BZ-5503

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Introduction

What can you do with Utility Software for Hand-held Analyzers BZ-5503?

Utility Software for Hand-held Analyzers BZ-5503 functions as the link between Type 2250 or 2250 Light (Type 2250-L) and reporting software on a PC, such as Noise Explorer Type 7815, Evaluator Type 7820/21, Protector Type 7825 or Qualifier Type 7830/31. It enables you to do the following:

- setup or control Type 2250 or 2250 Light from a PC
- retrieve data from Type 2250 or 2250 Light
- manage and archive data from Type 2250 or 2250 Light
- export data to

– Type 7810

Predictor Type 7810, Environmental Noise Prediction and Control Software, is a multi-purpose Windows®-based software package for calculating environmental noise. It allows you to calculate and analyze noise from various noise sources such as industry or traffic. With its state-of-the-art calculation power, it can be used for all applications ranging from small-scale impact assessments to mapping of large agglomerations.

For further information see Product Data for Predictor Type 7810.

– Type 7812

Lima Type 7812, Environmental Noise Calculation and Mapping Software, is the most powerful noise calculation system available. It includes advanced automated data manipulation, geometric handling and allows you to efficiently perform large, accurate noise calculations from existing data sets, without the need to use other software, such as GIS (Geographical Information Systems) and Auto-CAD. With fast algorithms and a huge capacity, Lima can make rapid, yet accurate, calculations. It is highly flexible, allowing in-depth analyses, and its openness eases integration with external data sets, calculation components and software.

For further information see Product Data for Lima Type 7812.

– Type 7815

Noise Explorer Type 7815 is a Windows®-based software package for the downloading and reporting of noise and vibration data measured with Brüel & Kjær Sound Level Meters and analyzers.

This software allows you to:

- format your data for export to spreadsheets, noise mapping software or the Windows® clipboard
- display/print measurement results in graphical or tabular form

For further information see Product Data for Noise Explorer Type 7815.

– Type 7816

Acoustic Determinator Type 7816 is a Windows®-based software tool for acoustic engineers who want to find out the sound power level of industrial sources by measuring sound pressure levels in the field. Using data from field measurements, Acoustic Determinator can guide you in the determination of sound power levels of various sources in accordance with a wide range of leading national and international standards, such as ISO 8297 and ISO 3744.

For further information see Product Data for Acoustic Determinator Type 7816.

– Type 7820

Evaluator™ Type 7820 is a Windows®-based software package for environmental noise evaluation. It provides versatile tools for analysing measured data from the family of Brüel & Kjær Sound Level Meters, and is a complete solution for the determination of Rating Levels according to various national standards.

It is used in noise profile measurement (to measure industrial, residential and road/rail traffic noise) and in environmental noise evaluation against noise limits according to national and international standards.

For further information see Product Data for Evaluator Type 7820.

– Type 7825

Protector™ is a Windows®-based software package for post-processing, simulating and archiving noise exposure data. Designed to work with the family

of Brüel & Kjær sound level meters, noise dose meters and sound level analyzers, Protector™ allows you to quickly download sample noise profiles for specific locations or persons. Protector™ can use this data to calculate noise exposure for people or positions under investigation. It calculates noise exposure according to ISO9612.2.

For situations where only work point noise measurements are available, and workers move about, Protector™ can combine workpoint measurements with a profile of a persons movements, to simulate their personal noise exposure.

This software allows you to:

- make comparisons between measured, calculated, and permitted noise exposure values
- create a corporate database for all occupational health matters related to noise exposure
- identify high-exposure areas and jobs for planning noise-reduction measures

For further information see Product Data for Protector Type 7825.

– Type 7830

Qualifier™ is a Windows®-based software package for calculating, documenting and reporting sound insulation curves and indexes. Designed to work with the family of Brüel & Kjær sound level meters and analyzers, Qualifier™ allows you to:

- calculate reverberation time and sound insulation,
- edit measurement results, including manual input of data
- document and report your measurements

For further information see Product Data for Qualifier Type 7830.

or Microsoft® Excel

- upgrade and update software on the instrument or install licenses for the instrument software

About the BZ-5503 Software

BZ-5503 Utility Software comprises two views:

- Archive View
- Instrument View

Archive View

To show the Archive view, click on the *Archive* button at the top of the window or use the shortcut <Ctrl + 1>.

The Archive View contains all the tasks commonly associated with the archives. The purpose of the archives is to keep the data in a secure and effective way, stored in the same structure as that used on the instrument. Data is kept in projects organised in job folders, per user.

The following suggestions are considered good practice when using the archives:

- Keep all data related to the same case in the same archive
- Make new archives for major new cases

- Keep data in the archive, even if you export data for post-processing, then you always have the raw data in a secure way
- Create the archive on a network drive, then your colleagues will also have access to the data
- Create users (for Type 2250 only) and templates in the archive for easy setup of the instrument to a specific case

Use the archive as the basis for the following activities with your instrument:

- Setup of the instrument
- Storage of instrument data
- View your data
- Export of data for post-processing

Note: It is strongly recommended that you never change an existing archive file structure with Windows® Explorer.

Instrument View

To show the Instrument view, click on the *Instrument* button at the top of the window or use the shortcut <Ctrl + 2>.

The Instrument View contains all the tasks commonly performed on the instrument. The purpose of these tasks is to transfer data from the instrument to the archives and to organise data and users (Type 2250 only) on the instrument. In addition, you can control the instrument 'on-line' for demonstration purposes, or if you need a very large display.

The following suggestions are considered good practice when organising data on the instrument:

- Create a User for each user of the instrument (Type 2250 only), all data and setups for each user are then effectively secure from being altered by other users
- Create job folders to distinguish between different jobs
- To organise larger jobs, or cases, consider creating a User as a "case", this will ease working on several cases at the same time (Type 2250 only)

To distinguish between tasks in the Instrument View and those in the Archive View, the background colour of the Instrument Explorer and pop-up dialogs is Brüel & Kjær green, while the rest are grey.

Help for Utility Software for Hand-held Analyzers BZ-5503

Context-sensitive help is provided with Utility Software for Hand-held Analyzers BZ-5503. Press <F1> at any time during use of this program to get detailed help on the current task. If required, a printer friendly 'pdf' version is also available on the Environmental Software CD-ROM (BZ 5298).

How to...

How to...

How to Install a New Version of Instrument Software

Type 2250 and 2250 Light software modules are collected together in a 2250 Software Package. The software packages (available at the time) were copied to your PC when you installed BZ5503. Later versions of these software packages may now be available on the 2250 Maintenance site at www.bksv.com. All software modules are installed when you install a package – you cannot pick out a single module from a package and install it separately.

To Install a 2250 Software Package:

1. Open your BZ-5503 application and click on the *Instrument* button at the top of the window to show the Instrument view.
2. Switch on your Type 2250 or 2250 Light instrument and wait a few seconds for the instrument to go through its initialisation and start-up routine.
3. Connect your instrument to the PC via the USB cable and wait for the instrument to be recognised automatically – this can confirmed by checking that the instrument serial number appears next to *Selected Instrument:* (top of the left pane).
4. Press the *Install* button on the toolbar (or select **Tools**, **Maintenance**, **Install Instrument Software**) to see the table showing the installed versions of the software modules.
5. Select the 2250 Software Package to install and press the *Next* button.
6. Select "Install and reuse settings" and press the *Next button.*
7. *S*elect up to 5 languages (in addition to English) for the user interface and press the *Install* button, the installation starts.
8. The installation will take several minutes. The instrument will automatically reboot and start again, when the installation is finished

How to Install a License for a Type 2250/2250 Light Software Module

A valid license is required to run a software module on the instrument. If you have purchased your instrument together with the software module(s), then the relevant license(s) will come pre-installed on the instrument. If you purchased a separate software application for your instrument, then you have to install the license on the instrument.

To Install a License for an Instrument Software Module:

1. Open your BZ-5503 application and click on the *Instrument* button at the top of the window to show the Instrument view.
2. Switch on your instrument and wait a few seconds for the instrument to go through its initialisation and start-up routine. .
3. Connect your instrument to the PC via the USB cable and wait for the instrument to be recognised automatically – this can be confirmed by checking that the instrument serial number appears next to *Selected Instrument:* (at the top of the left pane).
4. Press the *License* button in the toolbar (or select **Tools**, **Maintenance**, **Install Instrument SW License**) to see the table showing the installed versions of the software modules and the licenses already available.
5. Press the *Next* button to enter the Install License wizard.
6. You will have received a License Certificate from Brüel & Kjær together with the software module. Enter the 16 character license code (from the certificate) into the *Install License for Instrument SW* control panel.
7. Press *Install* and the license will be installed. You can now use the software module.

How to Get Data from your Instrument

Measurement data created by Type 2250 or 2250 Light is saved on the internal disk of the instrument, or on an SD-card or a CF-card plugged into your instrument. Use BZ-5503 Utility Software for Hand-held Analyzers to transfer data to an archive on the PC.

Data in an archive on the PC can be exported to the post-processing and reporting software Type 7810 Predictor, Type 7812 Lima, Type 7815 Noise Explorer, Type 7816 Acoustic Determinator, Type 7820/21 Evaluator, Type 7825 Protector, Type 7830/31 Qualifier or to Microsoft® Excel. The export is controlled by the BZ-5503 software (you cannot open the instrument data directly from the previously mentioned software, or Excel).

You can transfer data from the instrument in two ways:

a. Transfer data directly from the instrument over the USB cable (or via a modem) to an archive.

b. Plug an SD-card (or a CF-card) containing the data into a card reader on the PC and transfer the data directly to an archive.

The two methods are described below.

Transferring Data from the Instrument Over the USB Cable to an Archive:

1. Open your BZ-5503 application and click on the *Instrument* button at the top of the window to show the Instrument view.
2. Switch on your instrument and wait a few seconds for the instrument to go through its initialisation and start-up routine.
3. Connect the instrument to the PC via the USB cable and wait for the instrument to be recognised automatically and appear in the Instrument Explorer.

The easy way of selecting data:

4. Press the *To Archive* button on the toolbar (or use the **Tools**, **To Archive** menu). Select an archive for data storage in the *Send Data to Archive* control panel.
5. Select "Automatic deletion of data from the instrument" (then you don't have to bother with cleaning up the data on your instrument afterwards).
6. Select "Transfer new data" (then you will get all data saved since your last transfer of data).
7. Press the *Start Transfer* button and the data will be transferred into the selected archive. The transferred data will be stored in the archive using the same user and job folder structure as on the instrument.

The advanced way of selecting data:

8. Select the data you want to transfer in the Instrument Explorer. You can select multiple job folders and/or projects in the list view.
9. Right click on the selected data and select *To Archive* (or press the *To Archive* button on the toolbar, or use the **Tools**, **To Archive** menu). Select an archive for data storage in the *Send Data to Archive* wizard.
10. Select "Transfer selected data".
11. Press the *Start Transfer* button and the data (including the data in subfolders) will be transferred into the selected archive, using the same user and job folder structure as on the instrument.
12. Repeat steps 8-10 until you have transferred all the data required.
13. Delete the projects no longer required on the instrument by right clicking on the project(s) and selecting **Delete** from the context menu that appears.

Finally, press the *Archive* button to find your data again in the Archive Explorer.

Transferring Data from an SD-card (or a CF-card) on a PC Card Reader, to an Archive

1. Open the BZ-5503 application and press the *Archive* button at the top of the window to show the Archive view.
2. Plug the SD/CF-card into the card reader on the PC.
3. A 'Removable Disk' will appear in the Archive Explorer with the data from your instrument.
4. Be sure the filters you have set above the tree view show the Archive and User you want to transfer the data to (or select All Archives and All Users).
5. Select the job folders and/or projects on the removable disk and drag them with the mouse to the archive at the position, where you want to drop them - or right click with the mouse and select *Cut* or *Copy*, then right click at the position in the archive where you want the data, right click and select *Paste*.
6. Delete the projects no longer required on the removable disk.

How to Export Type 2250/2250 Light Data to Type 7810/12/15/16/20/25/30 or Excel

Type 2250 and 2250 Light Data can be processed by Type 7810 Predictor, Type 7812 Lima, Type 7815 Noise Explorer, Type 7816 Acoustic Determinator, Type 7820/21 Evaluator, Type 7825 Protector, Type 7830/31 Qualifier or Microsoft® Excel. (7821 Evaluator Light for 2250 Light data only, 7830/31 for 2250 Reverberation Time data only.)

First, using your BZ-5503 software, you have to transfer the instrument data to an archive on the PC. Then you can export data from the archive to any of the types mentioned above, or to Excel. The export is controlled by your BZ-5503 software (you cannot open instrument data directly from the post-processing and reporting software, or Excel).

To Export Data from an Archive to Post-processing Software:

1. Open your BZ-5503 application and click on the *Archive* button at the top of the window to show the Archive view.
2. Select the data you want to export in the Archive Explorer (you can select multiple projects and/or Job folders in the list view).
3. Right click on the selected data and select *Export* from the drop-down (or press the *Export* button on the toolbar, or select the **File**, **Export menu**). Select whether you want to export to Type 7810, 7812, 7815, 7816, 7820, 7825, 7830, or Excel, in the *Export* control panel.
4. If you want to export to Excel then press *Next* and specify what to export and an Excel master file for the Excel output – see details in How to Export Data to Excel
5. Press *Finish* to export the data - the post-processing software will automatically be started and display the result

How to Export Data to Excel

You can export data from your instrument to Excel either by using the following procedures or by **Copy Data/Paste** from the Data Viewer. They will enable you to:

- View all the data for each Sound Level Meter or Frequency Analysis Project in one Microsoft® Excel row
- View all the data for each logging interval in Logging Projects in one Excel row
- View all the data for each Report interval in Periodic Reports in one Excel row
- View Reverberation Time data or decays
- Export as much data as you want in one go – within the scope of a single User's data and the limitations of Excel
- Make your own filter to extract data for export
- Make your own Excel report format including charts and tables

How it Works

Firstly, you have to transfer data from your instrument to an archive - see How to Get Data from your Instrument. Then you can export data from an archive to Excel using the Export Wizard (see below). Right click on the selected data and select *Export* from the drop-down (or press the *Export* button on the toolbar, or select the **File**, **Export menu**).

Using the Export Wizard, you can select which parts of the data you want to export and with an "Excel Master File" you can format the exported file. Then you can choose to launch Microsoft® Excel immediately or save the output to your chosen Excel file.

The default Master File supplied with BZ-5503 is called 'EmptyMaster.xls' – it is used to export the complete data from your instrument and should not be modified.

Creating your own Master Files

You create your own Master Files for filtering and reporting by:

- selecting the data for export (1st screen in the Wizard below)
- exporting the selected data and creating an Excel output file (2nd screen in the Wizard below)
- using that file to create your own Master Files for filtering or reporting by deleting the data you want to filter away and/or adding the report features (graphs, tables etc.,) you want (3rd screen in the Wizard below)

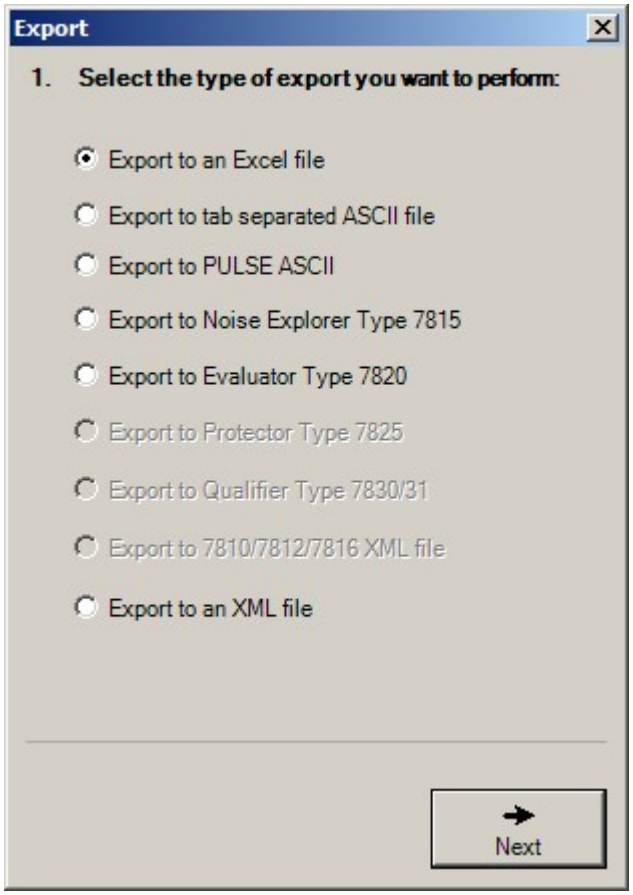
Three Master files (referred to as such only in the wizard) are supplied with the BZ-5503 software:

- EmptyMaster.xls – mentioned above and used in the Step by Step Guide below
- FilterExample.xls – similar to 'MyFilter' used in the Step by Step Guide below
- ReportExample.xls – used in the Step by Step Guide below

The Wizard

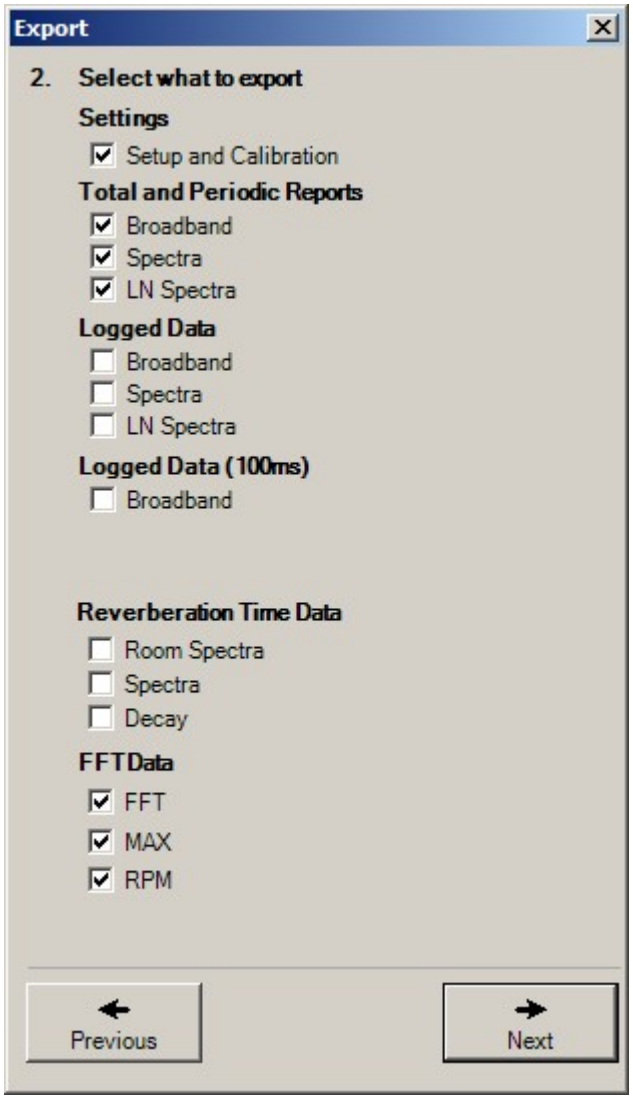
The Wizard consists of three screens, as follows:

1st Screen



Choose *Export to an Excel file.* The following screen appears:

2nd Screen



Settings:

- Setup and Calibration parameters will be output to one sheet.

Total and Periodic Reports:

- *Broadband* will output Broadband data to a single sheet. Total data will be output to one row. Periodic Reports will be output with one Report interval per Excel row.
- *Spectra* will output Spectral data to a single sheet. Total data will be output to one row. Periodic Reports will be output with one Report interval per Excel row.
- *LN Spectra* will be output to a single sheet. Total spectra will be output to one row. Periodic Reports will be output with one Report interval per Excel row.

Logged Data:

- *Broadband* will output Broadband data to a single sheet. The Logged data will be output with one logging interval per Excel row.
- *Spectra* will output Spectral data to a single sheet. The Logged data will be output with one logging interval per Excel row.
- *LN Spectra* will be output to a single sheet. The LN spectra will be output with one logging interval per Excel row.

Logged Data (100 ms):

- *Broadband* will output L_{Aeq} and/or L_{AF} to a single sheet. The data will be output with one 100 ms interval per Excel row.

Reverberation Time Data:

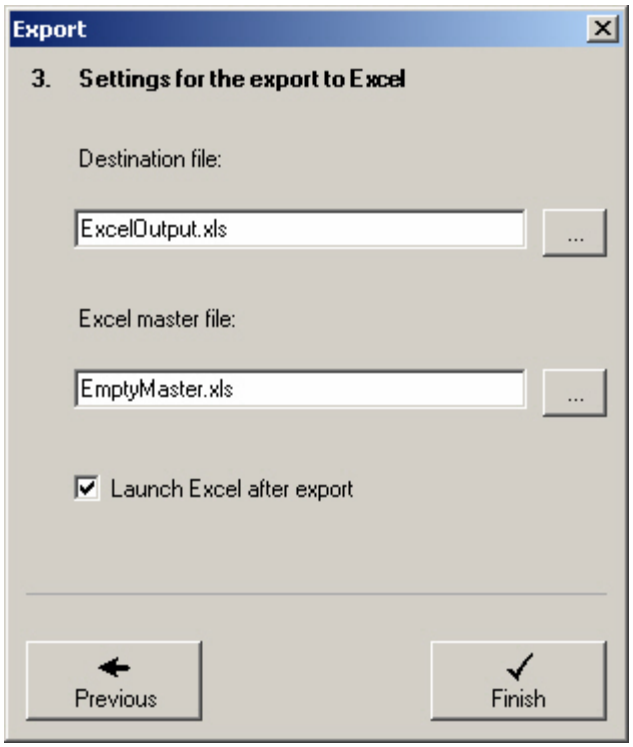
- *Room Spectra* will output Room Reverberation Time Spectra (T30 Room, T20 Room and EDT Room) to a single sheet.
- *Spectra* will output Reverberation Time Spectra (T30, T20 and EDT) for each position to a single sheet.
- *Decay* will be output the decays for each position to a single sheet.

FFT Data:

- *FFT* will output the FFT spectrum to a single sheet.
- *MAX* will output the MAX FFT spectrum to a single sheet.
- *RPM* will be output the RPM to a single sheet.

Each selection will output data to a separate sheet. Select the data you want to export and the final screen appears:

3rd Screen



The panel has one section which allows you to:

- save the output in an Excel file (either by typing the name into the entry field or browsing to it using the browse button ...
- select an Excel Master File (either by typing the name into the entry field or browsing to it using the browse button ...

Note: The parameters in the header row will be in the language selected in **Tools**, **Options**, **Export Language**.

- launch Excel immediately after exporting the data

Step by Step Guide

The following steps guide you through the whole process of exporting data to an Excel spreadsheet and/or creating reports.

Exporting Complete Set of Data

1. Use the wizard (shown above) to select the data for export and the EmptyMaster.xls as the Master File. This is the file used when you want export the complete set of data. It consists of an empty Excel file.

Filtering Data for Export

1. Still in the Wizard, select *Launch Excel* and export the complete set of data.
2. After Excel has opened, delete the unwanted data columns (parameters).
3. Delete all data rows (except row 1, the header row).
4. Save the Excel sheets as MyFilter.xls with the other Master Files.
5. Export your data using MyFilter.xls as the Master File – the resulting Excel file will contain only the required sheets and parameters.

Note 1: The filter must match the measured data. If for example, L_{Aeq} and L_{Ceq} appear in the list of filtered information and you use the filter on data measured with *Broadband Frequency Weighting* set to *AZ* instead of *AC*, then you will only get L_{Aeq}. L_{Ceq} will not be present in the data and L_{Zeq} has not been set in the filter. If you want L_{Zeq} to be present together with L_{Aeq}, then make a new filter.

Note 2: The filter must match the selected Export Language in **Tools**, **Options**.

Reporting

1. Export complete data or filtered data as shown above, naming the Excel file (as an example) MyReport.xls.
2. Add one or more sheets containing calculated data, tables and graphs.
3. Create links between the report sheets and the data sheets (if you want to delete the data rows in the data sheets afterwards, use the *Clear Contents* option from the Edit menu, then Excel will preserve the links to the empty cells).
4. Save MyReport.xls with the other Master Files.
5. Export your data using MyReport.xls as the Master File – the resulting Excel file will contain the required data and reports:

Note: Again, it is essential that the filter matches the measured data.

How to Configure your Instrument

Type 2250/2250 Light is configured directly on the instrument by changing the setup and saving the changes in the Template. However, you can configure the templates on the PC in advance and then transfer them to the instrument.

To Configure the instrument:

1. Open your BZ-5503 application and click on the *Archive* button at the top of the window to show the Archive view.
2. Select an archive in the tree view and right click on it to create the users you require (if they don't already exist).
3. Select the user required (or set to *All Users*) and set *Data Type* to *Settings* instead of *Measurement Data* (top left pane).
4. You can copy templates from other users to this user (Type 2250 only) – and delete the templates you do not want
5. Right click on a template to Edit it. This will open an editor similar to the one on the instrument. Make the changes required to the setup and close the editor to save the changes.
6. Right click on a template to rename it as required.

Note: The default names given to the templates are localised to the language selected for the user interface and will change according to the choice of language - the names you enter will remain regardless of the chosen language.

7. Switch on your instrument and wait a few seconds for the instrument to go through its initialisation and start-up routine.
8. Connect the instrument to the PC via the USB cable and wait for the instrument to be recognised automatically.
9. Select the *To Instrument* task, and select either a specific template, all templates or the user, and click *Start Transfer* to transfer the selected settings to the instrument.

How to Create New Users on your Type 2250

Note: This topic is for Type 2250 only.

Type 2250 can handle more than one user of the instrument. Each user has their own set of preferences, templates and jobs/projects – completely invisible to other users. This can also be very useful in organising large jobs, or cases, you can separate the cases completely from each other by handling each case as a user.

The transducers, the calibration setup and the calibration histories of the transducers are common to all users/cases.

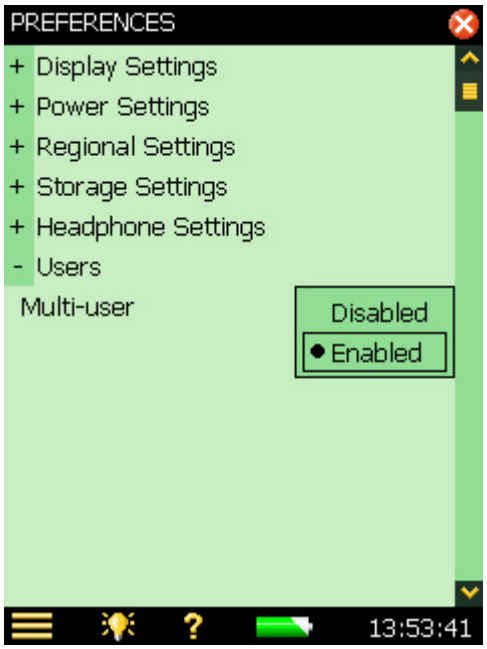
To Create a User/Case on the Instrument:

1. Open your BZ-5503 application and click on the *Instrument* button at the top of the window to show the Instrument view.
2. Connect your Type 2250 to the PC via the USB cable.
3. Switch on your Type 2250 and wait a few seconds for the instrument to be recognized automatically in the Instrument Explorer.
4. Select the instrument in the tree view and right click on it to select *Create User* from the drop-down (or press the *Users* button on the toolbar, or select the **File**, **New**, **User** menu). Type the name of the new user/case in the *Manage users on Instrument* control panel.
5. Select whether the settings (preferences and templates) for the new user shall be the default settings or the same as the settings of a user already defined on the instrument.
6. Press the *Create* button and the user is created.

Note: New users can also be created in the archive (using the *Users* task) and then transferred to Type 2250 using the *To Instrument* task .

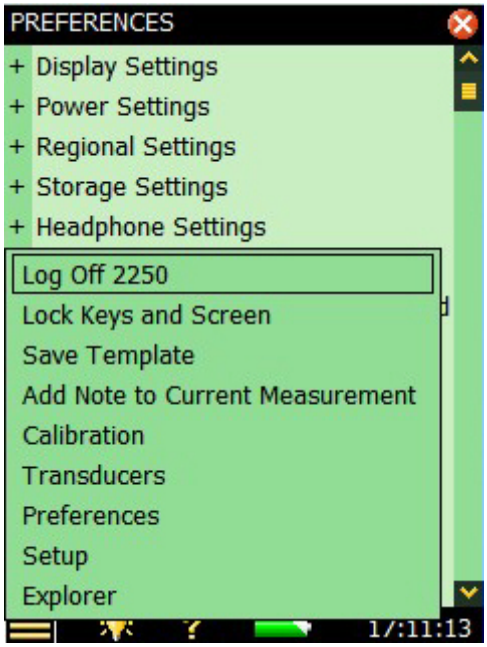
To Enable the New User/Case:

1. Set the *Multi-user* parameter to *Enabled* on the instrument (under *Users* in the **Preferences** menu):



To Switch Between Users/Cases:

1. Select *Log Off <user name>* from the Main Menu on Type 2250:



2. Select the new user name in the login screen and tap *Login*

How to Backup Archives

The archives containing the instrument data have typically been created on the local disk of your PC, or on a disk drive on your company network.

If you want to backup an archive, use Windows® Explorer as follows:

1. Locate the path to the archive you want to backup (the default path on your local disk is "C:\Documents and Settings\All Users\Application Data\Bruel and Kjaer\Env\Archives"). The folders in this path contain the archives, each of the folder names represents an archive name.

   Note: Do not make any changes to the content of the archive using the Windows® Explorer - this might make the archive unreadable to the BZ-5503 Utility Software for Hand-held Analyzers

2. Copy the folder with the name of your archive (and the content of the folder and all sub-folders) to the location where you want your backup.
3. You can zip your backup if required.
4. You can create a CD or DVD with your backup.

If you want to use your backup again:

5. Copy your backup to a folder of your choice, or connect directly to it (if not zipped).
6. Unzip the backup – if zipped (remember to set "Use folder names", when unzipping).
7. Open your BZ-5503 application and click on the *Archive* button at the top of the window to show the Archive view.
8. Press the *Archives* button on the toolbar.
9. Select the path to the folder with the backup of the archive.
10. Type the name of the archive in the name field above the path.
11. Press the *OK* button, the archive will be discovered and connected instead of being created.
12. The archive appears in the Archive Explorer.

If the backup is on a CD or a DVD (and Not Zipped), you can connect to it directly:

13. Select the path to the folder where the backup of the archive is stored (e.g., "D:\", if the CD drive is recognised as D).
14. Type the name of the archive in the name field above the path.
15. Press the *OK* button, the archive will be discovered and connected instead of being created.
16. The archive appears in the Archive Explorer – however, you will only be able to read, export or copy data from this archive, you cannot add or edit any data or settings to this archive.

Instrument

Instrument View

The Instrument View allows you to view or select jobs/projects on the instrument, for further action. It consists of a tree and a list view:

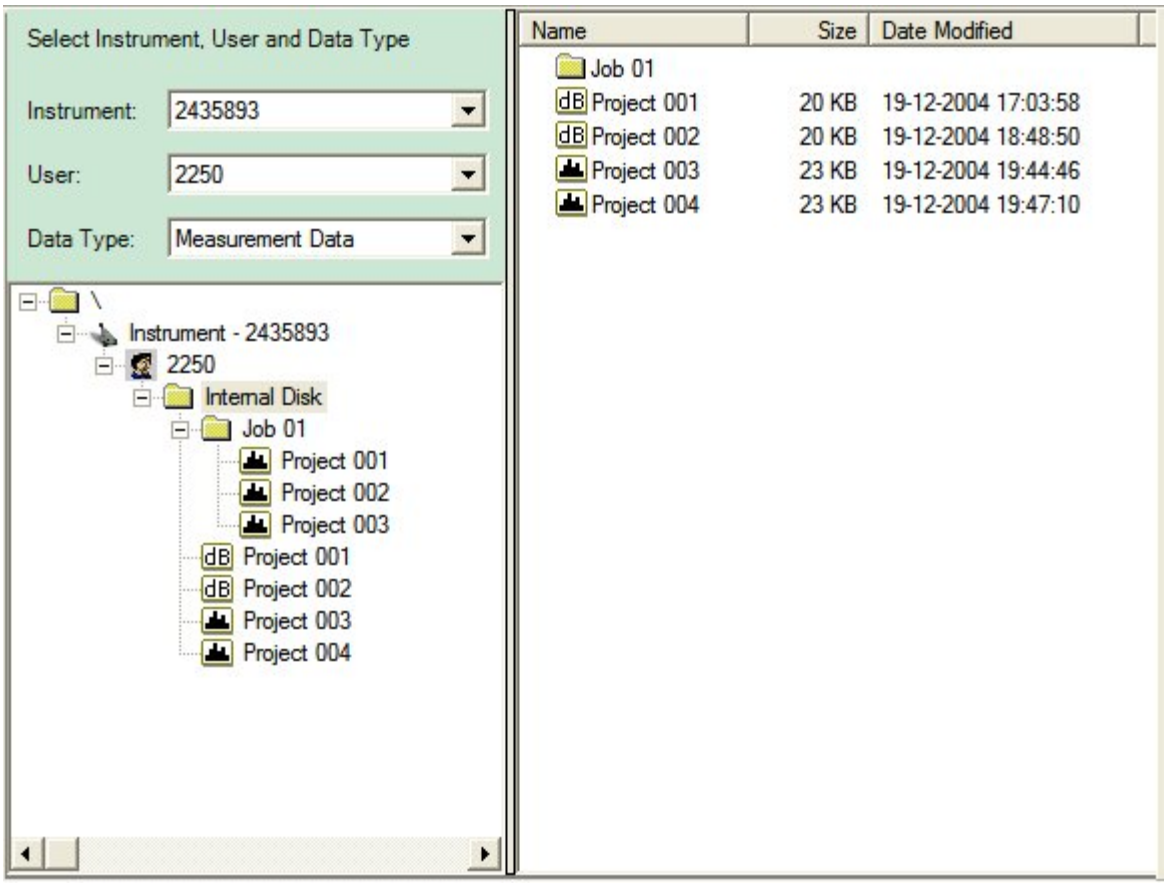
Tree View

The tree view in Instrument View allows you to quickly navigate to the job folder and project you need.

List View

The list view (to the right of the tree view) allows you to sort the data and see more detail.

An example Instrument View is shown below:



The pane at the top allows you to select which *Instrument*, *User* and *Data Type* you would like:

Instrument

When you connect your instrument to the PC via the USB cable, the instrument is automatically detected, and the serial number is displayed here. If you connect more than one instrument, then select here which instrument you wish to connect to.

User

If you have defined more than one user on the instrument (Type 2250 only), then select which user to view here. It is possible to view all users at the same time by selecting *All Users*.

Data Type

Select whether you want to display *Measurement Data* (job folders and projects) or *Settings* (templates and preferences).

Context Menus

To help you manage your data in this view, various context menus have been provided. These pop-up when you right-click on the selected item. For instance, menus have been provided for each of the tree nodes, each of your job folders and each of your projects. Each of these menus has various options, some of which may, or may not be available, depending on which part of the tree you are in and what you have selected in the *Data Type* drop down list. Most tasks and functionality in Instrument View can be activated from the context menus.

While some of the options on these context menus are specific to this BZ-5503 software and need explanation (see below), some are common options found in most software packages, such as **Expand**, **Collapse**, **Explore**, **Cut**, **Copy**, **Paste**, **Delete** and **Rename**, which are self-explanatory.

Context Menus Specific to BZ-5503 Software

On-line Display: Use this option to start the on-line display, which allows you to view the instruments display remotely on your PC and use the simulated keyboard to control measurements and data.

Create User: (Type 2250 only) Use this option to create a new user on the instrument by typing the new name into the entry field provided. Select which method you want to use to create the new user, you can choose either the 'default' user, or clone an existing one by selecting it from the user drop-down list. Once you have selected what you want, click the *Create* button.

To Archive: Use this option to transfer the currently selected data from your instrument to the archive. Select an archive from the drop down list that appears in the pop-up window, or click the *New* button to create a new archive. Tick the tick box if you want to delete the data from the instrument once it has been transferred to the archive. Click the *Start Transfer* button to start the process.

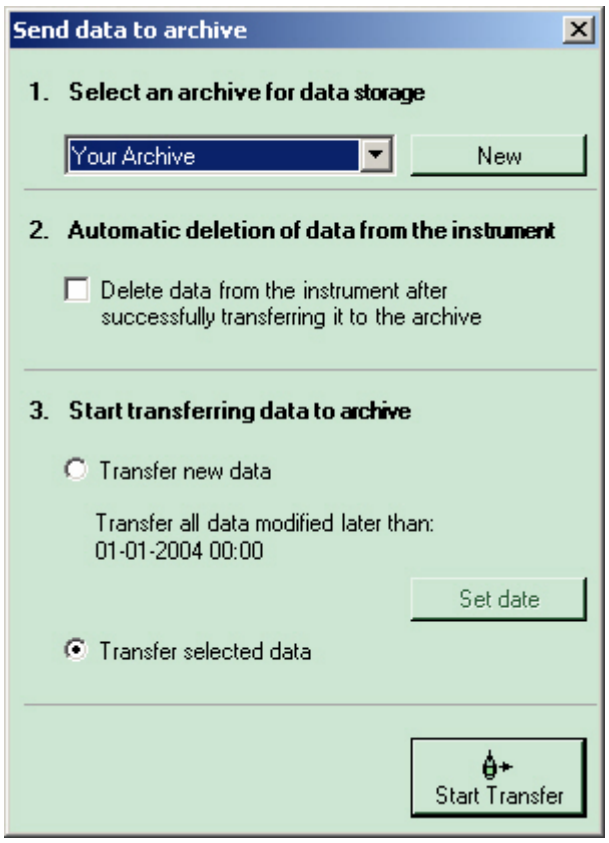
Create Job Folder: Use this option to create a new job folder in the archive. Type the new name into the entry field of the window that pops up, then click the *Create* button to add your new folder to the archive.

View Annotations: Use this option to view the list of text notes or recorded comments that have been attached to the project as annotations.

Disconnect Instrument: Use this option to disconnect the USB connection between the PC and the instrument, before unplugging the USB cable. To connect to the instrument again, simply plug the USB cable into the socket.

Transfer Data from the Instrument to the Archive

Select the data to transfer, right click on it and select **To Archive** from the drop-down (or press the *To Archive* button on the toolbar, or use the **Tools**, **To Archive** menu) to transfer projects, and/or settings, from the instrument to the selected archive, using the *Send Data to Archive* wizard:



The transferred data will be stored in the archive using the same user and job folder structure as on the instrument. However, no distinction is made in the archives between memory devices in the instrument (i.e., data in a 'Job001' folder' on a SD-card and data in a 'Job001' folder on the internal disk will all be stored in 'Job001' in the archive). During the transfer of data, if a project exists already in the archive with the same name, a pop-up dialog appears, asking you to rename it.

The panel is split into 3 sections:

Section 1: allows you to choose an archive for storing your data, or creating a new one if required.

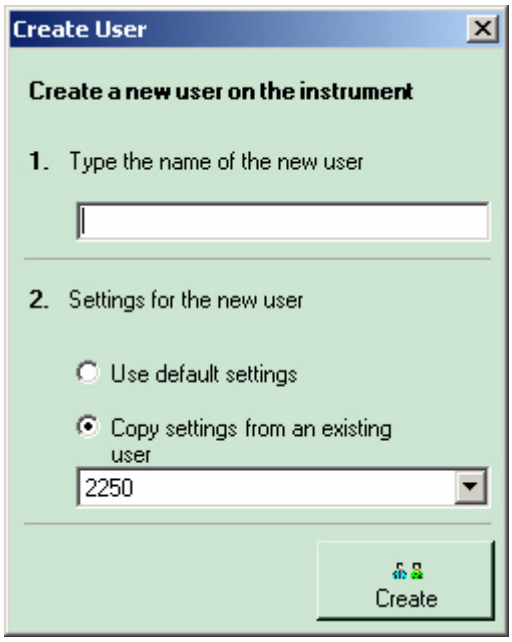
Section 2: allows you to delete the data from the instrument, once it has been successfully stored in your chosen archive (if you tick the checkbox). If you do not tick the checkbox, a copy of the data you transferred will remain on the instrument.

Section 3: allows you to choose between transferring selected data (i.e., data selected in the explorer tree/list view) or transferring all data modified by the current user after the specified date. A *Set Date* button is provided to change the date, if required.

Once you have selected what you want, click the *Start Transfer* button.

Create Users on Instrument (Type 2250 Only)

The Create User wizard is used to create a new user on the instrument:



The panel is split into 2 sections:

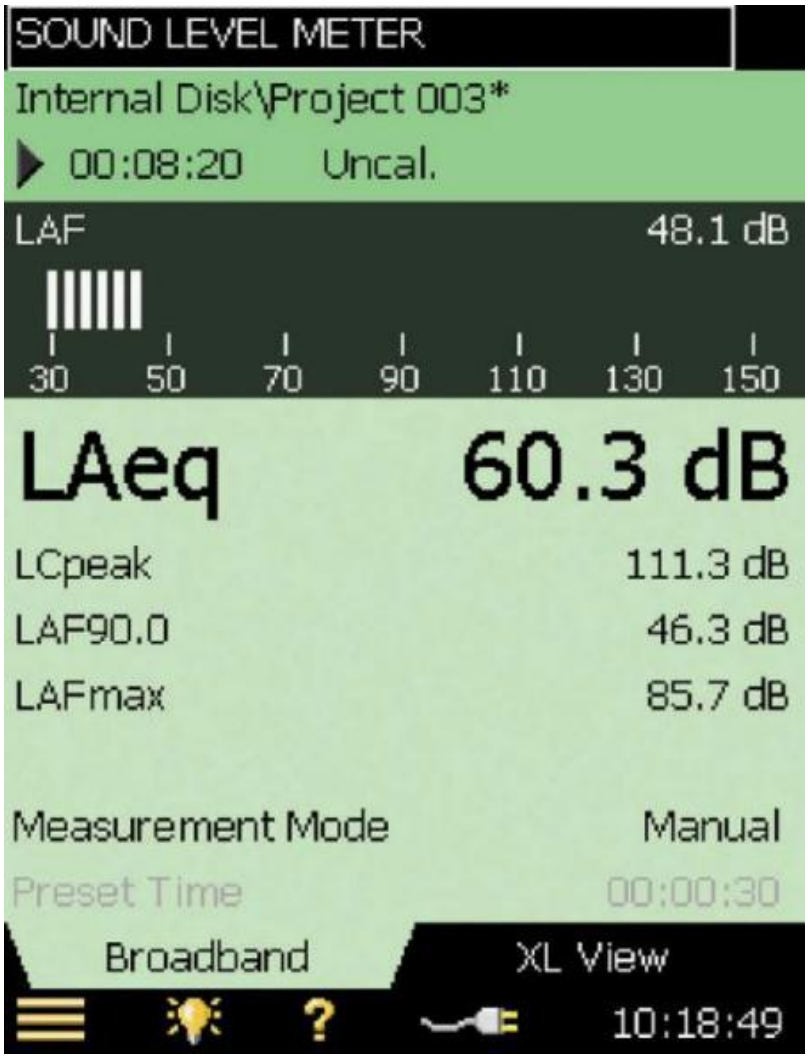
Section 1: allows you to type in the name of a new user on the instrument.

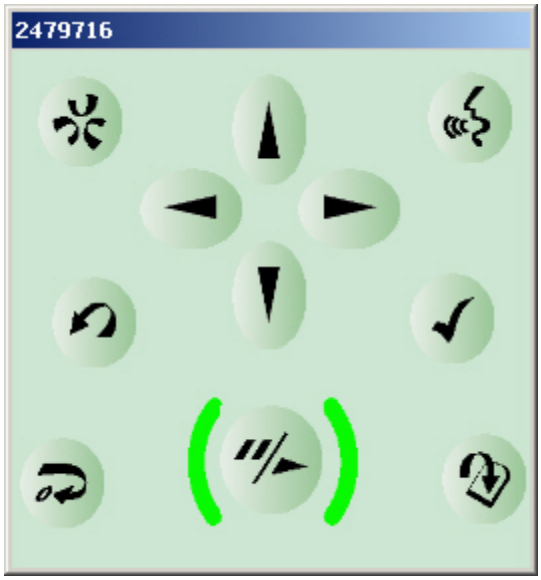
Section 2: allows you to select which method you want to use to create the new user. You can choose either the 'default' user, or clone an existing one by selecting it from the user drop-down list. Once you have selected what you want, click the *Create* button.

The *Create User* wizard can be displayed by right clicking on an instrument in the tree view and selecting **Create User** from the drop-down menu.

On-line Display

The on-line display and keyboard connect to the instrument you have selected in explorer. They allow you to control and monitor your measurements remotely from your PC.



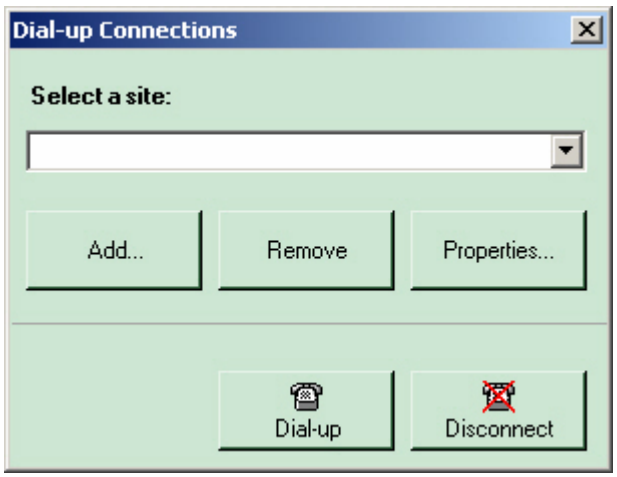


Note: The on-line display can be active while transferring data to the archive or to the instrument. More than one on-line display can be active at the same time, this means that different instruments can have their own on-line display.

Dial-up

The Dial-up wizard allows you to connect to the instrument via a telephone connection – wired or wireless – using suitable modems. When you connect via modem you will see the contents of the instrument in the Instrument Task, as if you had made the connection via USB. You then have the same possibilities for transferring data to the Archive and organising data on the instrument, as if you were connected via the USB connector. You can also use the On-line Display and keyboard to monitor and control the instrument.

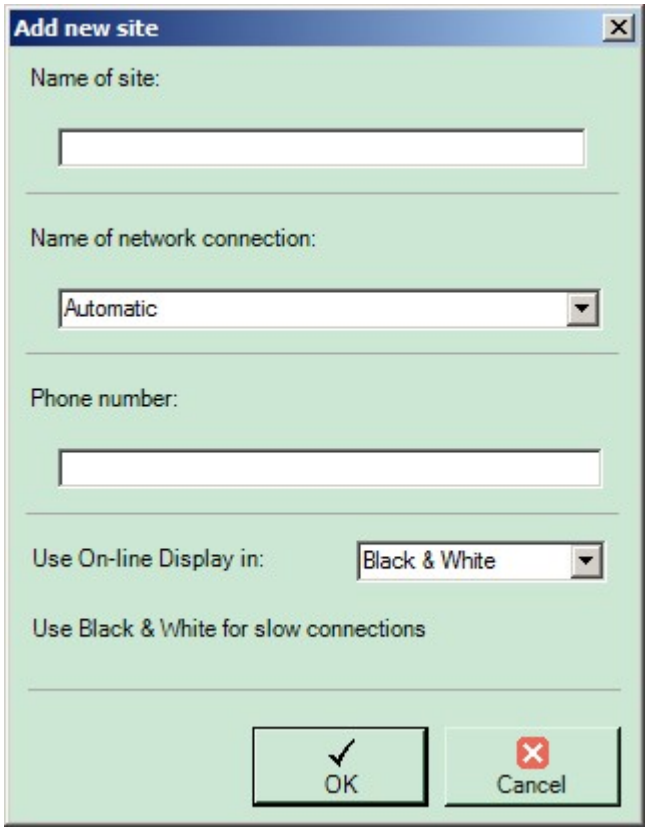
Press the *Dial Up* button on the toolbar (or use the **Tools**, **Dial-up** menu) to use the *Dial Up Connections* wizard for connecting an instrument using a modem:



Ensure your PC is connected to a modem and the instrument is connected to a modem - see details in the Type 2250 or 2250 Light User Manual.

Select a site and press the *Dial Up* button for connecting to the instrument.

You can define more than one site. A site is described by the *Name of site*, the *Name of network connection* and the *Phone number*. These settings can be set by pressing the *Add* button:



The settings can be edited by pressing the *Properties* button or deleted by pressing the *Remove* button.

You can select *Automatic* in the *Name of network connection* drop-down, if you want BZ-5503 to automatically set up your modem, or define your network connection and modem using the functionality in Windows®:

- Open 'Phone and modem options' to add a new modem in Windows®
- Under 'Network (and Dial-up) Connections' you use the 'Create (Make) a new connection' wizard to create a dial-up connection using the modem
- Select the created network in *Name of network connection* drop-down

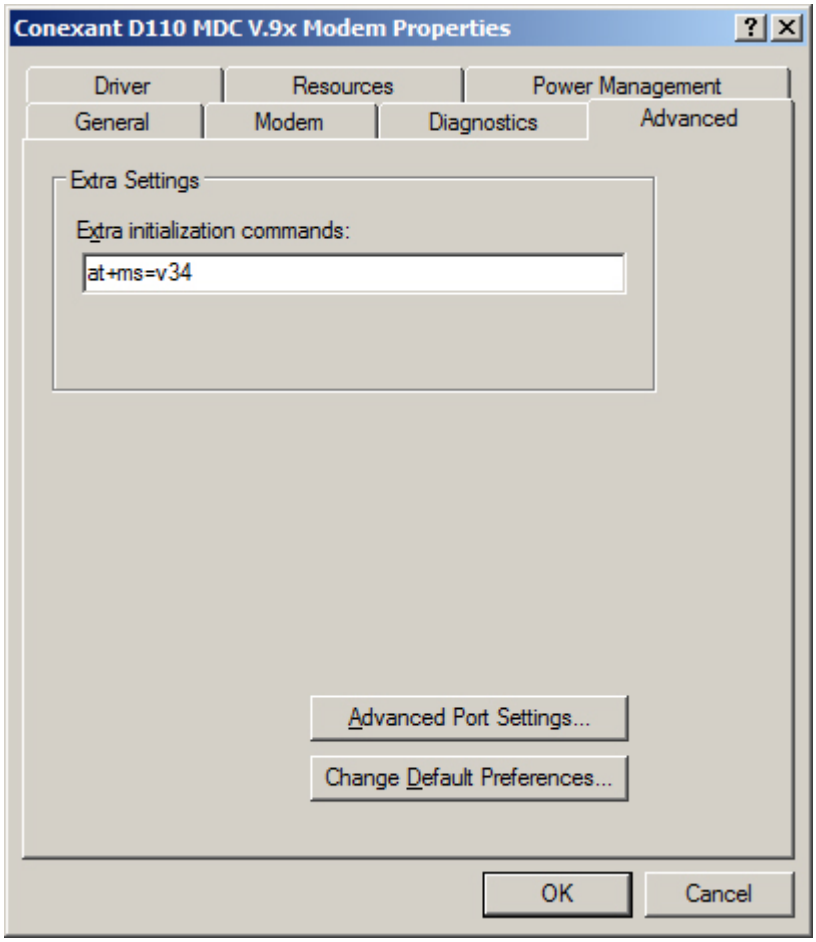
Please refer to the Windows built-in help for details.

If you want to use the On-line Display to monitor the instrument, then select either 'Black & White' or 'Colour' from the drop-down, to choose which display to use with this connection.

Note: It is recommended to use the black and white display for slow connections, to get proper response times when controlling the instrument.

Use the *Disconnect* button in the Dial-up Connections wizard to disconnect the instrument.

Note: In some cases the phone line conditions are unable to support V90 connections and consequently are unable to operate at 56k. If this is the case, your modem will perform better if you make a V34 connection instead. To accomplish this, the modem must be given the 'at+ms=v34' command. This can be added to the modem initialization (init) string – found on the Control Panel under *Phone* and *Modem Options*:



Please see the help files for your respective operating system for more information.

Archive

Archive View

The Archive View allows you to view or select jobs/projects in the archive for further action. It consists of an archive tree and a list view:

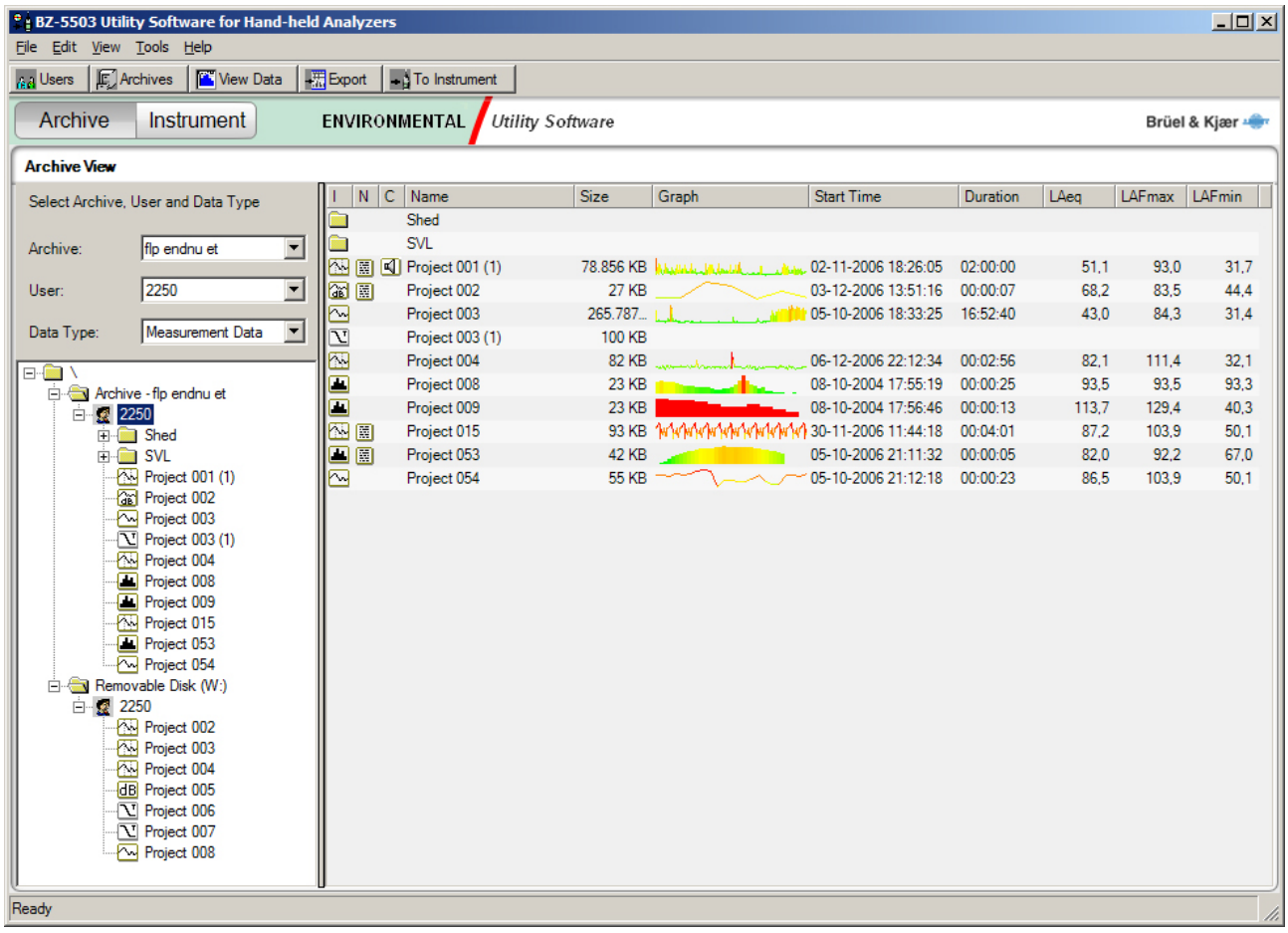
Archive Tree View

The archive tree view allows you to quickly navigate to the job folder and project you need in the archive.

List View

The list view (to the right of the tree view) allows you to sort the data.

An example Archive View is shown below:



The pane at the top allows you to select which *Archive*, *User* and *Data Type* you would like:

Archive

If you have created more than one archive, then select which archive here. It is possible to view all archives at the same time by selecting *All Archives*.

User

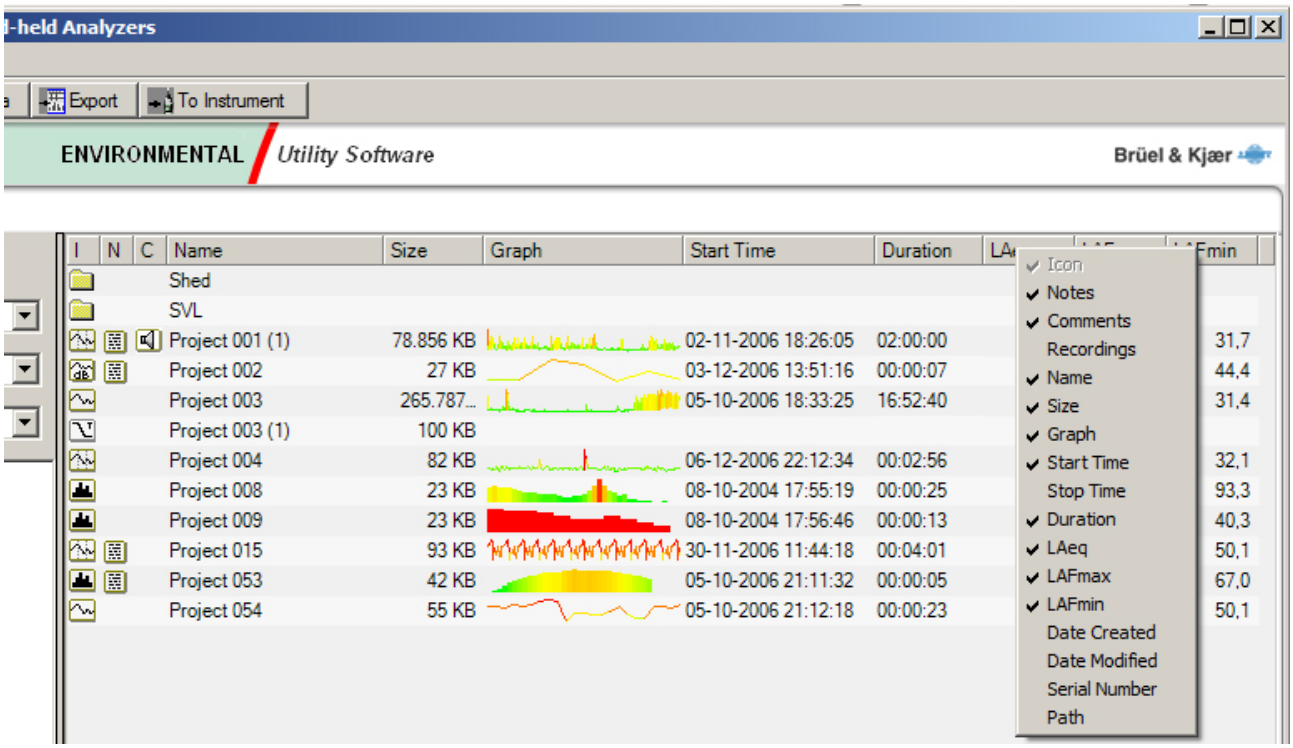
If you have defined more than one user in the archive, then select which user to view here. It is possible to view all users at the same time by selecting *All Users*.

Data Type

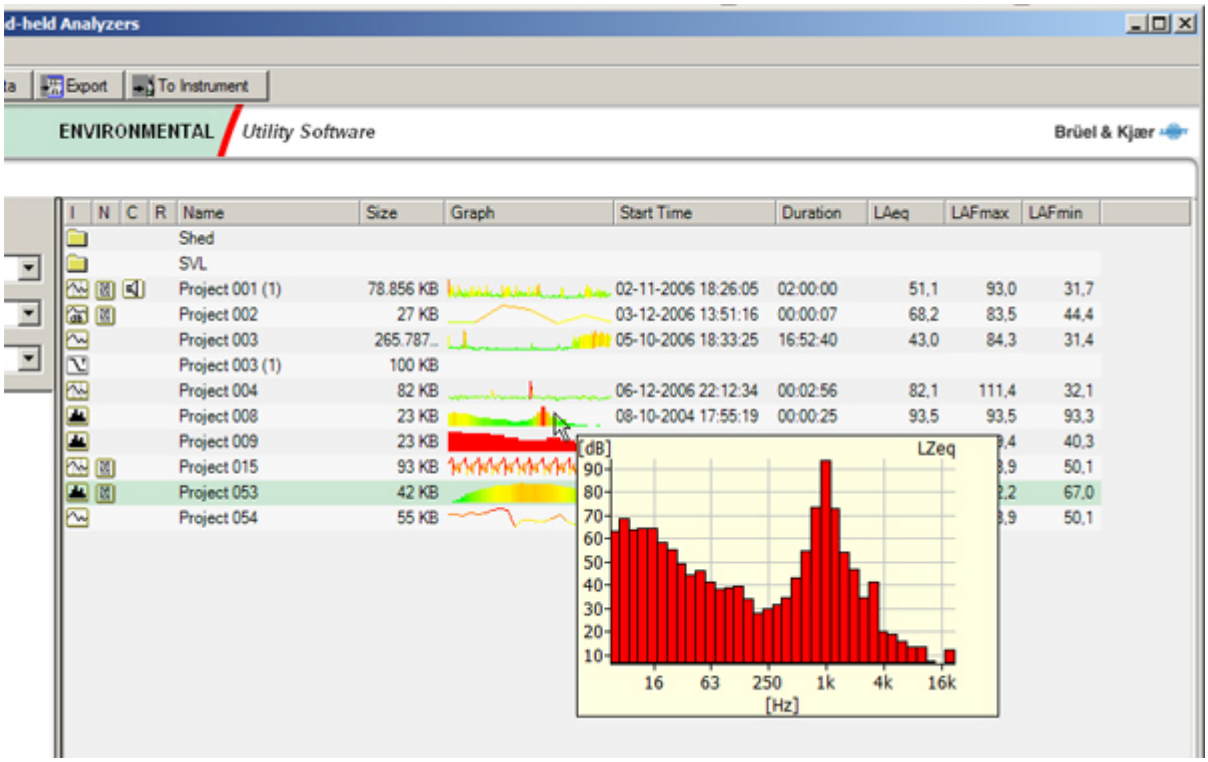
Select whether you want to display *Measurement Data* (job folders and projects) or *Settings* (templates and setups).

List View

The list view contains job folders and projects with a number of details listed in the columns. Use mouse to right-click on the column-header to display the columns that are available. Select/deselect from the list that pops up:



- You can re-organise the columns by clicking a column header and dragging it to another position
- You can sort the list in accordance with any of the columns by clicking on the column header. Click again to reverse the sorting
- The *Graph* column shows your measurements as thumbnails. Sound Level Meter data doesn't contain graphics content and Logging data from software versions below 2.0 doesn't either
- For Logging data the thumbnail shows the Logging Overview measured by the instrument
- For Frequency Analysis data the thumbnail shows the L_{eq} spectrum
- The colouring of the thumbnail is green for data below 30 dB, and red for data above 100 dB – and then from green through yellow to red from 30 to 100 dB
- Hover the mouse over the thumbnail to show it as a small graph like this:



- Hover the mouse over the Note icon for immediate display of the content
- Hover the mouse over a Comment or Recording, for immediate playback – it stops when you move the mouse again

Context Menus

To help you manage your data in this view, various context menus have been provided. These pop-up when you right-click on the selected item. For instance, menus have been provided for each of the tree nodes, each of your job folders and each of your projects. Each of these menus has various options, some of which may, or may not be available, depending on which part of the tree you are in and what you have selected in the *Data Type* drop-down list. Most tasks and functionality in the Archive View can be activated from the context menus.

While some of the options on these context menus are specific to this BZ-5503 software and need explanation (see below), some are common options found in most software packages, such as **Expand**, **Collapse**, **Explore**, **Cut**, **Copy**, **Paste**, **Delete** and **Rename**, which are self-explanatory.

Context Menus Specific to BZ-5503 Software

New Archive: Use this option to add a new archive. Type the new name into the entry field of the *Add New Archive* window that pops up, then select the path where to create the new archive by navigating to it using the browse button. Then click the *OK* button to accept or the *Cancel* button to abort.

Create User: Use this option to create a new user in the currently highlighted archive. Type the new name into the entry field and then select which settings you want to use for the new archive. Use either the default settings **or** copy the settings from an existing user in the archive, selecting the user from the drop-down list that appears when you select the radio button. When you have finished, click the *Create* button to create the new user.

Properties: Use this option if you want to check the path of the currently highlighted archive.

Create Job Folder: Use this option to create a new job folder for the current user in the archive. Type the new name into the entry field of the window that pops up, then click the *Create* button to add your new folder to the archive.

To Instrument: Use this option to transfer data from the selected archive to the instrument. First select the instrument from the drop-down list. Then select the memory device in the instrument to which you want to download the data. Finally, select the data that you want to transfer (in the explorer tree view) and click the *Start Transfer* button.

Add Note: Use this option to add a text note to either the job folder or a project within the folder.

Export: Use this option to export the selected jobs or projects.

View: Use this option to view the measurement data stored in the currently highlighted project, using the BZ-5503 Data Viewer.

Edit: Use this option to edit the text note attached to the project, or to edit a template.

Play: Use this option to play the recorded comment or sound recording attached to the selected project.

View Annotations: Use this option to view the list of text notes or recorded comments that have been attached to the project file as annotations.

Disconnect Archive: Use this option to disconnect an archive from the Archive Explorer. Once disconnected, the archive will no longer be available or displayed. Use *Connect Archive* to reconnect the archive again.

Connect Archive: Use this option to connect to an archive that already exists.

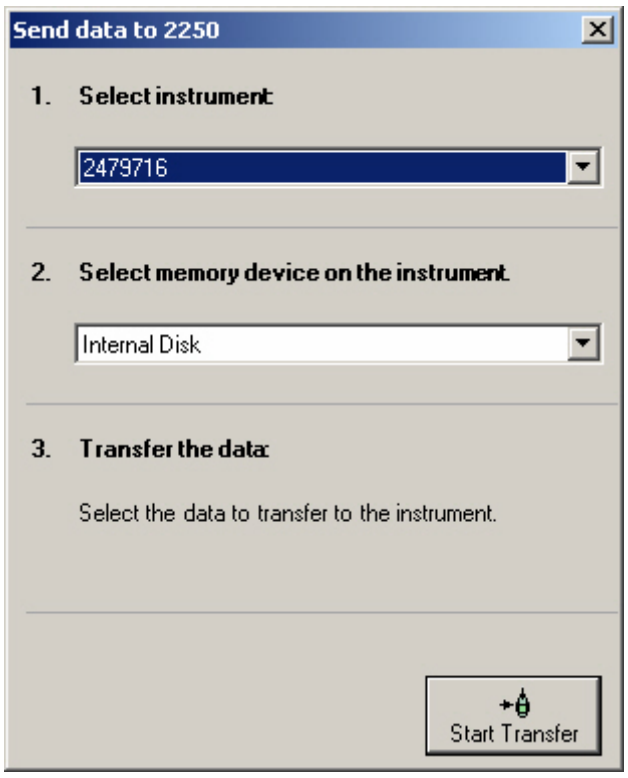
Hide: Use this option to hide a removable disk that is not relevant to your instrument.

Show: Use this option to display a removable disk that was previously hidden.

Search: Use this option to search for any project item in a job folder, user or Archive (or all Archives).

Transfer Data from the Archive to the Instrument

Select the data to transfer, right click on it and select **To Instrument** (or press the *To Instrument* button on the toolbar, or use the **Tools**, **To Instrument** menu) to transfer projects, and/or settings, from a selected archive to the selected instrument, using the *Send Data to Instrument* wizard:



The transferred data will be stored in the instrument on the selected memory device in the same job folder structure as in the archive and under the same user.

The panel is split into 2 sections:

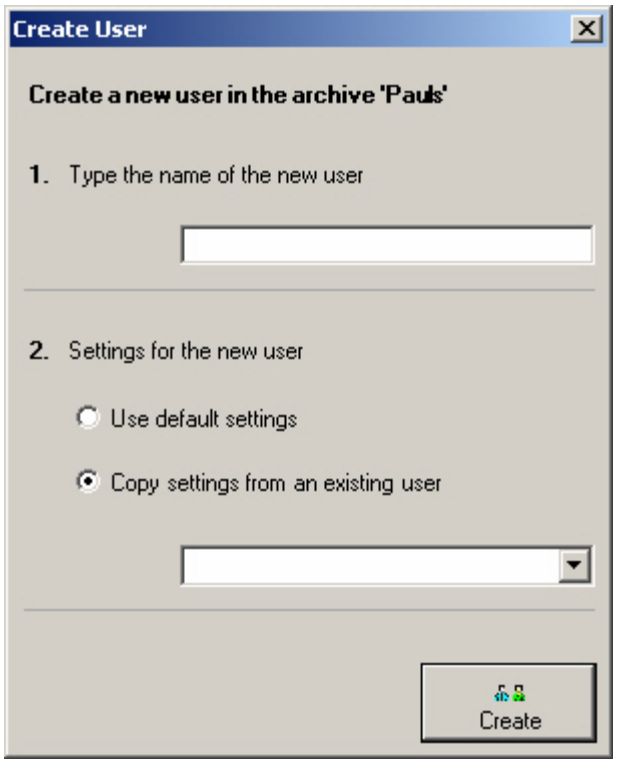
Section 1: allows you to choose an instrument for storing your data.

Section 2: allows you to select the memory device on the instrument (whether it be internal disk, SD-card or CF-card).

Once you have selected what you want, click the *Start Transfer* button.

Create Users in Archives

The Create User wizard is used to create a new user in the archives:



The panel is split into 2 sections:

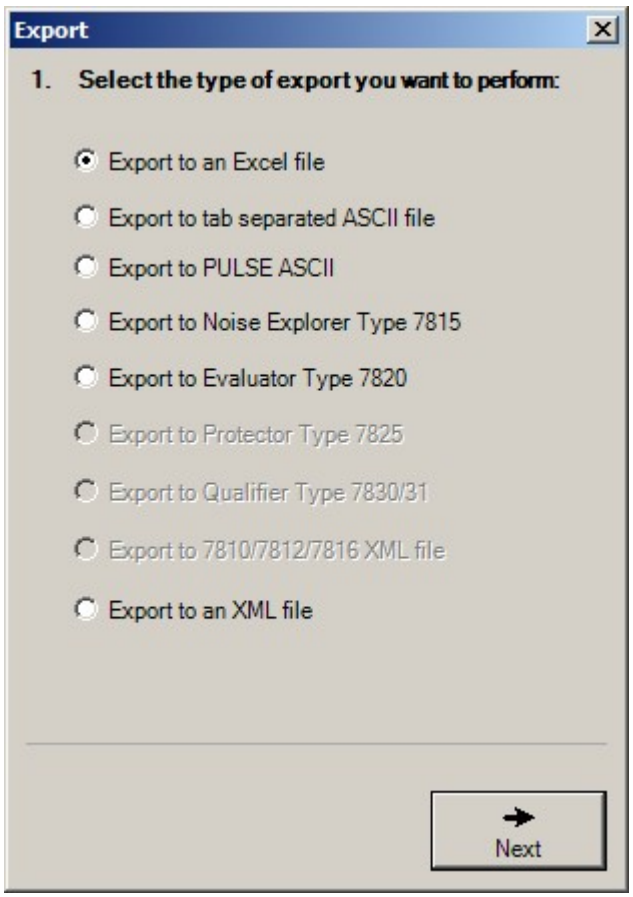
Section 1: allows you to type in the name of a new user to be created in archives.

Section 2: allows you to select which method you want to use to create the new user. You can choose either the 'default' user, or clone an existing one by selecting it from the user drop-down list. Once you have selected what you want, click the *Create* button.

The *Create User* wizard can be displayed by right clicking on an archive node in the tree view and selecting **Create User** from the drop-down menu (or press the *Users* button on the toolbar).

Export

Select the data to export, right click on it and select **Export** (or press the *Export* button on the toolbar, or use the **Tools**, **Export** menu) to export selected data from your instrument in various formats, depending on your post-processing software, using the Export wizard:



Select which type of file format you would like your data exported to. The choices are normally Excel, text or XML format, but if you are using one of Brüel & Kjær's post-processing software packages, they will also appear in the list of radio buttons, and can be selected. (If none of these products have been installed, they will be greyed out in the list.)

Once you have chosen which data is to be exported, click the button. The button will be a *Finish* button, if no more selections are necessary, or a *Next* button, to display wizard dialogues for further selections – like in *Export to an Excel file*.

Export to Qualifier

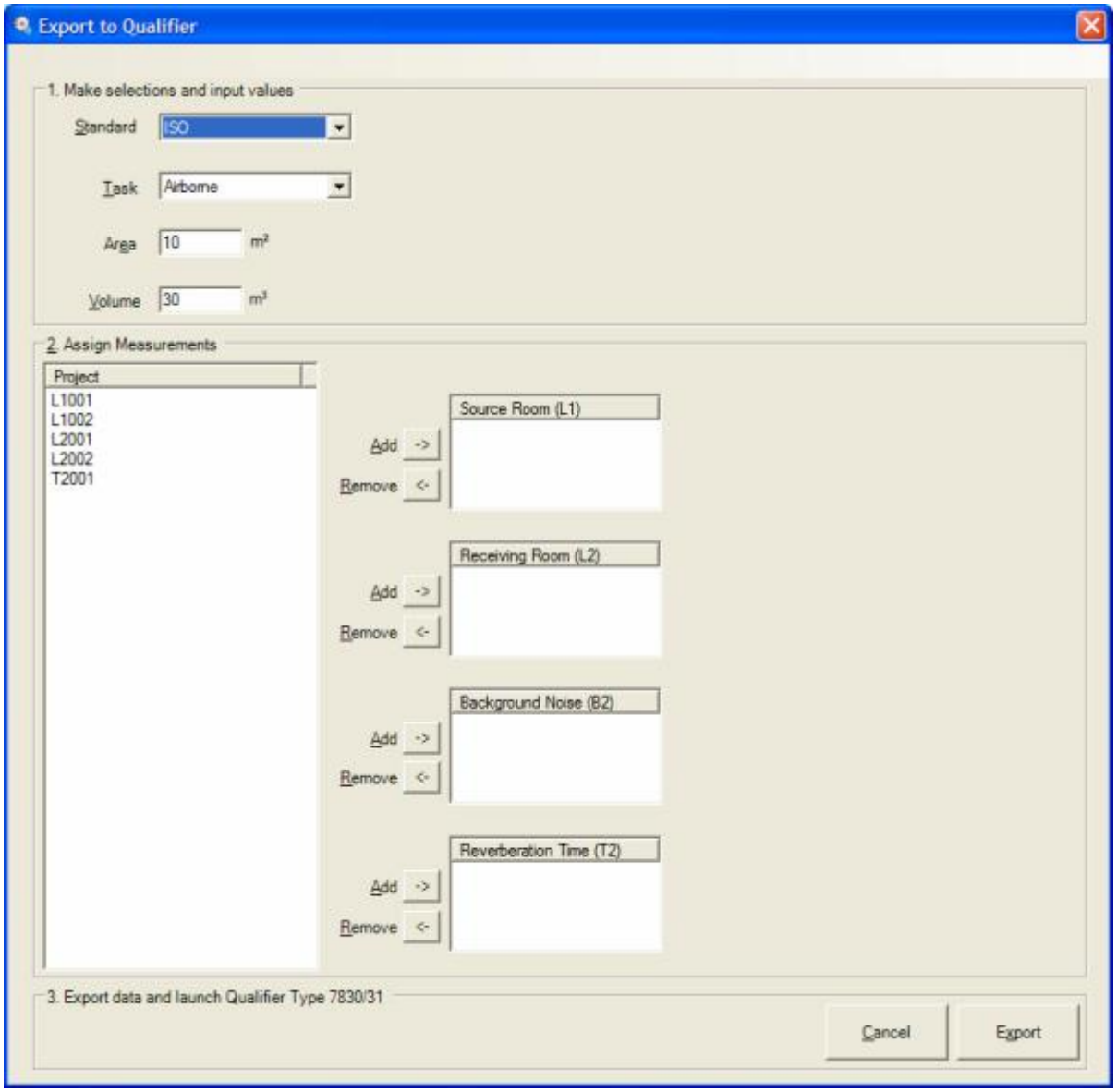
This dialog allows you to select which data to export to Type 7830 Qualifier, for calculating Building Acoustics parameters in accordance with international and national standards. (The dialog appears when you select *Export to Qualifier Type 7830/31* in the Export wizard).

- Use BZ-7223 Frequency Analyzer Software to perform L1, L2 and B2 measurements.

Note: Version 2 of this software can control the built-in generator.

- Use BZ-7227 Reverberation Time Software to perform T2 measurements.
- Use BZ-5503 to archive the data on your PC.
- Use this dialog to select which data to export to Type 7830 as L1, L2, B2 and T2 data, and to select standard, task, surface and volume - see typical dialog below.
- Use Type 7830 version 2.9 (or higher) to calculate and report the relevant building acoustics parameters.

Hint: To help you with 'data housekeeping' when doing the measurements, please create a job folder on your Type 2250 for each building acoustics task you want to perform. Set the 'Project Name Prefix' under 'Storage Settings, Preferences' to L1, L2, B2 or T2, matching the current function you want to measure - then Type 2250 will automatically do the position numbering.



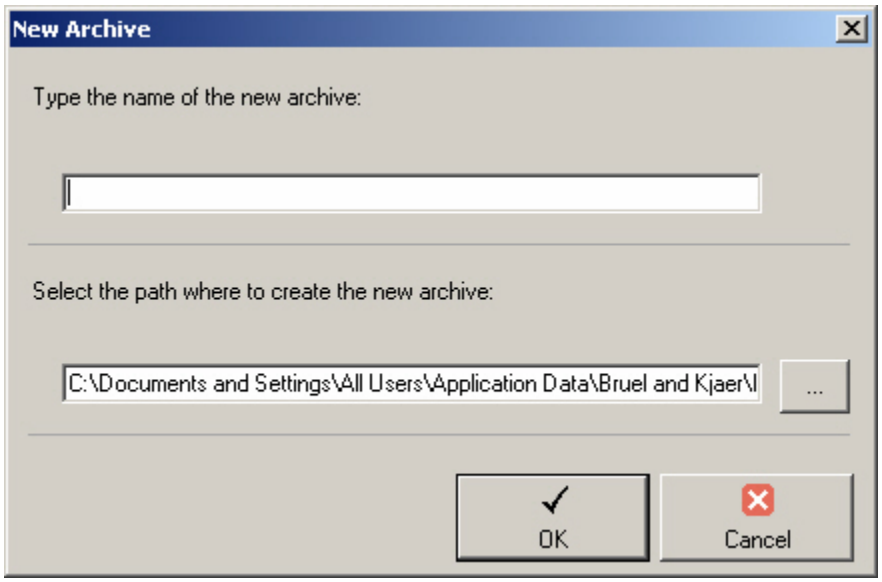
1. Select the desired *Standard* and *Task* from the drop-down lists - a detailed description of the standards and tasks is available in the Qualifier Online Manual, Chapter 6. A number of extra values for the calculation can be set, depending on the *Standard* and *Task* chosen:
    - For all standards with *Airborne* and *Façade* tasks, you can set the *Area* of the partition.
    - For all standards with *Airborne*, *Façade* and *Impact* tasks, you can set the *Volume* of the room.
    - For *NEN* standard with *Façade* task, you can set *Cr* and *Traffic Type*.
    - For *NEN* standard with *Impact* task you can set *Rubber Hammer* and *Floor*.
    - For *ASTM* standard with *Façade* task you can set *OILR Corr.* and *OITL Corr.*
2. Select the data to be exported. In the Project list you can select data from Frequency Analysis and Reverberation Time projects - all located in the folder you selected when starting the Export wizard.
3. Select the files and press the relevant *Add* or *Remove* buttons to add them to (or remove them from) the *Sending Room (L1)*, *Receiving Room (L2)*, *Background Noise (B2)* or *Reverberation Time (T2)* lists to the right of the Project list.

Note: NEN and BREW standards require measurements from two source locations - the lists appear when selecting these standards.

4. When you have selected and organized the data correctly in the lists, press the *Export* button to start the export to Qualifier.

New Archive

Right click on the top most level in the Archive tree and select **New Archive** from the drop-down (or use the **File**, **New**, **Archive** menu) to create a new archive, using the *New Archive* wizard:



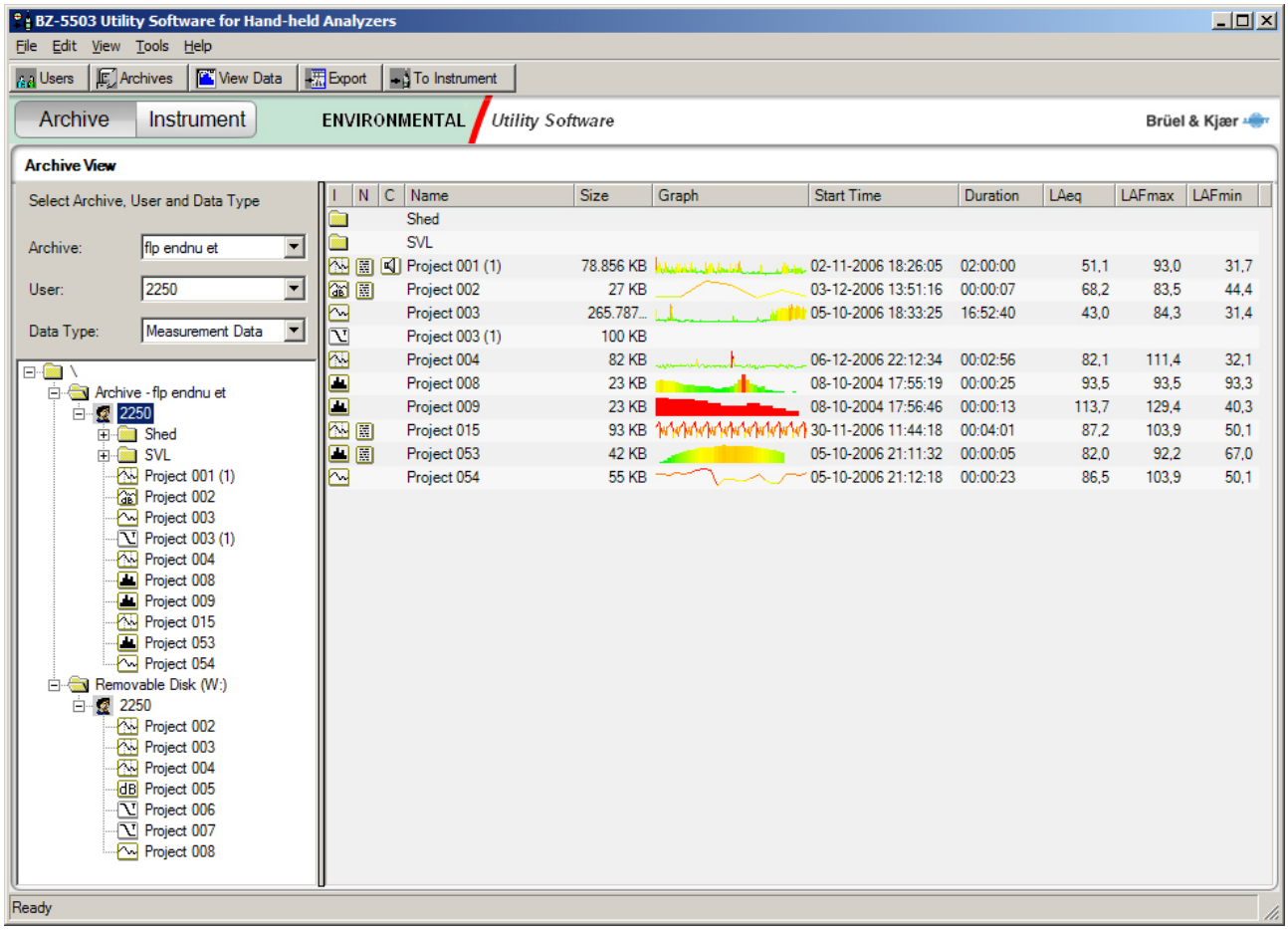
Enter the name of the new archive and select the path for creating the new archive. (Use the browse button ... if required.)

Finally, click the *OK* button to insert the new archive, click *Cancel* to abort.

Removable Disks, SD- and CF-cards

In the Archive View you can get access to removable disks like SD-Cards or CF-Cards (this requires that your PC has slots for these cards - or you connect an SD-Card or a CF-Card reader to the USB port of the PC).

If you have stored instrument data on an SD-Card or a CF-Card, and the card is in the SD/CF slot on your instrument, then you can transfer the data from the card to an archive using the *To Archive* task (through the USB connection), or you can remove the card from the instrument and insert it in the slot or card reader on your PC. The card will then be available in the Archive View as a 'Removable Disk':



You can copy or move data (projects, jobs or even users) to an archive. Use the mouse to right click on the data you want to copy (select **Copy** from the context menu) or move (select **Cut** from the context menu) and then right click at the position in the archive, where you want the data and select **Paste**. The data will then be transferred from the card to the archive.

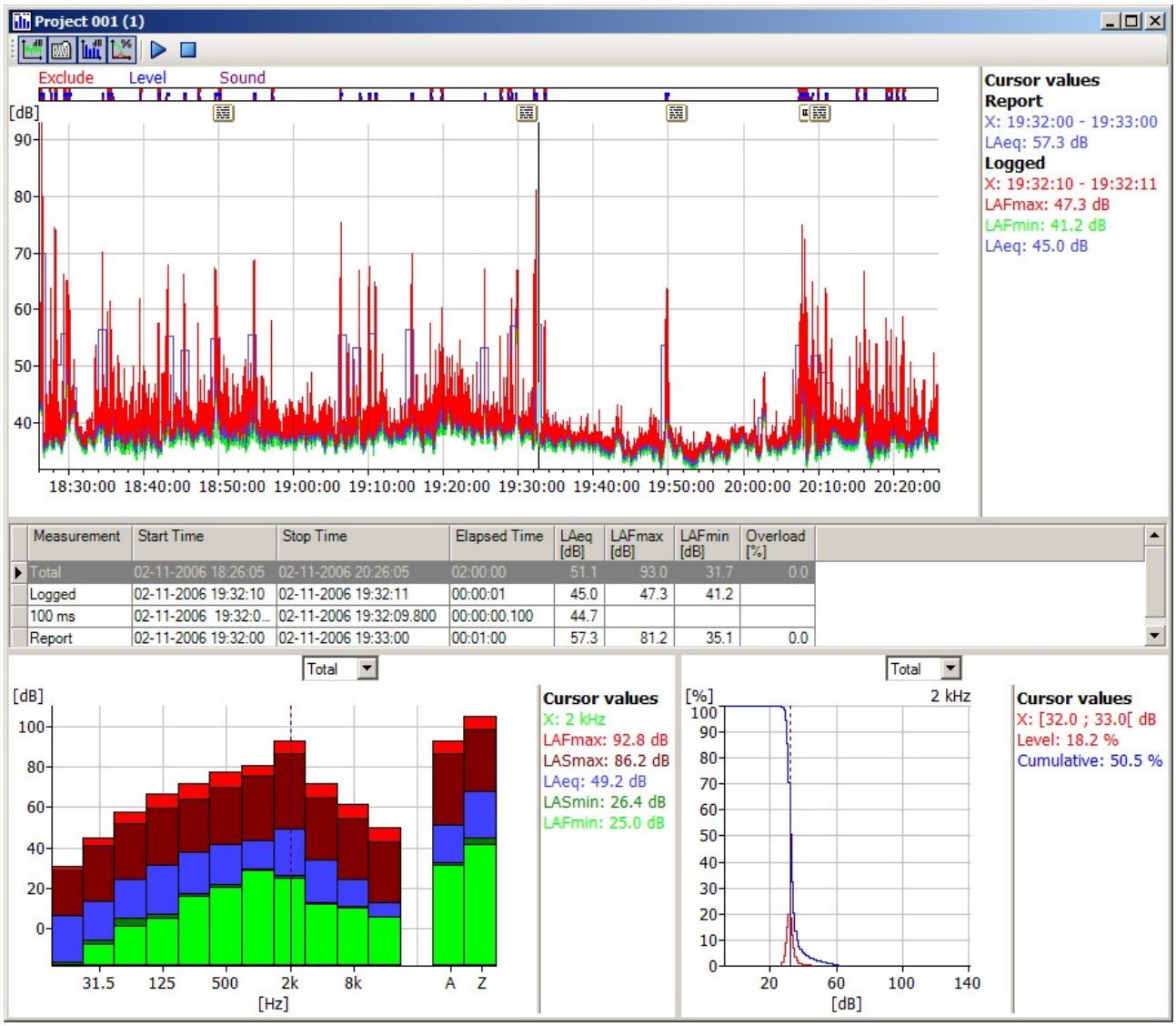
You can also use the mouse to drag and drop the data. Left click on the data you want to transfer, keep the button pressed down and move the mouse to the position in the archive, where you want the data. If you release the button, the data will be moved. If you press the **<Ctrl>** button while you release the mouse button, then the data will be copied. You can move or copy data from an archive to the card in the same way.

Note: All removable disks on your PC will be displayed in the Archive View. If a disk is not relevant as storage media for the instrument, then you can hide it by right clicking on it and selecting **Hide** from the context menu.

You can reveal hidden removable disks by right clicking at the top most level in the Archive View and selecting **Show**.

Data Viewer

The BZ-5503 Data Viewer allows you to view the data in your previously saved projects. Select *View* from the context menu that appears when you right click on a project in the archive list. A viewer window, similar to that shown below, will appear:



The Data Viewer displays the data in up to four different views: Profile; Table; Spectrum and Statistics.

- Sound Level Meter projects can be viewed using the Table and Statistics views
- Frequency Analysis projects can be viewed using the Table, Spectrum and Statistics views
- Logging and Enhanced Logging projects can be viewed using all four views: Profile; Table; Spectrum and Statistics views
- Reverberation Time projects can be viewed using the Table and Reverberation Time Spectrum Views
- FFT projects can be viewed using the Table and FFT Spectrum Views

Views can be enabled/disabled using the view selectors in the upper left corner: 

Opening large logging and enhanced logging projects the very first time requires building compressed versions of the data for easy zoom and overview facilities in the profile. The compressed information is stored within the project in the archive for faster access on successive openings. If the archive is write protected, then this compression is not possible and the zoom facilities will be limited.

Profile View

The Profile view shows measured broad-band parameters (LA_{eq}, L_{AFmax}, etc.) as a function of time. Parameters from Logging, 100 ms and Reports can be displayed.

Right click inside the profile to select which parameters to display. Above the profile you may see the markers made with the instrument during the measurement as coloured horizontal bars. Hover the mouse over the marker to see details of the marker.

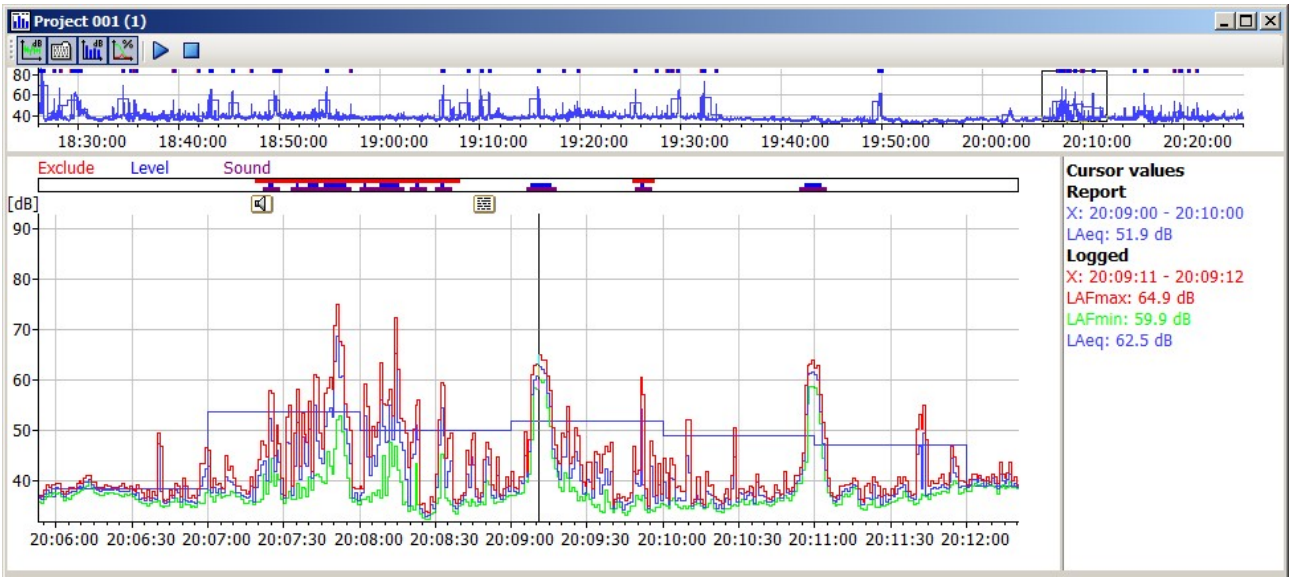
A sound recording (displayed as a sound marker) can be played back by right clicking the marker and selecting *Play* – or by placing the profile cursor to the left of or inside the marker and then pressing the Play icon  (or Ctrl P) in the upper left corner. Press the Pause icon  (Ctrl P) to pause the play back or press the Stop icon  (Ctrl S) to stop the play back and move the profile cursor to the start of the recording.

Below the markers you might see the annotations you have attached during the measurement:

Notes  and Comments  . Hover the Mouse over the icons to view the note or play the comment.

Zooming

You can zoom in on part of the profile by clicking with the left mouse button inside the profile and drag it horizontally while holding the Shift key down (in the profile, you don't need to hold the Shift key down). When you release the left mouse button, the profile is zoomed:



The overview of the profile is displayed above the zoomed profile – a little box on the overview profile indicates the zoomed part. Use the mouse to drag the box to another part of the overview profile for a zoomed display of this part.

You can select a new zoom range either in the zoomed profile or in the overview profile – the latter can be used for zoom-out.

Double-click on the x-axis to un-zoom.

Table View

The Table view shows measured broad-band parameters in tabular form. Up to four rows with parameters from the Total, Logged, 100 ms and Report.

The Logged, 100 ms and Report rows contain parameters from the sample period selected by the Profile cursor. Use mouse to right-click on the column-headline for display of possible columns. Select/deselect from the list that pops up.

You can reorganise the columns by clicking a column header and dragging it to another position.

One of the rows is highlighted to indicate whether data from Total, Logged, 100 ms or Report are selected for display in the Spectrum and Statistics views.

Spectrum View

The Spectrum view shows the measured spectra in graphical form. Select which spectra to display using the selector above the graph: Total, Logged or Report. This setting is linked to a similar parameter in the Statistics view.

Right click inside the spectrum to select which parameters to display.

Statistics View

The Statistics view shows the Level and Cumulative distribution of the noise levels. The statistics are based on the statistics made on the instrument.

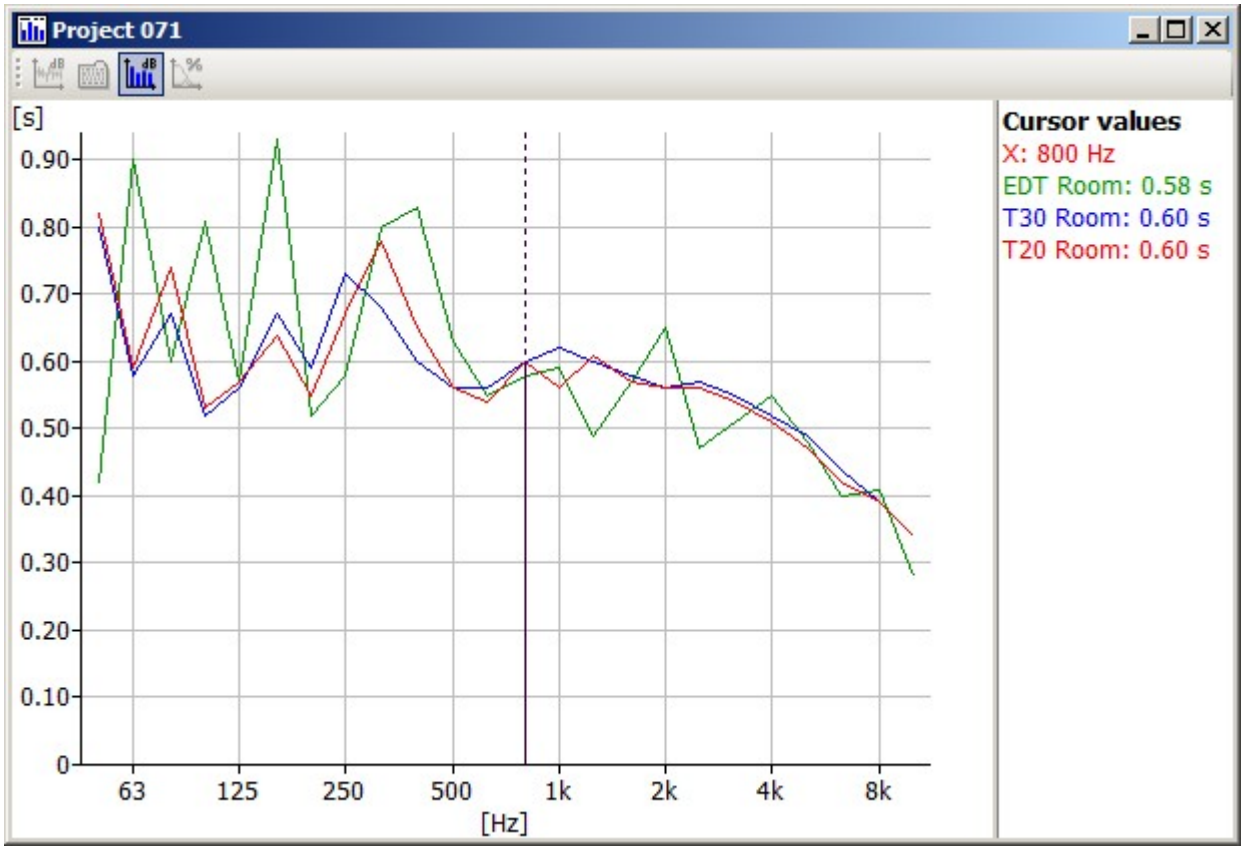
Select which statistics to display using the selector above the graph: Total; Logged or Report. This setting is linked to a similar parameter in the Spectrum view.

The frequency of the Spectrum cursor selects the statistics from the spectral statistics (this requires that spectral statistics have been measured).

Reverberation Time Spectrum View

The Reverberation Time Spectrum view shows the Room reverberation time spectra in graphical form.

Right click inside the spectrum to select which parameters to display.



FFT Spectrum View

The FFT Spectrum view shows the FFT spectra in graphical form.

You have the cursors Main, Delta, Reference, Harmonic and Symmetric Delta – together with the Auto Peak functionality – as in the FFT Analysis software BZ-7230. You select the cursor type in the drop-down above the graph. Clicking with the mouse on the graph sets the Main cursor, unless you point at one of the special cursors to drag it to another position or change the width.

The other drop-downs above the graph allow you to choose the scaling (PWR, RMS, PSD, ESD, Peak, Peak-Peak); the frequency weighting (A or Z); Acceleration, Velocity or Displacement (Accelerometer measurements only); and Linear or Logarithmic Y-axis (if data has been saved with Engineering units set).

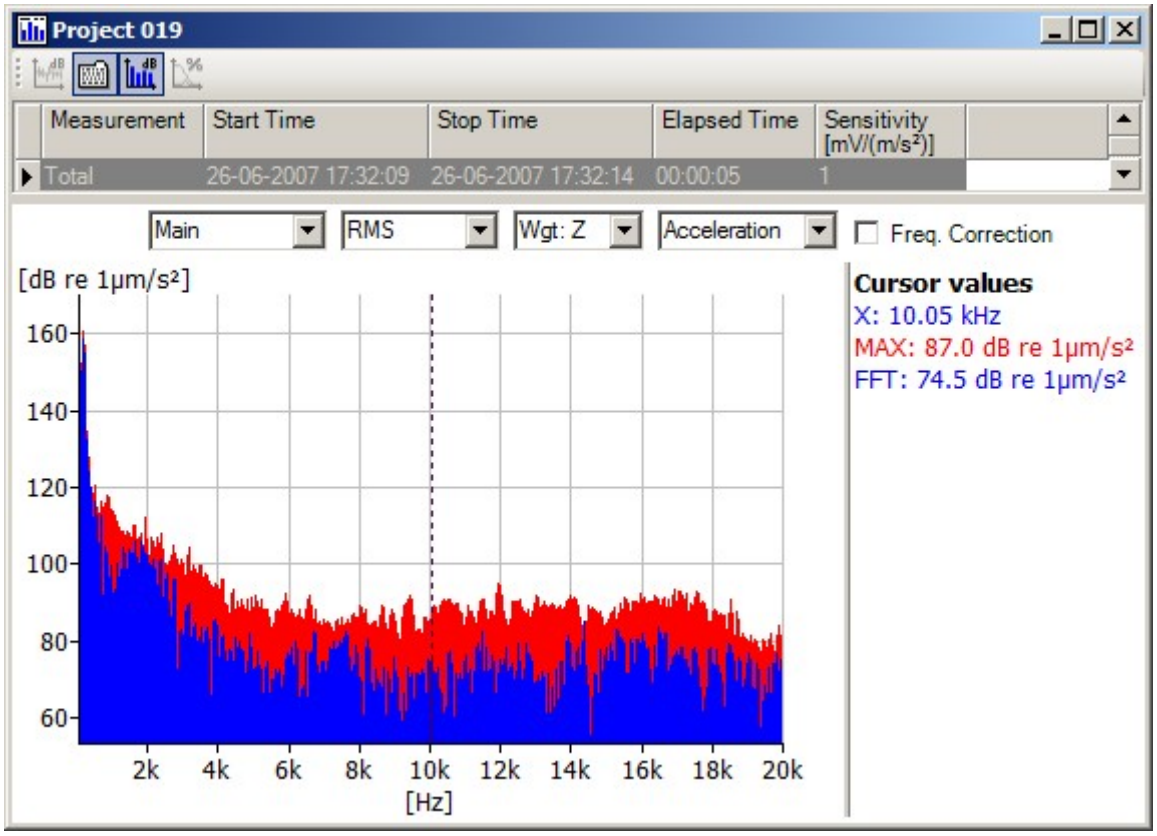
Check the Frequency Correction field, if you want corrected amplitude and frequency to be calculated for peaks between FFT lines.

You can zoom in on part of the spectrum by clicking with the left mouse button inside the profile and dragging it horizontally while holding the Shift key down. When you release the left mouse button, the profile is zoomed.

The overview of the profile is displayed above the zoomed profile – a little box on the overview profile indicates the zoomed part. Use the mouse to drag the box to another part of the overview profile for a zoomed display of this part.

Double-click on the x-axis to un-zoom.

Right click inside the spectrum to select which parameters to display.



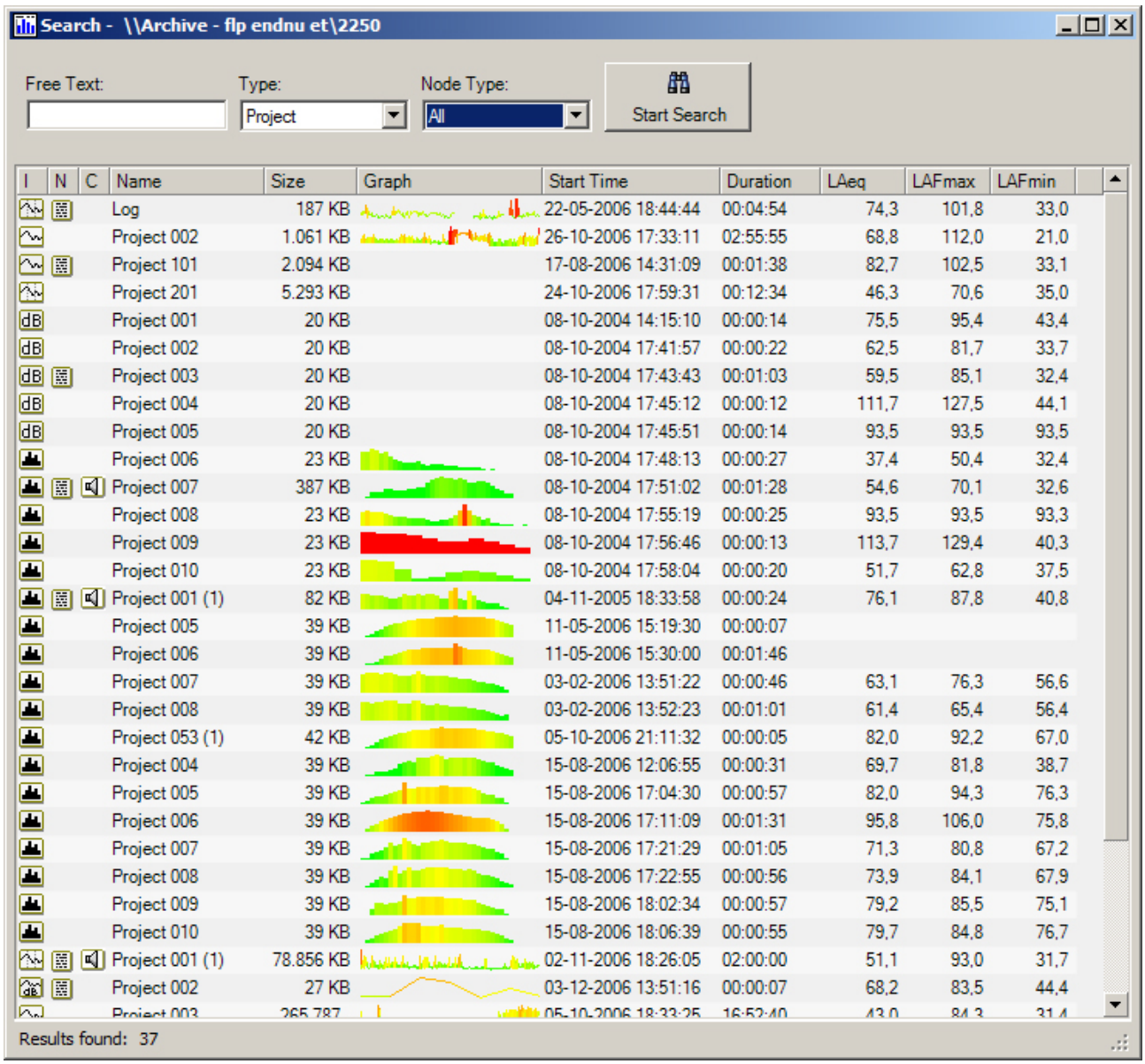
Copy Graphics and Data

You can copy the displayed graphs to the clipboard by right clicking inside the graph and selecting **Copy Graph**. You can then paste the graphics into your documentation tool, for example, Microsoft® Word.

You can copy the displayed data to the clipboard by right clicking inside the graph and selecting Copy Data. You can then paste the data into your documentation tool, for example, Microsoft® Excel.

Search

When you right-click on a job folder, a user, an Archive or All Archives (this requires that the Archive selector has been set to *All Archives* and you select the root of the archives) and select *Search*, then a search starts from this point and searches through all sub-folders. The results are shown in the Search View:



I	N	C	Name	Size	Graph	Start Time	Duration	LAeq	LAFmax	LAFmin
			Log	187 KB		22-05-2006 18:44:44	00:04:54	74,3	101,8	33,0
			Project 002	1.061 KB		26-10-2006 17:33:11	02:55:55	68,8	112,0	21,0
			Project 101	2.094 KB		17-08-2006 14:31:09	00:01:38	82,7	102,5	33,1
			Project 201	5.293 KB		24-10-2006 17:59:31	00:12:34	46,3	70,6	35,0
dB			Project 001	20 KB		08-10-2004 14:15:10	00:00:14	75,5	95,4	43,4
dB			Project 002	20 KB		08-10-2004 17:41:57	00:00:22	62,5	81,7	33,7
dB			Project 003	20 KB		08-10-2004 17:43:43	00:01:03	59,5	85,1	32,4
dB			Project 004	20 KB		08-10-2004 17:45:12	00:00:12	111,7	127,5	44,1
dB			Project 005	20 KB		08-10-2004 17:45:51	00:00:14	93,5	93,5	93,5
			Project 006	23 KB		08-10-2004 17:48:13	00:00:27	37,4	50,4	32,4
			Project 007	387 KB		08-10-2004 17:51:02	00:01:28	54,6	70,1	32,6
			Project 008	23 KB		08-10-2004 17:55:19	00:00:25	93,5	93,5	93,3
			Project 009	23 KB		08-10-2004 17:56:46	00:00:13	113,7	129,4	40,3
			Project 010	23 KB		08-10-2004 17:58:04	00:00:20	51,7	62,8	37,5
			Project 001 (1)	82 KB		04-11-2005 18:33:58	00:00:24	76,1	87,8	40,8
			Project 005	39 KB		11-05-2006 15:19:30	00:00:07			
			Project 006	39 KB		11-05-2006 15:30:00	00:01:46			
			Project 007	39 KB		03-02-2006 13:51:22	00:00:46	63,1	76,3	56,6
			Project 008	39 KB		03-02-2006 13:52:23	00:01:01	61,4	65,4	56,4
			Project 053 (1)	42 KB		05-10-2006 21:11:32	00:00:05	82,0	92,2	67,0
			Project 004	39 KB		15-08-2006 12:06:55	00:00:31	69,7	81,8	38,7
			Project 005	39 KB		15-08-2006 17:04:30	00:00:57	82,0	94,3	76,3
			Project 006	39 KB		15-08-2006 17:11:09	00:01:31	95,8	106,0	75,8
			Project 007	39 KB		15-08-2006 17:21:29	00:01:05	71,3	80,8	67,2
			Project 008	39 KB		15-08-2006 17:22:55	00:00:56	73,9	84,1	67,9
			Project 009	39 KB		15-08-2006 18:02:34	00:00:57	79,2	85,5	75,1
			Project 010	39 KB		15-08-2006 18:06:39	00:00:55	79,7	84,8	76,7
			Project 001 (1)	78.856 KB		02-11-2006 18:26:05	02:00:00	51,1	93,0	31,7
			Project 002	27 KB		03-12-2006 13:51:16	00:00:07	68,2	83,5	44,4

The following types of items can be found in a search: Projects; Job Folders; Annotations; Users and Archives. (You can also filter your search with the *Type* selector.)

For Projects you can refine your filter using *Node Type* to select the kind of project, and for Annotations you can refine your filter using *Node Type* to select which kind of annotation.

In the *Free Text* field you enter the text you want to search for, and the search starts when you hit the *Search* button. The search will check through all the names of items and the contents of notes.

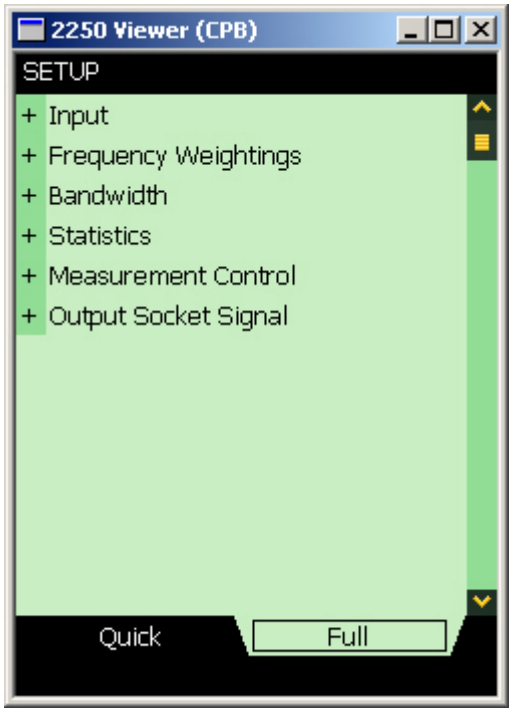
The following context menus are available:

- **View:** Use this option to view the measurement data stored in the currently highlighted project, using the BZ-5503 data viewer.

- **Export:** Use this option to export the selected project.
- **Edit:** Use this option to edit a text note.
- **Locate:** Use this option locate the selected item. This is done by highlighting the item in the Tree View.

2250 Editor

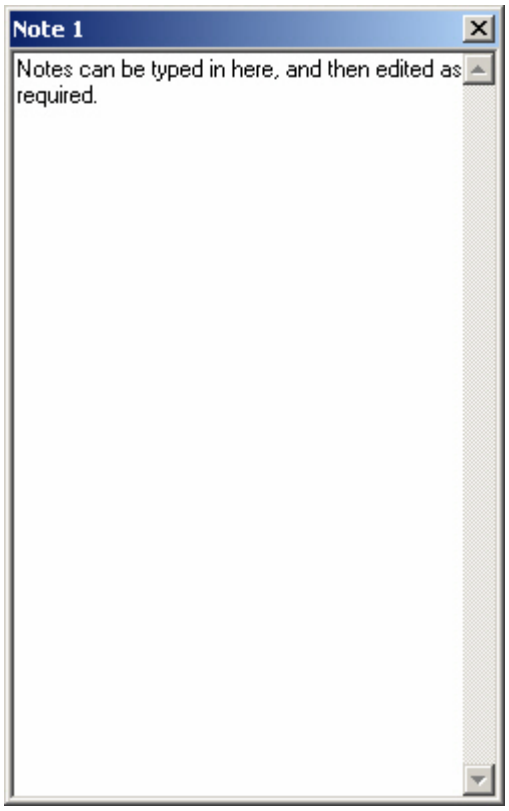
The 2250 Editor allows you to edit the parameters in your previously saved templates. Select **Edit** from the context menu that appears when you right click on a template in the archive list. The editor window (showing the template name in brackets in the title banner) will appear, see example below:



Use this window to edit any of your templates. When finished, close the window to save the changes.

Add Note

Right click on a job folder or a project in the Archive View and select **Add Note** from the list of options. Type your notes into the window that appears, see example below:



When you left click on a job folder in the tree view, all notes attached to each project in the job folder appear as paperclip symbols in the list view. Similarly, when you left click on the individual project in the tree view, all notes attached to that project (if there are any) are visible in the list view (numbered 'Note 1' up to 'Note N').

If you need to edit the note later, simply right click on the note in the list view, select **Edit** from the list of options and edit as required.

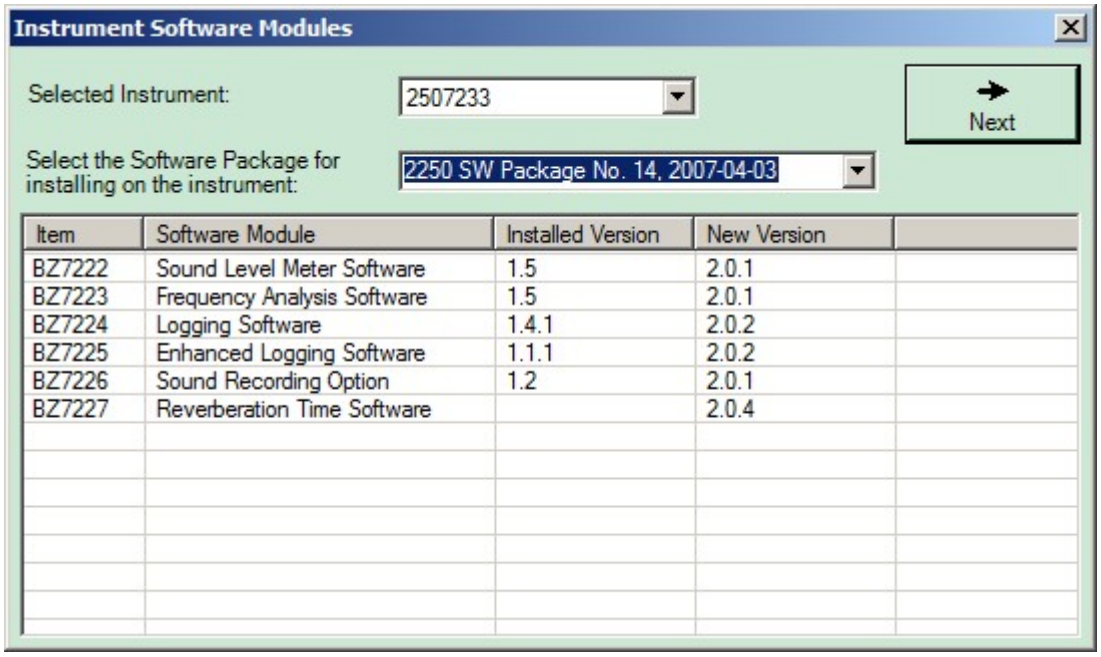
Maintenance

Installing Software Modules on the Instrument

The *Instrument Software Modules* wizard is used to install new software modules on the instrument, or for upgrading existing modules.

Click on the *Instrument* button at the top of the window to show the Instrument view, then press the *Install* button on the toolbar (or select **Tools**, **Maintenance**, **Install Instrument Software**) to see the table showing the installed versions of the software modules on the selected instrument.

The list includes the version of the installed modules and the version of the new modules that can be installed:



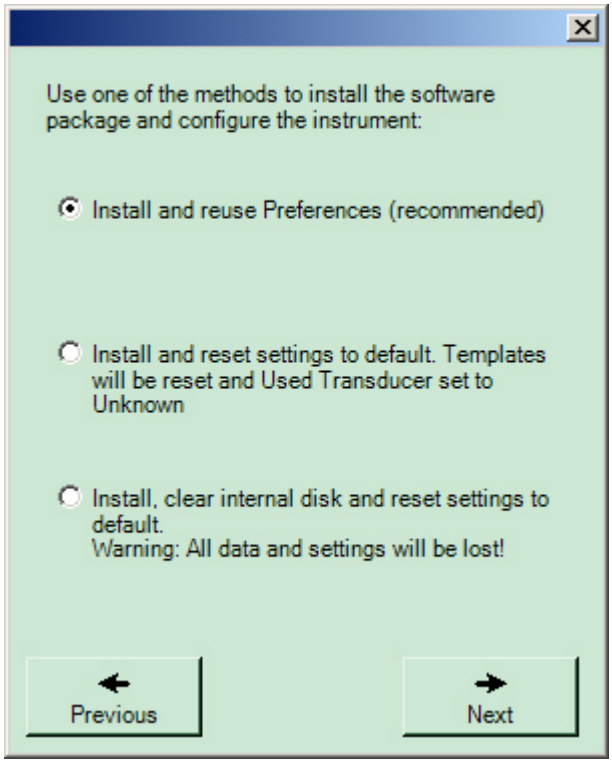
Select the instrument and software package to install. The software packages (available at the time) were copied to your PC when you installed BZ-5503. Later versions of these software packages may now be available on the 2250 Maintenance site at www.bksv.com.

The 2250 software package consists of a number of software modules. All software modules are installed when you install a package – you cannot pick out a single module from a package and install it separately.

In general, it is recommended to keep your instrument updated with the latest software modules, please check the 2250 Maintenance site on www.bksv.com at regular intervals. See the section on 'Type Approved Software Versions' below.

When ready press the *Next* button.

The following wizard appears, which allows you to choose your preferred method of package installation and lets you configure your instrument:

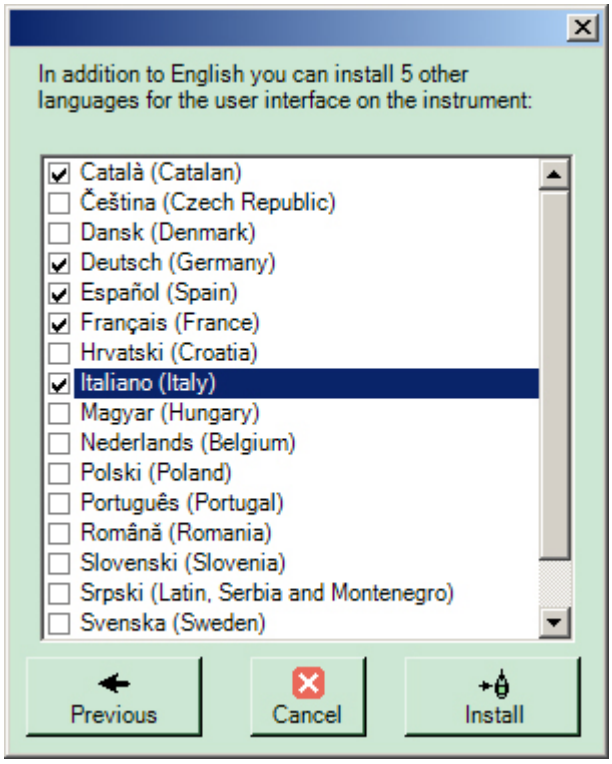


Select one of three methods of installation and configuration:

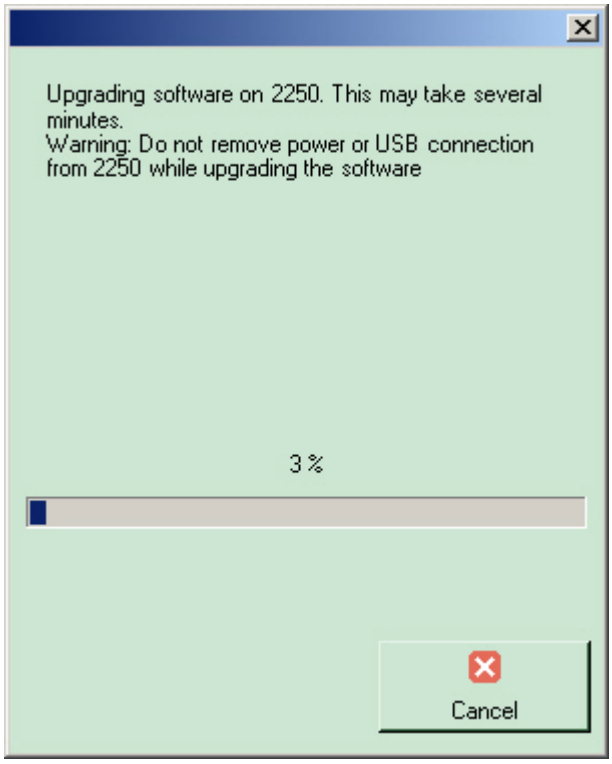
- *Install and reuse preferences (recommended)* - this will install the software modules and copy new templates to the instrument and to the default user – "2250" on a Type 2250, and "2250Light" on a 2250 Light. After the installation you have to adjust the touch screen in **Preferences**, **Display Settings**, and select your preferred language and Time Zone, etc., in **Preferences**, **Regional Settings**.
- *Install and reset settings to default. Templates will be reset and "Used Transducer" set to Unknown* – this will install the software modules and copy new templates to the default user, existing templates will be cleared and updated. Preferences will be cleared and updated and the *"Used Transducer"* parameter will be set to *Unknown*. Any unsaved annotations or data will be deleted. Saved data will be unaffected. Use this setting if you downgrade the software modules to older versions. After the installation you have to adjust the touch screen in **Preferences**, **Display Settings**, and select your preferred language and Time Zone, etc., in **Preferences**, **Regional Settings**. Then select your transducer again in the "*Transd. used*" line in the Transducers display.
- *Install, clear internal disk and reset settings to default. Warning: All data and settings will be lost!* - this will install the software modules, delete all data, settings, transducer descriptions and calibration histories on the internal disk, copy new templates to the instrument and reset to defaults. You should only use this setting if you have experienced serious problems in starting and using the software, and you have tried the Reset Options described in the Troubleshooting section of the User Manual for the instrument, and you have tried the "Install and reset settings to default" procedure (above) without any success. After the installation you have to adjust the touch screen in **Preferences**, **Display Settings**, and to select your preferred language and Time Zone, etc., in **Preferences**, **Regional Settings**. Then you have to define the supplied Microphone in the transducer database, select it as the *"Used Transducer"* and calibrate it.

Once you have selected what you want, click the *Next* button.

Select the preferred languages for the user interface on your instrument:



Once you have selected your preferred language, click the *Install* button. The installation will then proceed and a pop-up will appear showing the installation progress. This will take several minutes:



Warning: Do not interrupt the installation process.

The instrument will automatically reboot and start again, when the installation is finished.

Note 1: You select your preferred language on the instrument from the **Main Menu**, **Preferences**, **Regional Settings**.

Note 2: If you have experienced serious problems in starting and using the software, you have tried the Reset Options described in the Troubleshooting section of the User Manual for the instrument, and you are not able to install software using the USB, then you can install instrument software using a CF-card.

Note for Type 2250: The templates for user "2250" will be updated when installing/upgrading 2250 software. You have to manually update the templates for the other users afterwards. This is done by copying templates from user "2250" to the other users – see How to Configure your Instrument.

Type Approved Software Versions

National bodies that type approve sound level meters generally approve specific versions of the sound level meter software. Whenever Brüel & Kjær revises software an extension of the approval is applied for. However, new versions can be published on the 2250 Maintenance site at www.bksv.com before the new approvals are finalised. If use of your Type 2250 or 2250 Light relies on the use of an approved version you should check with your type approving authority, or with your local Brüel & Kjær representative, before installing a new version.

If you need to install a previous version of a software module, then select the 2250 Software Package containing the version of the software module required and install it as described above.

Installing Software Modules on the Instrument Using a CF-card

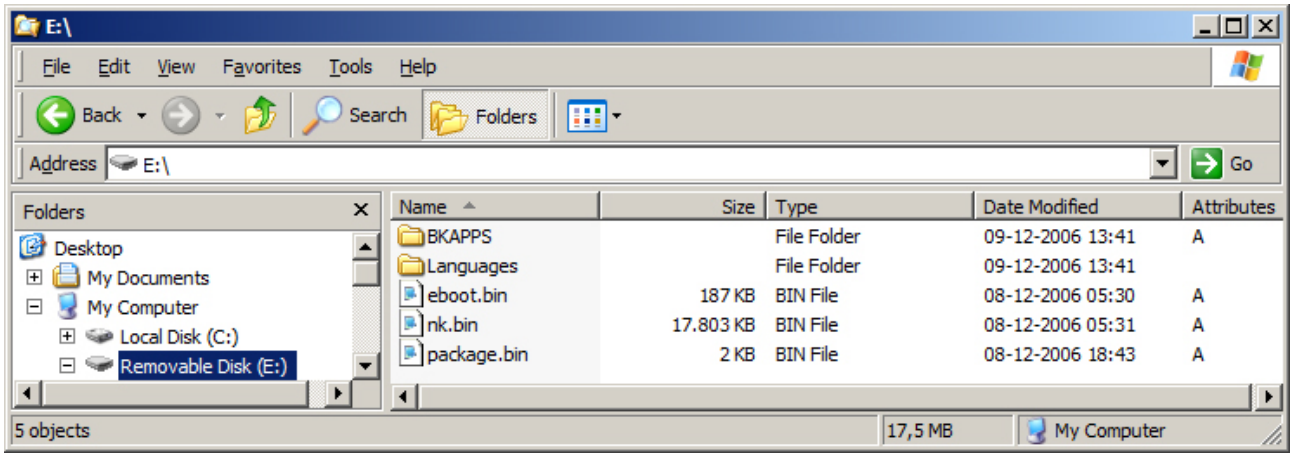
If you are not able to install software using the USB, then you can install the instrument software using a CF-card.

Procedure:

- Locate the required 2250 Software Package in the folder where you have installed BZ-5503. The default path is:

C:\Program Files\Bruel and Kjaer\ENV\BZ5503\SWP

- Copy the **content** of the required 2250 Software Package to the root of an empty CF-Card (size between 64 and 512 MB and formatted with FAT 16). You should now have the following layout:



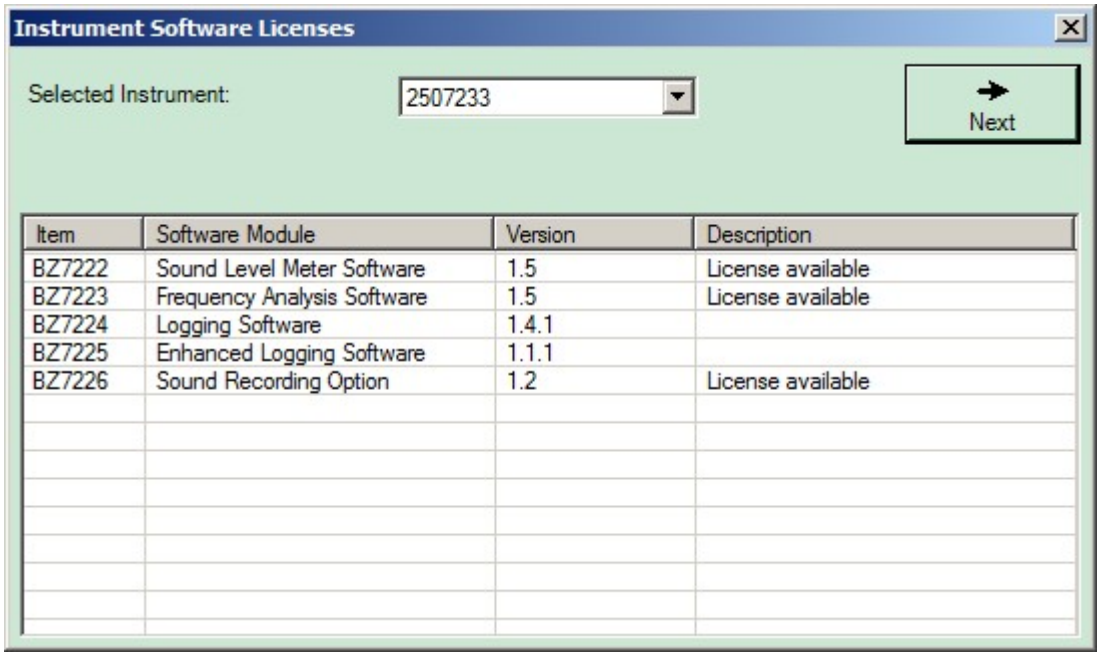
- Power off the instrument and insert the CF-card in the CF slot on the instrument
- Press and hold down the **Commentary** and **Save** pushbuttons, while switching on the instrument. The Maintenance Mode initial screen will be displayed
- Press the **Accept** pushbutton to "Update 2250 Software". This takes a few minutes
- Then press the **Accept** pushbutton to Reset to Default Settings. This will install the rest of the applications and reset the instrument to the SLM template, with no transducer selected. This takes a few minutes
- When done, the instrument initialises in SLM mode. Please adjust the touch screen in **Preferences**, **Display Settings**.
- Select your transducer again in the topmost line of the Transducers display
- Remove the CF-Card

Installing Licenses for Instrument Software

The *Instrument Software Licenses* wizard is used to install licenses for the software modules on Type 2250 or 2250 Light.

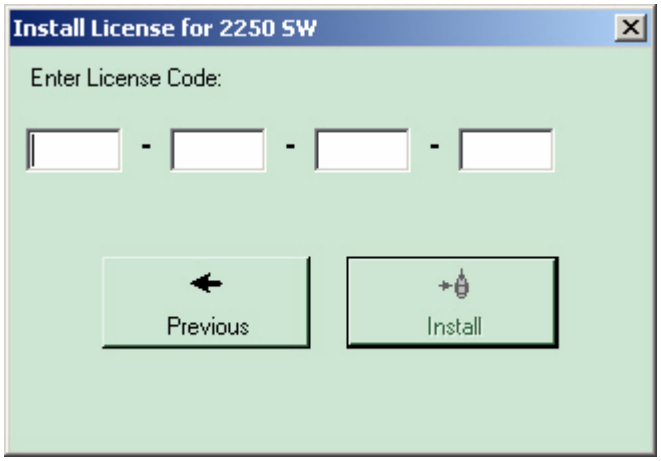
Click on the *Instrument* button at the top of the window to show the Instrument view, then press the *License* button on the toolbar (or select **Tools**, **Maintenance**, **Install Instrument SW Licenses**) to see a list of software modules that are installed on the selected instrument.

The list includes the version of the installed modules and a description of the license for the modules listed:



Select the license you want to install, then press the *Next* button.

The following wizard appears, which allows you to enter the 16 character license code, taken from the License Certificate. (You received the License Certificate from Brüel & Kjær, together with the software module):



Once you have entered the license code, click the *Install* button. The license is then installed on your instrument, and the list of installed software modules with the description of the licenses is refreshed.

Delete Licenses

You can limit the range of functionality of your instrument (for example, when lending the instrument out to other users) by deleting the licenses of certain software modules. Delete a license by right clicking the software module in question in the list and select *Delete*.

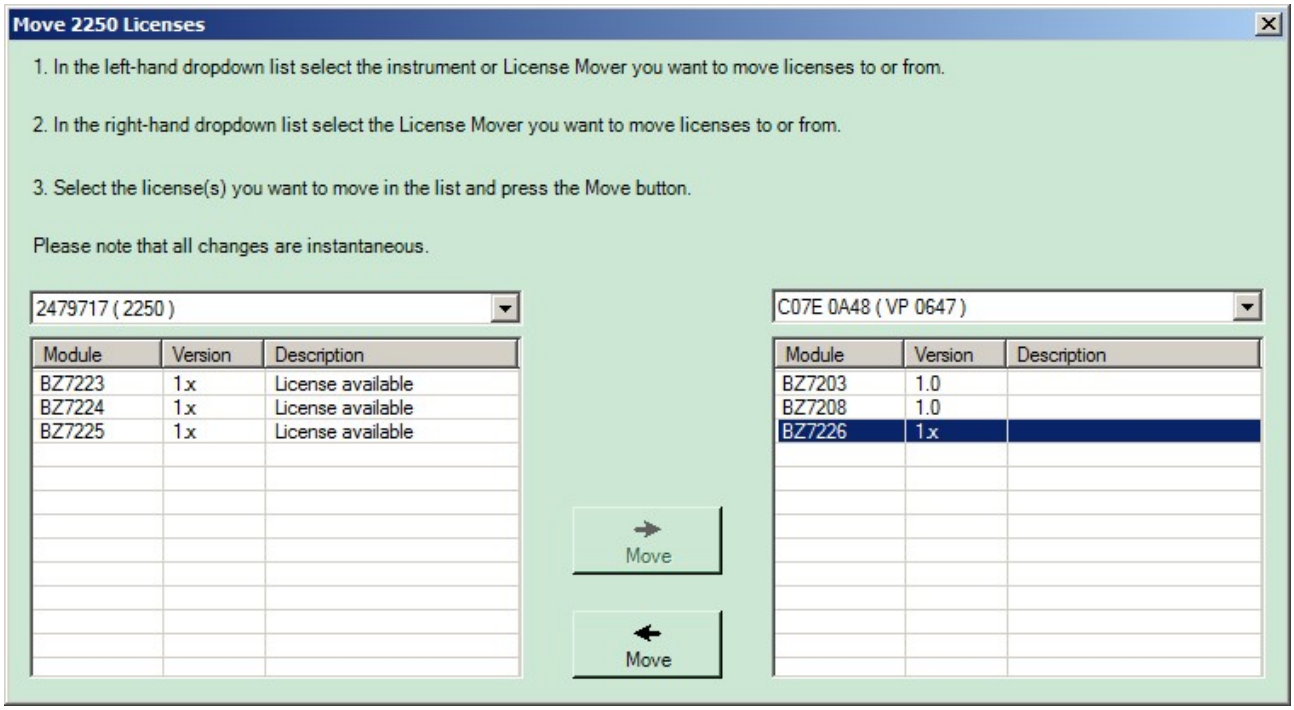
You install the license again as described above using the 16 character license code from the License Certificate. (You received the License Certificate from Brüel & Kjær, together with the software module.)

Moving Instrument Licences

If you have more than one Type 2250, or 2250 Light, you may want to share application software between instruments of the same type. You can do this by moving the license from one Type 2250 to another by using *Move Instrument Licenses*, together with the License Mover VP 0647. If you lend out your Type 2250, you may want to temporarily 'un-install' applications not needed. This can be achieved by moving the license of the application to License Mover VP 0647. When needed again, you move the license back to your Type 2250.

Connect the SLM License Mover VP 0647 to a USB or Parallel Printer Port of your PC (the License Mover is a USB device as standard, but can be delivered as a parallel port device, please consult your local Brüel & Kjær representative) and connect your instrument to another USB port on your PC.

Using the *Move Instrument Licenses* wizard below, the instrument will be displayed in the left-hand drop-down list and the License Mover in the right-hand drop-down list. The available licenses are shown in the lists below the drop-downs. Select the license(s) in the list you want to move to the other list and press the corresponding *Move* button.

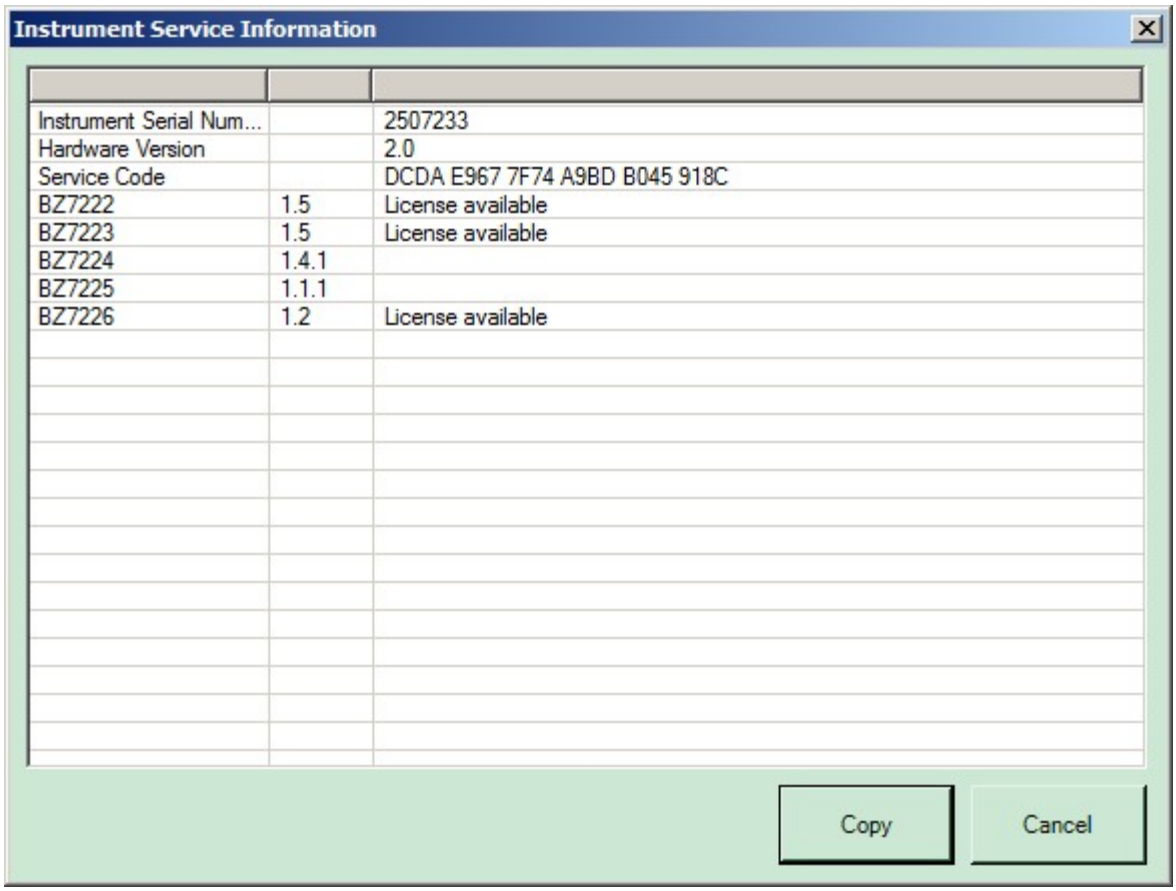


Notes:

1. You cannot move licenses with a limited availability (e.g., licenses expiring after a number of days).
2. License version 1.x indicates that the license is valid for versions 1.1, 1.2, 1.3, etc., of the module, but not for version 2.1, for example.
3. You cannot install a license again after it has been moved out from a Type 2250 - you have to move it back again to make the module available.
4. You cannot move licenses directly from one Type 2250 to another, you have to move it to a SLM License Mover VP 0647 first and then to the other Type 2250 afterwards.
5. You can also move licenses between two SLM License Movers VP 0647.
6. The SLM License Mover VP 0647 can hold Type 2250, 2250 Light and 2260 software licenses.

Instrument Service Information

Should you encounter any problems with your instrument, the Service Information window provides you with all the information you will need to enable you to contact Brüel & Kjær:



This includes:

- the serial number of your instrument
- hardware information for your instrument
- software information for your instrument

The window can be accessed from the **Tools** menu, by selecting **Maintenance**, **Instrument Service Info**.

The window can be copied to your clipboard, then pasted into an email and sent to your local Brüel & Kjær representative.

Enhancements Log

The enhancements log provides information on what new features have been included in the latest version of the software.

Version 1.1

- Supports installation of new software on Type 2250 using the USB connection
- Supports installation of software licenses for Type 2250 applications
- Supports export of logging data to Type 7815/20/25 and Excel
- Supports export of data to tab delimited text files
- Supports transfer of data from SD-/CF-cards to the archives
- Use of mouse to drag and drop jobs and projects when copying/moving data between archives or locally on Type 2250
- Creation of users as an Instrument task
- Copying, moving and deletion of templates
- Copying preferences

Version 1.2

- Supports Excel master files where cells can be deleted or cleared
- Minor improvements in Excel output

Version 2.0

- User Interface changed from using tasks in a task bar to two Views: Archive and Instrument
- Supports dial-up connection to a Type 2250 using a modem
- New faster and more reliable USB driver for connecting to Type 2250 using the USB interface
- Disconnect button for safe removal of a Type 2250 connected via a USB cable
- Compatibility mode for support of Type 2250 with older software versions using the previous USB interface
- PULSE not required for running BZ-5503

Version 2.1

- Supports user interface in a variety of languages
- Supports selection of data for export to Excel, Text-files and XML-files
- Supports export in Invariant English (will not change over time) and in the local language supported on Type 2250
- Disconnect button removed – in most cases it is not necessary to use the disconnect facility before removing the USB cable between Type 2250 and the PC
- Dial-up supports automatic setup of modem

Version 2.2

- Supports renaming of templates
- Supports Connect/Disconnect to Archives
- Supports moving licenses between Type 2250 and SLM License Mover VP 0647
- Supports Black & White On-line Display for slow modem connections

Version 3.0

- Supports 2250 Light
- Supports installation of specific languages for user interface in instrument
- Supports export of Reverberation Time data to Type 7830/31
- New Archive List View with additional information and thumbnails
- Archive Search facility
- Built-in data viewer

Version 3.1

- Supports export of Frequency Analysis and Reverberation Time data to Type 7830

Version 3.2

- Supports 2250 MATRON Light

Version 3.3

- Supports export of FFT data to Types 7815 and 7820 and to Pulse ASCII format
- The Data Viewer supports display of reverberation time and FFT data
- The Data Viewer supports logging data of any size
- The Data Viewer profile zoom facilities have been enhanced
- The Data Viewer supports Copy Graph and Copy Data to clipboard

Menus

Menus

File Menu

The **File** menu allows you to choose from the following options:

Open	Allows you to open and view projects in the selected archive. This option is not available in the Instrument View. **Note:** an error pop-up will appear if you don't select a project before selecting **Open** from the menu.
New	Allows access to the following options on the sub-menu: **Archive** - creates a new archive (same as right clicking on top most level in the Archive View and selecting New Archive from the drop-down menu, or using the **Tools**, **Archives**, **Connect Archive** menu). **User** - creates a new user on the selected instrument (same as right clicking on an instrument in the tree view and selecting Create User from the drop-down menu). **Job Folder** - creates a new job folder on the selected instrument or in a selected archive. Simply type in the name for the new folder in the pop-up that appears and then press the *Create* button. **Note** - adds a note to the job folder or project selected in the Archive View (same as right clicking on a job folder or project in the Archive view and selecting Add Note from the drop-down menu).
Delete	Allows you to delete the selected job folder or project in either the Instrument or Archive View. **Note:** a warning pop-up asks you to confirm the deletion of the selected item, or cancel the action.
Rename	Allows you to rename any item in the Instrument or Archive View.
Properties	Allows you to view the properties of the selected archive in the Archive View (same as right clicking on an archive in the Archive view and selecting **Properties** from the drop-down menu).
Exit	Allows you to exit the program.

Edit Menu

The **Edit** menu allows you to choose from the following options:

Copy	Allows you to copy notes from one project to another, via the clipboard. Short cut: <Ctrl + C>

Cut	Allows you to cut notes from projects, and temporarily store them on the clipboard. Short cut: <Ctrl + X>
Paste	Allows you to paste the contents of the clipboard into the project. Short cut: <Ctrl + V>

View Menu

The **View** menu allows you to select one of the defined views:

Archive	Use this to display the Archive View, equivalent to clicking on the *Archive* button at the top of the window. Short cut: <Ctrl + 1>
Instrument	Use this to display the Instrument View, equivalent to clicking on the *Instrument* button at the top of the window. Short cut: <Ctrl + 2>

Tools Menu

The **Tools** menu allows you to choose from the following options:

To Instrument	Allows you to transfer projects, and/or settings, from a selected archive to the selected instrument.
Export	Allows you to export data to post-processing software.
To Archive	Allows you to transfer projects, and/or settings, from the instrument to the selected archive.
Disconnect Instrument	Allows you to disconnect the USB connection between the PC and the instrument, before unplugging the USB cable.
On-line Display	Allows you to control and monitor your measurements remotely from your PC.
Dial-up	Allows you to connect to the instrument via a telephone connection – wired or wireless – using suitable modems.
Archives	Choose this option if you want to connect/disconnect an archive, or show/hide a removable device.
Maintenance, Install Instrument	Allows you to install new software modules on the instrument, or upgrade existing

Software	modules.
Maintenance, Install Instrument SW License	Allows you to install new software modules on the instrument, or upgrade existing modules.
Maintenance, Move Instrument Licenses	Allows you to move Type 2250 licenses to a SLM License Mover VP 0647 and back again - or onto another Type 2250.
Maintenance, Instrument Service Info	Displays information for the connected instrument - useful if contacting Brüel & Kjær for service enquiries.
Options	Displays the Options window, where you can select a language, change the Excel export options and enable/disable the compatibility mode.

Help Menu

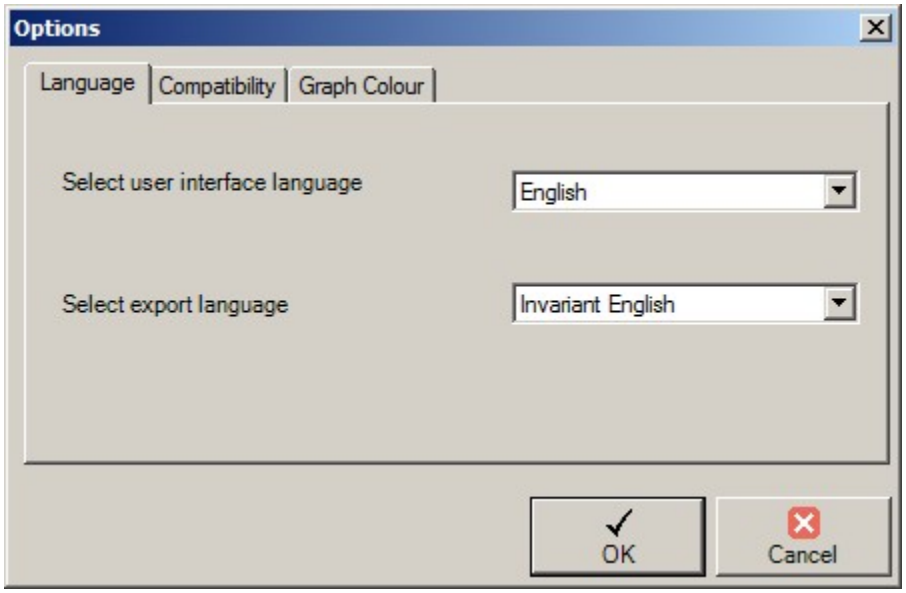
The **Help** menu allows you to display the contents window for BZ-5503 Help and show the About Dialog.

Help Topics	Displays the Help and its Contents window.
About BZ5503	Displays the About BZ-5503 Dialog box containing version information and detailed information on the software modules.

Tools Menu

Options (Tools Menu)

Selecting **Options** from the **Tools** menu displays the Options wizard (which opens on the *Language* tab):



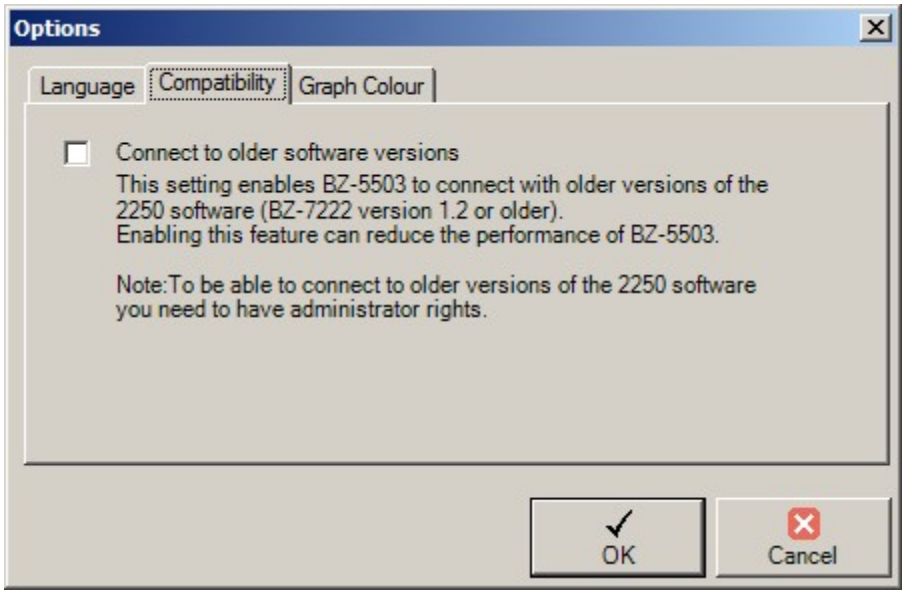
Use this tab page to select the language to be used on the User Interface and the language to be used for export. You can use the export language to get parameters in your local language, e.g., when exporting to Excel.

Note: If a program (or macro) is going to interpret the parameters, then you are recommended to select “Invariant English” from the drop-down list of export languages. This setting will output parameters in English and the names of the parameters will be kept over time from version to version of the program. This is not guaranteed for other languages, where the parameter names might change over time.

Once selected, click the *OK* button to save the changes or click *Cancel* to exit.

Compatibility

The second tab on the Options wizard is the *Compatibility* tab:

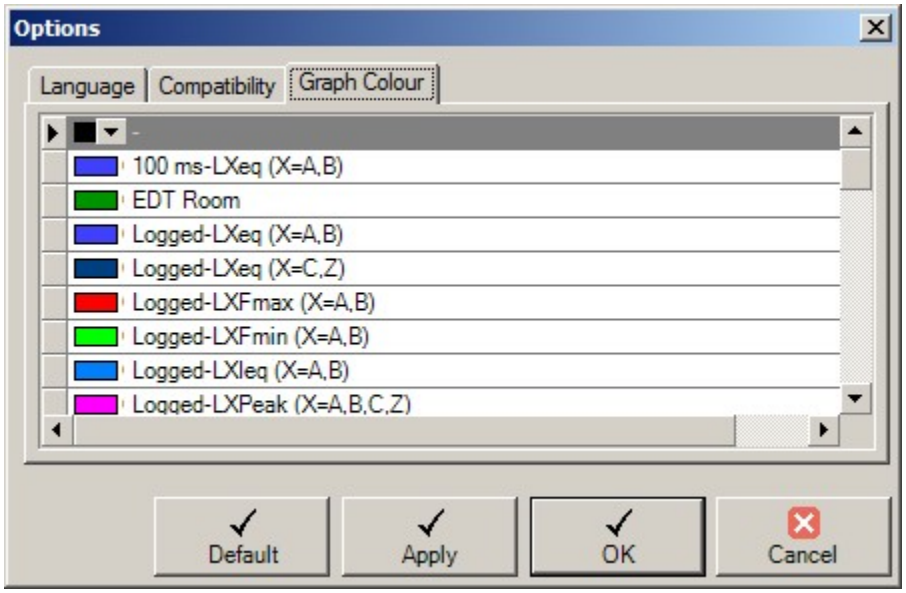


Use this tab page if you want to make sure that your USB connection is compatible with older versions of Type 2250 software (BZ-7222 version 1.2 or older). Tick the checkbox if you want to enable the compatibility mode, leave the checkbox blank if you want the mode disabled.

Note: If you enable the compatibility mode, this can reduce the performance of the BZ-5503 application.

Graph Colour

The third tab on the Options wizard is the *Graph Colour* tab:



All parameters in graphs have a pre-defined colour; use this tab if you want to adjust the colours. Click on the colour to open a palette with colours to choose from.

Click *Apply* to set the colours immediately on an open graph to view the result.

Click *Default* to reset all colours to the pre-defined setting.

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