

Druckversion

Datei: Einstellungen - Hilfe

<b>Ereignisse drucken</b> <b>Datei: 896A329D00002.sis</b>		Geortet: Nichtbeantwortet Reaktionsdatum: Aktiviert	VideoZSR TS 2000 01:45:16 204 kbps	Datum : Zeit: Aufzeichnungswahl: VideoZSR TS 2 x 60 ms	01.07.2017 14:03:41
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Melde Nr.: VideoZSR      Melde ID: www.videozsr.com      Melde ID:

Eingetragter Geschwindigkeit  Transmittierter Geschwindigkeit  Vertikale Geschwindigkeit  Ausdrucker ID	Vertikale Skala 20 m/s  Vertikale Skala KI: 75.0 m/s KI2: 75.0 m/s KI: 75.0 m/s KI2: 75.0 m/s
---	--

	Rand 1	Rand 2	Rand 3	Rand 4	Rand 5	Rand 6	Rand 7
<b>Spitzenwert</b>	0-RT (122.7 ms)	0-RT (80.52 mm/s)	0-RT (28.0 mm/s)	0.0 Pa / -9.0 dB (0.0 mm)	-	-	-
<b>Frequenz</b>	1 Hz	1 Hz	454 Hz	1 Hz	-	-	-
<b>Schwellenwert</b>	0-RT (0.0 mm)	0-RT (1.00 mm)	0-RT (0.3 mm)	20.0 Pa	-	-	-
<b>Messwertart</b>	Geophon In ± 4.3 V	Geophon In ± 4.3 V	Geophon In ± 4.3 V	Mikrofon (0 Lineal)	-	-	-
<b>Messwertart</b>	OK	OK	Fehler		-	-	-

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## 2 DECLARATION OF CONFORMITY

**Vibration Meter VibraZEB VM-7TS Manufacturer:**

Zünderwerke Ernst Brün GmbH, Werkstrasse 111, 45721 Haltern am See (Germany)

Based on test results using appropriate standards, the product conforms to:

Directive 2014/30/EU, Electromagnetic Compatibility (EMC) Directive 2014/35/EU, Low Voltage (LVD)



**This Conformity is indicated by the symbol, “Conformité européenne”**

## 3 Safety instructions

Warning or precaution notes are included throughout the manual, when they are applicable. A precaution identifies actions and situations that can produce damage to the measurement instrument. A warning identifies actions and situations that involve risk for the user of the equipment. Follow the instructions of the manual at all times in order to use the seismograph and software in a safe way.

## *1 Operation*

## 1.1 Introduction

This guide is about how to use the vibration meter software which you have received with your ZEB vibration meter. The program can be installed on Windows 7, 8 or 10 (32 bit/64 bit). A basic familiarity with the operating system is assumed.

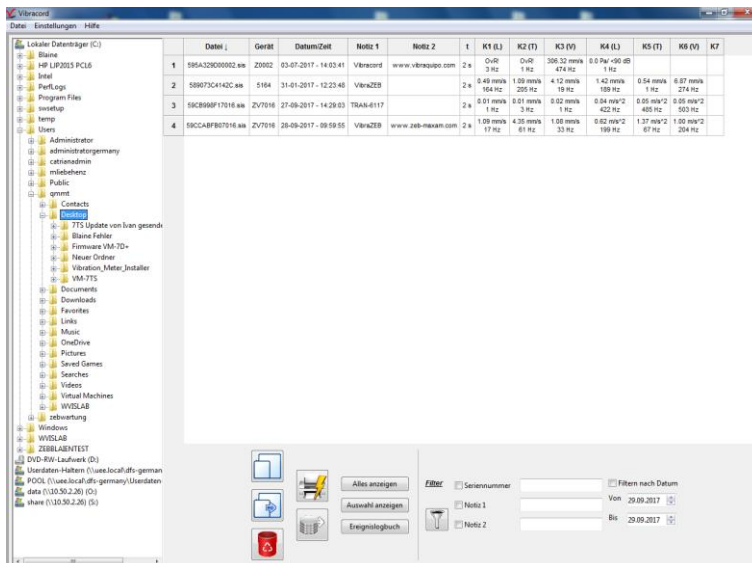
## 1.2 Installation

Connect the USB flash drive to the PC. If the window with the drives content does not open automatically navigate by hand to the drive. Run the utility "vibration meter XX.exe" (as administrator) and follow the installation instructions.

## 1.3 Startwindow

After a successful install of the program a screen with the open file dialogue is shown:

The menu bar is located at the top, on the left side is the directory structure for navigation, on the right hand side events are shown and in the lower part events can be loaded, printed, organized and sorted.



Move: Moves the highlighted events into another directory



Copy: Copies the highlighted events into another directory



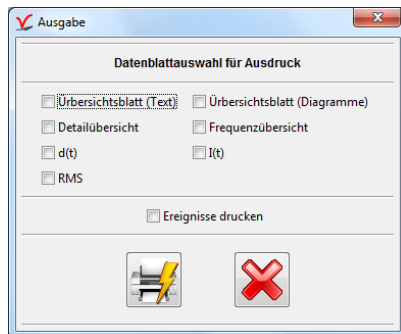
Delete: Deletes highlighted events

WARNING: This action cannot be undone.





**Print:** Starts the printer dialogue. The preferred output sheets can be selected.



**Export:** Exports all highlighted events into a CSV file.

**Show all:** Loads all events in the directory into the program.

**Show selected:** Only loads a single event.

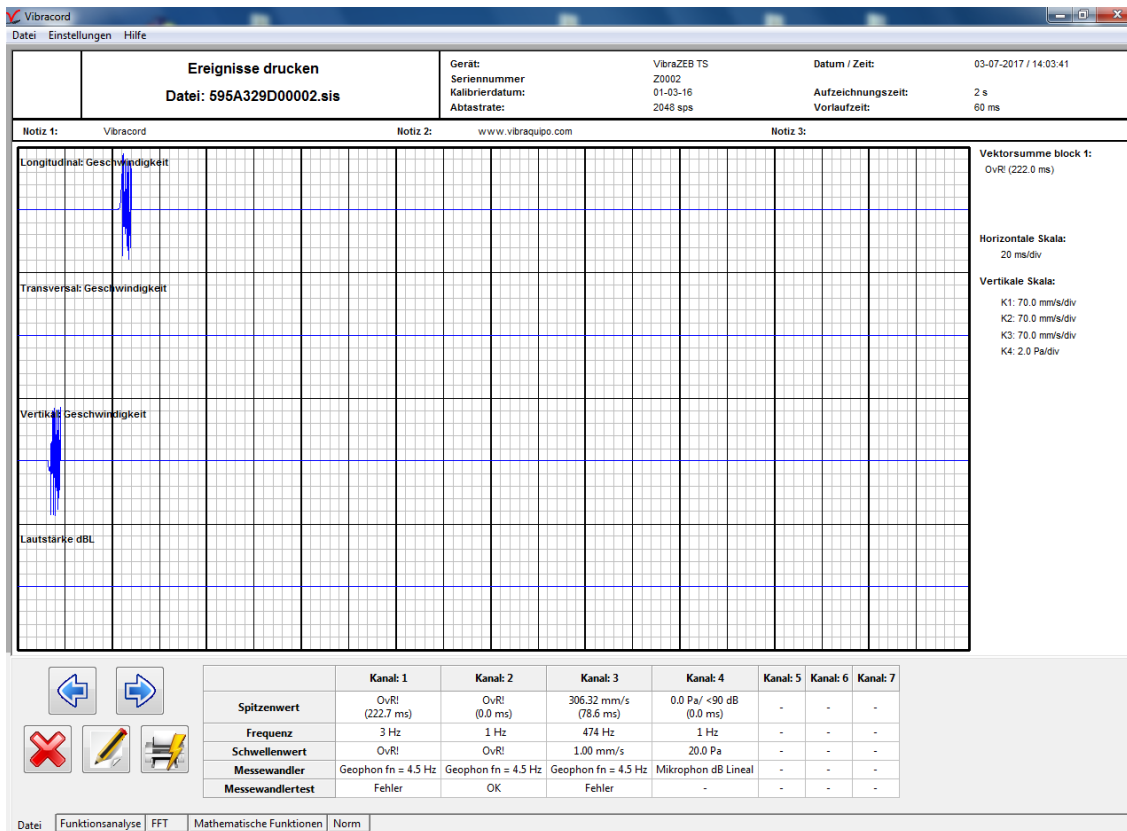


**Show Log:** Loads log book entries.

**Filteroptions:** Allows filtering by serial, Note 1, Note 2 or date.

## 1.4 Main page

The main page displays wave forms and bar graphs.



The windows is parted into:

top: Overview

middle: Waveform (Bargraph) and peak values

bottom: Navigation buttons and infomartion table



Use these buttons to navigate through the files if more than one event was opened



Close: Closes this window and reverts to the file explorer view



Notes: Allows to edit the text in the notes

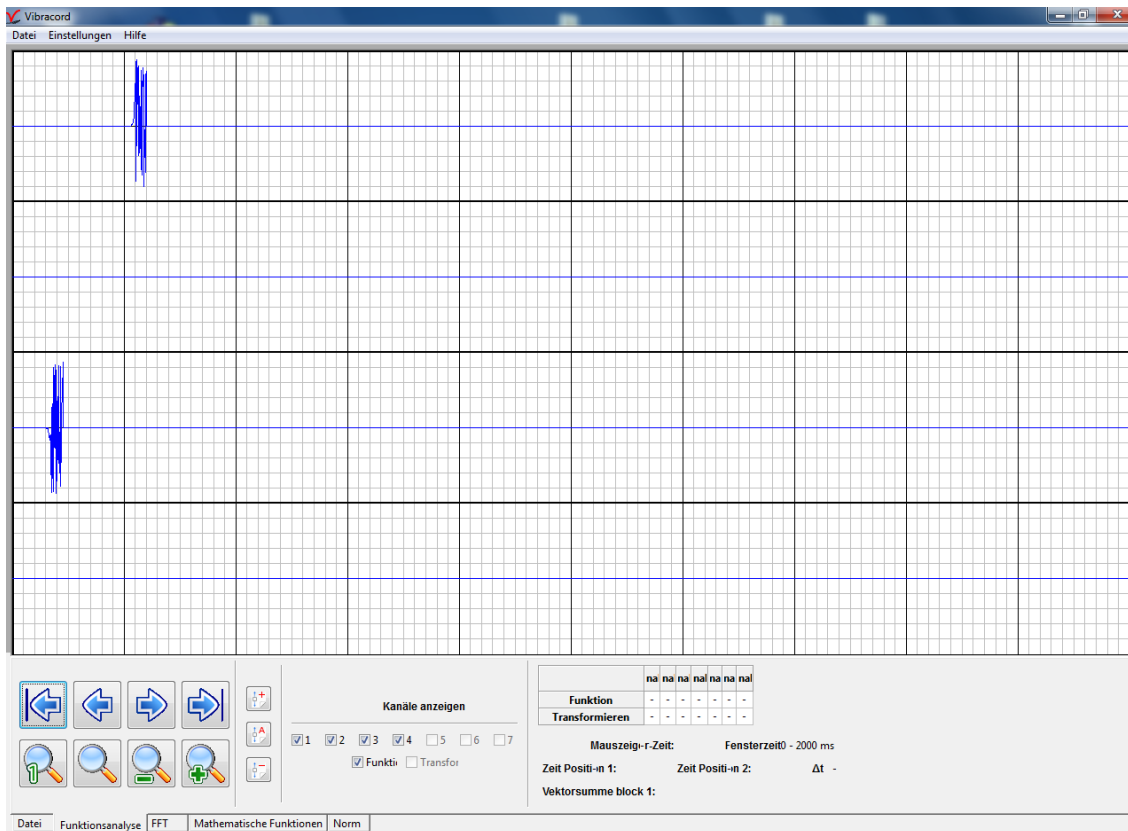


Print: Prints a protocall oft he current event

Tabs: Switch through the single tabs: File (main page), function analysis, FFT frequency analysis, mathematical functions and prevention criteria.

## 1.5 Function analysis

This tabs allow a detailed view of the event as wave form.



Moves the wave form (forward, reward, start, end)



Zoom (smaller, bigger, full, selection (use left and right mouse buttons to set borders))



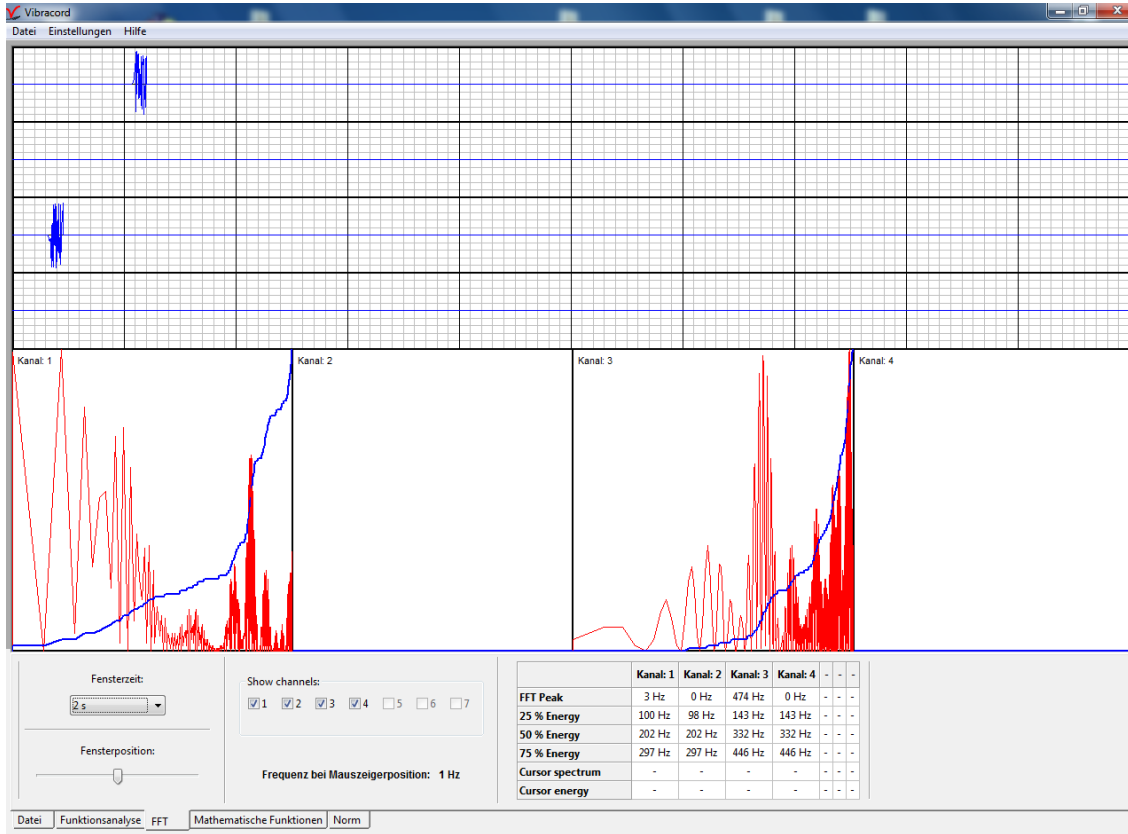
Y-Axis (smaller, bigger, automatic)

☒ 1 ☒ 2 Show channels

Datatable: Amplitude, frequency and values at mouse position

## 1.6 FFT Frequency analysis

This tab offers an advanced frequency analysis with Fast-Fourier-Transformation. This window is only available for wave form records.



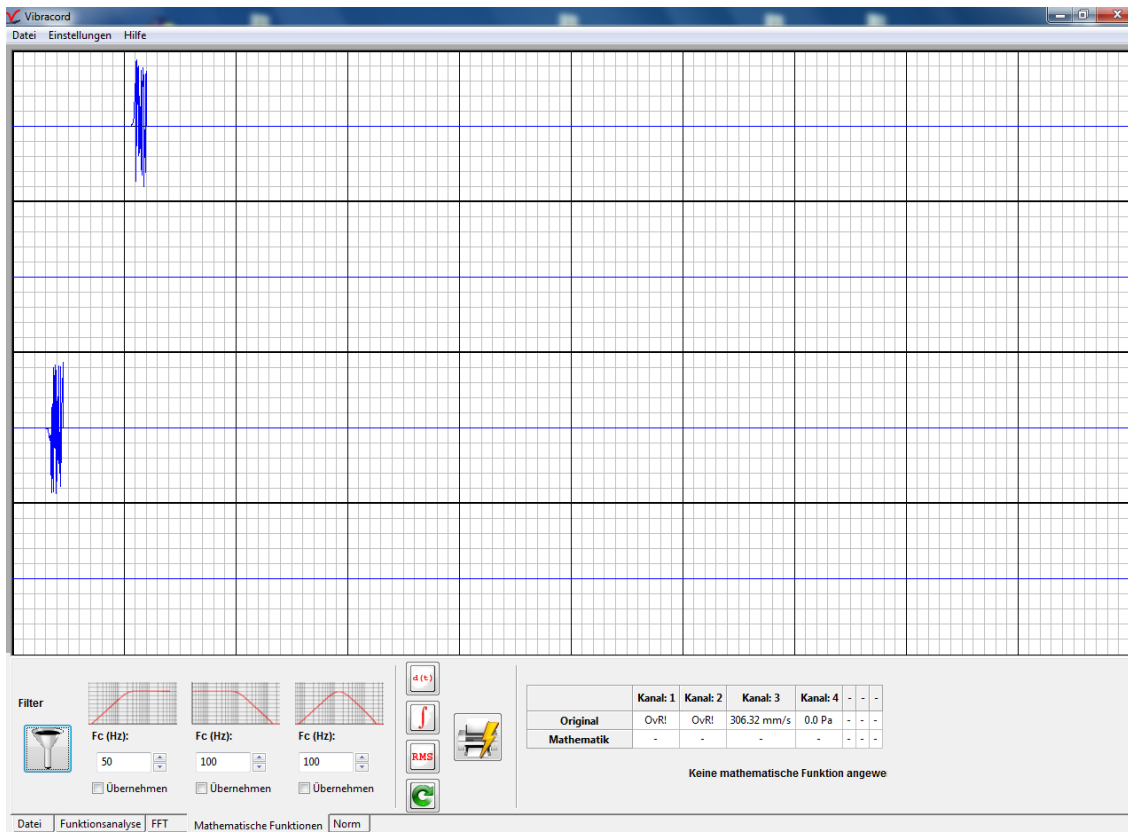
Windowtime: needed for FFT

Position: moves the windows through the event

Show channel: shows or hides single channels

Table: shows frequencies and energylevel for all channels.

## 1.7 Mathematic Functions



Original curve is displayed blue and calculated wave is displayed red.



Filter: Highpass, Lowpass and Bandpassfilters are available



Deviation: calculates the acceleration



Integration: calculates the movement



RMS: calculates the root mean square value



Undo: removes all filters



Print: Prints an overview of this page

Table: Shows all original and calculated values

## 1.8 Prevention Criteria

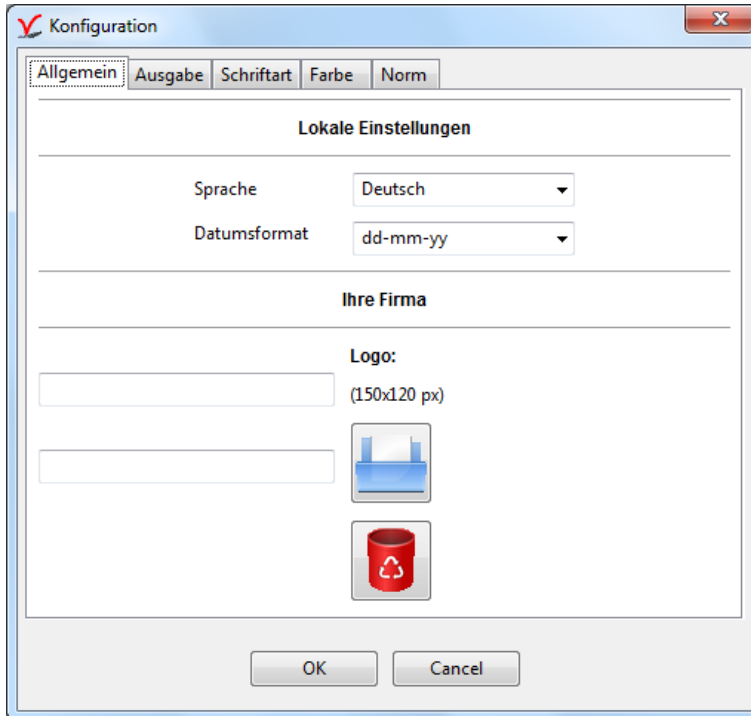


Creates a report and opens the printer dialogue.

## 1.9 Configuration

Opens the configuration windows via **Seettings** → **Configuration**.

### Main

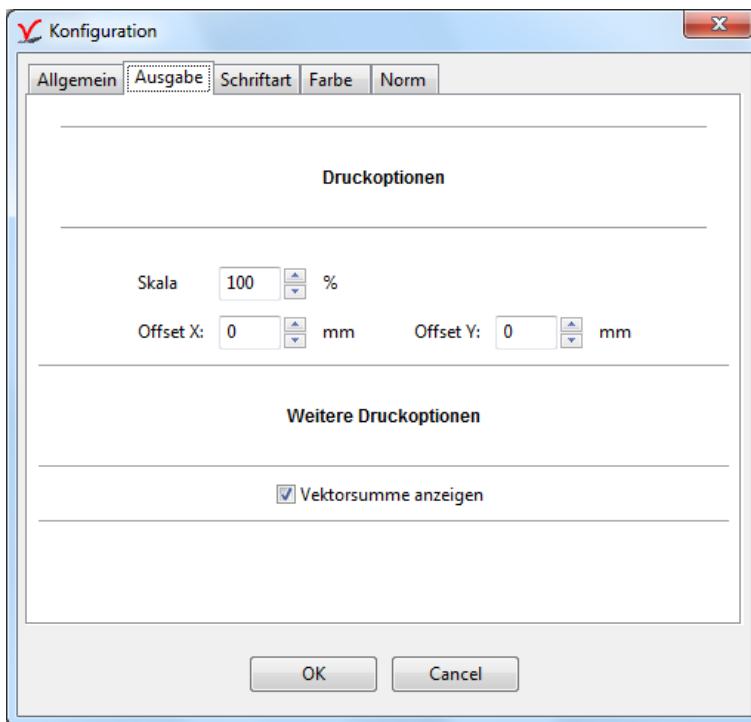


Language: Select the program and report language (application needs to be restarted after changes).

Date format: Select the date format according to your country.

Use the button to include the logo of your company in the header of the report.

Note: The logo must have a size of 150 x 120 pixels in bmp format. Use any graphics program to convert your logo to this size and format.

Printer

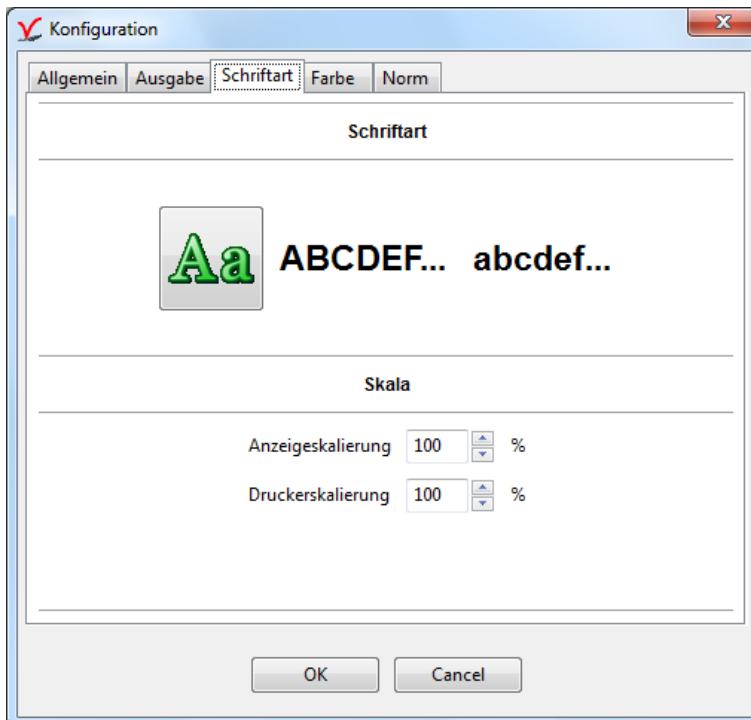
Scale: 100% is one complete page according to the printer setup

Offset: Modification of the printed character size. Use if text overlaps lines.

Show vector sum: With this check box it is possible to show or hide the vector sum in the printed reports.



## Font

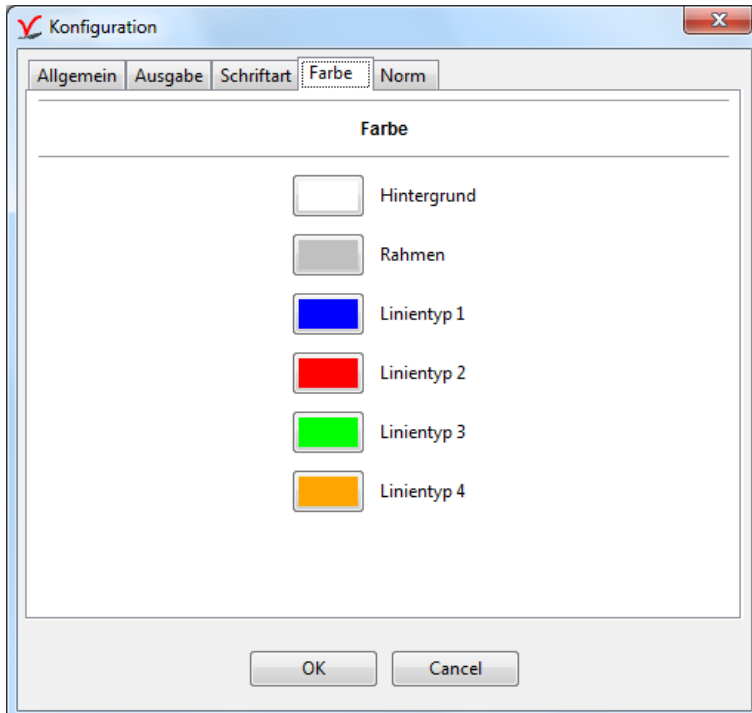


Change font: Change font for reports on screen and print function

If the selected font exceeds the assigned limits or is too small, change the following values:

Screen font scale: Increase or decrease the font size on the screen

Printer font scale: Increase or decrease the font size in the printed reports

Colour

Use this dialog to change the different colours used in the reports.

## Norm

**Konfiguration**

Allgemein | Ausgabe | Schriftart | Farbe | **Norm**

**Norm**

Auswahl des Beurteilungskriteriums: DIN 4150

**Analysemethode**

Analysemethode: FFT Spitzenwert

Frequenzbereich: 0-512 Hz

Achse X FFT: Logarithmisch

**Kriterium für Funktion**

☒ Nicht bearbeitete Funktion anzeigen

☒ Transformierte Funktion anzeigen

OK Cancel

Norm to use: Select the Norm to use in this drop box

Frequency to use: In this drop box, select the frequency calculation method used by the Norm. If the Norm specifies the method, the selection is not overridden.

Frequency range: Select the frequency range for the FFT.

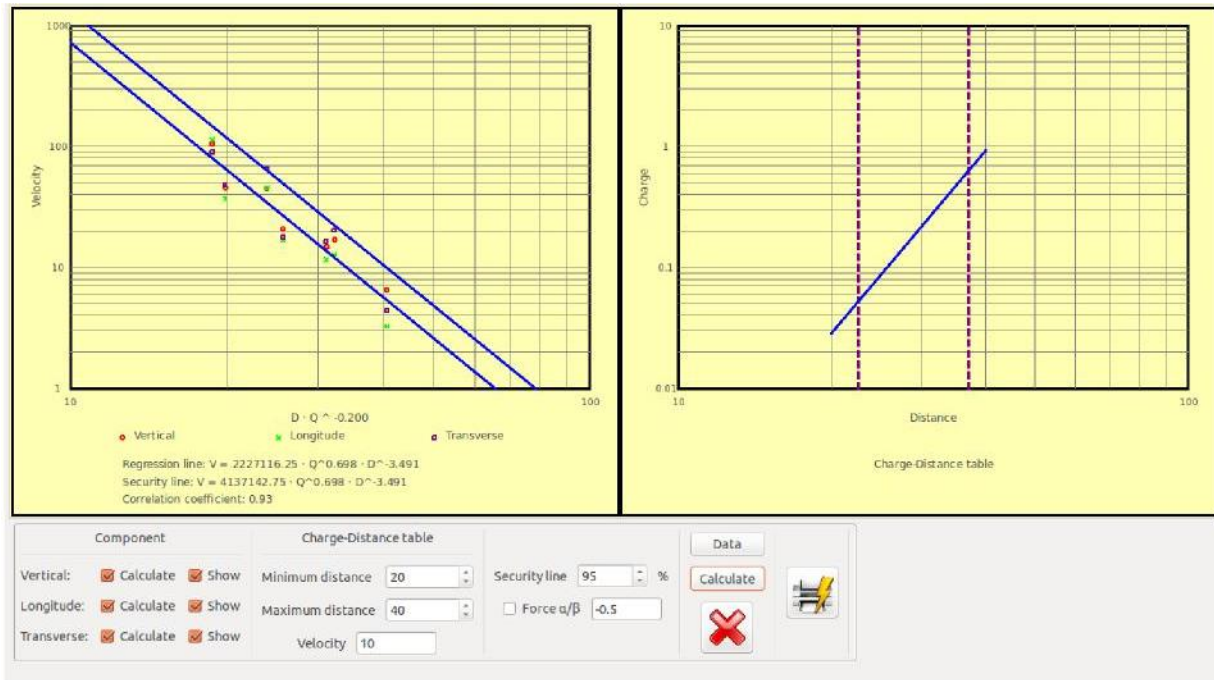
FFX X Axis: Specify if you want a linear or logarithmic X axis.

Show original wave: Use this check box if you want to see the original wave in the reports (only applied to Norms that mathematically transform the wave).

Show transformed wave: Use this check box if you want to see the transformed wave in the reports (only applied to Norms that mathematically transform the wave)

## 1.10 Regression analysis

This utility allows the calculation of the charge – distance table in a blast with the recorded data.



Regression adjust window: In this window, you can see the regression adjustment, with the adjustment line, security line and the different points used for the study.

Charge – distance table window: In this window, you will see a graph with the distance (X axis) and the charge (Y axis). To know the maximum charge allowed for a specific distance, find the distance in the X axis, cut the blue line with a perpendicular and use a horizontal line at this point to find the charge value. The magenta lines limit the area where the study is reliable.

Component: Use these check boxes to enable or disable the components for the adjustment and / or show the graph.

Charge – distance table data: Introduce the maximum and minimum distance for the charge – distance table, and the maximum vibration value allowed.

Advanced options: Introduce the confidence level of the security line (usually 95 %). By default, the program will calculate the best fit line, but it is possible to force the alfa / beta relation.

Data button: Use this button to introduce the data of the analysis. A dialog will appear to introduce it.

Calculate button: After introducing the data and selecting the values explained above, use this button to calculate the regression analysis.

Print button: Use this button to print a report.

### 1.11 Help/About



Shows version and supported devices. Also offers program updates.

**NOTE:**

**This user manual was updated Q1/2019.**

**If you have any questions to this or any other ZEB product feel free to write an e-mail to [zeb@zeb.maxam.net](mailto:zeb@zeb.maxam.net) or call +49 2365 5020 - 900.**