

The MCR-IMP Software Suite

The MCR-IMP series software is the second-generation impedance tube testing software developed by BSWA Technology Co., Ltd. It is based on the new software platform MCR. With over 20 years of experience in material sound absorption and transmission loss testing, both the impedance tube hardware and testing software of BSWA Technology have made significant progress. The improved hardware design allows for more compact and convenient testing, while the modular software design provides a clear testing process suitable for both research purposes and batch testing in production-oriented enterprises.

The MCR-IMP software suite includes the following three modules: MCR-BASE, MCR-IMPS and MCR-IMPT.

--- MCR-BASE

MCR-BASE is the standard module of the MCR multi-channel noise and vibration testing system software, serving as the foundation software platform. It is used for test personnel description, test-related document settings, and test equipment configuration. Other functional software modules of MCR can only run independently on top of this module. It includes built-in drivers for various data acquisition hardware, allowing for channel configuration and calibration. It also supports data acquisition, playback, and standard acoustic analysis.



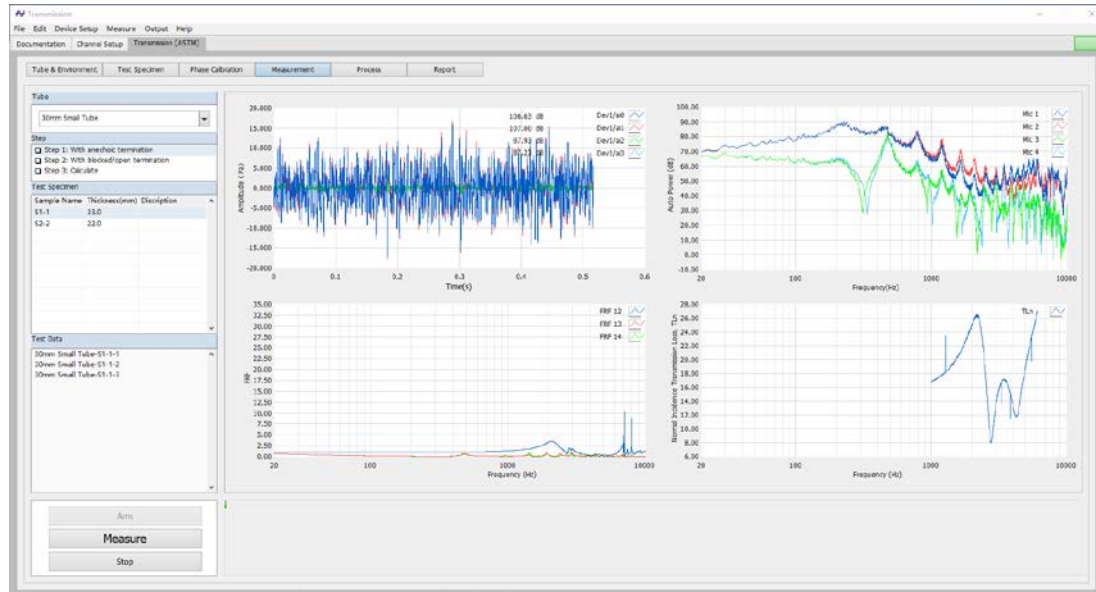
--- MCR-IMPS, MCR-IMPT

MCR-IMPS and MCR-IMPT correspond to the absorption testing module and transmission loss testing module, respectively, in the impedance testing of acoustic

materials. The software is designed based on the latest ISO and ASTM testing standards. In addition to the required absorption and transmission loss testing, it synchronously measures the acoustic impedance, acoustic admittance, and other characteristics of the materials. The functional modules have a clear structure and defined steps. They come with a built-in signal generator and material database, allowing for synchronous monitoring and analysis of the acquired signals based on signal-to-noise ratio and correlation analysis to ensure the accuracy of the final results. They are suitable for both batch testing of materials and laboratory research. The MCR-IMPS module requires a minimum of 2 data acquisition channels, while the MCR-IMPT module requires a minimum of 4 data acquisition channels. The software also includes the standard impedance tubes from BSWA Technology, which can be directly selected, and it also supports user-defined tubes.



<Sound absorption coefficient testing user interface>



<Transmission loss testing user interface>

Module Features:

- New software testing platform with strong scalability
- Designed based on ISO and ASTM standards
- Transfer function method for testing material sound absorption and transmission loss
- Streamlined and easily understandable testing process
- Storage of raw signals for analysis in other modules
- Real-time signal monitoring to ensure proper testing
- Easy selection of tube types
- Support for user-defined tube testing
- Database mode for convenient testing and viewing of multiple samples
- Synchronized testing, display, and comparison of multiple parameters
- Support for circular and square tubes
- Automatic curve fitting for multiple tube diameters results
- Automatic generated report in Excel

For further information and demo license, please contact us at liuwei@bswa.com.cn.