

How To Setup Dewesoft X DAQ Software



 **DEWESoft® X**

How to enter the Settings?

Dewesoft has been developing leading data acquisition software for more than 20 years. [Dewesoft X](#) is the world's best data acquisition, recording, and data analysis software. Software received multiple international awards, is innovative, very easy to use, and requires no programming to acquire, store and analyze data from analog, digital, CAN, GPS, video, serial, and many other data sources.

After you have successfully [downloaded](#) and installed the Dewesoft software it is time to set it up according to your needs. To access the settings in [Dewesoft X](#), go to the top right corner of the program.

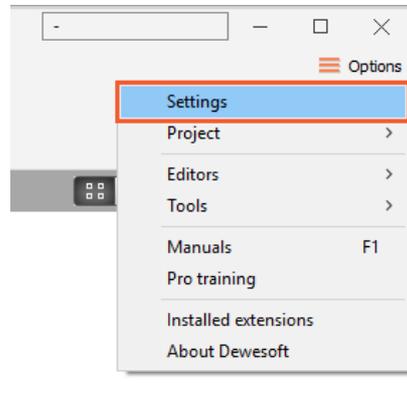


Image 1: Entering settings button

When you open the Settings, the following screen will appear, which shows us the basic structure:

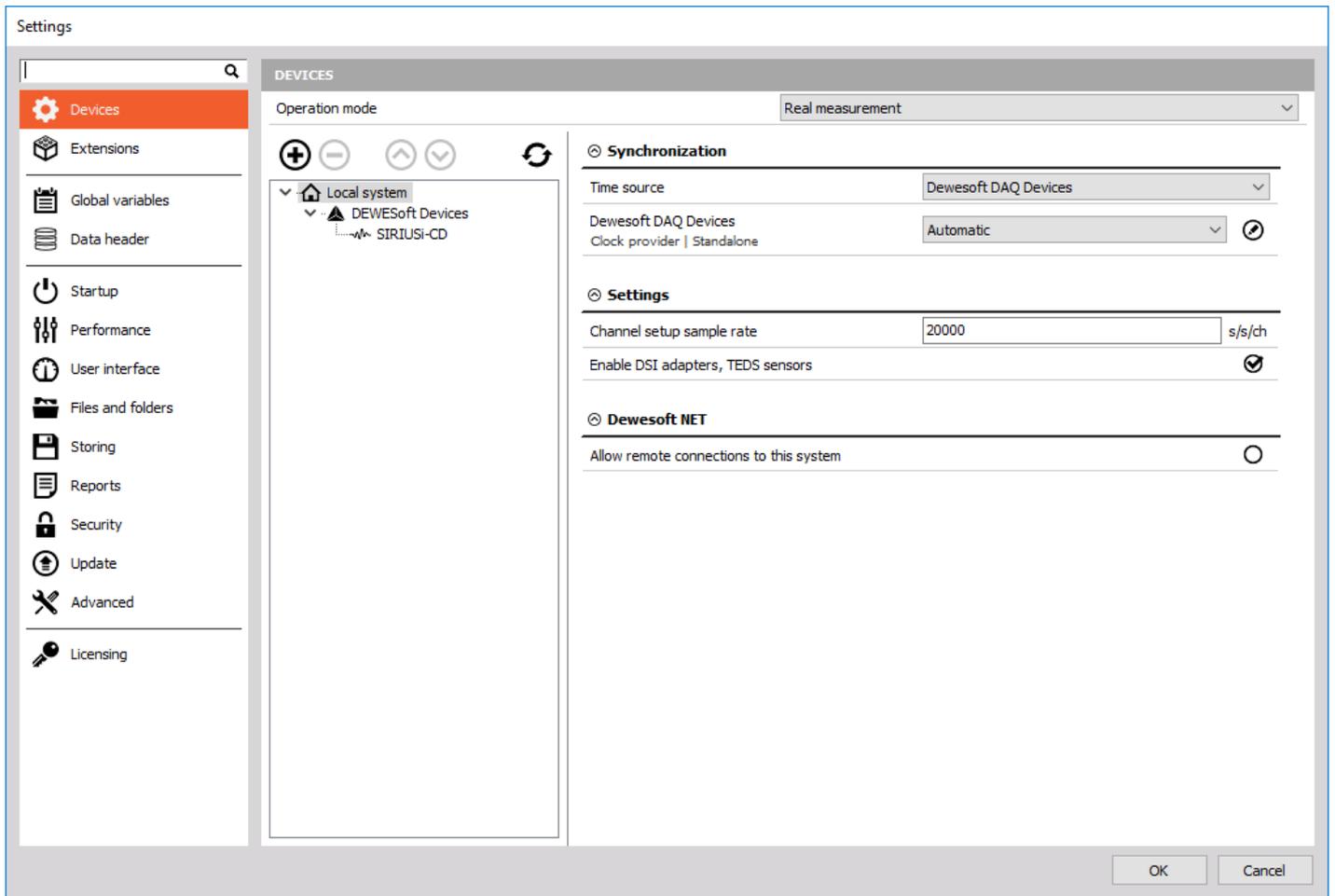


Image 2: Dewesoft settings structure

- Devices - view the connected DAQ devices (Real measurement mode) or simulate channels (Simulation mode) to make an offline setup.

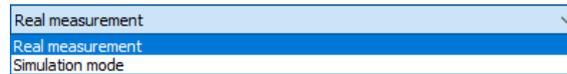


Image 3: Dewesoft settings operation mode

- Real measurement (DAQ devices ([SIRIUS](#), [DEWE-43](#), [KRYPTON](#)) are used to acquire data.)
- Simulation (Simulation mode can be used when we don't have any DAQ devices connected to our system and we want to simulate different types of channels to make an offline setup.)
- Extensions - Add a plugin or extension according to your needs.
- Global variables - Define the channels, that can be used in a sequencer, math section, or in displays.
- Data header - Define the input fields for different operators.
- Startup - Allow multiple instances of [Dewesoft X](#) or load a setup or a sequence as soon as [Dewesoft X](#) starts.
- Performance - Select the application process priority, use multiple CPU cores, and define other performance characteristics.
- User interface - Adjust [Dewesoft X](#) according to your wishes - change the language, font size, background color, and many other settings.
- Files and folders - Define the starting folder where the setups, data files, and other database files are stored.
- Storing - Create a zipped data file to reduce the file size or use the video compression.
- Reports - Use your own company logo in reports when printing the data file.
- Security - Lock the settings with a password. A password can also be used to change the setup, editing sensors, stopping the measurement, changing the sequence, or leaving the full screen.
- Advanced - Set an advanced option for different areas, like hardware, visuals, math, diagnostics, and analysis.
- Licensing - Enter license number and register software. You can choose between online or offline registration. To receive a fully functional 30-day evaluation license for [Dewesoft X](#) software fill and submit the [form](#) on our [web page](#).

How to setup the Real measurement?

Which Synchronization types can be used?

The basic idea of synchronization is to provide a clock signal from a **time source**. **Clock slave** receives the signal from the clock provider and the devices are synchronized.

Devices can be synchronized in two different ways:

- Software synchronization - The software synchronization accuracy is around 2-10 ms, which is enough for simple temperature measurement. This synchronization solution requires no additional hardware.
- Hardware synchronization - It is a hardware solution that can synchronize all USB devices ([SIRIUS](#), [DEWE-43](#), ...) and [EtherCAT](#) devices.

We have connected one [SIRIUS](#), one [DEWE-43](#) and one [KRYPTON](#) measurement unit to the [SBOX](#)

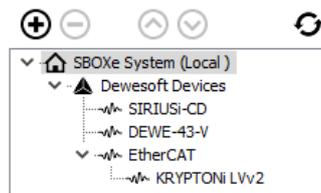


Image 27: Dewsosoft settings device list

Time source

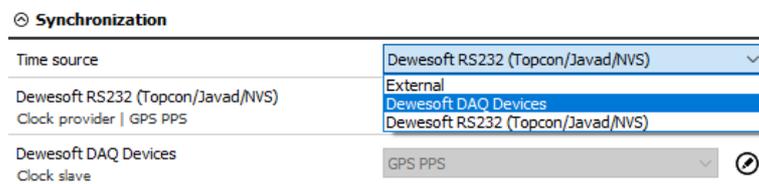


Image 28: Synchronization time source options

The time source provides a clock for synchronization. It can be selected from:

- Dewsosoft DAQ devices (when we have a Dewsosoft measurement device connected to our computer),
- External (Clock/Trigger, IRIG-B DC, NTP, GPS PPS),
- PC clock (when we have only a computer, without a measurement device),
- GPS devices (Dewsosoft RS232 (Topcon/Javad/NVS), NMEA compatible GPS, ...).

Synchronization types are dependent and automatically adjusted from the DAQ devices connected to our system.

Type of synchronization

If Dewsosoft DAQ device is selected as a time source, a clock provider must be selected from:

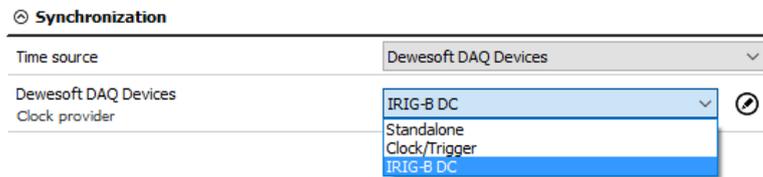


Image 29: Synchronization clock provider options

- Automatic - this option automatically selects the best option for synchronization regarding the hardware connected to the system.
- Standalone - only one device, there is no synchronization between devices needed.
- SoftSync - this synchronization solution requires no additional hardware. The accuracy is > 10 ms.
- Clock/Trigger - the clock of the device gives a trigger signal.
- IRIG-B DC - It contains time-of-year and year information in a BCD format (it contains the information about the absolute time). This is the best way to synchronize the devices because it is the most exact one.
- GPS PPS - Since the satellites are transmitting exact absolute time and better receivers usually output this pulse with high precision (below one microsecond), we can use this technology to synchronize remote systems - and there is no distance limit.
- NTP - Network Time Protocol (**NTP**) is a networking protocol for clock synchronization between computer systems. It is less accurate than other methods.



Image 30: External NTP clock provider

To enter the addresses of the NTP server click the edit button near the drop-down menu. If you want to have more devices synchronized via NTP protocol, the same server address must be entered in all of them.



Image 31: Check NTP servers

When you check NTP servers, the time and date of the server will show. If the server address is wrong, the check will fail.

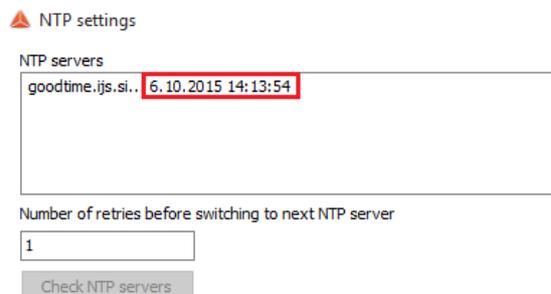
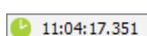


Image 32: NTP server response

If the synchronization via NTP is successful, you will see a green clock next to the time in measure mode.



Synchronization between Dewesoft USB devices

	Accuracy	When to use	Device
Clock/trigger	< 1 μ s	stationary	Dewesoft, RoaDyn
IRIG-B DC	< 1 μ s	stationary	Dewesoft, Meinberg
GPS PPS	< 1 μ s	mobile	GPS receiver
NTP	< 10 ms	ethernet	NTP server
SoftSync	> 10 ms	when there is no external time source	/

Any Dewesoft device can be precisely synchronized by hardware ([SIRIUS](#), [DEWE-43](#), [MINITAURs](#), [DS-CAN2](#)).

When using the NET system, there are several possibilities that can be used for synchronization:

- Clock/trigger - relative time
- IRIG-B DC Master / IRIG-B DC Slave - absolute time
- GPS - absolute time
- NTP - absolute time

Clock/trigger connection example

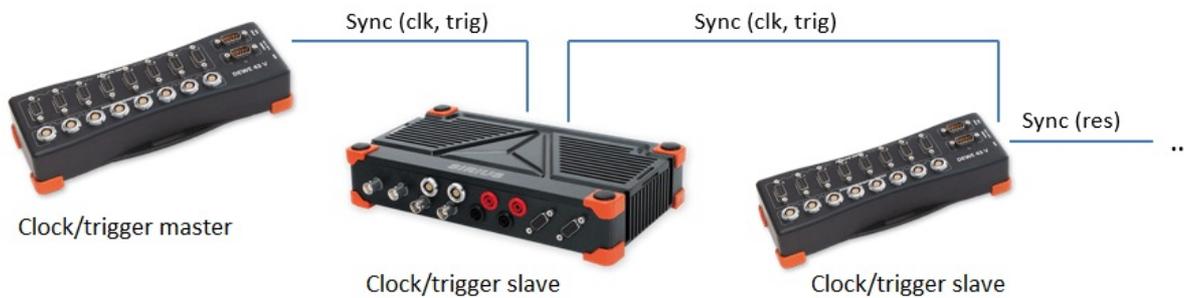


Image 34: Clock trigger connection example

IRIG-B DC connection example of one unit

- The *Dewesoft device* as IRIG-B DC generator



Image 35: IRIG-B DC connection example

b) *External* IRIG-B DC provider



Image 36: IRIG-B DC external provider

GPS PPS connection example of one unit

a) The *Dewesoft device* has a GPS receiver



Image 37: GPS PPS connection example from Dewesoft device

b) *External* GPS receiver

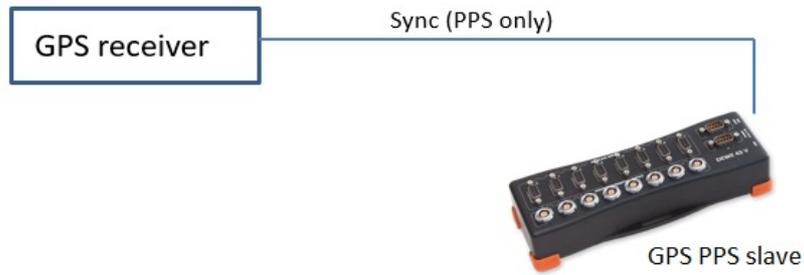


Image 38: GPS PPS connection example from GPS receiver

NTP connection example of one unit

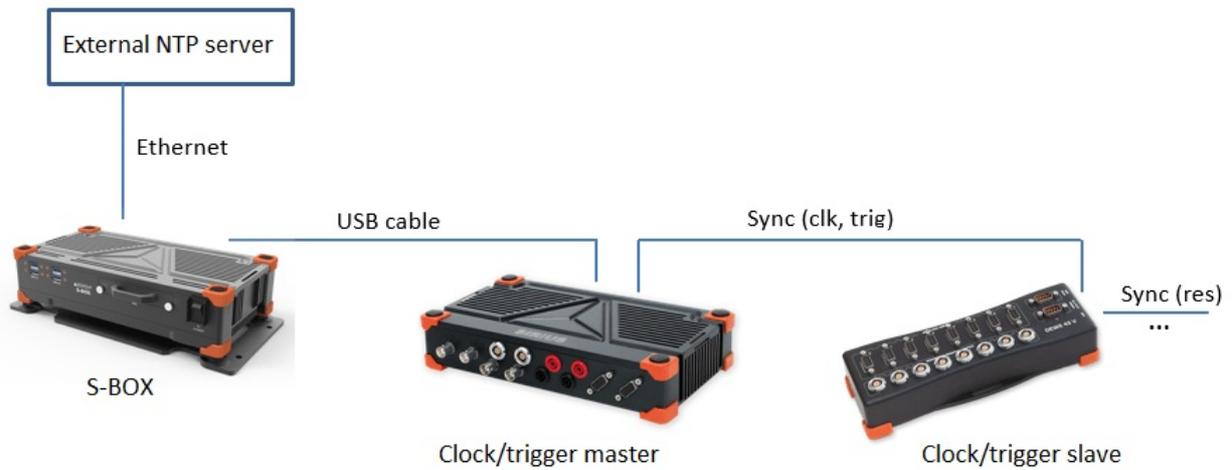


Image 39: NTP connection example

Synchronization with [ECAT-SYNC-JUNCTION](#)

[ECAT-SYNC-JUNCTION](#) works in the same way as other Dewesoft devices. It is automatically recognized within the [Dewesoft X](#) software (supported in version X2 SP4). By default, [ECAT-SYNC-JUNCTION](#) will be set up to synchronize between [KRYPTON EtherCAT@](#) and [SIRIUS USB](#).

With [ECAT-SYNC-JUNCTION](#) several connection options are possible:

- Synchronization of [SIRIUS/DEWE-43 USB](#) with [KRYPTON/SIRIUSiwe EtherCAT@](#) devices, where the accuracy of synchronization is < microsecond

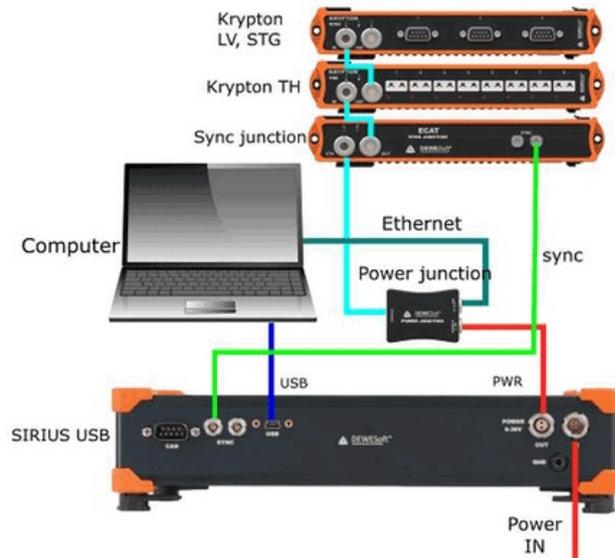


Image 40: USB and EtherCAT device synchronization

- Synchronization of [KRYPTON](#) module with external IRIG B DC triggering source

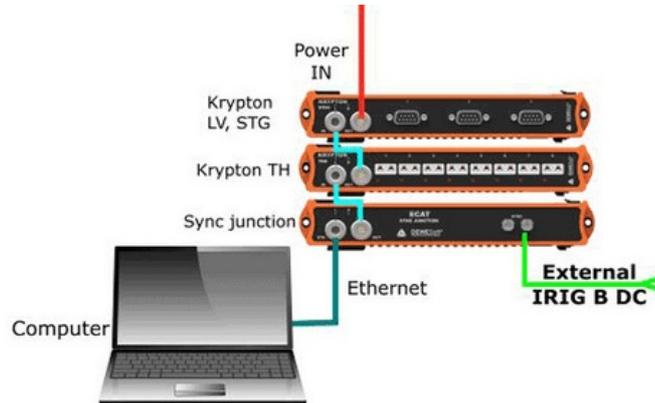


Image 50: EtherCAT external IRIG-B DC synchronization

- Synchronization of [KRYPTON](#) and [SIRIUS USB](#) with external IRIG B DC triggering source

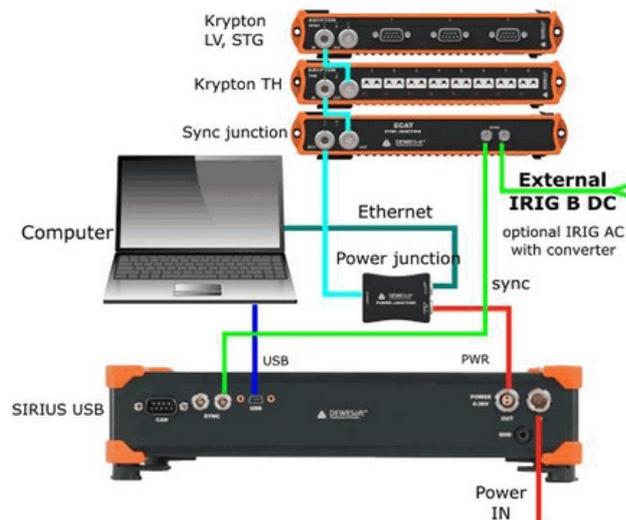


Image 51: EtherCAT and USB devices external IRIG-B DC synchronization

- Synchronization of [KRYPTON/SIRIUSiwe](#) with triggered cameras

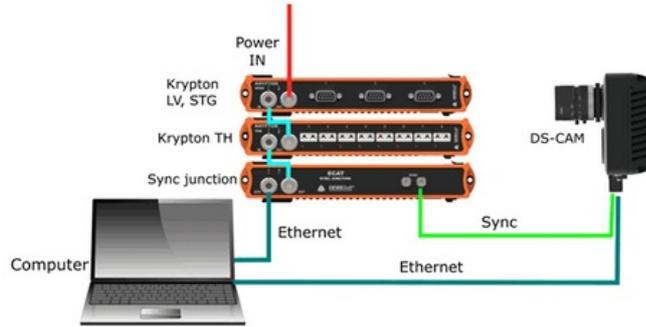


Image 52: EtherCAT chain triggering the camera

- Synchronization of [SIRIUS/DEWE-43 USB](#) with [KRYPTON/SIRIUSiwe](#) and triggered cameras

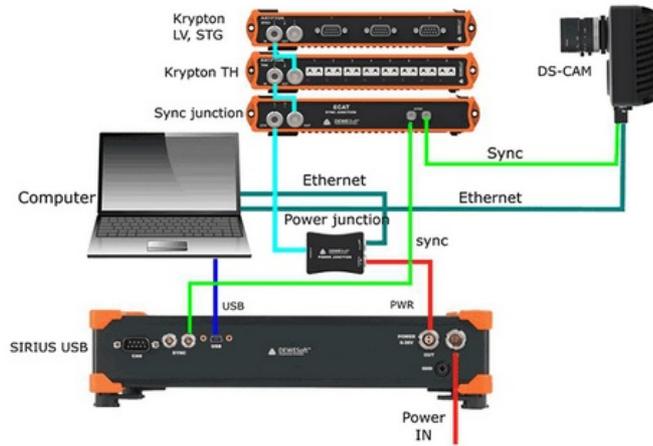


Image 53: EtherCAT and USB synchronization with the camera trigger

How to use Simulation mode?

Simulation mode can be used when we don't have any DAQ devices connected to our system and we want to simulate different types of channels to make an offline setup.

Simulation mode can be chosen from:

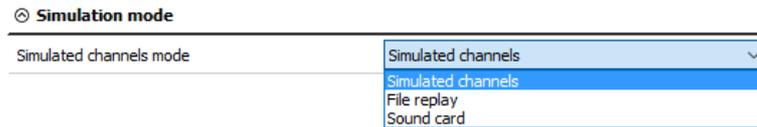


Image 55: Simulated channels mode selection

- Simulated channels - we define the number of analog in channels, counter channels, digital in channels, asynchronous analog out channels, and asynchronous digital out channels.

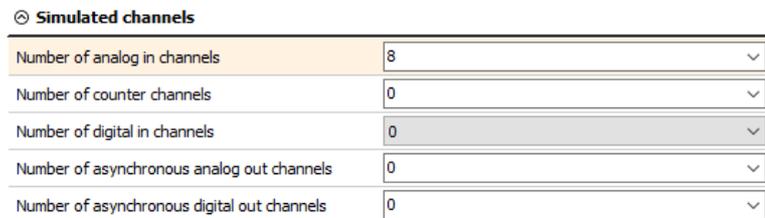


Image 56: Simulated channels

- File replay - we can replay files, that have already been recorded.

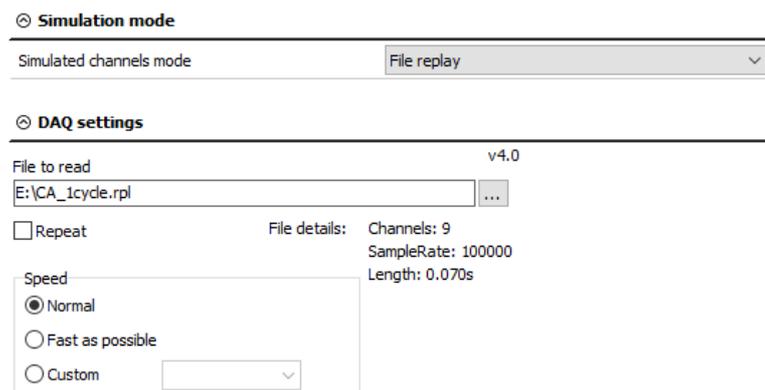


Image 57: File replay example

- Sound card - we can use the sound card in our computer to collect the data and make a measurement.

⊖ **Simulation mode**

Simulated channels mode

⊖ **DAQ settings**

Audio devices

V3.0

Image 58: Sound card example

What is Dewesoft NET and how to use it?

Dewesoft NET

With [Dewesoft NET](#), your measurement system can be controlled remotely with the ease of use you couldn't imagine before. [Dewesoft NET](#) also serves as the center for Distributed Data Acquisition systems where you have multiple systems located either together or scattered across an entire continent. By enabling this option, you allow the remote connections to your system.



Image 59: Enable Dewesoft NET

Once the remote connections to your system are allowed, the system can be added as a measurement unit on the client.

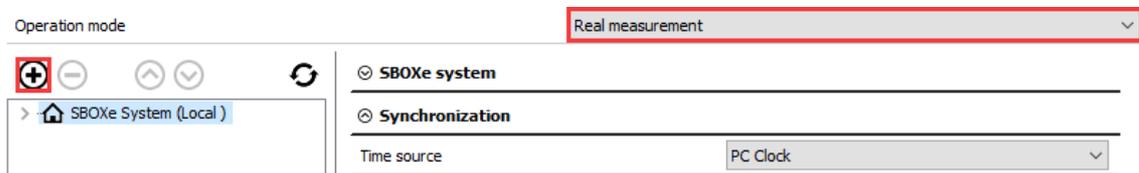


Image 60: Open add device window

Measurement units connected through the [Dewesoft NET](#) system can be found under Standard devices.

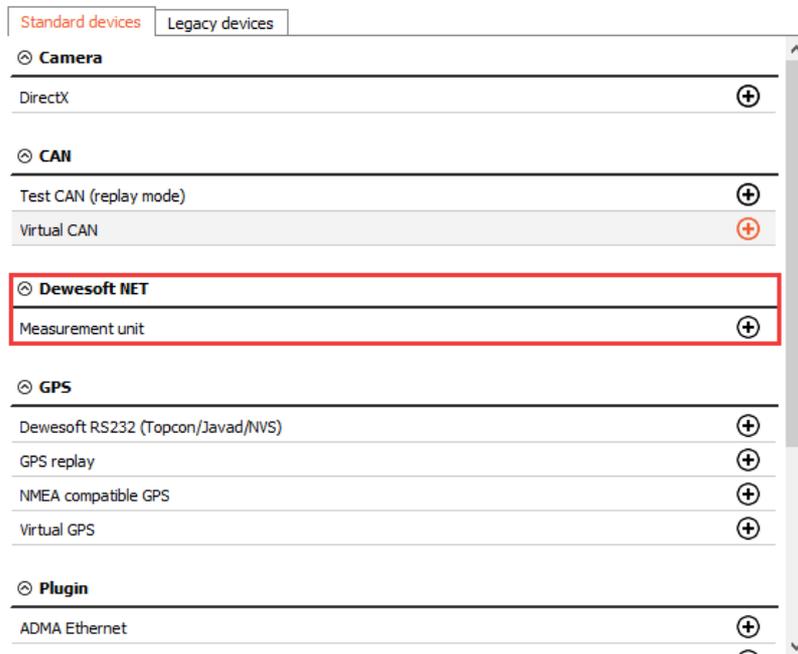


Image 61: Add Dewesoft NET measurement window

For more informations about the [Dewesoft NET](#) system, visit out [Dewesoft NET PRO training course](#).

How to add Extensions?

If you want to enable plugins or extensions, please go to the Extensions section. Extensions are divided into five different sections:

- Export (export the datafiles to different formats, like ATI(.ati), Google earth(.kml), Broadcast wave format(.bwf), Standard data file.dat, Wave.wav, Technical data management(.tdm), ...)
- Import (DS NET USB log files or text files.)
- Math application (set additional settings to several additional math applications like balancing, CA, fatigue analysis, FFT analyzer, FRF, Power, ...)
- Plugin (enable several additional plugins like Polygon, Sound Power, Weather station, DS NET, Chapter 10, AutoExport, Control channels, Ethernet receiver, ...)
- Visual controls (information about different visual controls inside Dewesoft like FRF geometry, Modal circle, Polygon, Rotor balancer, Altitude indicator.)

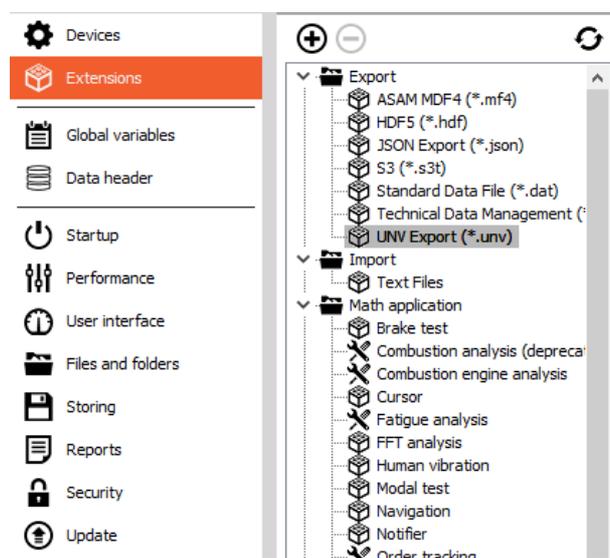


Image 62: Dewesoft extension list

To add a new extension, click the plus button. Here you can see plugins, that are disabled. To enable them, select the plugin and click on the Enable button.

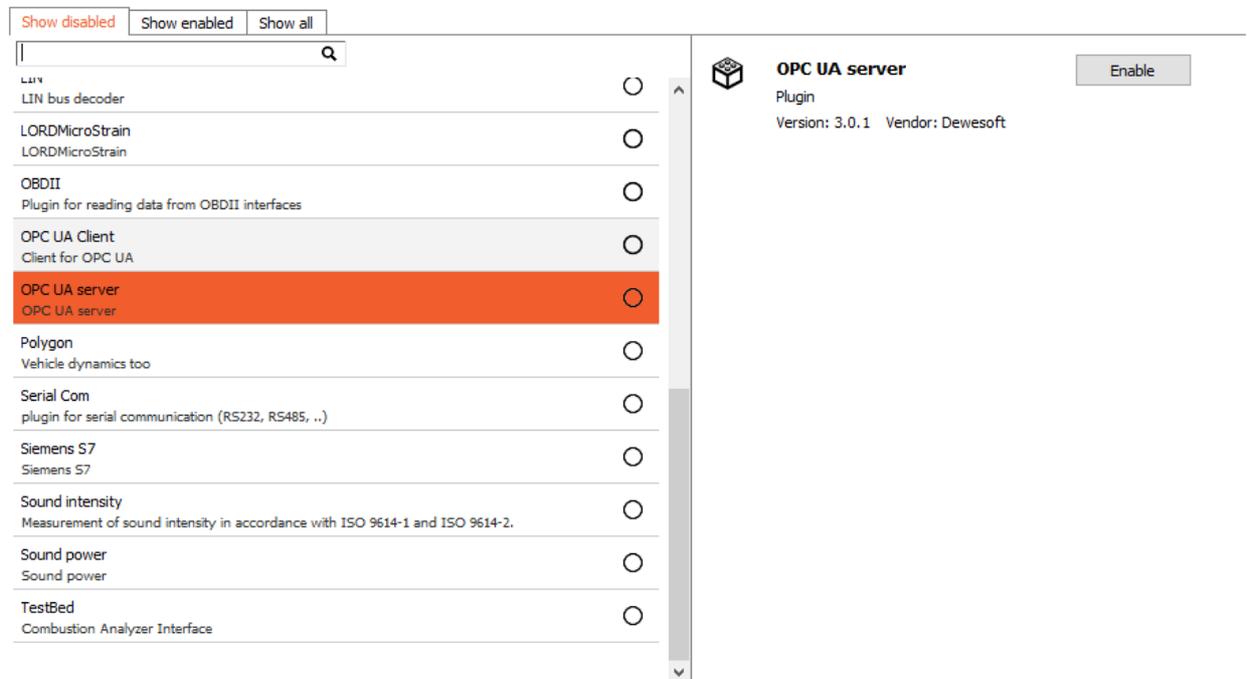


Image 63: Enable the extension in Dewesoft settings

When selecting all the needed Extensions, we can see some specific settings related to the selected plugin. To learn more about their meaning, please go to courses that are describing the specific section.

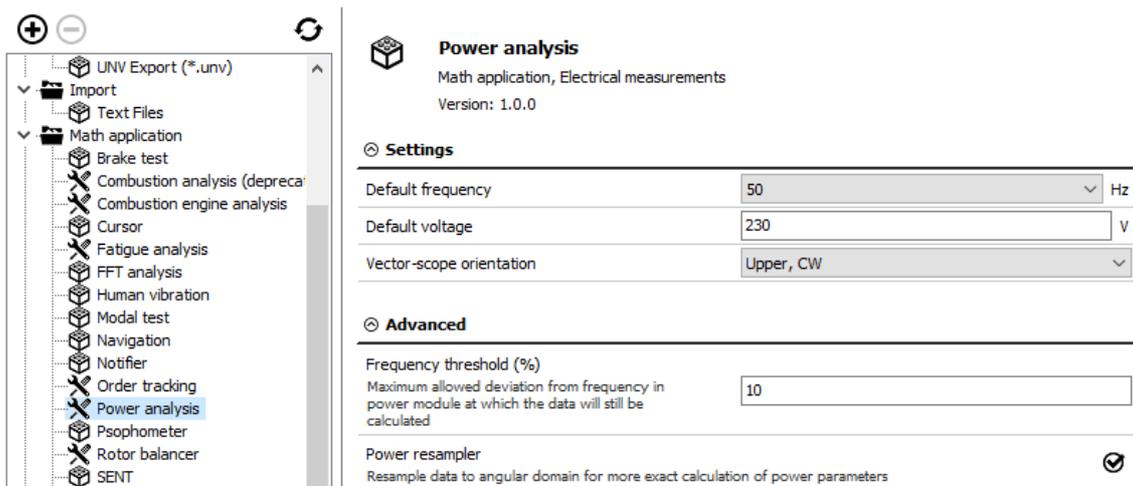


Image 64: Extensions specific settings

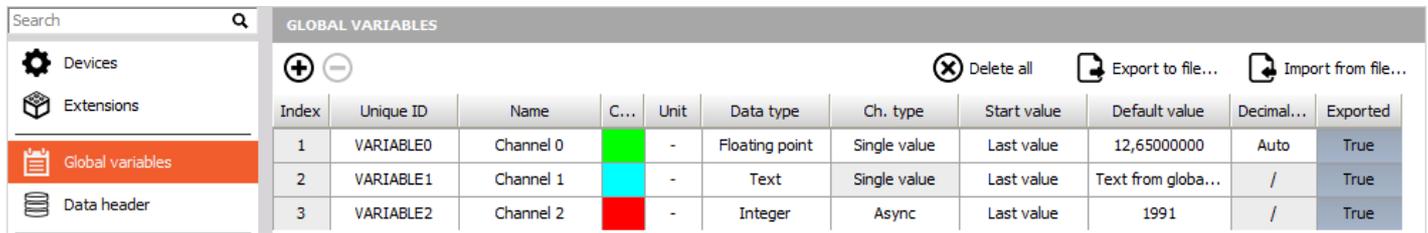
HINT: After enabling all the needed plugin, you have to refresh the list by clicking on the icon. After doing that, Dewesoft needs to be restarted.



Image 65: Refresh extensions list

What are Global Variables?

Global variables define the channels, which can be used in a sequencer, math section, and displays. New variables can be added with a plus button.



Index	Unique ID	Name	C...	Unit	Data type	Ch. type	Start value	Default value	Decimal...	Exported
1	VARIABLE0	Channel 0		-	Floating point	Single value	Last value	12,65000000	Auto	True
2	VARIABLE1	Channel 1		-	Text	Single value	Last value	Text from globa...	/	True
3	VARIABLE2	Channel 2		-	Integer	Async	Last value	1991	/	True

Image 66: Global variables set-up

The Unique ID must be defined, which is used as a reference for all other places where internal variables are used. Channel name can be freely defined, we can define the color and the unit.

Data type can be:

- Floating point (floating decimal point, we can also define the number of decimal numbers)
- Integer (whole number)
- Text (text written by the user)

Channel Type can be:

- Single value (storing only one value per entire measurement)
- Async (adding value each time the channel changes from sequencer or math)

Start value can be selected from:

- Last value (variable will remember the last value)
- Default value (it will always start with the defined default number)

Default value describes what value the channel has when starting up.

What is a Data Header?

Data header allows you to define input fields in which operators can enter additional not measured parameters at the start or end of the measurement.



Image 67: Data header settings

In data header, we can define:

- **Info field**- The Info button adds a new line in the right section of the window. Just click in the new line and enter the desired text, for example 'File header information'.

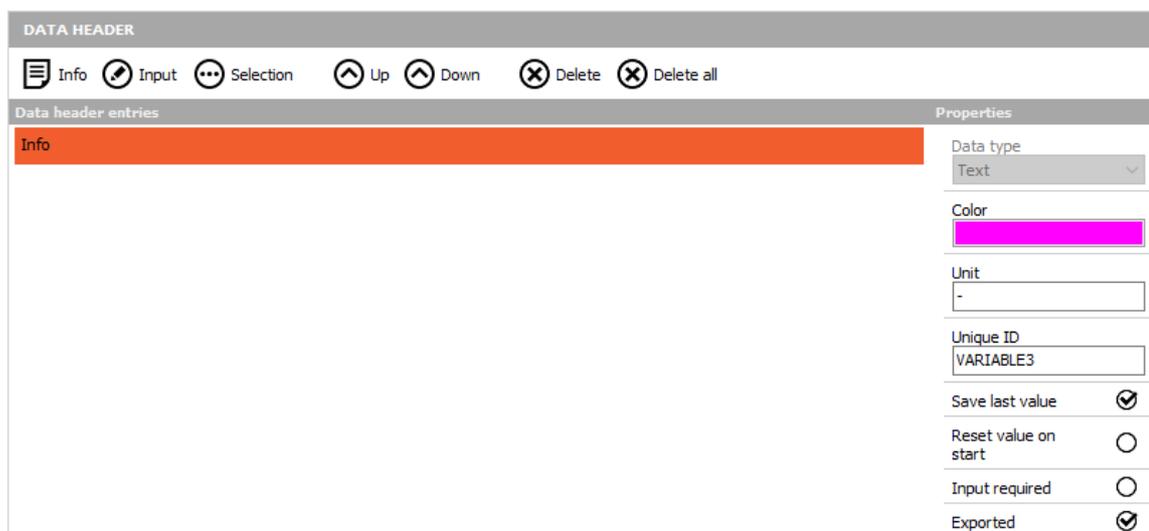


Image 68: Data header info field

- **Input field**- The Input field can be used for any single line values or comments (you can use it for example for location information...). Let's create a new field with the press on the Input icon and rename it (for example to 'Location'). To rename the field, just click on the name and overwrite it:

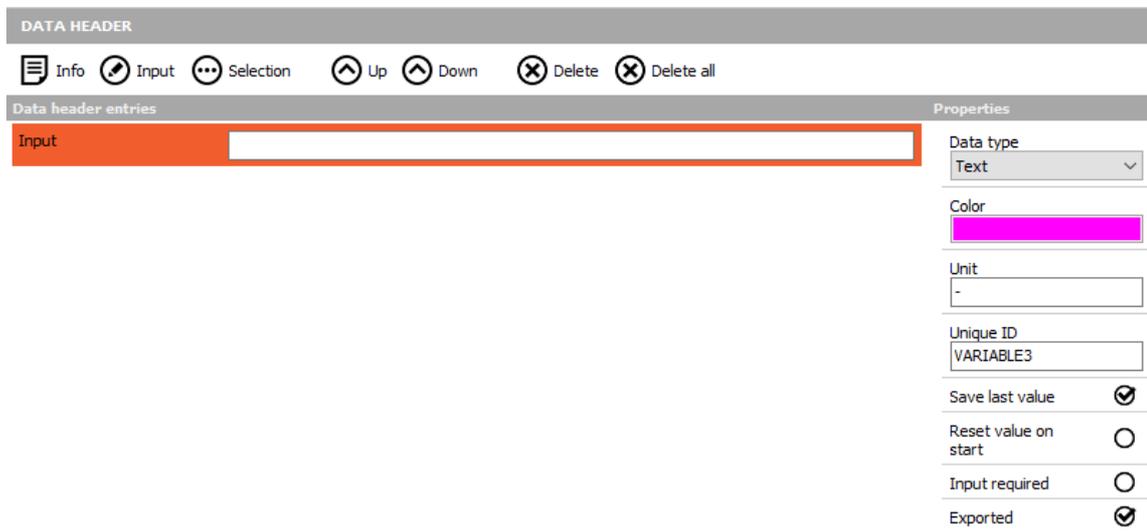


Image 69: Data header input field

- **Selection field** -The Selection field can be used for creating a list of 'value' and is very useful when you have to use the same 'value' very often. This can be for example a list of user names or also a list of departments within your company. Let's create a new list with the press on the Selection icon and label it (for example 'User' - click on 'Selection' and overwrite it).



Image 70: Data header selection

Now you have to define the content of your list. To do that, press the three dots button on the right side and Create Selection. When the list window appears, enter the desired names in the New item field and press the Add item button.

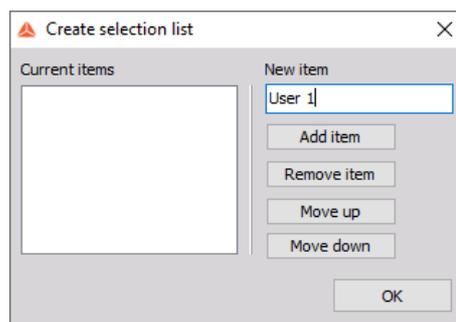


Image 71: Add item to the selection list

The name will appear in the list on the left side, in our example labeled User 1.

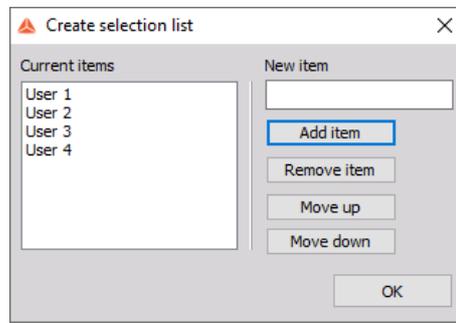


Image 72: List of items in the selection list

Enter as many names as required. You can also edit values directly on the list by selecting an item. To remove an item, just select it from the list on the left side and press the Remove item button. When all names are entered, press the OK button or press Cancel to reject all entries. The result of upper entries is the following drop-down list in the global header window:



Image 73: Selection list dropdown

- **Position up/down-** With both buttons up and down, you can now change the position of the:
 - File name field
 - Comments field
 - Input field
 - Selection field
 - Info field (like created above)
- You can **change the position of fields** at any time. Just select it (the red box will appear) and move it up or down using the appropriate button.
- **Delete field** - To remove unused or non-required fields, select the field and press the Delete icon. The only field you can't delete is the File name entry field.

Under header settings, you can select whether to ask for the header on the start of the storing or at the end:

- Ask for header on start option will pop up a window with all entries before the start of storing.
- Ask for header at the end will open the same window when the measurement is stopped.



Image 74: Data header settings

You can also export the header to .xml file or import the header from the setup file.

If we have selected the option Ask for the header at the end, we get the window like in the picture below after we stop storing the data. We can

see the input sections defined earlier in Settings.

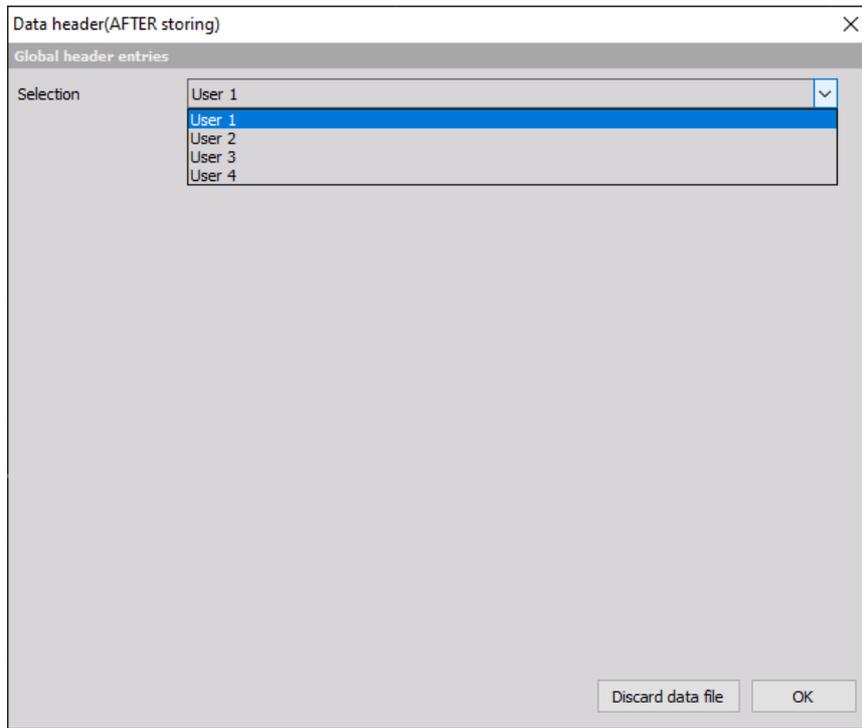


Image 75: Data header after storing

How to Startup the Dewesoft X?

Startup option allows you to select what do you want [Dewesoft X](#) to do when you start it.

Multiple instances of [Dewesoft X](#) can be selected to allow that [Dewesoft X](#) is started multiple times on the same computer for special applications (running different devices, analysing old data while measurement process is running...).



Image 76: Enable multiple instances option

If you have a measurement device connected to the computer, you cannot have multiple instances of [Dewesoft X](#)!

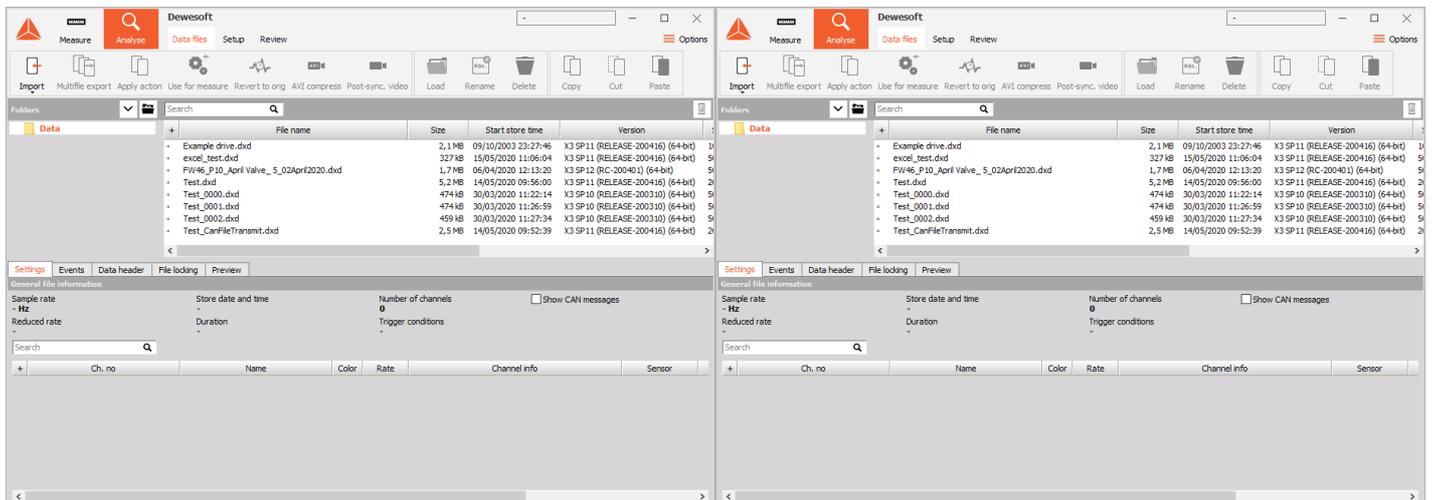


Image 77: Dewesoft running two instances

Under Starting setup options you select what to do when [Dewesoft X](#) starts.

- Nothing ([Dewesoft X](#) opens normally, no action is performed.)



Image 78: Default startup option

- Load setup ([Dewesoft X](#) automatically loads a defined setup. We can also tell the program to go straight to Acquisition mode or to start [Dewesoft X](#) in full-screen mode.)

⊙ **Starting setup**

When Dewesoft starts do Load setup ▾

Setup filename ⋮
 C:\DEWESoft\Setups

Automatically start acquisition

Start in full screen mode

Image 79: Load setup when Dewesoft starts

- Load sequence (Load sequence at start will load the sequence defined in the file name and run when [Dewesoft X](#) starts.)

⊙ **Starting setup**

When Dewesoft starts do Load sequence ▾

Sequence filename ⋮
 C:\DEWESoft\Setups

Image 80: Load sequence when Dewesoft starts

How to set Performance settings?

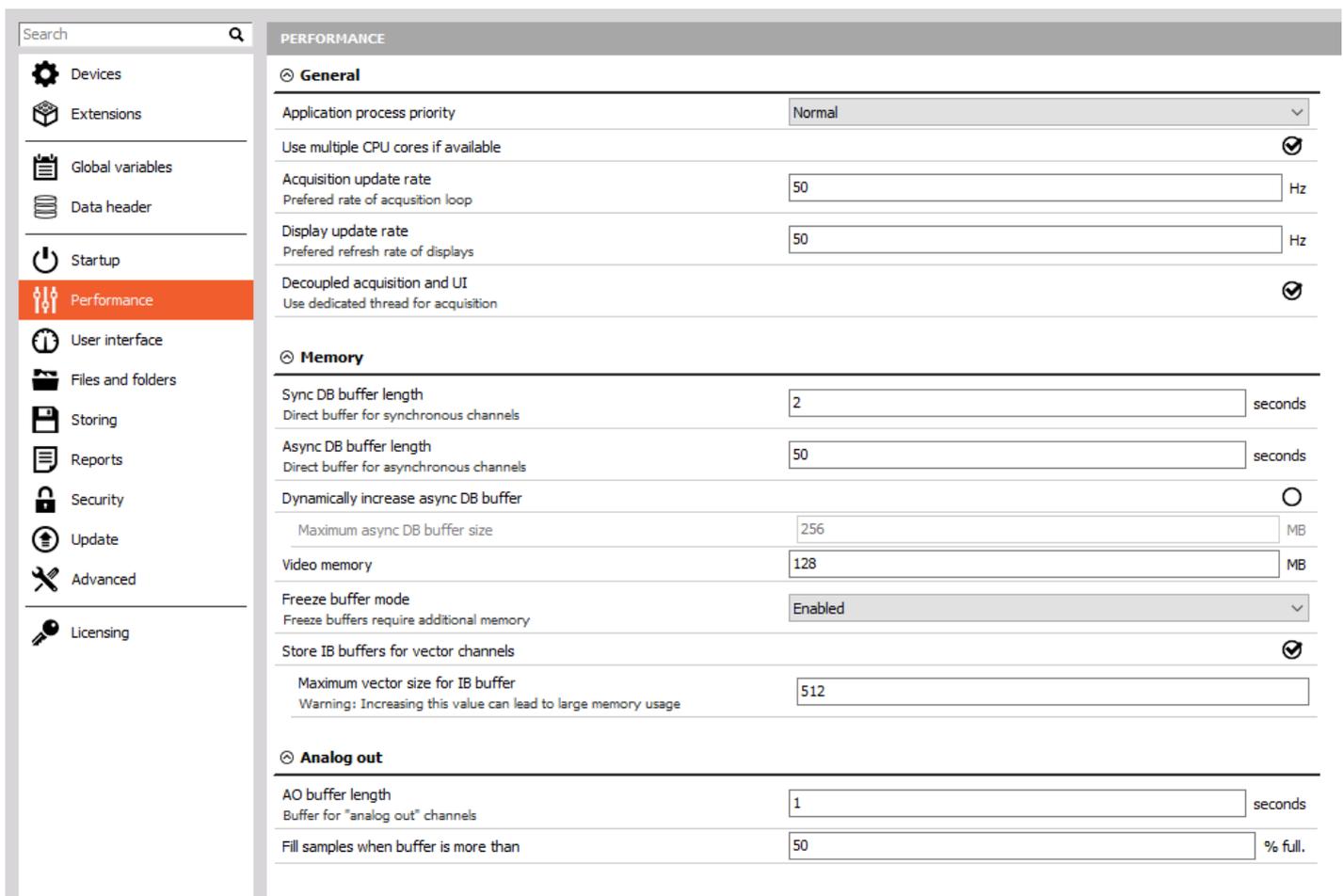


Image 81: Dewesoft X performance settings

General

- Application process priority defines the process priority of [Dewesoft X](#).

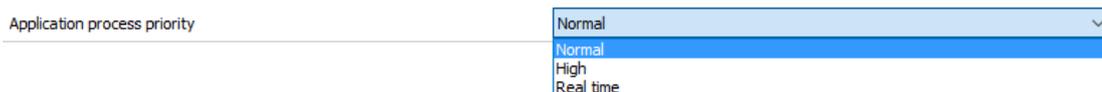


Image 82: Application process priority

- Usually, [Dewesoft X](#) should run on its own in the OS and, therefore Normal priority is enough.
 - High priority allows [Dewesoft X](#) to increase its performance if other processes are also running on the system.
 - Real-time is useful only in special applications. Even though thinking that real-time priority would be the best, but in reality, it might stall acquisition low-level drivers which must have enough CPU time. Setting [Dewesoft X](#) to real-time would mean that tasks like displaying data on the screen would have to high priority.
- Use multiple cores is a very important function to split the data acquisition and math processing between different CPU cores.
 - Acquisition update rate defines the preferred rate of acquisition loop. The graphic part was always a part of acquisition loop (data acquisition, calculation, storing, graphics). The graphics were drawn at the same time and that did not allow us to run a faster acquisition. Now, the graphics can be done in parallel. As a result, we could lower the priority of graphic part and have faster acquisition

times. Average acquisition loop was running with about 50 Hz and now it can run up to 1000 Hz. Set the acquisition update rate higher if you want to have the faster reaction times.

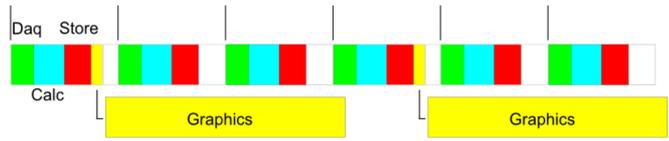


Image 83: Acquisition update rate

- Display update rate option defines the preferred refresh rate of displays. With defining lower display update rates, we can reduce CPU load of Displays. If we change the update rate from 50 Hz to 1 Hz, the CPU load of displays dropped from 30 % to 1 %. This is very useful when we are on the limit with our computer CPU.
- Decoupled acquisition and UI option are enabled by default. This option will use a dedicated thread for acquisition. One core will be used for acquisition and one core will be used for the user interface.

Memory

Memory sizes are important to run the software correctly for a different application. There are sizes which need to be defined for:

- Sync DB - This is the memory size in seconds for all synchronous channels (analog, counters, ...). The value should be larger than maximum refresh time - 2 seconds is the default.
- Async DB - This is the memory size for all asynchronous channels (CAN, GPS, and many others...). The default value is 50 seconds.
- Video memory - Size of the video buffer; with lots of cameras the default 64 MB value should be reduced to half, for example not to run out of system memory.

Enable Freeze buffers should be enabled if we plan to use Freeze mode (to see data during the measurement).



Image 84: Freeze buffer mode

When we enable it, the Freeze button is seen during the Measure mode.



Image 85: Freeze button in measurement

When storing the data, you will see a special Freeze button. This is a sign for Grandview, enhanced freeze mode. Grandview allows the user to

review stored data from the start of measurement without interrupting data acquisition and storing process. User is able to zoom into any region of data already stored on disk during the measurement and review any type of signal including video, which makes (long term) measurements easier to manage.



Image 86: Pressed store button

Analog out

⊙ **Analog out**

AO buffer length seconds
 Buffer for "analog out" channels

Fill samples when buffer is more than % full.

Image 87: Analog out settings

- AO buffer length - when you use the Function generator function in [Dewesoft X](#), the software sends the data to Sirius. Sirius waits for the amount of AO buffer length (in our case, this is 1 second) before it starts to output the signal. This has to be done, to prevent data loss. By default, the buffer length is set to 1 second.

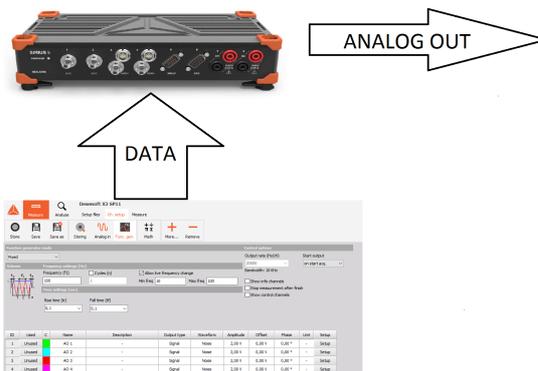


Image 88: Analog out buffer

- Fill samples when the buffer is more than __ % full. Let's say that we have a buffer of 2 seconds. The samples will be sent when the buffer will be filled with the defined amount of percentage (at 2-second buffer, 50 % means, that it will wait for 1 second). By default, the value is set to 50 %.

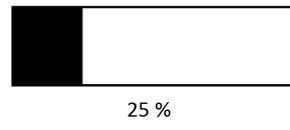
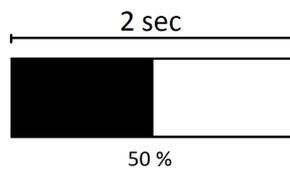


Image 89: Analog out buffer 2

How to customize the User Interface?

Under the user interface section, we define the language of the program, display characteristics, sound card selection, and keyboard shortcuts.

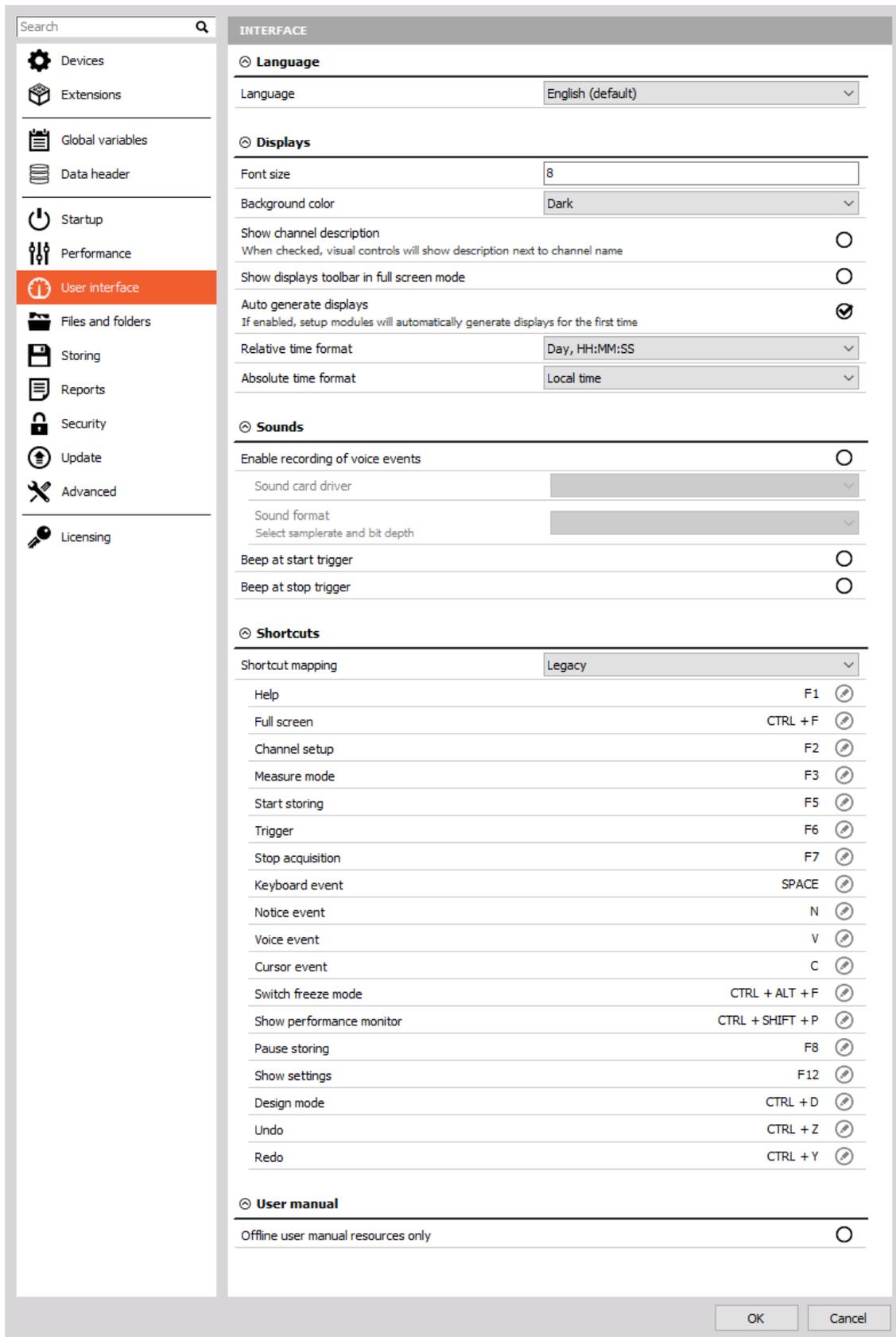


Image 90: User interface settings

Language

The language file can be selected from the drop-down list.

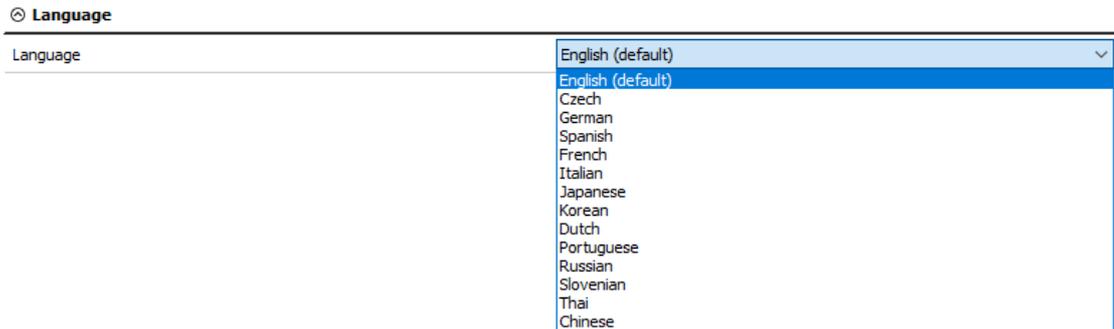


Image 91: Dewesoft language selection

The language files can be found in a folder locale located in [Dewesoft X](#) installation folder. Here, you can also add your own language files if they are written with the appropriate tool.

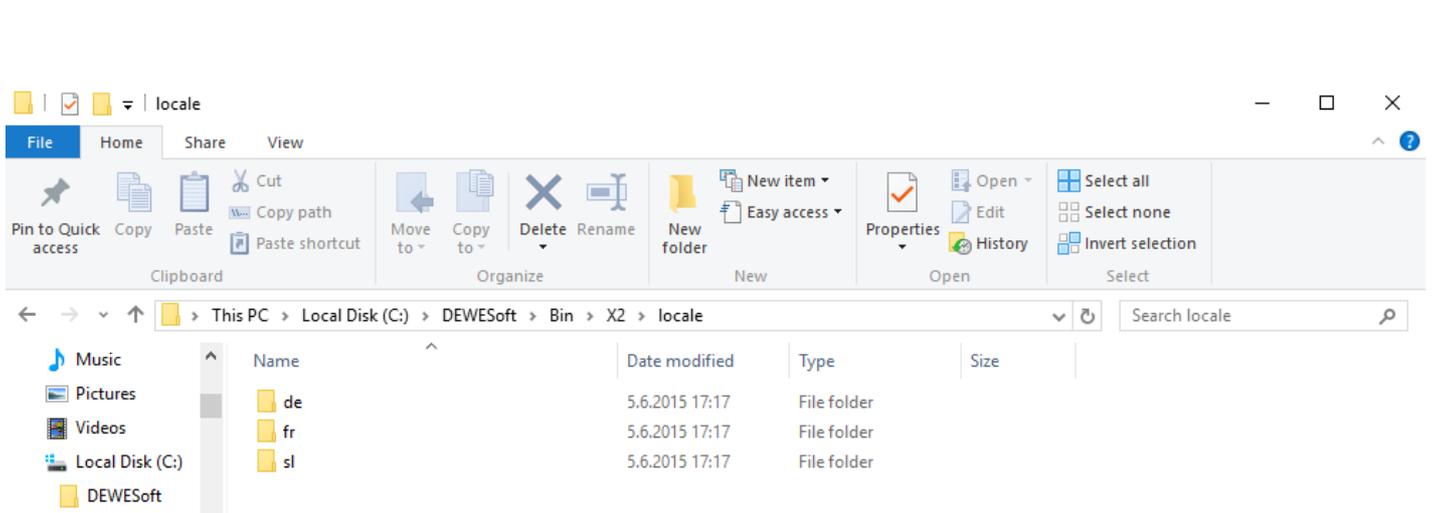


Image 92: Language files

Displays

Font size defines the size of the font in measure mode (example: in the left picture, the font size is 8 and in the right picture the font size is 16).

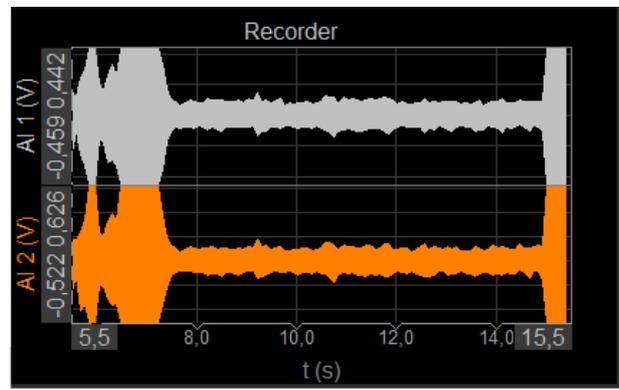
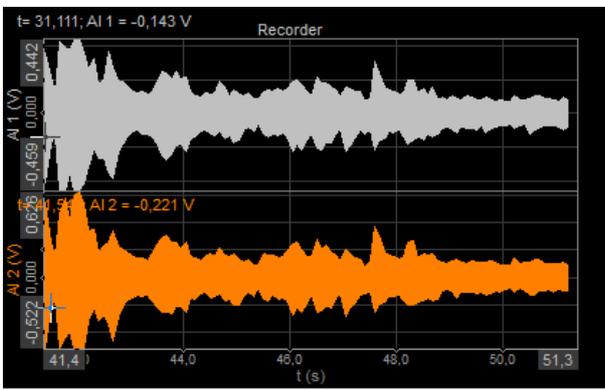


Image 93: Image font size

If we change the background color to white, the background of the measure mode will change.

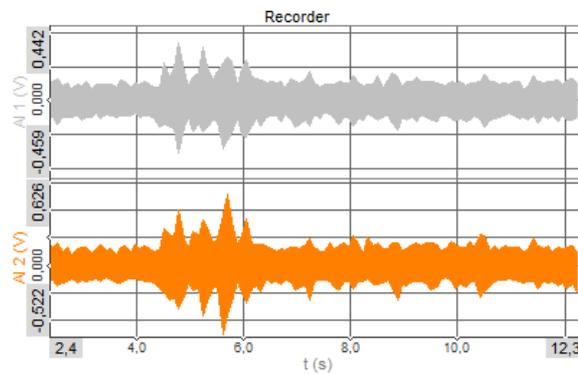


Image 94: Dewesoft light background

Show channel description sets that the channel description is shown in the name of the channels in visual controls (like recorder, for example). When switched off, only names are shown.

Dynamic acquisition rate: 5000 [Hz] Bandwidth: 1953 Hz

Channel actions: Balance amplifiers Short on Zero all Reset zero all

Search:

ID	Used	C	Name	Description	Ampl. name	Range	Measure...	Min	Values	Max	Physical ...	Units	Zero	Setup
1	Used		AI 1	First sensor	DEMO-SIRIUS-ACC	10 V	Voltage	-10,00	-6,424 / 6,634	10,00		V	Zero	Setup
2	Unused		AI 2	Second sensor	DEMO-SIRIUS-ACC+	10 V	Voltage	-10,00	-3,273 / 3,540	10,00		V	Zero	Setup
3	Unused		AI 3	Third sensor	DEMO-SIRIUS-ACC+	10 V	Voltage	-10,00	-10,000 / 10,000	10,00		V	Zero	Setup

Image 95: Channel description

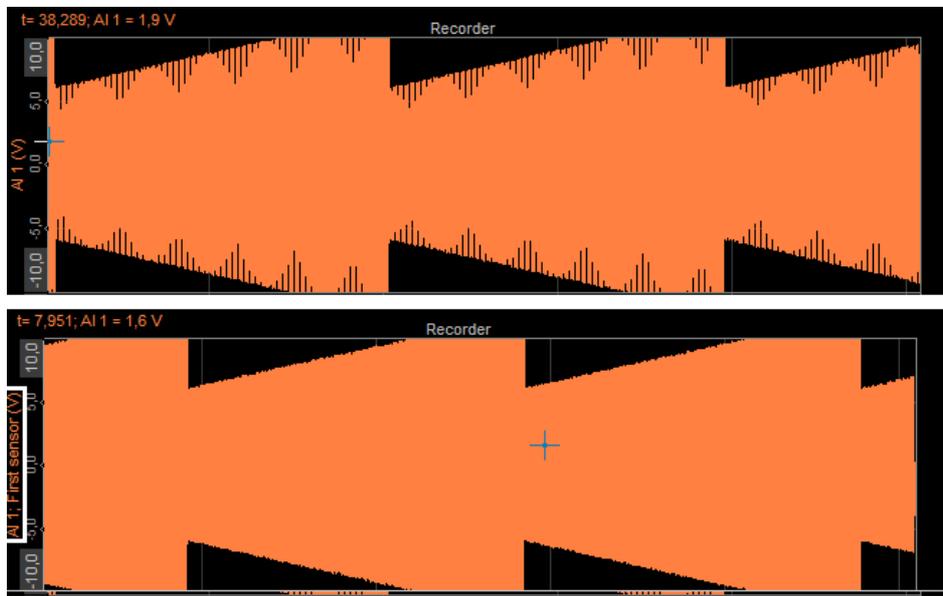


Image 96: Disabled/enabled channel description option

Show instrument toolbar in full-screen displays instruments button in full-screen mode; full screen (available with Ctrl-F) usually shows only instruments, but in this case, also a toolbar with standard displays are shown. In the left picture, this option is disabled, and in the right picture, this option is enabled. We can see the toolbar with different screens.



Image 97: Show the main toolbar

For the Time axis display Local time, UTC and Telemetry (UTC) can be selected from the drop-down list:

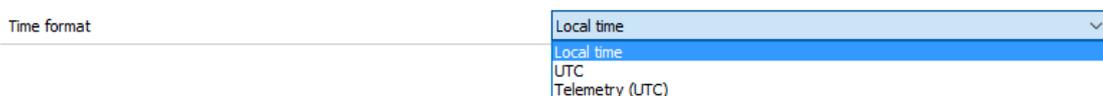


Image 98: Time format options

This selection will affect the absolute axis of the recorder, time display in the multimeter, and other displays showing absolute time. Dewesoft X always stores the data in UTC format (without the local time bias).

- Local time display will show with data in local time based on OS settings, therefore the same data file will have different absolute times if viewed in the USA than if it is opened in China.
- UTC will show the universal coordinated time (without bias) and will be displayed the same around the globe.
- Telemetry UTC will not display the day, month and the year, but will display the day of the year instead.

Sounds

Sound sections allow you to tell [Dewesoft X](#) which capable sound card in this computer you want to use for making voice annotations when storing data.

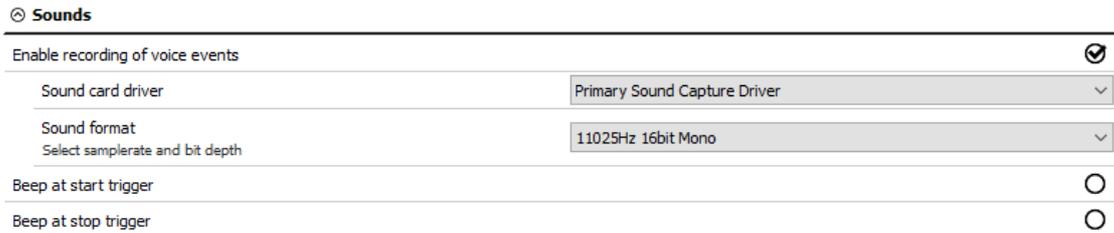


Image 99: Settings for voice events

Sound format can be chosen from the drop-down menu:

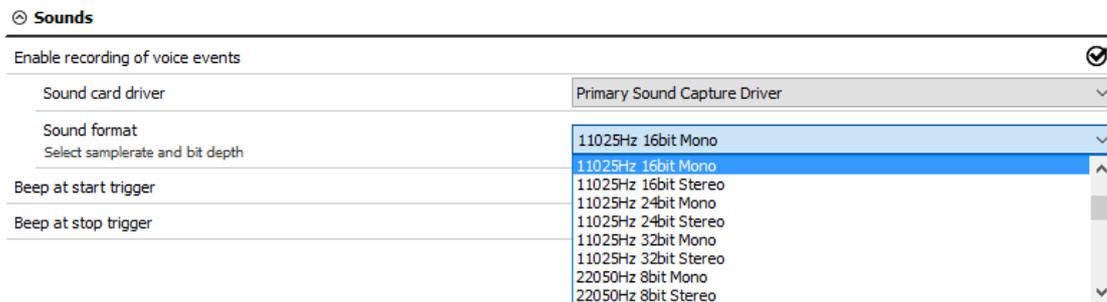


Image 100: Sound format

The voice events can be entered by pressing V during recording, but only if the sound card is defined. The sound at the start and stop triggers allows us to have a sound indication for triggering.

Let's make an example of voice recording. I have chosen my Microphone as a sound card driver.

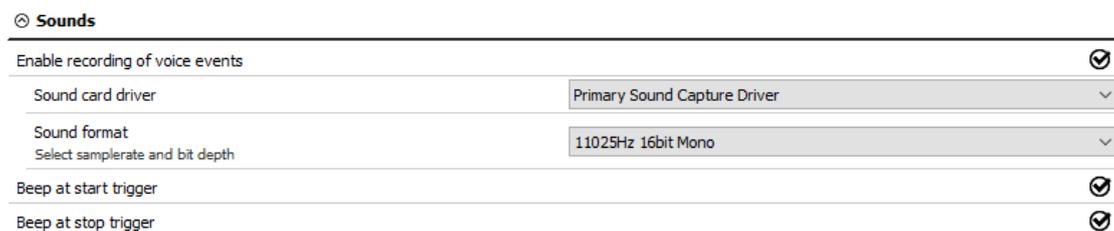


Image 101: Voice event settings example

When I go to Measure mode, click the Store button to start storing the data.

While measuring, press the V button on the keyboard and the program will record the voice with the selected sound card.

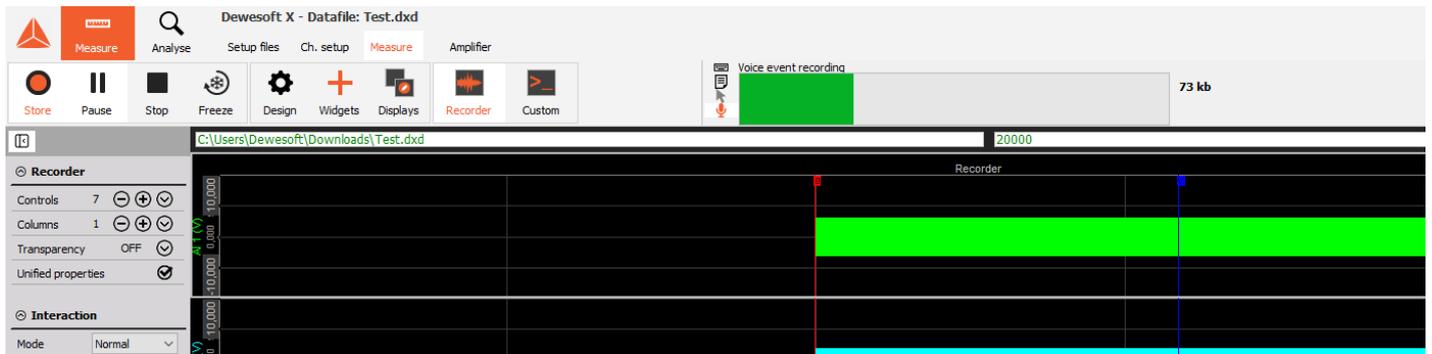


Image 102: Voice event recording

In **Analysis mode**, when we open the data file, we can see a *voice event* under the events section.

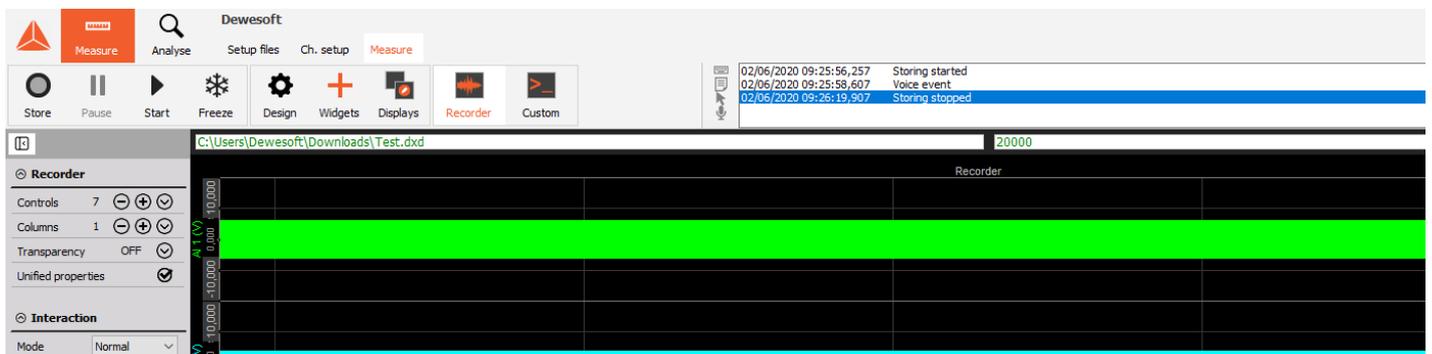


Image 102: Recorded voice event

In the *events window*, you can see when we started and stopped the storing and when we made a voice event. If you want to replay the voice event, double click on it.

The following window will appear and the voice will be replayed.



Image 103: Voice event progress

Shortcuts

Under the shortcuts section, you can see all the available keyboard shortcuts in [Dewesoft X](#).

⊖ Shortcuts

Shortcut mapping	Legacy	
Help	F1	✎
Full screen	CTRL + F	✎
Channel setup	F2	✎
Measure mode	F3	✎
Start storing	F5	✎
Trigger	F6	✎
Stop acquisition	F7	✎
Keyboard event	SPACE	✎
Notice event	N	✎
Voice event	V	✎
Cursor event	C	✎
Switch freeze mode	CTRL + ALT + F	✎
Show performance monitor	CTRL + SHIFT + P	✎
Pause storing	F8	✎
Show settings	F12	✎
Design mode	CTRL + D	✎
Undo	CTRL + Z	✎
Redo	CTRL + Y	✎

Image 104: Shortcut list

You can change the buttons that will lead you to the wanted shortcut. Select the Custom Shortcut mapping.

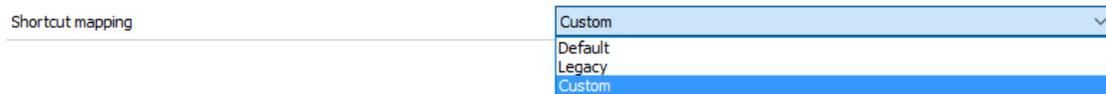


Image 105: Shortcut mapping

After that, a pen icon will show at every shortcut. To change the shortcut button, click on the pen icon.

⊖ Shortcuts

Shortcut mapping	Custom	
Help	F1	✎
Full screen	F11	✎
Channel setup	F2	✎

Image 106: Change of the shortcut key

The following window will appear. After assigning a new shortcut, click the OK button.

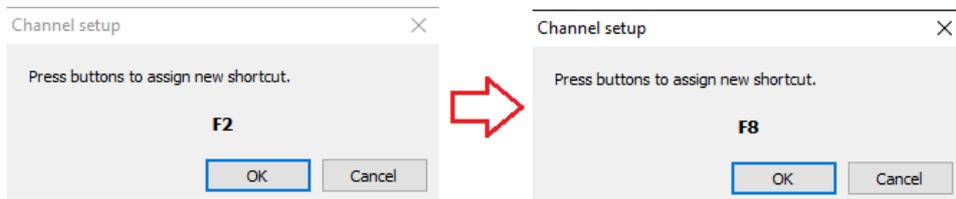


Image 107: Change keyboard shortcut

The new button for the shortcut is assigned.

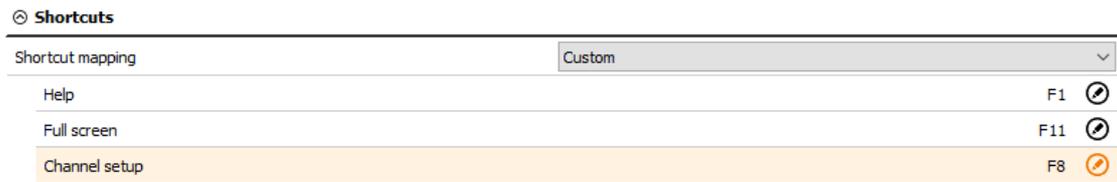


Image 108: New shortcut button

User manual

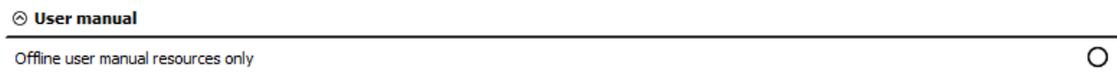


Image 109: User manual resources

If the checkbox is checked, Dewesoft will not attempt to get manual sources from the webserver. It will only use the sources installed with Dewesoft installation.

How Files and Folders are structured?

Section Files and folder defines a starting point within the folder structure.

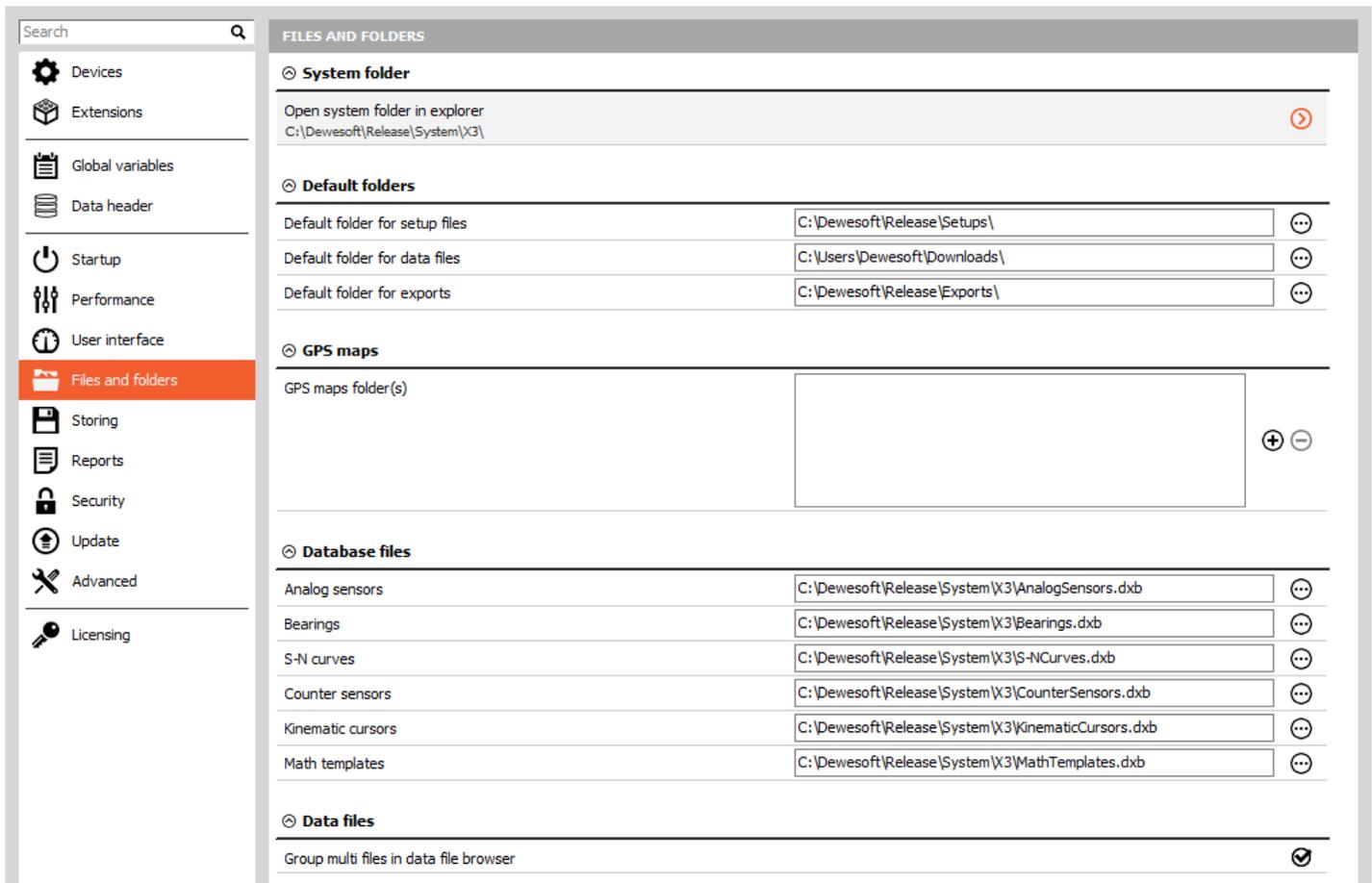


Image 110: Files and folders overview

Default folders

- Default folder for setup files - Defines the starting folder where the setups will be loaded from. This default folder can be changed also from the Folders menu in Measure - Setup files with setting Set as the default project folder.
- Default folder for data files - Defines the folder where to store the data files by default. This can be also changed as above, but inside Measure - Ch. setup - Storing or Analysis - Data files.
- Default folder for exports - Defines the default place where the files are exported. If we select Remember the last selected folder, then the folder which was last selected when exporting data will be set as default and remembered for the next export.

GPS maps

We have to define the path to GPS folder(s), which will be shown in the GPS plugin in [Dewesoft X](#).

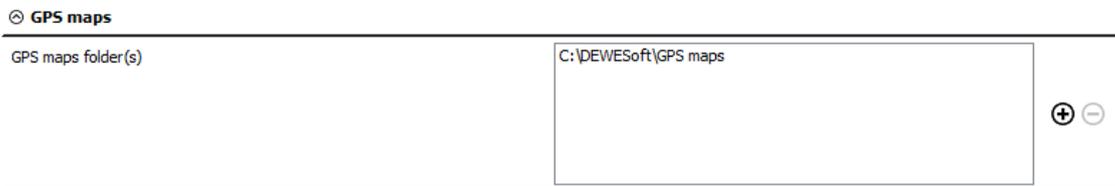


Image 111: GPS maps folder

Database files

Under Database files, we define the path to different files:

- Analog sensors
- Bearings
- S-N curve
- Counter sensors
- Kinematic cursors
- Math templates

How to set up Storing?

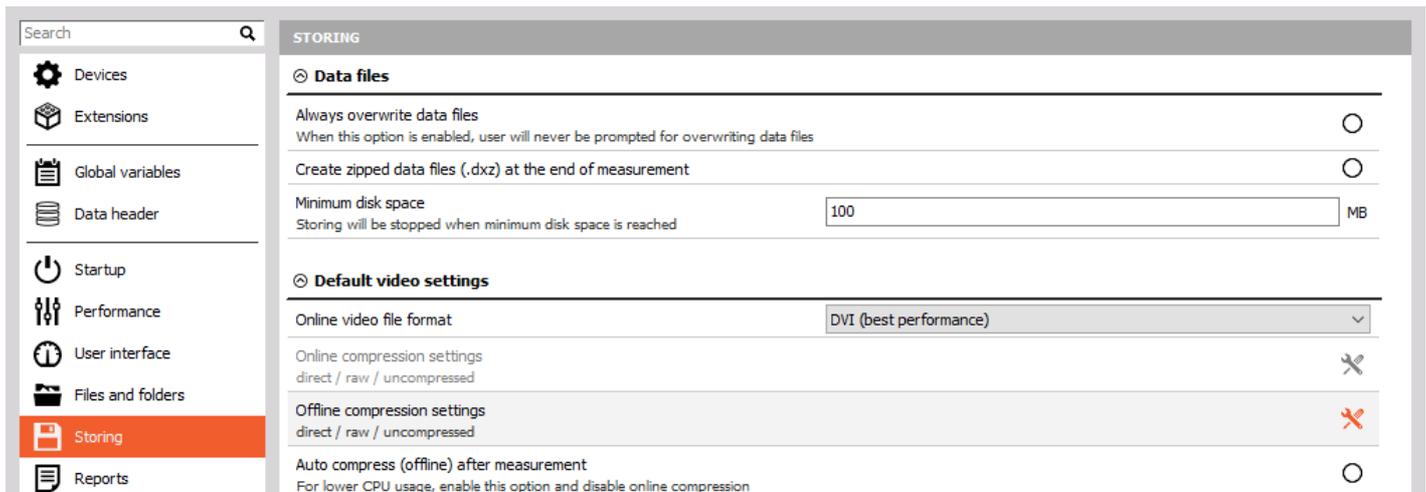


Image 112: Dewesoft storing overview

Data files

Always overwrite data fields is an option that allows you to automatically overwrite the files without additional confirmation.

[Dewesoft X](#) can create a zipped data files (.dxz) at the end of the measurement. The advantage of this function is, that the data file is compressed and, therefore, takes less space.

Let's make a 30-second data file with 4 channels and a sample rate of 20000 samples/second. With a normal storing, the size of the data file is 5 MB. Then we select to have a zipped data file. The size of the datafile got reduced to 105kB.

	File name	Size	Start store time	Version	Sample rate	Channels	Store mode
•	Test_normal.dxd	5,0 MB	02/06/2020 13:03:26	X3 SP11 (RELEASE-200417) (64-bit)	20000 Hz	AI: 4	always fast
•	Test_zipped.dxz	105 kB	02/06/2020 12:59:34	X3 SP11 (RELEASE-200417) (64-bit)	20000 Hz	AI: 4	always fast

Image 113: Data file compression test

We can also define the Minimum disk space, that is required to make a data file. If we reach this limit during the measurement, storing will be stopped and the data file will be saved.

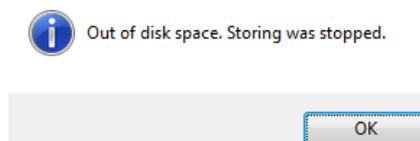


Image 114: Out of disk space

If there is not enough space from the beginning of the measurement, you will get a warning.



Image 115: Not enough free space

Default video settings

Online video file format can be selected between DVI or AVI format.

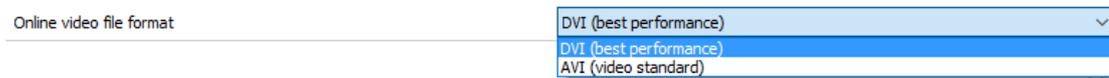


Image 116: Video format options

Online video compressions settings (We can compress the video during the measurement and make the datafiles smaller. Our computer has to have good performance characteristics to perform online video compression):

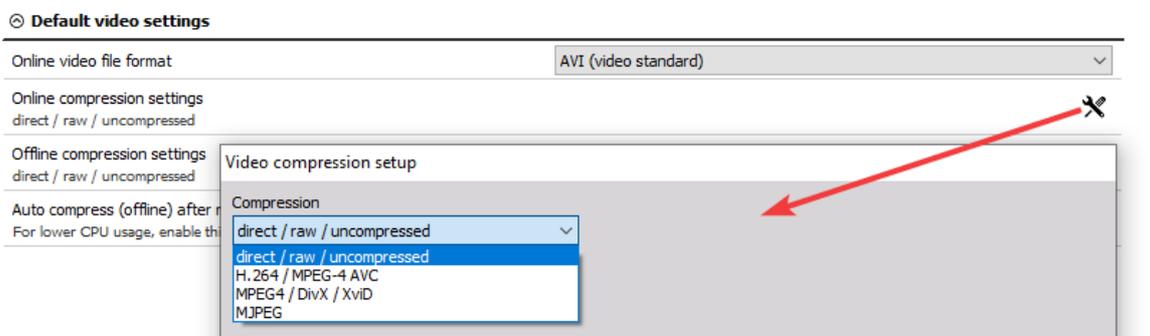


Image 117: Video compression options

Offline video compression settings (with offline video compression we can reduce the size of the data file):

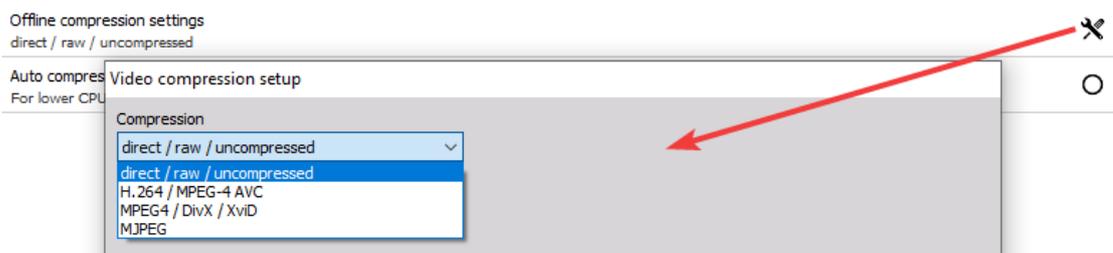


Image 118: Offline video compression options

For lower CPU usage, we can enable the option Auto compress (offline) after measurement. By enabling this option, we also disable online compression.

Auto compress (offline) after measurement
For lower CPU usage, enable this option and disable online compression



Image 119: Auto compress video

How to create Reports and add a Logo?

Use your own company logo on printouts. After selecting the three dots button, the standard window explorer window appears to simply select an image file (*.jpg type).

Under Print margins, we define printer border in millimeters.

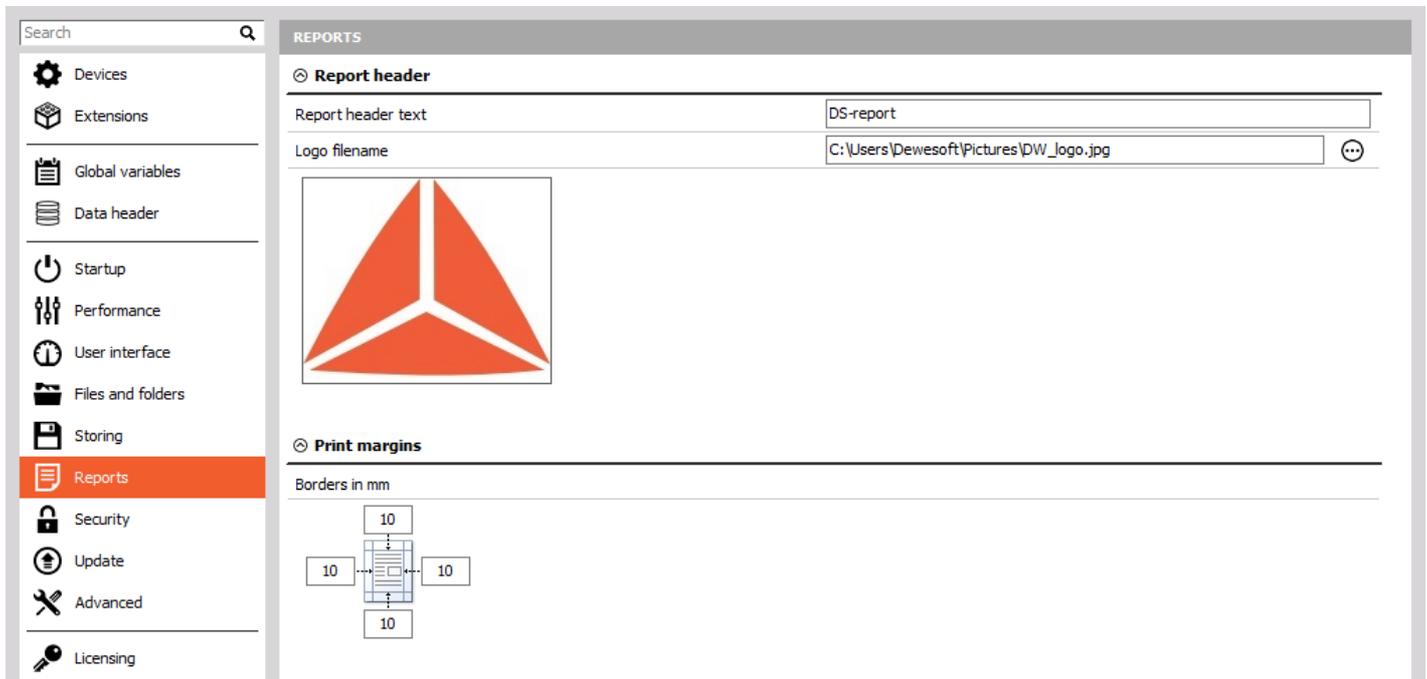


Image 120: Report header

Report header is seen when we want to print the document. Go to Analysis mode, select print and on the top of the document is our report header (with text and logo).

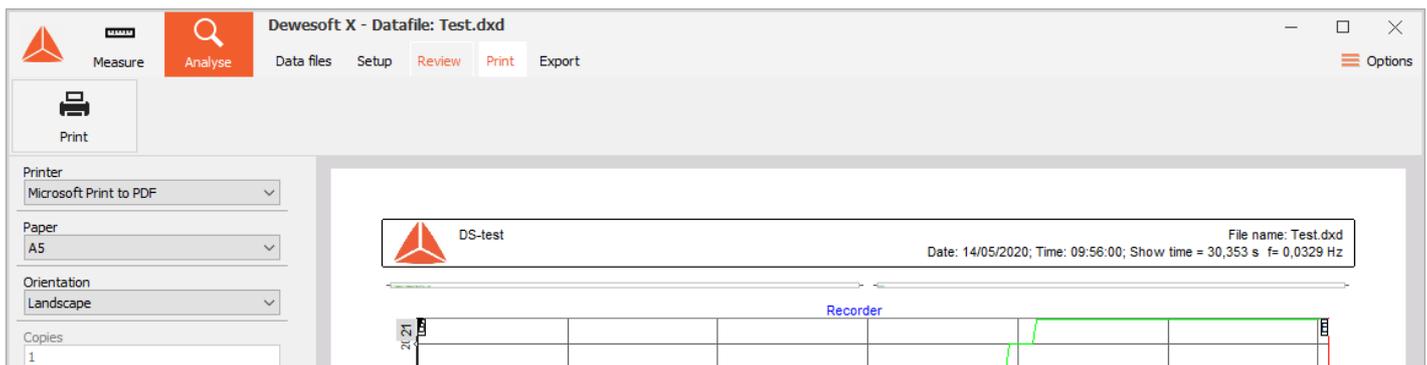


Image 121: Report header example

How to set Security?

Under security options, you can lock the access to settings and preventing the access to [Dewesoft X](#) procedures.

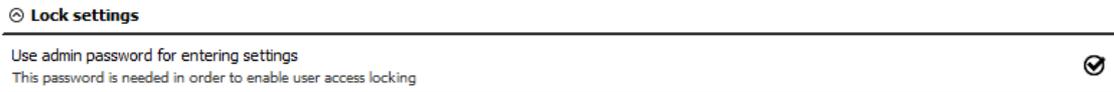


Image 122: Password for entering settings

If we select this option, you will have to enter the password the next time you will enter the Settings.

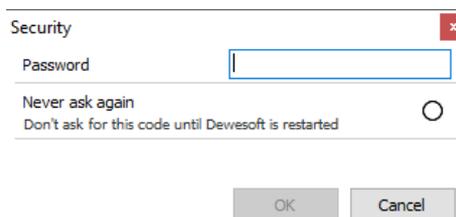


Image 123: Enter password for settings

You can also select the option **Never ask again**. It will not ask you for a password unit [Dewesoft X](#) is restarted.

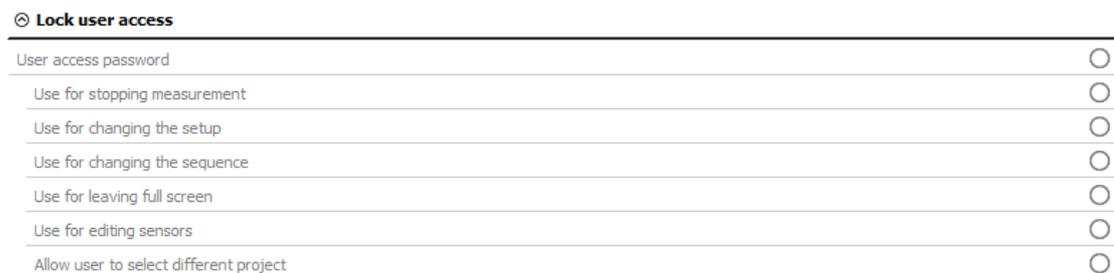


Image 124: Lock user access

If we select to use User access password, we can use it:

- for stopping measurement,
- for changing the setup,
- for changing the sequence,
- for leaving the full screen,
- for editing sensors and
- for allowing users to select different projects.

We can also define that the files being stored will be locked. We have three options:

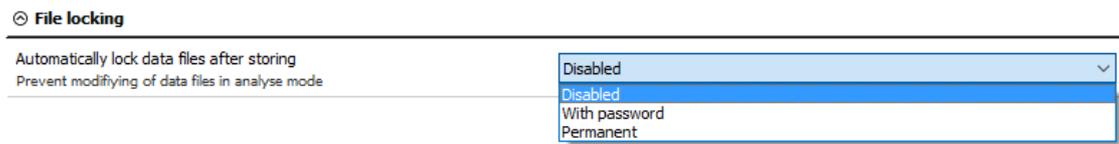


Image 125: File locking options

- **Disabled** - file locking will be disabled and the files can be post-processed.
- **With password** - file locking will be enabled and a password will be defined to unlock the file in analysing.
- **Permanent** - the file will be permanently locked and we can be sure it will not be modified in analyze.

How to Update firmware?

The firmware for [Dewesoft X](#) hardware can now be upgraded directly in [Dewesoft X](#) software (firmware upgrade tool is no longer required).

Required equipment

- Dewesoft instrument ([SIRIUS](#), [DEWE43](#), [KRYPTON](#), ...):
- [Dewesoft X](#) (version X2 SP7 or above)
- Dewesoft firmware upgrade package ([.dxu](#) file)

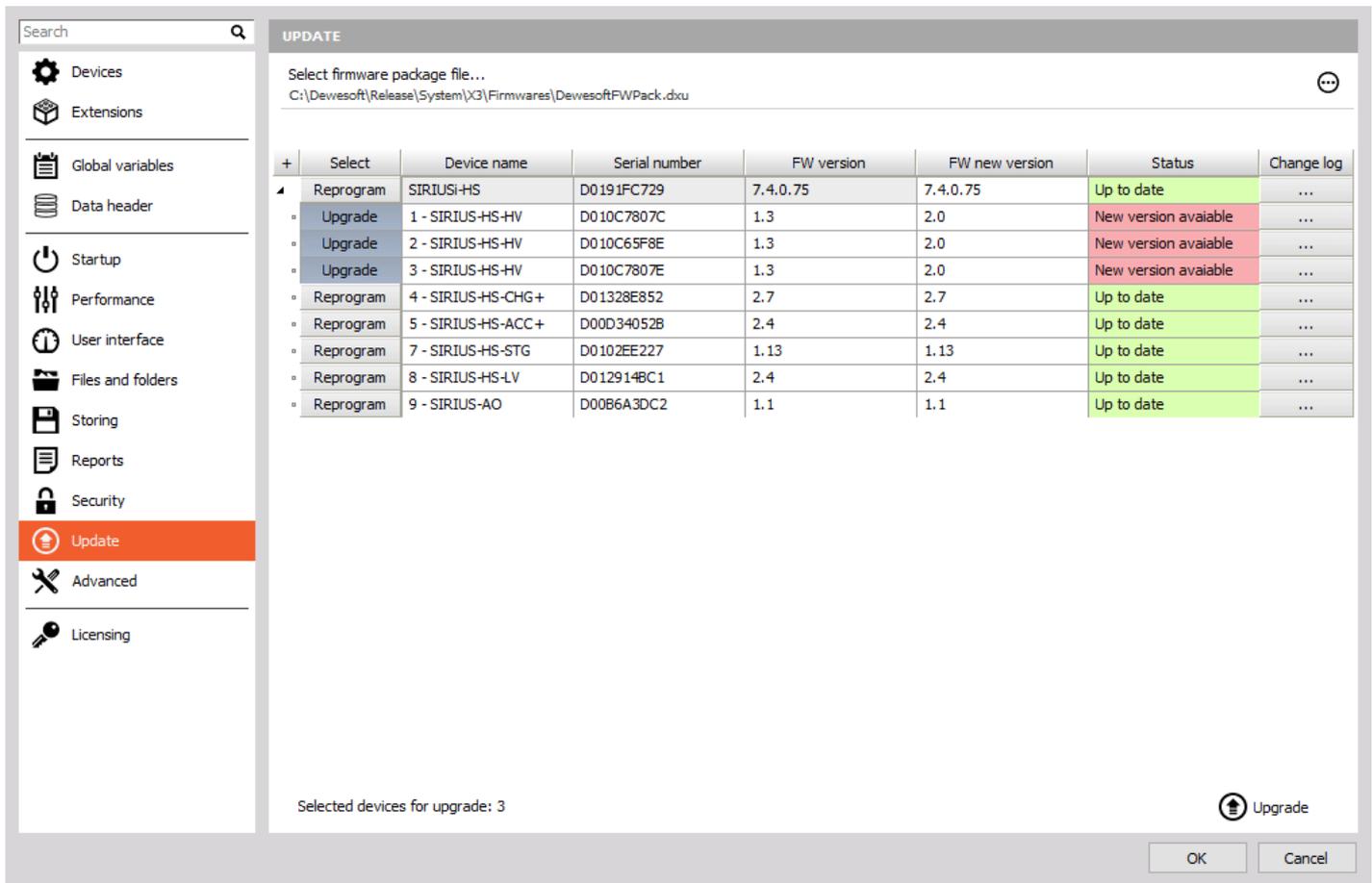


Image 126: Firmware upgrade

Upgrade process

Download the Dewesoft upgrade package (.dxu file) from the Dewesoft downloads page under section [drivers](#).

Copy the file into the Firmware folder of your [Dewesoft X](#) installation (D:\DewesoftX\System\X\Firmwares).

Connect the Dewesoft instrument to PC and run [Dewesoft X](#) software.

Go to Settings and the Update menu. If the firmware package isn't selected, select it by pressing the "three-dot button" and find the folder with the firmware file in it.



Image 127: Firmware upgrade pack

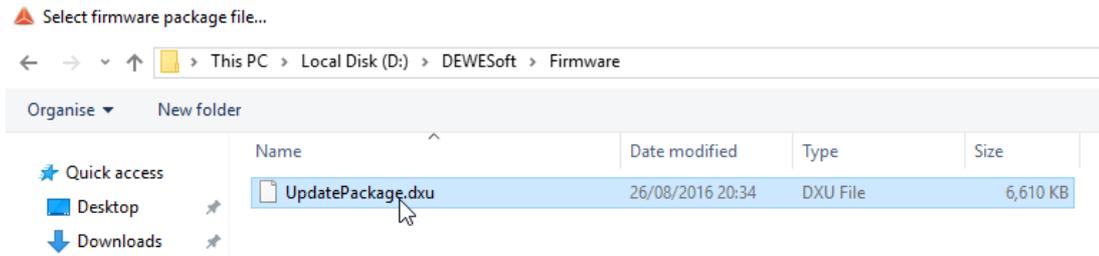


Image 128: Firmware pack selection

Select the device you want to upgrade and start the firmware upgrade by pressing the Upgrade button. The window should appear indicating that the upgrade has begun:

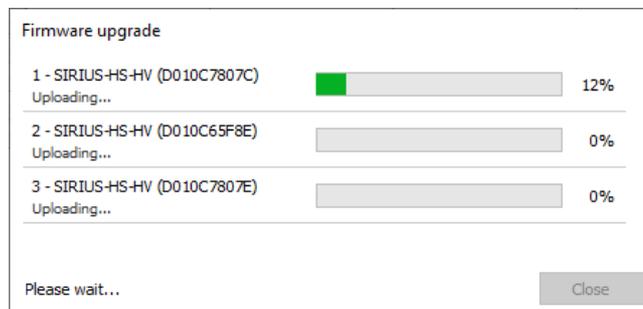


Image 128: Firmware upgrade progress

Wait until the software finishes the upgrade and close the window. After the upgrade, the device status should turn green and say 'Up to date'.

+	Select	Device name	Serial number	FW version	FW new version	Status	Change log
▲	Reprogram	SIRIUSI-HS	D0191FC729	7.4.0.75	7.4.0.75	Up to date	...
▫	Reprogram	1 - SIRIUS-HS-HV	D010C7807C	2.0	2.0	Up to date	...
▫	Reprogram	2 - SIRIUS-HS-HV	D010C65F8E	2.0	2.0	Up to date	...
▫	Reprogram	3 - SIRIUS-HS-HV	D010C7807E	2.0	2.0	Up to date	...
▫	Reprogram	4 - SIRIUS-HS-CHG+	D01328E852	2.7	2.7	Up to date	...
▫	Reprogram	5 - SIRIUS-HS-ACC+	D00D34052B	2.4	2.4	Up to date	...
▫	Reprogram	7 - SIRIUS-HS-STG	D0102EE227	1.13	1.13	Up to date	...
▫	Reprogram	8 - SIRIUS-HS-LV	D012914BC1	2.4	2.4	Up to date	...
▫	Reprogram	9 - SIRIUS-AO	D00B6A3DC2	1.1	1.1	Up to date	...

Image 129: Firmware up to date

Warning: Do not disconnect the device while upgrading firmware!

What are the Advanced options in settings?

How to import License?

The license for measuring with [Dewesoft X](#) is included in the device (usually PROF version). Once it is connected to the USB port, it acts as a dongle.

The license for *analyzing* is **free!** [Dewesoft X](#) can be installed on any computer and the stored data files can be opened, recalculated, and exported.

Additional licenses can be required for plugins, these can then also be written into the Dewesoft® device. To test plugins, you can request a 30-days-Evaluation license.

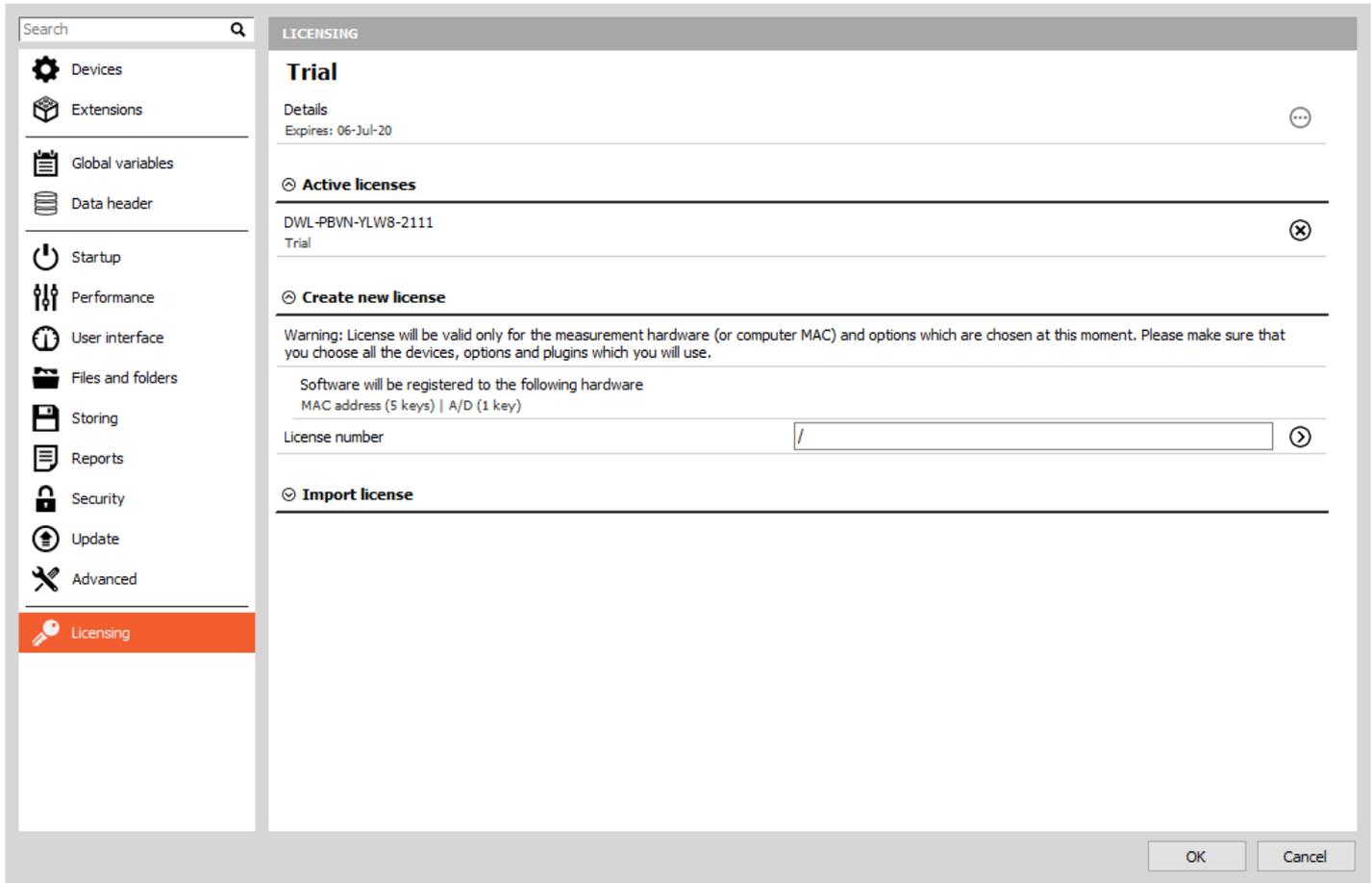


Image 157: Licensing

Under the *licensing section*, you see your **Active licenses**, **Create a new license**, or **Import offline license** (*.lic file format).

Make sure that all the hardware which you intend to use is connected and switched on. Only in this case, the registration will be fully done for all measurement hardware being used. The license is then generated to hardware keys of the hardware OR to computer MAC address. So you can use the same hardware with the license file on any computer and you can also exchange the measurement hardware on the same computer with a need that MAC addresses are the same.

Offline registration

If your measurement PC has access to an internet connection you can register directly from inside [Dewesoft X](#) software. If not [Dewesoft X](#) will automatically offer offline registration.

Enter your license key and press the arrow next to the license number button.

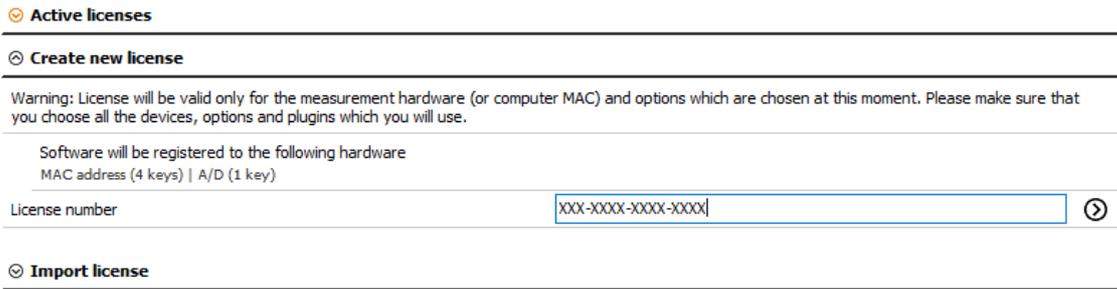


Image 158: Enter your license key

If there are no DAQ devices connected to the computer, the license is generated only for MAC addresses of the PC.

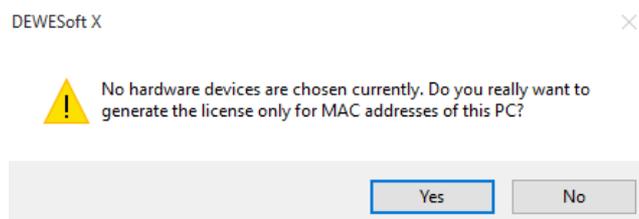


Image 159: If there are no DAQ devices connected to the computer, the license is generated only for MAC addresses of the PC

[Dewesoft X](#) will connect to the internet and will register automatically (online). If there is no internet connection, [Dewesoft X](#) will offer offline registration.

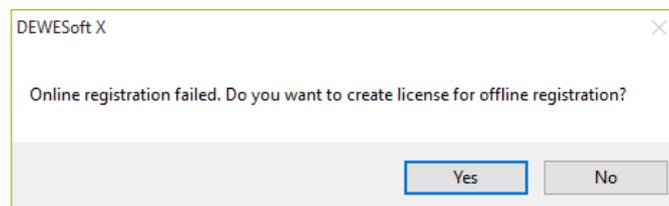


Image 160: If there is no internet connection, [Dewesoft X](#) will offer offline registration

[Dewesoft X](#) will create a *.lic file and you have to save it to the computer.

Copy the created license ".lic" file from the measurement computer, and go to a computer with internet access. Visit Dewesoft home page, and select [registration](#).

Drop the *.lic file to the window.

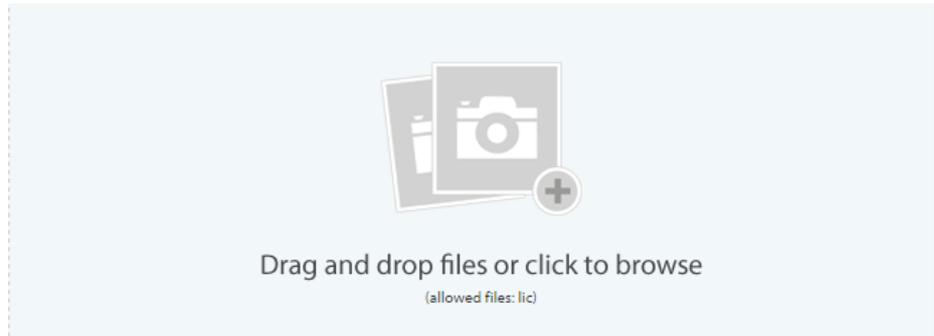


Image 161: Drop created license file on Dewesot's registration page

When you drop your license, the following window will appear. Please, download the generated file.

Save and overwrite the new ".lic" file over the ".lic" file on the measurement computer.

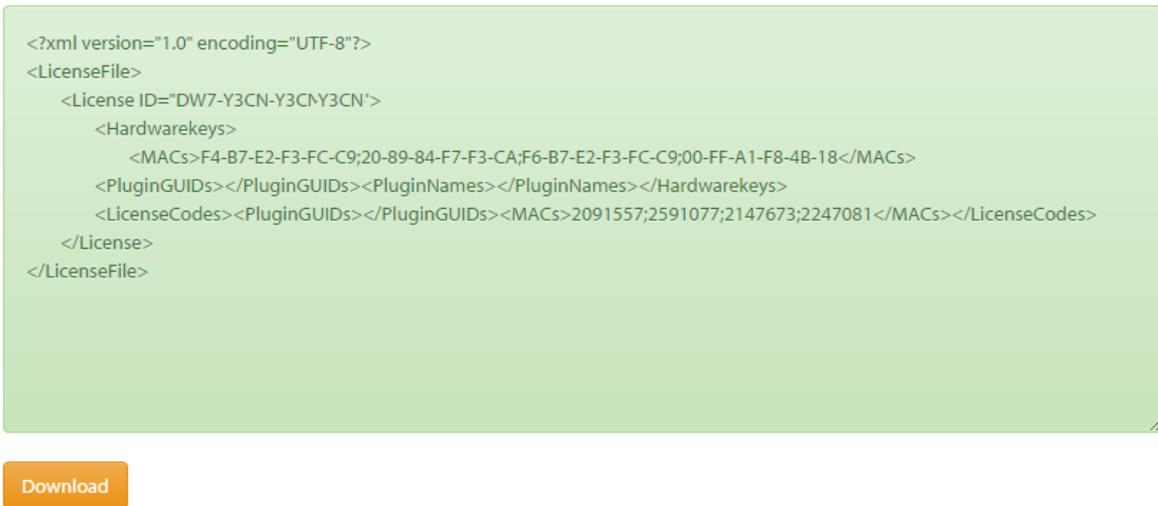


Image 162: Save and overwrite the new .lic file over the old .lic file

Restart [Dewesoft X](#) software and select the option Import license. Import the *.lic file that was downloaded from the web page.



Image 163: Restart Dewesoft X software and select Import license

Evaluation license

To receive a fully functional 30-day evaluation license for [Dewesoft X](#) software, fill and submit the form below. Data marked with * is required. Please provide a valid email address to which we can send the evaluation license.

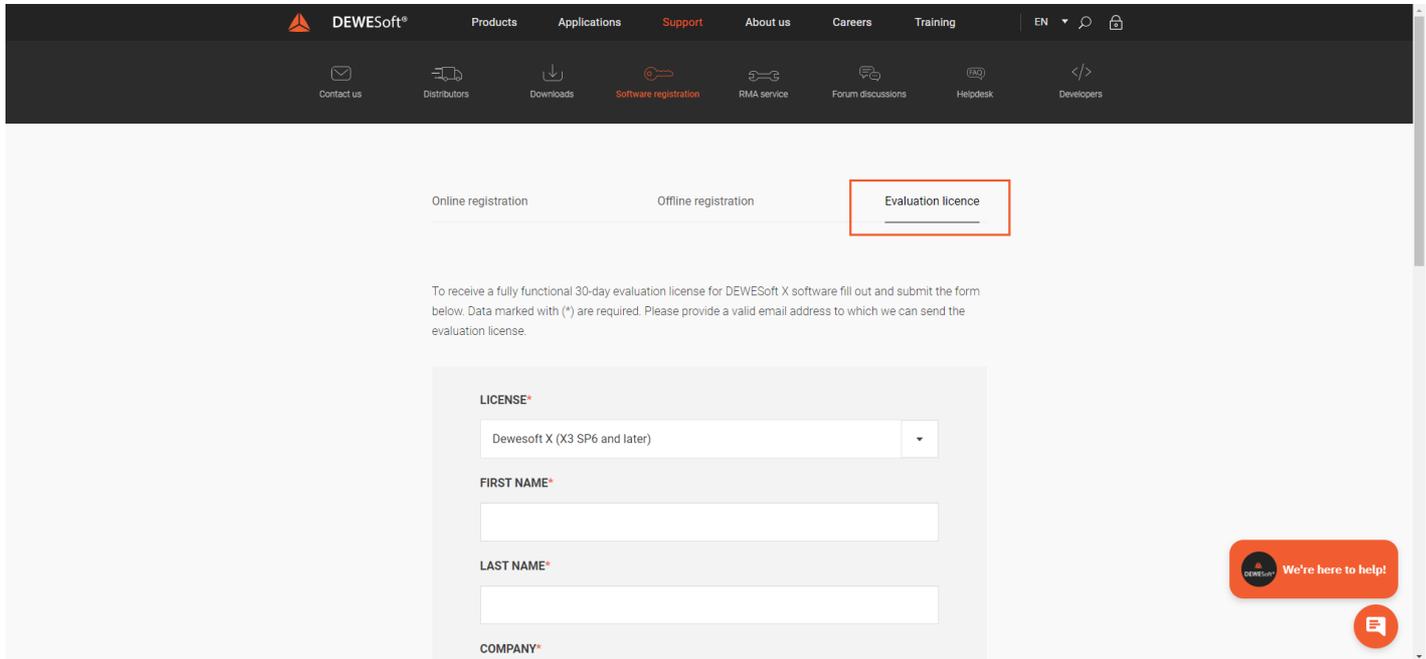


Image 164: Request for a 30-day evaluation license for Dewesoft X

Write license to Dewesoft devices

When we have a license for software on our PC, we can also write the license to Dewesoft measurement devices. This can be done, so the devices can be used also with another computer.

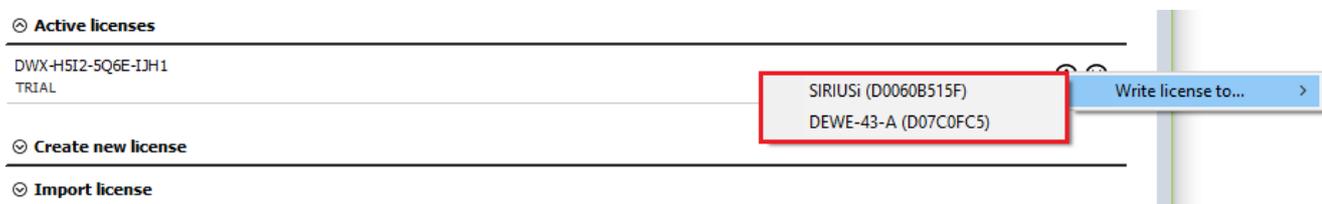


Image 165: You can write licenses on measurement devices

If the license is already written on the measurement device, we get a warning. We can overwrite the existing license with a new one.

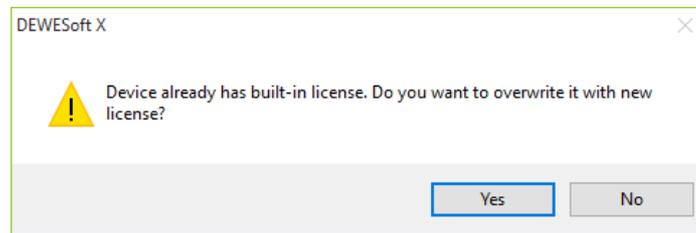


Image 166: If the license is already written on the measurement device, we get a warning