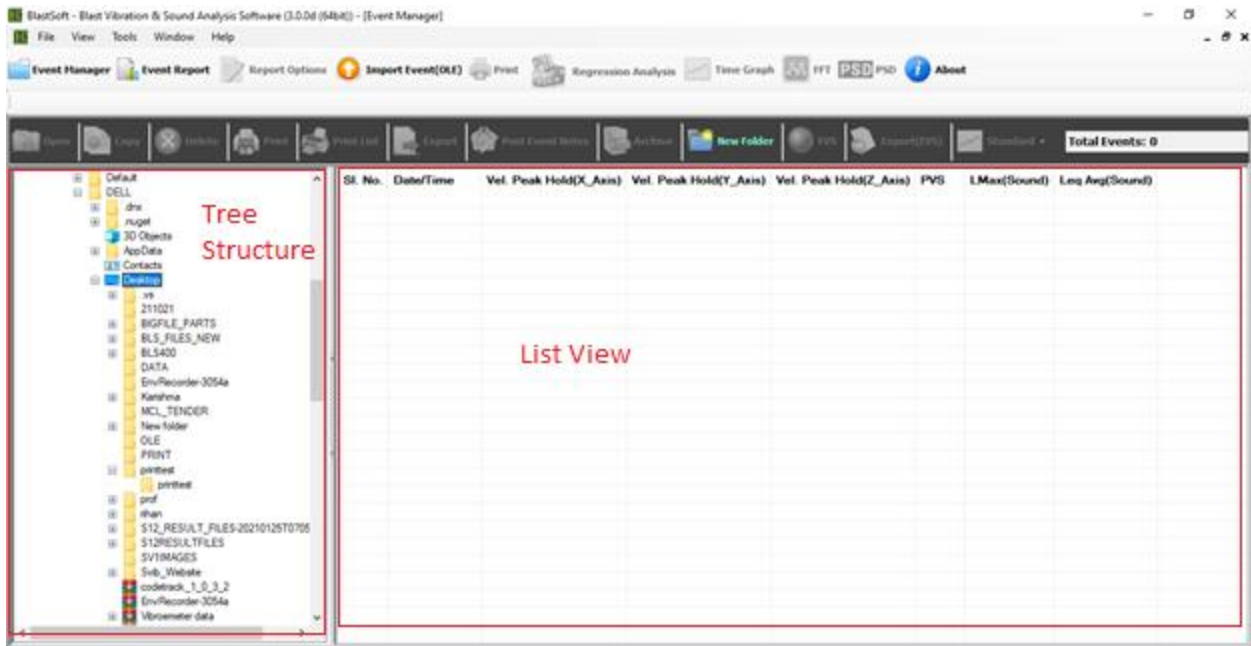
2. Application Launching:

Install the BLS Package as discussed in 1.2 and Click on icon  on Desktop to launch the application

Event Manager Window will appear .Left hand side one tree structure & right hand side list view

2.1. Tree structure

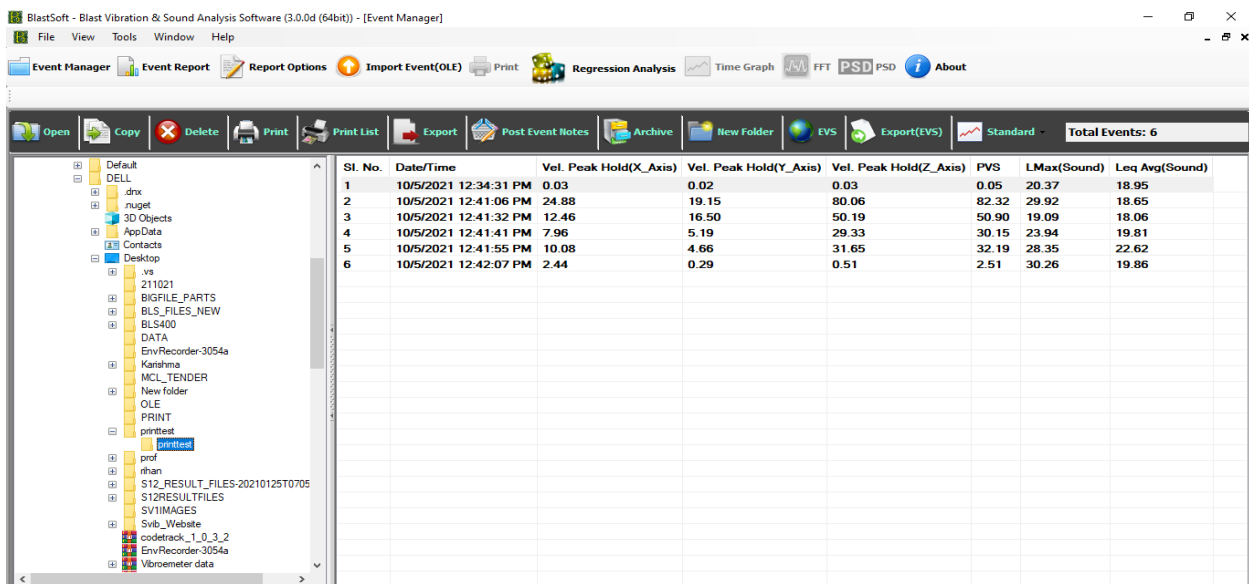
Tree structure is used to select the folder from where Blast files are stored as explain in 1.



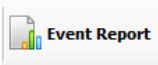
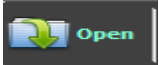
2.2. List View:

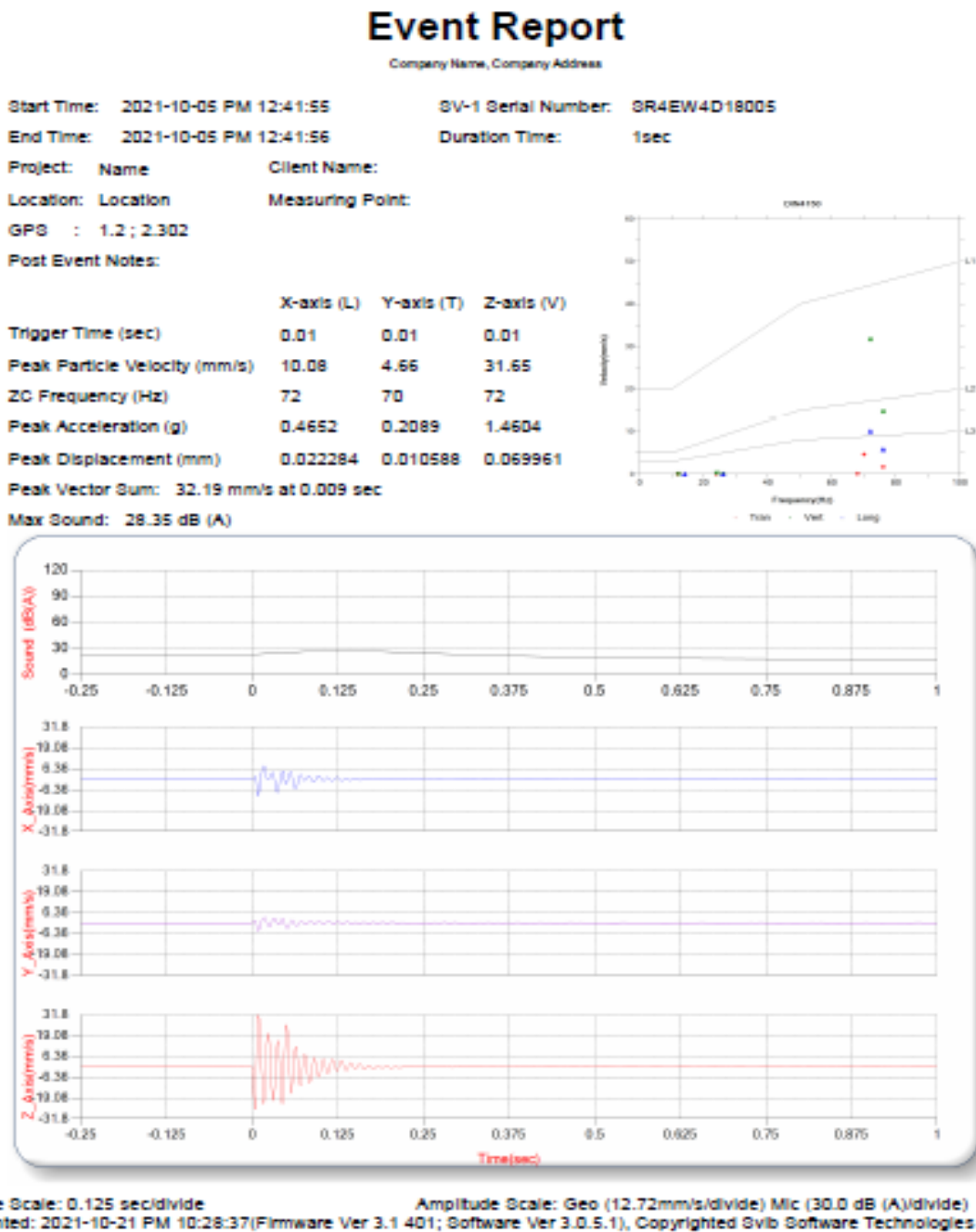
List View is used to show Velocity peak hold of x, y, z, PVS , LMax(Sound) & Leq Avg(Sound)

When user select the folder where Blast files are stored, list view shows its values in right side.




3. Event Report:

When user double click of list view file or click on  or click on  event report window will open which shows Event Report details of X, Y, Z axis values & charts showing the sound and vibration analysis of the selected

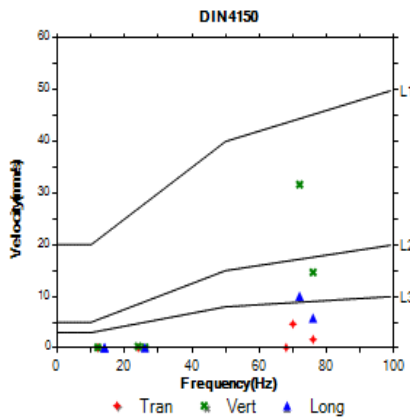


4. Standards:



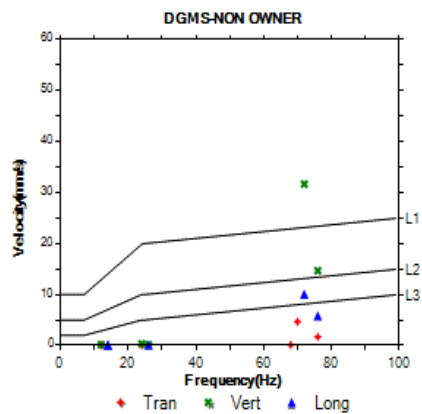
When user click on  button, on the right side of event report as shown in 10 Freq-vel graph plot is shown with the corresponding standards .In dropdown 3 standards (DIN4150, DGMS-Non Owner, and DGMS-Owner)

4.1. DIN-4150:



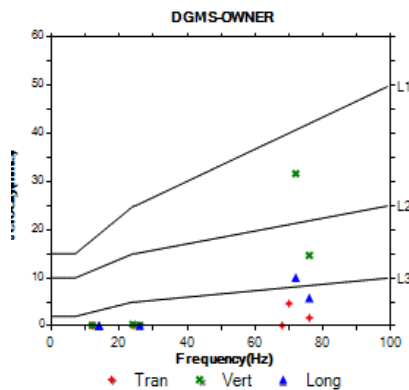
Permissible PPV(mm/s) as per DIN				
Type of structure		Dominant excitation Freq(Hz)		
		<10Hz	10-45Hz	>45Hz
L1	Industrial buildings	20	40	50
L2	Domestic houses/Structure	5	15	20
L3	objects of historical importance & Sensitive structures	3	8	10

4.2. DGMS-NON Owner:



Permissible PPV(mm/s) as per DGMS-Non Owner				
Type of structure		Dominant excitation Freq(Hz)		
		<8Hz	8-25Hz	>25Hz
L1	Industrial buildings	10	20	25
L2	Domestic houses/Structure	5	10	15
L3	objects of historical importance & Sensitive structures	2	5	10

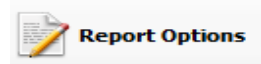
4.3. DGMS-Owner:



Permissible PPV(mm/s) as per DGMS-Owner				
Type of structure		Dominant excitation Freq(Hz)		
		<8Hz	8-25Hz	>25Hz
L2	Domestic houses	10	15	25
L1	Industrial buildings	15	25	50
L3	objects of historical importance & Sensitive structures	2	5	10

5. Report Options:



When user selects a file from list View & clicks on  button following window will appear.

The screenshot shows the 'Event Report Options' dialog box in the BlastSoft software. The dialog box contains the following fields:

- Event Report Title : Event Report 1
- Company Name : svib
- Address : bang
- Telephone Number : 9876543210
- Mobile Number : 9876543210
- Fax Number : 24343
- Email Address : i@gmail.com

The background shows a table with the following data:

Sl. No.	Date/Time	Vel Peak Hold(X Axis)	Vel Peak Hold(Y Axis)	Vel Peak Hold(Z Axis)	PVS	LMax(Sound)	Leq Avg(Sound)
1	10/5/	Report Options			0.05	20.37	18.95
2	10/5/				82.32	29.92	18.65
3	10/5/				50.90	19.09	18.06
4	10/5/				30.15	23.94	19.81
5	10/5/				32.19	28.35	22.62
6	10/5/				2.51	30.26	19.86

User need to enter all the fields. Then click on Apply button. That user options will get reflected into event report.

The screenshot shows the 'Event Report 1' summary in the BlastSoft software. The report includes the following information:

Event Report 1
svib, bang
TEL: 9876543210 FAX: 24343 Mobile: 9876543210 E-mail: i@gmail.com

Start Time: 2021-10-05 PM 12:41:55 SV-1 Serial Number: SR4EW4D18005
End Time: 2021-10-05 PM 12:41:56 Duration Time: 1sec

Notes :
Project : Name Client Name :
Location: Location Measuring Point:
GPS : 1.2 ; 2.302

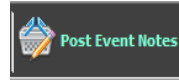
Post Event Notes:

	X-axis(L)	Y-axis(T)	Z-axis(V)
Trigger Time (sec)	0.01	0.01	0.01
Peak Particle Velocity (mm/s)	10.08	4.66	31.65
ZC Frequency (Hz)	72	70	72
Peak Acceleration (g)	0.4652	0.2089	1.4604
Peak Displacement (mm)	0.022284	0.010588	0.069961

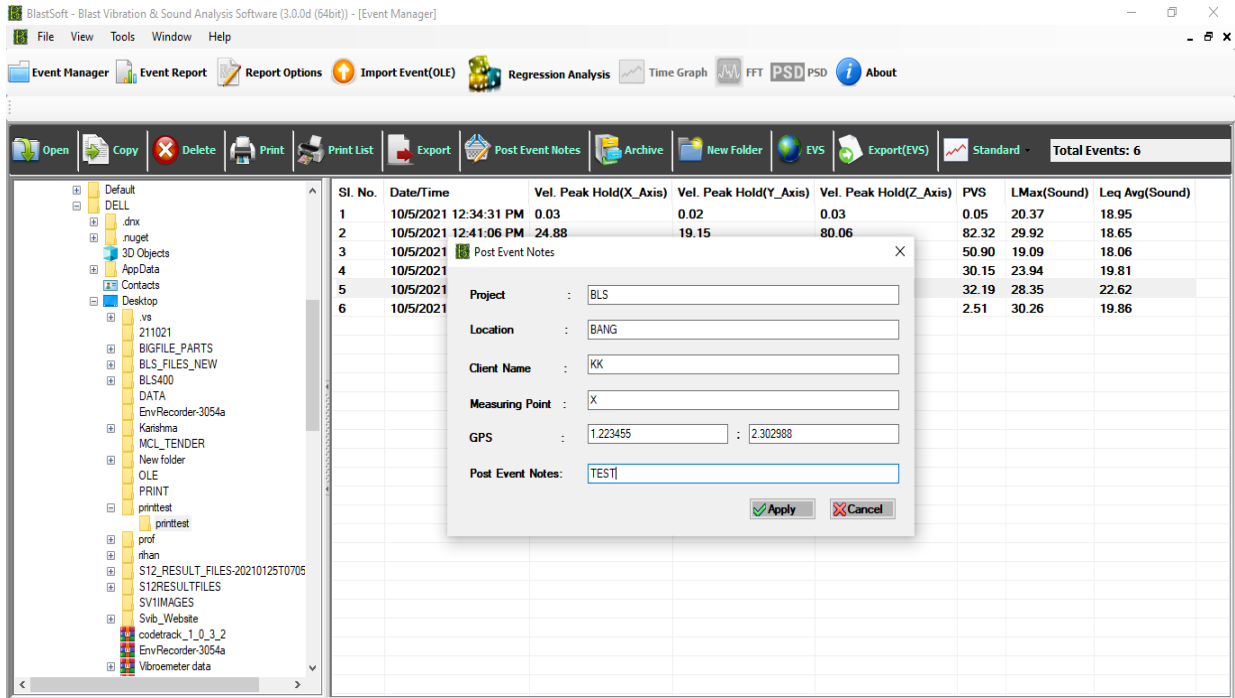
Peak Vector Sum: 32.19 mm/s at 0.009 sec
Max Sound: 28.35 dB (A)

The graph shows Velocity (mm/s) vs Frequency (Hz) for DGMS-OWNER. The graph displays three curves (L1, L2, L3) and data points for Tran (red diamond), Vert (green asterisk), and Long (blue triangle).

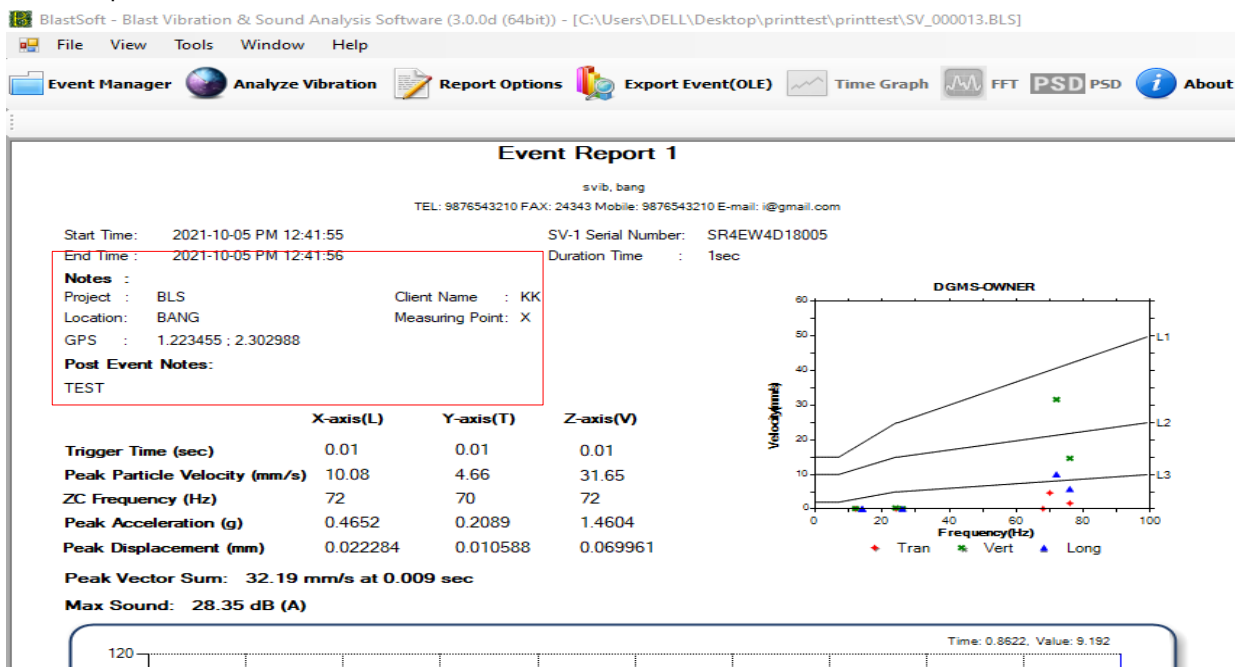
6. Post Event Notes:



When user selects a file from event list & clicks on  button following window will appear.

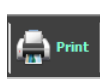



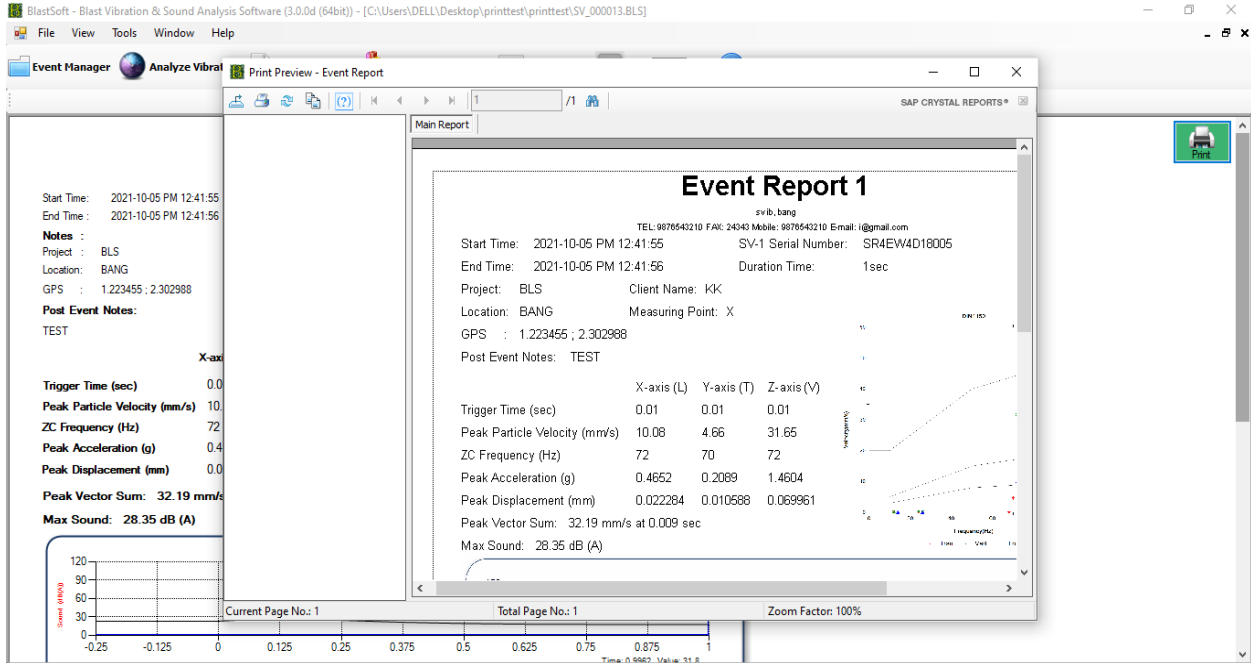
User need to enter all the fields. Then click on Apply button. That user options will get reflected into event report



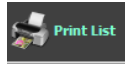
7. Print:

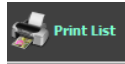


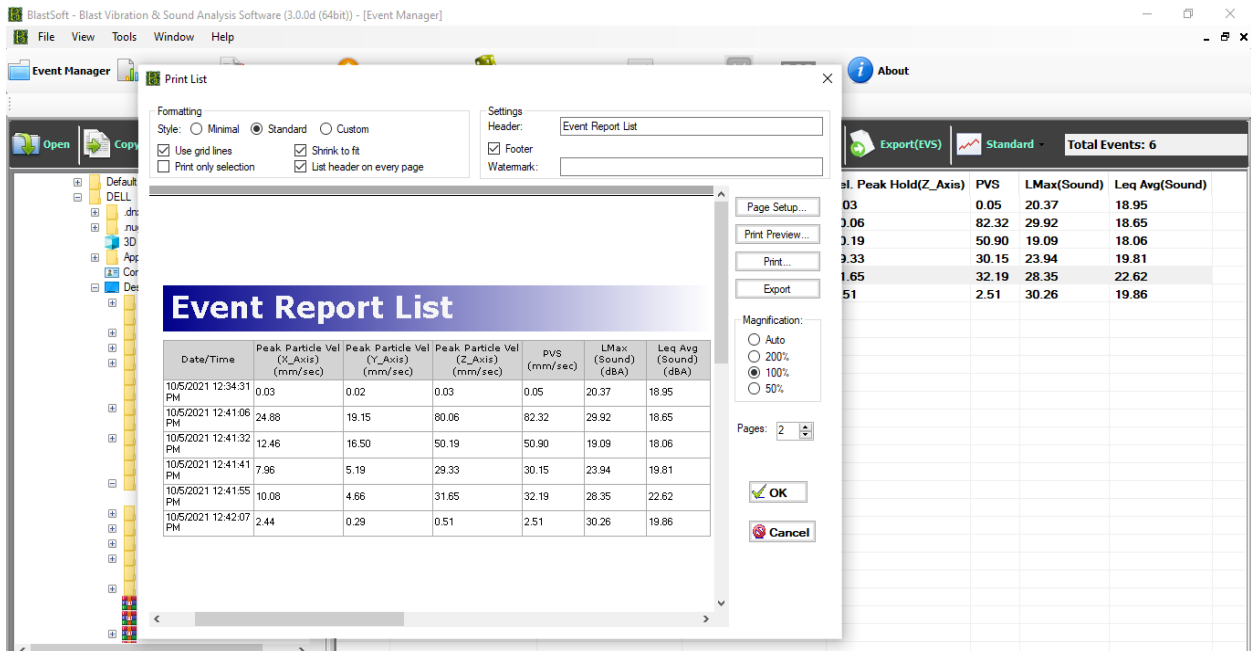
When user clicks on  or  (Inside the event report form) following window will appear. User can take print of the event report or it can save as pdf file also.



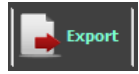
8. Print List:

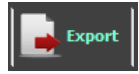


When user clicks on  button following window will appear. There user can take print of the list view or it can export to .csv file.



9. Export:



When user clicks on  browser window will appear. User need to browse the location where that exported file need to save & click on OK. That file data will save to text file as below.

```
SV_000013_ASCII - Notepad
File Edit Format View Help
Blast Vibration & Sound Analysis

Exported Time: 10/22/2021 12:09:22 PM
File Name : SV_000013
Blast PDA Version : 3.0.5.1
PDA Serial Number : SR4EW4D18005
Firmware Version : V3.1 401; 4ch; MaxFS:16384Hz;
Analyzing Library Version : 2.0.2
Start Time : 2021-10-05 PM 12:34:31
End Time : 2021-10-05 PM 12:34:32
Duration : 1 sec
Integration Time : 0.125 sec
Sample Rate : 1024 sps
dB Reference : Acc: 1E-05          Vel: 1E-09          Disp: 1E-12

Notes
Project : BLS
Location : BANG
Client : KK
Measuring Point : X
GPS : 1.223455 ; 2.302988
Post Event Notes
TEST

Transducer Options
Sensitivity(mV/g): Ch1: 800 Ch2: 800 Ch3: 800
Amp Gain : Ch1: 2 Ch2: 2 Ch3: 2
Comp Gain : Ch1: 1 Ch2: 1 Ch3: 1

Analyzing Options
Integral : Ch1: ACC Ch2: ACC Ch3: ACC
Weight : Ch1: HORIZONTAL Ch2: FLAT Ch3: VERT
Average : Ch1: 2 Ch2: 2 Ch3: 2

Result
Ln 1, Col 1 100% Windows (CRLF) UTF-8
```

10. EVS:



When user click on EVS button by selecting one file from list view, EVS Window will appear. User can take its print also.

Event Report 1

svib, bang
 TEL: 9876543210 FAX: 24343 Mobile: 9876543210 E-mail: i@gmail.com

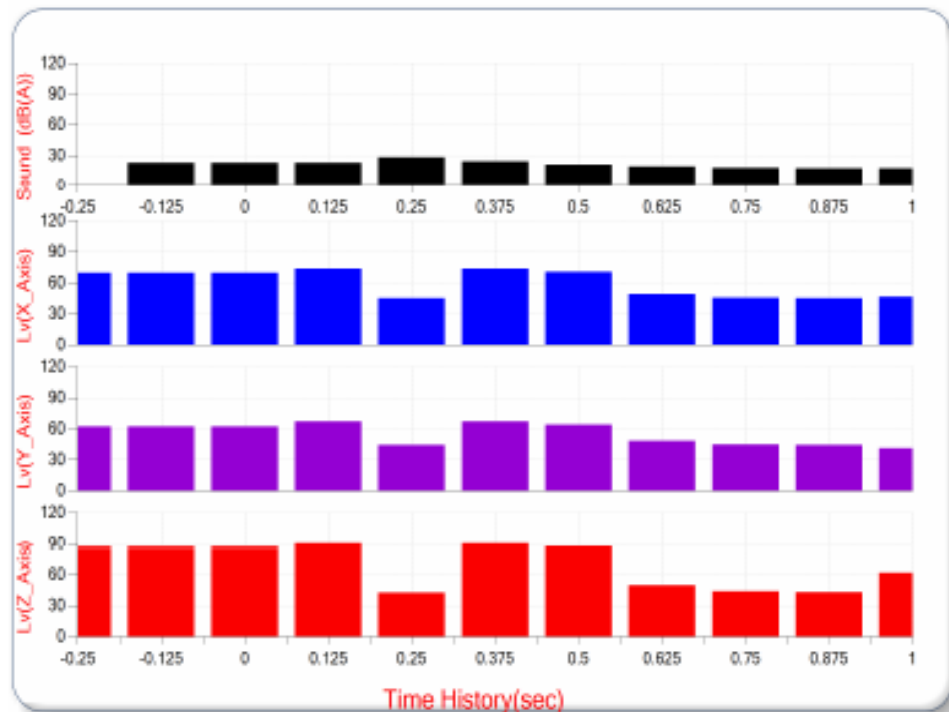
Start Time:	2021-10-05 PM 12:41:55	SV-1 Serial Number:	SR4EW4D18005
End Time:	2021-10-05 PM 12:41:56	Duration Time:	1sec
Project:	BLS	Client Name:	KK
Location:	BANG	Measuring Point:	X
GPS :	1.223455 ; 2.302968		

Post Event Notes:

Sound (dB(A))	Leq	LMax	LMin	L1	L5	L10	L50	L90	L95	L99
	22.62	28.35	17.78	28.35	28.35	28.35	19.03	17.78	17.78	17.78


Vibration Vert Axle (dB)	Leq	LMax	LMin	L5	L10	L50	L90	L95	L99
	80.48	90.91	42.50	90.25	87.27	51.42	43.67	42.71	42.50

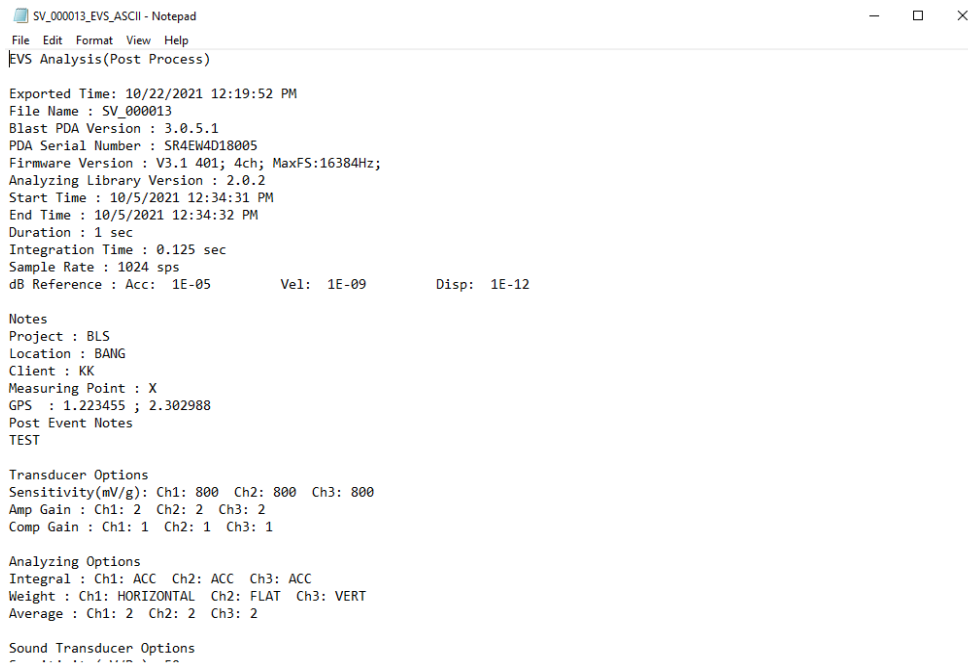
Time History:



Printed: 2021-10-22 PM 12:13:32(Firmware Ver 3.1 401; Software Ver 3.0.5.1), Copyrighted Svib Software Technologies Pvt Ltd

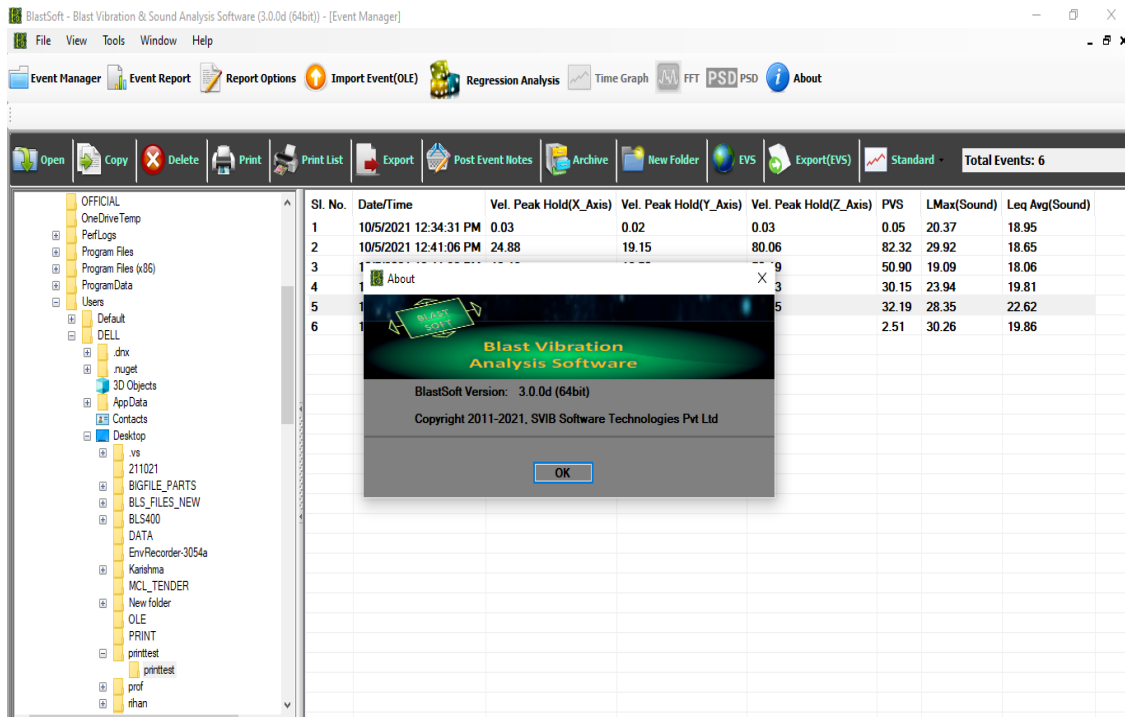
11. Export EVS:

Click on  icon to export the EVS to text file of the selected file.



12. About:

Click on About Icon to view the version of project.



*****END*****