

Calibration Measurements of Reverberation Time in a Traffic Control

CASE STUDY: Verification of Acoustic Parameters in a Traffic Control Room Using the SV 971A Sound Level Meter

Measurement

Operator:

Budmal-Art Sp. z o.o.

Monitoring Instrumentation:

SVANTEK SV 971A - Class 1 Sound Level Meter

SvanPC++ Software

Challenge:

To accurately determine the reverberation time in a traffic control room in accordance with PN-EN ISO 3382, with the aim of validating the acoustic design, ensuring regulatory compliance, and providing optimal working conditions for operators.



Verification of Acoustic Parameters

Reverberation Time

Reverberation time (RT60) is a fundamental parameter used to describe the acoustic characteristics of enclosed spaces. In traffic control rooms—environments where operators' concentration can directly impact human safety—acoustic requirements are particularly stringent. Measurements were carried out in accordance with PN-EN ISO 3382 to verify the acoustic conditions before and after room adaptation.



About the Company

Budmal-Art Sp. z o.o. has been active in the market since 1992, specializing in acoustic design and measurements. The company brings extensive expertise in executing qualified acoustic projects in specialized spaces—from concept and execution to final quality validation.

About the Instrumentation

The SVANTEK **SV 971A** was used for the measurements — a compact yet advanced Class 1 sound level meter capable of automated reverberation time (RT60) calculations and efficient execution of multiple measurements with result averaging. The intuitive graphical display enables on-site assessment of results.

“Thanks to our knowledge, experience, and professional-grade instrumentation, we are able to deliver precision-tailored acoustic designs—from the first measurement to final verification.”

Budmal-Art Sp. z o.o. Team

Budmal-Art Sp. z o.o. conducted the reverberation time tests as part of an acoustic adaptation project. RT60 is a key design metric in specialized facilities where acoustic conditions influence both comfort and operational efficiency. The measurements conducted in accordance with PN-EN ISO 3382 aimed to confirm the compliance of the acoustic performance with the design specifications.

Budmal-Art's approach is distinguished by its comprehensive project delivery — covering the design, implementation, and performance verification stages. This guarantees a high level of quality and predictability for the final outcome.

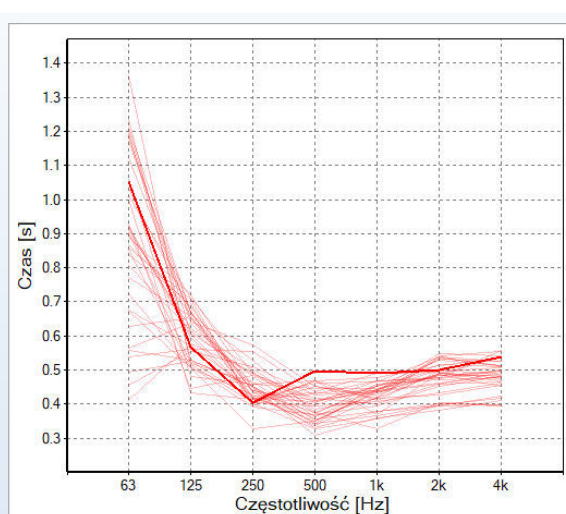
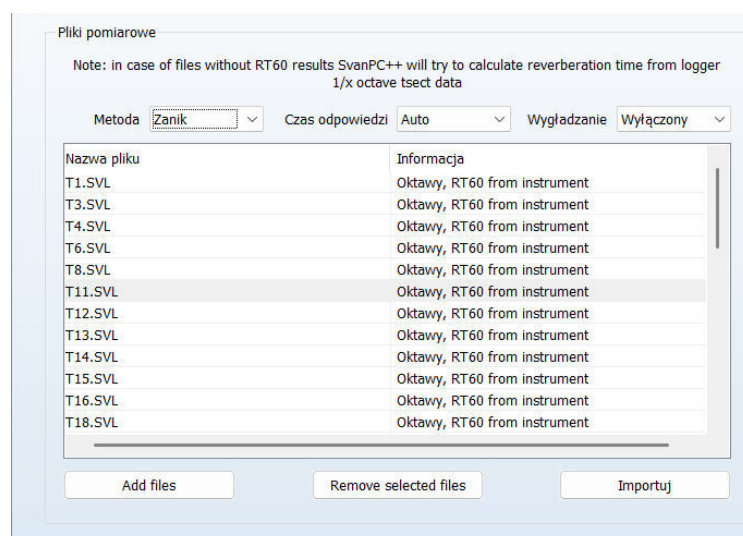
Post-measurement data analysis was conducted using **SvanPC++** software with the Building Acoustics Module, which provides advanced data visualization and facilitates the identification of results that deviate from standard thresholds.



The SVANTEK **SV 971A** streamlined the measurement process through built-in averaging functions and a user-friendly interface, allowing engineers to evaluate room acoustics directly on-site. After connecting the device to a PC, the collected data was analyzed using **SvanPC++** with the Building Acoustics Module, enabling detailed verification of outliers and confident inclusion in the final report.

This Class 1 instrument supports not only RT60 measurements according to ISO 3382, but also STIPA speech intelligibility assessments – all within a single device. Measurement efficiency is further enhanced by the synchronization of two **SV 971A** meters, allowing simultaneous data acquisition in two separate locations—a valuable feature in large-scale facilities.

Field teams can also utilize the **Building Acoustics PRO** mobile app, which provides remote control, real-time RT60 monitoring, automatic airborne sound insulation calculations compliant with ISO 16283, and report generation in accordance with applicable standards.



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