

## PULSE Noise Emission Outdoor Machinery, Directive 2000 Type 7885

### Uses

- Determination of sound power levels for outdoor machinery specified in European Union (EU) Directive 2000/14/EC

### Features

- Supports ISO 3744, 3745 and 3746
- Complete system
- Ability to specify maximum sound power level (as defined in EU Directive 2000/14/EC) for each category of machinery
- Full documentation and statistics for all measured machines
- Automatic generation of test reports
- Guaranteed sound power level calculated in test report

### Benefits

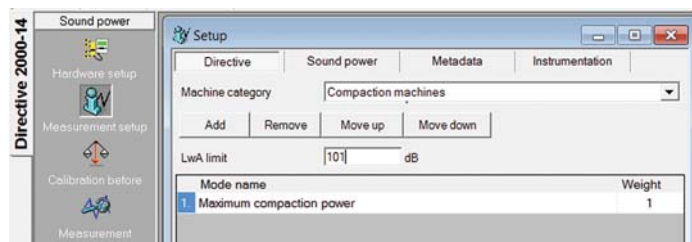
- Workflow that follows the specifications of each standard
- Facilitates access to the European market
- Efficient measurement procedures
- Easy to use, minimal training required



### Description

PULSE Noise Emission Outdoor Machinery, Directive 2000 Type 7885 is a software application that supports EU Directive 2000/14/EC. 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.

**Fig. 1** Measurement setup interface for Type 7885



Complete sound power determination systems are designed around Type 7885 and include the hardware and software components necessary for ISO standard testing. Custom systems are designed and ordered via Project Sales.

### About Directive 2000/14/EC

EU Directive 2000/14/EC requires manufacturers to declare noise emissions according to standardized measurement methods (ISO 3744, 3745 and 3746) as a prerequisite for placement on the EU market.

### Declaration of Sound Power

Directive 2000/14/EC states the maximum permissible sound power levels for over 50 types of outdoor machines. Categories of machinery covered in the directive include, but are not limited to, compaction machines, compressors and lawnmowers.

The sound power of machines is determined from the measured sound pressure at specified modes of operation of the machine. The result is displayed on a label visibly fixed to the machine.

**Fig. 2** Noise labels for sound power and pressure, A-weighted



This is the guaranteed sound power level that the manufacturer confirms will not be exceeded with a certificate of conformity.

## System Overview

Machines are typically tested in an outdoor test area using an array of six to ten microphones positioned over a hemisphere.

If preliminary investigations for a particular category of machinery show that there is a deviation of <0.5 dB in the surface sound pressure levels between systems using ten microphones and systems using six microphones, it is acceptable to use six microphones.

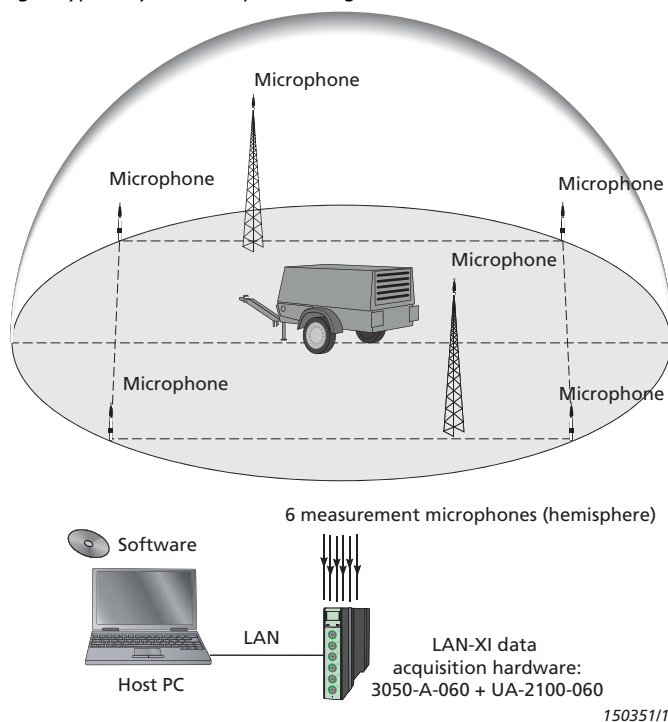
For testing according to ISO 3744, six microphones are positioned on a standard-defined hemisphere and cabled to a LAN-XI front end, see Fig. 3. All signals are logged by the host PC where Type 7885 controls the measurement and produces the report.

## Configuration Options

Other configurations that support more microphones and/or other measurement surfaces, for example parallelepiped, are also supported.

Brüel & Kjær also supports ISO 6393, 6394, 6395 and 6396 with PULSE Sound Power Determination for Earth-moving Machinery Type 7883. See product data [BP 2521](#) for details.

Fig. 3 Typical system setup according to ISO 3744



## Specifications – PULSE Noise Emission Outdoor Machinery, Directive 2000 Type 7885

A Windows®-based application for use with PULSE™ LabShop. 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; or Windows® 7 Pro, Enterprise or Ultimate (SP1) (x64) operating systems
- Microsoft® Office 2016 (x32 or x64) or Office 2013 (x32 or x64)
- Microsoft® SQL Server® 2014 Express (SP2) (included in installation), SQL Server 2014 (SP2), SQL Server 2012 R2, SQL Server 2008 or 2008 R2 Express Edition SP1

#### 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), CB

\* 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

- Microsoft® Office 2016 (x32)
- Microsoft® SQL Server® 2014 (SP2)
- 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](#)

## Ordering Information – Typical Sound Power Determination System According to ISO 3744†

Due to the variety of options, order via Project Sales

### SOFTWARE

Type 7885-X PULSE Noise Emission Outdoor Machinery, Directive 2000

### HARDWARE

6 × AO-0426-x-yyy‡ Low-noise, double-screened cable, BNC (M), 85 °C (185 °F)

6 × Type 4189-A-021 ½" Prepolarized Free-field Mic. (6 Hz to 20 kHz) with Pre-amplifier Type 2671, TEDS  
 Type 3050-A-060 LAN-XI 6-ch. Input Module 51.2 kHz (Mic, CCLD, V) with Front Panel UA-2100-060, 6 × BNC (F)

### SOFTWARE MAINTENANCE AND SUPPORT

M1-7885-X Agreement for Type 7885

### 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)

† X is licence type, either X = N, where the licence is node-locked to PC host ID or dongle; or X = F, where the licence is floating, i.e., 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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