PULSE Sound Power of Fans Type 7886

PULSE™ Sound Power of Fans Type 7886 is a software application that supports sound power determination of fans and enables manufacturers to comply with national and international regulations for noise emission quantities. The software is configured with the measurement requirements defined by ISO 3744, 3745 and 3746 to guide you through measurement setup, measurement runs and report generation.

Complete sound power determination systems are designed around Type 7886 and include the hardware and software components necessary for ISO standard testing.

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Uses, Benefits, Features

Uses

- Determination of sound power levels for fans and air-moving devices, both at inlet and outlet
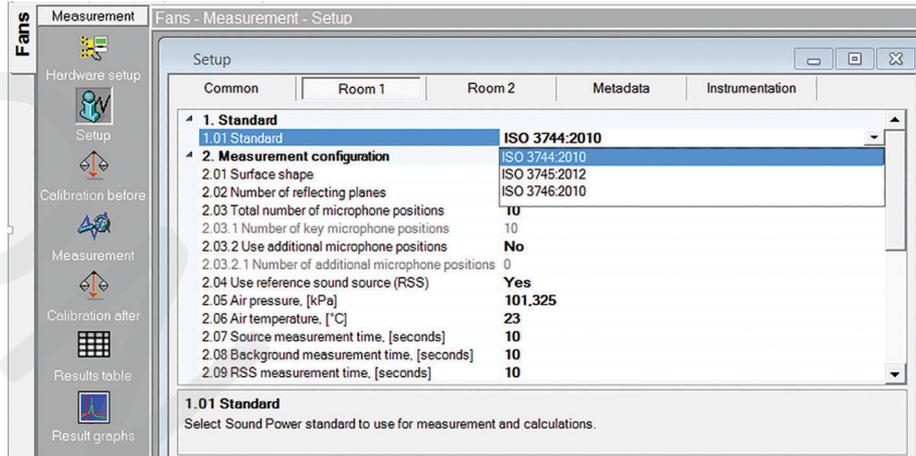
Benefits

- Workflow that follows the specifications of each standard
- Efficient measurement procedures
- Easy to use, minimal training required

Features

- Supports sound power standards: ISO 3744, 3745 and 3746
- Complete system
- Ability to specify maximum permissible sound power level for each category of machinery
- Full documentation for all measured machines
- Automatic generation of test reports
- Corrections for background noise and test environment
- Simultaneous testing in one, two or three anechoic rooms
- Supports additional microphones for cases in which the directivity of the source is excessive

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The Measurement Setup of Type 7886 guides you through the set-up according to ISO Standard 3744, 3745 or 3746. Selecting the standard to which you are testing enables and disables fields according to the requirements of each standard.

Fig. 1
The Measurement Setup task contains fields, such as Standard, that populate test parameters for the Common, Room, Metadata and Instrumentation tabs

System Overview

A typical system for testing air conditioning fans consists of the test setup, data acquisition hardware, and software.

Microphones are positioned as defined by the ISO standard (for example: on a hemisphere, sphere, or parallelepiped) in one, two or three anechoic rooms. The signals are cabled to LAN-XI data acquisition hardware that is connected to a computer installed with all necessary PULSE software. All signals from all rooms are logged simultaneously by the computer where Type 7886 controls the measurement progress and produces a report.
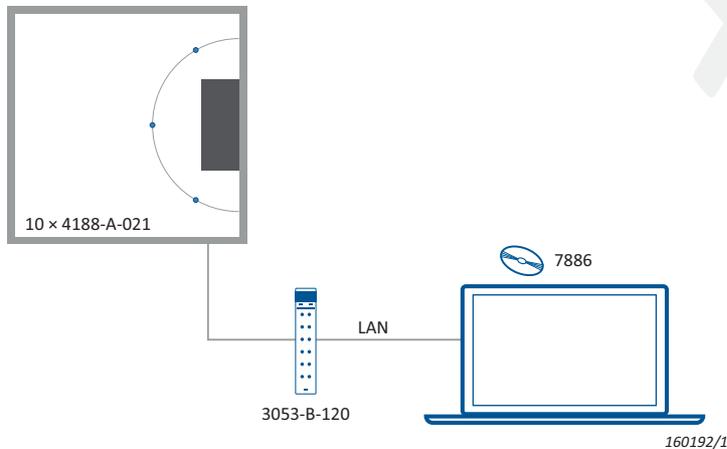
Typical Configurations
Type 7886 supports testing in one, two or three rooms simultaneously.

One Room
Typical configuration includes the following:
• 10 microphones in one anechoic room, positioned in a hemisphere
• LAN-XI Input Module Type 3053-B-120
• PC installed with PULSE Sound Power of Fans Type 7886
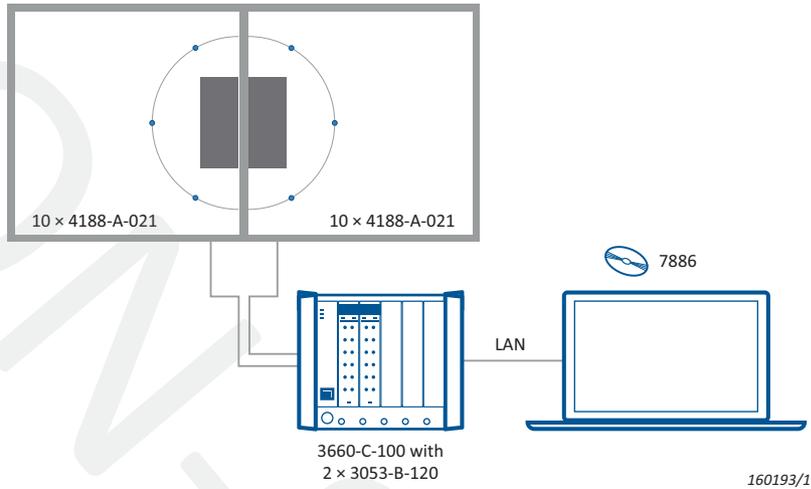
Fig. 2
One-room system

Two Rooms (Transmission Suite)

Typical configuration includes the following:
- 20 microphones in two anechoic rooms, each with ten microphones positioned in a hemisphere
- LAN-XI Front-end Frame Type 3660-C-100 with two LAN-XI input modules Type 3053-B-120
- PC installed with PULSE Sound Power of Fans Type 7886

Fig. 3
Two-room system

10 × 4188-A-021 10 × 4188-A-021

7886

LAN

3660-C-100 with
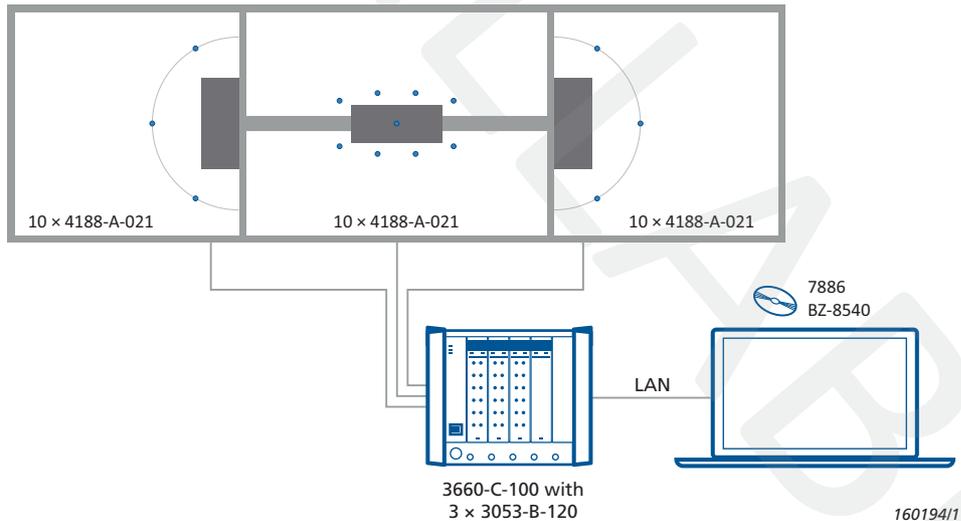2 × 3053-B-120

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Three Rooms (Transmission Suite)

Typical configuration includes the following:
- 30 microphones in three anechoic rooms: two rooms with ten microphones positioned in a hemisphere and one room with ten microphones positioned in a parallelepiped
- LAN-XI Front-end Frame Type 3660-C-100 with three LAN-XI input modules Type 3053-B-120
- PC installed with PULSE Sound Power of Fans Type 7886 and Option for Third Room BZ-8540

Fig. 4
Three-room system

10 × 4188-A-021 10 × 4188-A-021 10 × 4188-A-021

7886
BZ-8540

LAN

3660-C-100 with
3 × 3053-B-120

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Specifications – PULSE Sound Power of Fans Type 7886

Type 7886 is a Windows®-based application for PULSE Sound Power (SPW), a suite of sound power applications for the PULSE LabShop platform. The software is delivered via DVD or USB

System

SYSTEM REQUIREMENTS
- Microsoft® Windows® 10 Pro or Enterprise (x64) with either Current Branch (CB) or Current Branch for Business (CBB) servicing model
- Microsoft® Office 2016 (x32 or x64) or Office 2019 (x32 or x64)
- Microsoft® SQL Server® 2017 or SQL Server® 2019
  Note: Microsoft SQL Server 2017 is included in BK Connect® installation

Minimum Licence Requirements:
- BK Connect Data Viewer Type 8400
- BK Connect Hardware Setup Type 8401
- BK Connect Data Processing Type 8403

RECOMMENDED SYSTEM CONFIGURATION
- Intel® Core™ i7, 3 GHz processor or better
- 32 GB RAM
- 480 GB Solid State Drive (SSD) with 20 GB free space, or better
- 1 Gbit Ethernet network[*]
- Microsoft® Windows® 10 Pro or Enterprise (x64) with CB
- Microsoft® Office 2016 (x32)
- Microsoft® SQL Server® 2017
- Screen resolution of 1920 × 1080 pixels (full HD)

FRONT END
The software automatically detects the front-end hardware connected and configures the system. If IEEE 1451.4 capable transducers (with standardized TEDS) are being used, these are also detected and attached automatically to the correct channel of the input module

For information about LAN-XI data acquisition modules, see product data BP 2215

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[*] A dedicated data acquisition network (LAN or WAN) is recommended. A network that only handles data from the front end improves the stability of the data

Ordering Information[†]

Type 7886-X	PULSE Sound Power of Fans
BZ-8540-X	PULSE Sound Power of Fans, Option for Third Room

SOFTWARE MAINTENANCE AND SUPPORT
M1-7886-X	Agreement for Type 7885
M1-8540-X	Agreement for BZ-8450

Software maintenance and support agreements are available for all applications

REQUIRED SOFTWARE
Type 8400-X	BK Connect Data Viewer
Type 8401-X	BK Connect Hardware Setup
Type 8403-X	BK Connect Data Processing

OPTIONAL SOFTWARE
Type 8400-A-X	BK Connect Data Viewer (advanced)
Type 8404-X	BK Connect Data Processing Specialist (instead of Type 8403)

Typical System for One Room

HARDWARE
- 1 × Type 3053-B-120: LAN-XI Input Module with Front Panel UA-2107-B-120 (SMB connectors)
- 10 × Type 4188-A-021: TEDS Microphone, ½″ Prepolarized Free-field Microphone Type 4188 with ½″ CCLD Preamplifier Type 2671
- 10 × AO-0587-x-yyy[‡]: Cable, SMB (F) to BNC (M)

SOFTWARE
- 1 × Type 7886-X: PULSE Sound Power of Fans
- 1 × M1-7886-X: Software Maintenance and Support Agreement for Type 7886

[†] X is the licence type. If X = N, the licence is node-locked to PC host ID or dongle. If X = F, the licence is floating, that is, shared via a licence server

[‡] Please specify cable length when ordering: x = D (decimetres) or M (metres); yyy = length in decimetres or metres

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