PRODUCT DATA

Measurement Partner Suite BZ-5503

from software version 4.7

Modular and optimized for the post-processing of measurement data, Measurement Partner Suite provides essential post-processing tools for the noise and vibration professional.

The powerful combination of a Hand-held Analyzer Type 2250, 2250-L or 2270 with its range of sound and vibration applications, Measurement Partner Field App, MP Cloud and Measurement Partner Suite, equips you for any measurement task.

In its basic configuration as standard PC software, Measurement Partner Suite provides an advanced viewing and maintenance platform for your hand-held analyzer, and includes Measurement Partner Field App to help you with field measurements. All users have free access to MP Cloud.

Uses, Benefits and Features

Uses

- Download, view and archive data locally or in MP Cloud
- Maintain analyzer software
- Display and access data and operate remotely
- Post-process and export data to other formats
- Store and share MP Cloud archives
- Merge Field App and analyzer data

Benefits

- Improve data management: Measurement Partner's free advanced data viewer, archive and export tools come standard with all Type 2250, 2270 and 2250-L analyzers
- Reduce cost:
  - Configurable to match your requirements – only pay for the tools you need when they are needed
  - Subscription-based with no penalty should your subscription lapse
- Flexibility: licenses can be locked to the analyzer serial number if you have one, or a few instruments, or locked to a PC dongle if you have a lot of instruments
- Easily share and store data in MP Cloud

Features

- Advanced data viewing tools
- Resumable downloads (Type 2250/70 software version 4.x)
- GPS coordinates are viewable in Google Maps™
- Support of Measurement Partner Field App (iOS and Android)
- Licensed features include:
  - Playback of WAV files associated with markers
  - Tone, impulse and exceedance analysis
  - Individual octave band profiles
  - Scheduled data download
  - Post-weighting spectra
  - Calculator function (including background noise correction)
  - Tone assessment (1/3-octave, FFT)
  - Convert 1/3-octave to 1/1-octave spectra
  - Convert FFT to 1/3-octave spectra
  - Post-process WAV files (scale, cut and join recordings)
  - FFT-based tone analysis of WAV files
  - Export of any portion of a WAV file (logging profile)

Brüel & Kjær

Description

You have just been out in the field performing your measurements and now you are back in the office ready to write your report – or so you think. Often there is a lot more work to do before you can even consider preparing a report. From calculating your results to preparing your report, the post-processing phase can be time-consuming, labour-intensive and sometimes risky in regards to potential errors. In some instances, the post-processing and reporting phases of a project are actually longer than the measurement itself.

Because post-processing is just as important as data acquisition when performing an environmental measurement project, Brüel & Kjær continually strives to provide you with integrated hand-held analyzer solutions that simplify all phases of your work. Measurement Partner Suite helps you save valuable man-hours during post-processing, freeing up time for other projects and ultimately making your quotes more competitive.

Subscription

It is an uncertain world, and without a long pipeline of projects, it can be difficult to justify a large investment in PC software. To accommodate this fact, Measurement Partner Suite offers valuable data analysis and post-processing functionality on a time-limited subscription basis. This reduces the size of the investment considerably over the short term and allows you to adjust your investment up and down – only pay for what you need, when you need it. If your subscription products lapse, there is no penalty, you can simply re-subscribe at a later date, should you wish to.

And remember, for those who do not wish to subscribe, Brüel & Kjær provides Measurement Partner Suite's basic configuration with your hand-held analyzer as standard and free of charge. This configuration provides data archive, preview and export capabilities as well as software maintenance and remote online display.

To stay up-to-date on the latest updates, videos and post-processing modules for BZ-5503, go to Brüel & Kjær's website at www.bksv.com and search 'Measurement Partner'. Then contact your local Brüel & Kjær representative to subscribe to the module or modules of your choice.

Using Measurement Partner Suite

Measurement Partner Suite enables you to:

- Set up and control your hand-held analyzer from a PC
- Download data from the analyzer using USB cable, LAN network or MP Cloud
- Merge data from field app and analyzer
- Manage and archive data from the analyzer
- View data in archives and cloud archives
- Receive detailed notifications of analyzer software releases and update your software as required
- Install licenses to enable software modules in the analyzer
- Synchronize the analyzer's clock to your PC
- Remotely view online analyzer displays
- Change the fractiles used by the analyzer for calculation of broadband and spectral statistics
- Playback, analyse and export 16- and 24-bit WAV files
- Post-process data (with a BZ-5503 license)
- Export to other post-processing and documentation tools, such as Microsoft® Word and Excel®
- Consult a suite of tutorial videos for help learning how to operate Measurement Partner Suite

Measurement Partner Field App transforms the way you work with your hand-held analyzer. It is an advanced companion app for Types 2250 and 2270 and 2250 Light offering:

- Remote analyzer control
- Remote display
- Remote annotation of measurement data
- Cloud support

Fig. 1
Using Measurement Partner Field App

Whenever you stand next to your analyzer to operate it, you disturb the sound field. Therefore Brüel & Kjær has released a field app that keeps you away from your analyzer. Once your analyzer is powered on and in stand-by mode, you can wirelessly connect to it using a 3G modem or wireless LAN (using UL-1050 for G4, UL-1016 for G3).

Once connection is made to the analyzer, you are ready to start, stop and pause your measurement from a safe distance. For noise measurements, the instantaneous LAF profile is displayed on the field app. For vibration measurements, the Fast inst. profile is shown.

This allows you to keep an eye on the status of your measurement without being close to the analyzer, which is particularly important when low noise levels are being measured such as for indoor measurements.

The field app supports all annotation types: note, voice commentary, image, video and GPS. All annotations are uploaded to MP Cloud for merging with the analyzer project in Measurement Partner Suite.

Measurement Partner Cloud

Types 2250, 2250-L and 2270 can send measurement data to Measurement Partner Cloud (MP Cloud) where projects are immediately available for post-processing, sharing or storage subject to account capacity. Only authorized users have access to the data when it is the MP Cloud.

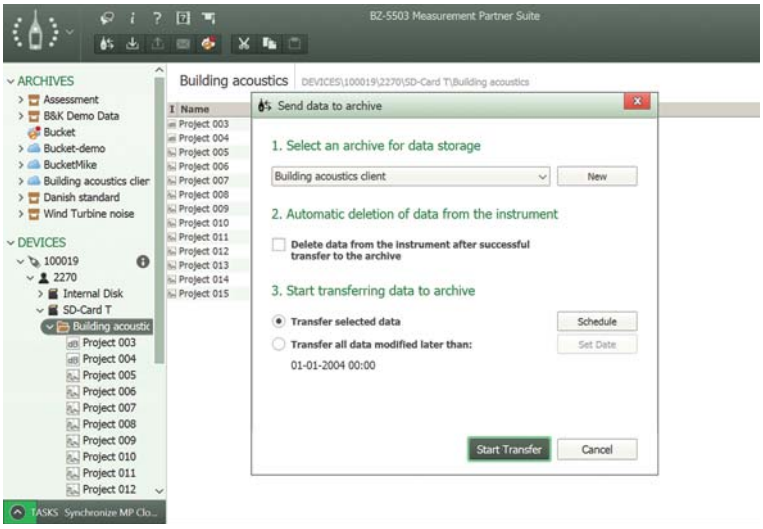
You can create a Cloud account by visiting the MP Cloud Web service at cloud.bksv.com. You open an account, register your analyzer serial number and perform a one-time pairing of analyzer and account, ensuring data security. You can also administer access to the account from the Web service and order subscriptions to increase account capacity.

You can connect the hand-held analyzer to the Internet through a modem, LAN or Wi-Fi connected to a router. In the field, the analyzer can connect through Wi-Fi to a hotspot on a smart device (Wi-Fi using CF Card UL-1019 for G1 – G3 and Wireless USB-A Adapter UL-1050 for G4, respectively).

After measurement is completed and the project is saved, you log the analyzer into the Cloud, and projects are uploaded to the Cloud from the analyzer. To do this, you simply need to move your data to the Cloud folder, which is automatically created when you log on to your account. The data will now be ready for post-analysis in Measurement Partner Suite by anyone who has access to the relevant Cloud archive.

Upload Data to Archives and Cloud Archives

Fig. 2
Transfer and archive data quickly and easily



Transfer to Archive

You can download data from your analyzer to any archive by connecting the analyzer to a PC running Measurement Partner Suite, either using the supplied USB cable or via wired/wireless LAN or 3G connection. Or, if you have saved your data on a memory card, you can insert the memory card in a card reader.

Using MP Cloud

The easiest way to transfer your data to Measurement Partner Suite, however, is to use MP Cloud. Data can be uploaded directly to an archive of your choice in MP Cloud from any analyzer with Internet connection. Your measurement data is then waiting for you when you open Measurement Partner Suite.

Resumable Downloads

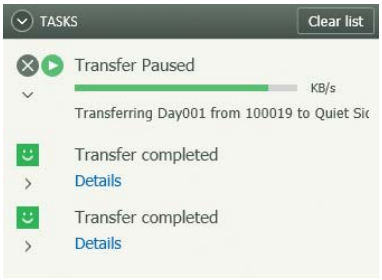


Fig. 3
Data download has been paused. Press the play button to restart the download

Avoid the risk of having to restart downloads of large measurement projects due to an unstable Internet connection. With the resumable download feature of BZ-5503 (analyzer software version 4 and later), the software automatically pauses and restarts downloads if the connection fails. It is also possible to manually pause and/or restart as needed.

View and Manage Data

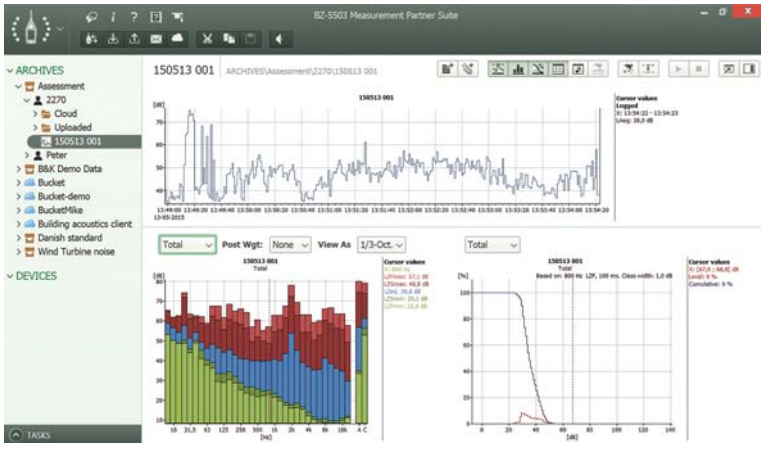


Fig. 4
Scroll through measurements in a project and view the individual data in graph format

Measurement Partner Suite has a wide range of configuration tools, including noise curves and spectral statistics, for viewing your data, so that you can decide which post-processing tasks are required to extract the results you need for your report.

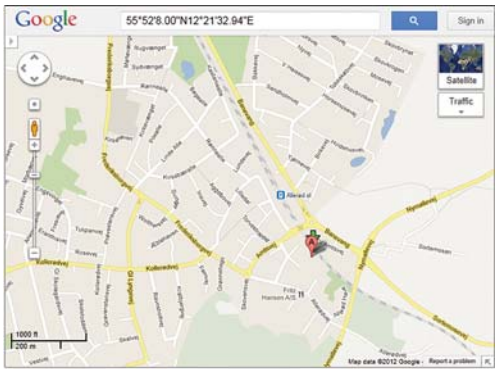
Working with Annotations

Measurement Partner Field App is the recommended solution for on-site annotation of your measurement data.

Fig. 5
View and edit annotations collected with the field app

While your analyzer is measuring, and you are standing a safe distance away so as not to disturb the sound field, you perform all necessary annotations with the Field App: notes, images, GPS, voice commentaries and even video. When the measurement is complete, the Field App uploads the annotations to MP Cloud, where they are ready for merging with the appropriate analyzer project or to be sent to a folder. Once merged, annotations can be found in the right-side panel of Measurement Partner Suite as well attached to the profile for Logging users.

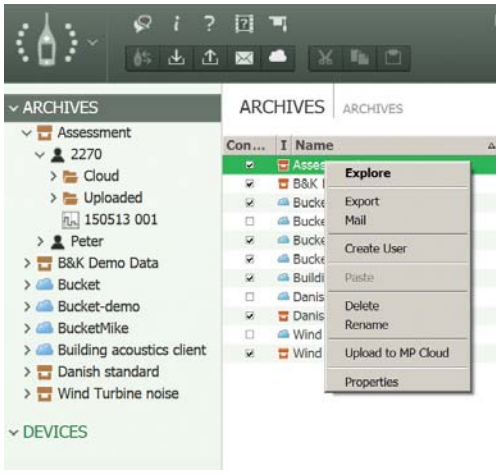
Fig. 6
Viewing GPS coordinates in Google Maps™



GPS coordinates can be seen in Google Maps™ with a single right-click.

Share Data

Fig. 7
Share your data with colleagues and clients using MP Cloud



Sharing data with your colleagues could not be easier with Measurement Partner Suite.

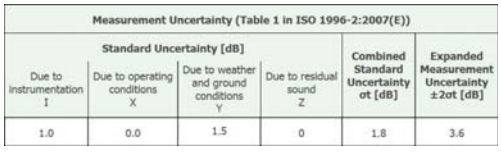
MP Cloud

Share your data using MP Cloud. Users with an account can create Cloud archives in Measurement Partner Suite and share with colleagues, partners and clients.

Pack and Go Files

Alternatively, you can share your data using the Pack and Go feature and send the data via email where the B7Z file creates its own archive in the recipient's Measurement Partner Suite.

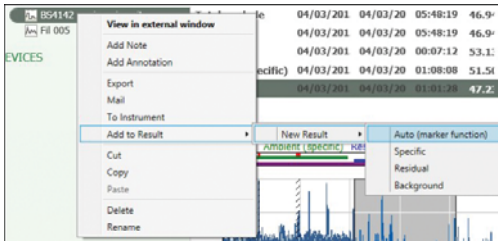
Measurement Uncertainty



Measurement Uncertainty (Table 1 in ISO 1996-2:2007(E))					
Standard Uncertainty [dB]				Combined Standard Uncertainty σt [dB]	Expanded Measurement Uncertainty ±2σt [dB]
Due to instrumentation I	Due to operating conditions X	Due to weather and ground conditions Y	Due to residual sound Z		
1.0	0.0	1.5	0	1.8	3.6

Any measurement is meaningless without an uncertainty or tolerance associated with it, and noise measurements are no exception: measurement uncertainty should be stated in the report. The Measurement Partner Suite solution is based on the methodology presented in ISO 1996-2:2007 and is designed to support your measurement uncertainty calculations.

Support of Rating Level Calculation



Measurement Partner Suite supports UK, French and German users with a turnkey solution for calculating the rating level according to the local legislation in each of these countries.

In the UK, BS-4142:2014 determines how the rating level calculation is performed. Dedicated markers (specific, residual and background) send selected portions of measurement projects to a results section where users can work interactively with their data to calculate rating level. Tone and impulse assessment according to BS-4142:2014 are fully supported.

When an environmental assessment is performed in France, the primary legislation used to guide consultants and authorities in their measurements is Emergence. Emergence is divided into two types: ICPE (#IPPC) and neighbourhood noise. Tones are assessed according to Tonalité Marquée. These standards are all supported in Measurement Partner Suite. Should some French users still be working to the Août 85 standard (old Emergence), this is also supported.

Environmental assessments are performed in Germany according to the TA Lärm (technical instruction on noise control). TA Lärm defines the rating level formulas and the exceedance criteria referencing DIN 45641 (averaging of sound levels) and DIN 45680 (measurement and evaluation of low-frequency environmental noise). The actual calculation according to TA Lärm is done in Microsoft® Excel® using the official Excel macro provided by the DIN committee.

Post-processing Functionality

When you purchase a Measurement Partner post-processing module, you get the ability to post-process measurement data collected with Logging Software BZ-7224, Enhanced Logging Software BZ-7225 or Logging Software for 2250 Light BZ-7133, making searching through large amounts of data in Excel® a thing of the past.

Post-processing Logged Data

Often, only selected parts of a logging profile are relevant for analysis and sometimes marking a logging profile during a measurement is impractical. Perhaps, in retrospect, the report period should have been different. During post-processing you can effectively and quickly identify, annotate and analyse the important parts of a logging profile by using the Export Region feature and Advanced Report Period and Marker functionality.

Marker and Report Wizard

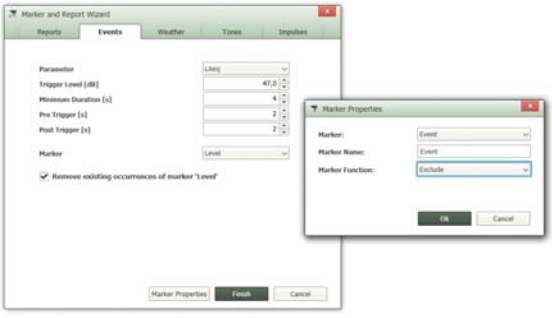


Fig. 8
Marking a logging profile using the Marker and Report wizard

The Marker and Report wizard makes it easy to add or modify exceedance, exclude, event, level, sound or user-defined markers. The markers can be defined based on a number of criteria such as noise level or wind speed and direction data collected with weather stations MM-0316 or MM-0256.

The Marker and Report wizard also allows you to redefine the measurement data's report period as many times as needed. Report periods can be any length that does not exceed the duration of the measurement. You can also create your own marker names using marker properties.

Exceedance, Tone and Impulse Assessment

To determine whether limits have been exceeded, you must identify which portions of the logging profile are relevant for further analysis. Tone and impulse content can often be critical when determining whether limits have been exceeded. The Marker and Report wizard can perform tone assessment and impulse assessment based on criteria that you define.

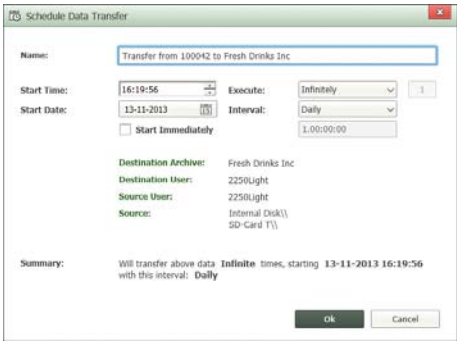
Measurement Partner Suite will even help you perform an exceedance assessment on longer logging periods. Simply set the day, evening and night criteria that apply in your region and Measurement Partner Suite will mark the profile where these limits have been exceeded.

Statistical Parameters in Post-processing

Measurement Partner Suite also offers the option of calculating broadband and spectral statistics in post-processing, even when this has not been done on the analyzer. LN logged octaves can even be shown in the profile view when this option is selected in the calculation settings.

Schedule the Transfer of Data

Fig. 9
Scheduled data transfer



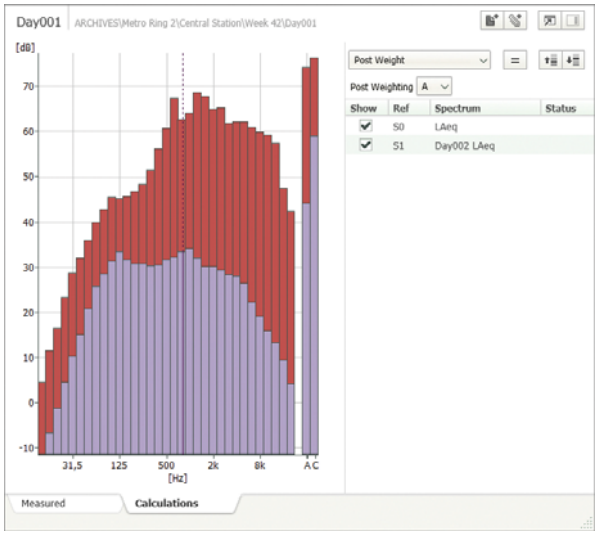
If you are connecting remotely with your analyzer over longer periods, you can schedule automatic data downloads at predetermined times using the Scheduled data transfer feature.

Post-processing of Spectra

Sometimes in the post-processing phase of a measurement project, you need to adjust the frequency weighting of your data: post-weighting requires only one mouse click, either in the measured spectrum window or in the calculator itself. Conversion of a 1/3-octave spectrum to 1/1-octave spectrum is performed manually in the measured spectrum window or automatically in the calculator when consistency is required. In addition, spectrum calculations, such as broadband correction for known reflections and correction for background noise (user-defined or standardized), can instantly be performed with the calculator. Tone assessment can also be performed.

Calculations

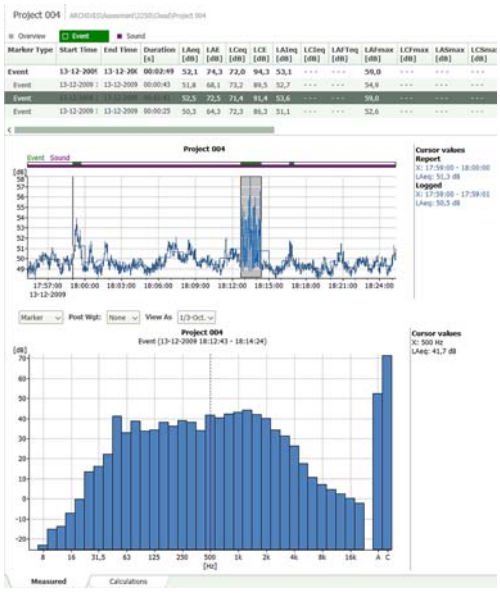
Fig. 10
Select the Calculations tab to perform basic spectrum calculations



Perform basic spectrum calculations using the Calculation tab. For example, subtract background noise from a noise-level measurement or add numerous individual spectra together to ascertain the combined noise spectrum.

View Spectrum for Marker Periods

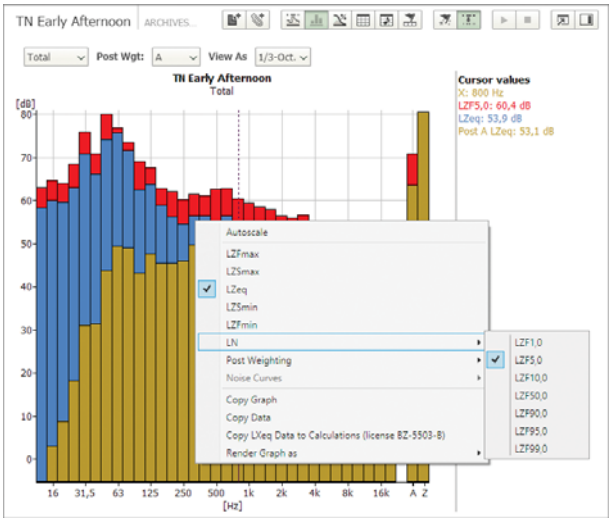
Fig. 11
View spectra markers



Easily view and export predefined markers (defined during or after the measurement) in the spectrum display. View and scroll through the list of markers while viewing both profile and spectrum.

Post-weighting of Spectra

Fig. 12
Frequency weighting added to spectra



Add frequency weighting to your spectra if they have been collected with Z-weighting during the measurement and view in the spectrum display.

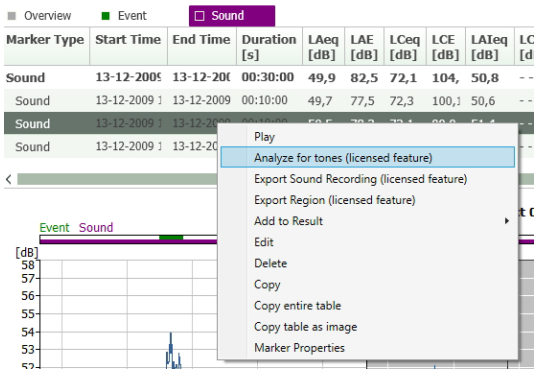
Tone Assessment

Fig. 13
Perform tone assessment

Perform tone assessment on FFT or 1/3-octave spectra using either ISO 1996–2:2007 or DM 16-03-1998 and view complete tone assessment details in the Tone Table. Prominent tones are automatically identified.

Tone Assessment of WAV Files

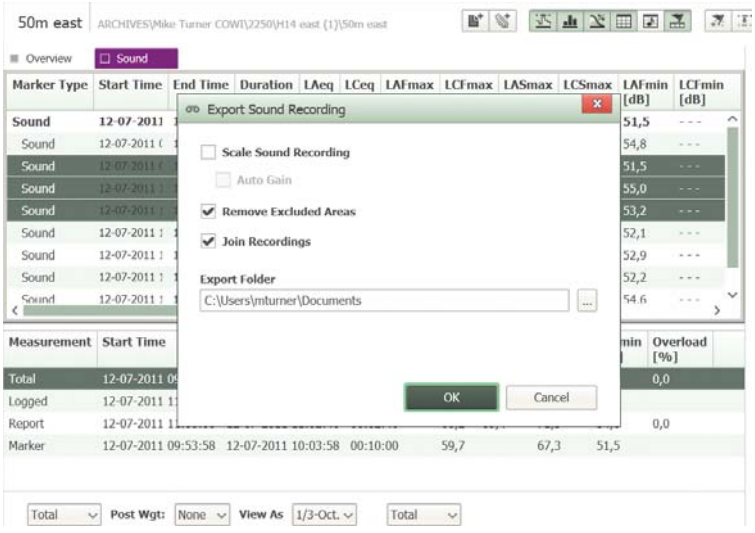
Fig. 14
Perform tone assessment on the WAV file itself



Measurement Partner Suite also includes a set of tools for post-processing of WAV files collected with Signal Recording Option BZ-7226. Users with BZ-7226 on the analyzer can perform a tone assessment on the WAV file itself if it is recorded on an analyzer running software version 4.3 (or later). You can even select the portion or portions of the WAV file on which your analysis is based.

Join Signal Recording WAV Files

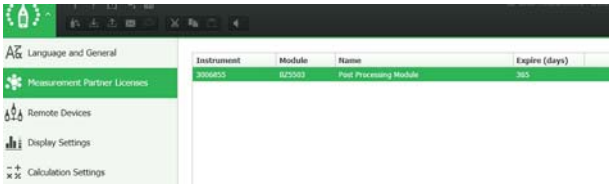
Fig. 15
Join signal recordings



Your analyzer stores signal recordings as WAV files, which you can join to create a single WAV file for archiving, sharing and playback using the Join Recordings feature. The file can be also be used for further post-processing in other programs such as Brüel & Kjær's PULSE Multi-analyzer.

Licensing System

Fig. 16
License tab of the Options window where all licenses can be viewed, managed and fulfilled



Measurement Partner Suite has two methods of licensing the post-processing functionality that is available above and beyond the free basic configuration.

Method 1: Licenses can be locked to instrument serial numbers allowing license files to be shared freely and copied to any PC where Measurement Partner Suite is installed. Each subscription product relates to one instrument only, so if you have two instruments and you need to analyse data from both, then you will need two licenses. This method of licensing suits users with one, or just a few instruments, and is available as 1, 3 or 5 year licenses.

Method 2: Licenses can be locked to a PC dongle. This allows you to post-process data from an unlimited number of instruments, as long as the dongle is attached to the PC. In this case, license files cannot be freely shared amongst users, only when a dongle is attached to the PC is the functionality available. This method of licensing suits users with many instruments and is available as 3 or 5 year licenses.

In the user interface, functionality is enabled as long as the license is valid. As a license nears its expiry date, a warning is shown during start-up. Contact your Brüel & Kjær representative to renew your subscription.

Measurement Partner is designed to be intuitive and easy to use. However, new or occasional users may need help operating the software.

If you are new to Measurement Partner Suite, one way to learn is to experiment with the fully licensed demo data. When working with the demo data you will have unlimited access to all the licensed functionality allowing you to play with all the features of Measurement Partner Suite before deciding whether to subscribe to the license in question.

Overview of Free Features and Licensed Functionality

	Free	Licensed Functionality (Post-processing Module BZ-5503)
Manage archives	X	X
Upgrade analyzer	X	X
License install on analyzer	X	X
Export (78XX, XML, ASCII)	X	X
Template maintenance	X	X
User Maintenance	X	X
List view (small graphs of projects, total values LAEq, etc.)	X	X
Online display	X	X
Add/view annotations on projects/job folders/templates	X	X
Export annotations (project and profile annotations)	X	X
Pack-and-Go files (export/import)	X	X
Send mail	X	X
View projects (CPB, Logging, etc.)	X	X
Search	X	X
Noise rating curves	X	X
Display wind speed and/or direction on profile	X	X
Change LN percentiles	X	X
Synchronize analyzer time	X	X
Rating level calculation according to: UK legislation BS-4142:2014; French Legislation (Emergence, Août 85); and German Legislation (TA Lärm)	X	X
View logged octaves in profile		X
Scheduler for downloads (pause/resume; version 4 analyzer software required)		X
Export region from profile		X
New/edit/delete markers		X
Marker calculations		X
Marker wizard (weather, tone and impulses)		X
Report wizard		X
Annotations and attachments on markers		X
Configure marker		X
Export marker calculation data		X
Generate spectral statistics		X
Weather markers (average wind speed and direction and report periods)		X
Marker: level exceedance		X
Post-weight spectra		X
1/3- to 1/1-octave conversion		X
Calculation (add/subtract/compare octave spectra, background correction) on CPB or FFT spectra		X
Tone assessment for CPB or FFT spectra		X
Tone assessment for WAV files		X
Advanced export of signal recordings (scale, remove excluded areas and join recordings)		X
Measurement Partner Field App	X	X
MP Cloud	X	X

For more information, please visit www.bksv.com.

BZ-5503 is included with Types 2250, 2250-L and 2270 for easy synchronization of setups and data between the PC and hand-held analyzer. BZ-5503 is supplied on ENV DVD BZ-5298

PC REQUIREMENTS
Operating System: Windows® 7, 8.1 or 10 (all in 32-bit or 64-bit versions)
Recommended PC:
- Intel® Core™ i3
- Microsoft®.NET 4.5
- 2 GB of memory
- Sound card
- DVD drive
- At least one available USB port
- Solid State Drive

ONLINE DISPLAY OF TYPE 2250/2250-L/2270 DATA
Measurements on the analyzer can be controlled from the PC and displayed online with the PC, using the same user interface on the PC as on the analyzer
Display: 1024 × 768 (1280 × 800 recommended)

DATA MANAGEMENT
Explorer: Facilities for easy management of analyzers, users, jobs, projects and project templates (copy, cut, paste, delete, rename, create)
Data Viewer: View measurement data (content of projects)
Synchronization: Project templates and projects for a specific user can be synchronized between PC and analyzer and between local and cloud archives. Measurement Partner Suite BZ-5503 merges Measurement Partner Field App annotations with the corresponding analyzer project

EXPORT FACILITIES
Excel®: Projects (or user-specified parts) can be exported to Microsoft® Excel® (Excel 2003 – 2016 supported)

Brüel & Kjær Software: Projects can be exported* to Predictor-LimA Type 7810, Acoustic Determinator Type 7816, Protector Type 7825, Qualifier (Light) Type 7830 (7831), PULSE Mapping for Hand-held Sound Intensity Type 7962/7752/7761 or PULSE Reflex

POST-PROCESSING
Measurement Partner Suite includes post-processing tools for data acquired with Type 2250/2250-L/2270. These tools help to assess logging data and measured spectra, such as calculating contribution from markers on a logging profile, or correcting spectra for background noise

HAND-HELD ANALYZER SOFTWARE UPGRADES AND LICENSES
The software controls analyzer software upgrades and licensing of the analyzer applications

INTERFACE TO HAND-HELD ANALYZER
USB, LAN or Internet connection

LICENSE MOVER
To move a license from one analyzer to another use BZ-5503 together with License Mover VP-0647

LANGUAGE
User interface in Chinese (People's Republic of China), Chinese (Taiwan), Croatian, Czech, Danish, English, Flemish, French, German, Hungarian, Japanese, Italian, Korean, Polish, Portuguese, Romanian, Russian, Serbian, Slovenian, Spanish, Swedish, Turkish and Ukrainian

HELP
Concise context-sensitive help in English

* Not all data are available in all exports. The data exported are dependent on the type and target of the export.

Ordering Information

BZ-5503-012	Post-processing Module, 1 year subscription for one instrument
BZ-5503-036	Post-processing Module, 3 year subscription for one instrument
BZ-5503-060	Post-processing Module, 5 year subscription for one instrument
BZ-5503-N36	Post-processing Module, 3 year subscription for any instrument (dongle)
BZ-5503-N60	Post-processing Module, 5 year subscription for any instrument (dongle)

OPTIONAL ACCESSORIES

VP-0647	License Mover

2017-06
BP 2430 – 20

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