

SoundPLAN International LLC

*Software Designers and Consulting Engineers for
Noise Control • Air Pollution • Environmental Protection*



1 October 2009

To Whom It May Concern,

SoundPLAN is a standards based software. Braunstein + Berndt GmbH (SoundPLAN software development office) tests that SoundPLAN is within 0.2dB of the standards. When available, they use the author's or overseeing agency's test questions for the standards for testing. However, not all authors or organizations provide test cases to benchmark results. When no test questions are available, Braunstein & Berndt or a SoundPLAN trading partner generate questions and test to ensure accuracy. Results from the hand calculations are compared with the results from SoundPLAN using our Excel test database. SoundPLAN is tested until deviations from the hand calculations do not exceed 0.2 dB.

Please note that all noise prediction models are statistical approximations of the real world. Deviation in measurement can occur. Every standard has a number of uncertainties such as metrological conditions, the source input data and geometry. SoundPLAN only processes the input data with the algorithm provided in the standards themselves. SoundPLAN is not inventing or developing new propagation methodologies, nor improving on the equations inherent in the standards. Braunstein & Berndt GmbH and SoundPLAN International LLC (SoundPLAN international sales office) only guaranty the accuracy of the standard implementation in the SoundPLAN software.

Quality Assurance (QA) is of vital importance to Braunstein & Berndt GmbH and SoundPLAN International LLC. Every new SoundPLAN release is benchmarked with the test cases from the previous version to ensure results are the same. Our QA testing is an ongoing process so results remain accurate to the requirements of the standards, and routines are compatible in all versions.

Furthermore, Braunstein & Berndt GmbH has been awarded the ISO 900: 2000 certificate. The certification body of TUV SUD Management Service GmbH certifies that "Braunstein + Berndt GmbH has established and applies a quality management system for development and distribution of software as well as consultancy work for environmental noise control, structural sound insulation and air pollution control."

Braunstein + Berndt GmbH implements new standards as they are published. All changes are incorporated in SoundPLAN updates available at www.soundplan.com for customers with warranty or update and maintenance contracts.

The following page lists the standards implemented and tested in SoundPLAN.



Sincerely,

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EU Directive Standards

Road: French NMPB
Rail: Dutch RMR 2002
Industry: ISO 9613
Aircraft: ECAC

Industry Standards

VDI 2714/2720
VDI 3760 (Indoor Model)
WDI-Standard
Concawe
General Prediction Method
OAL 28
DIN 18005 Gewerbe
ISO 9613-2; 1996
Construction Noise
(Hong Kong)
TA Laerm einfaches
Verfahren
Nord 2000
Japan Industry
based on ASJ model
BS5228

Road Standards

RLS 90
RLS 90 Streng
VBUS (Germany)
DIN 18005 Strasse
Statens Planverk
Report No. 48; 1980
CoRTN (UK)
Schweiz EMPA
RVS 302 Laermschutz
Road Traffic Noise
Nordic Prediction Method
Nord 2000
ASJ RTN - Model B; 1998
ASJ RTN - Model B; 2003
NMPB - Routes - 96
FHWA; 1978
TNM v2.5 (TM) (USA)
Russian Road
Hungarian Road

Aircraft Standards

ECAC
AzB
LAI
DIN 45643

Rail Standards

Schall 03
Schall 03 Streng
VBUSch (Germany)
Transrapid
DIN 18005 Schiene
ONORM 305011
Nordic Rail Prediction
Method Kilde Report 130
Calculation of Railway Noise
1996 (UK)
Nordic Prediction Method for
Train Noise
Japan Narrow-Gauge
Railways
SEMIBEL
RMR 2002
Russian Rail
Nord 2000