SoundPro® SE & DL Series with Option-2

Speech Intelligibility, Accessories, and Acoustic Spectral Curves

The SoundPro SE & DL Models with Option-2 includes all of the Acoustic Spectral Curves and Speech Intelligibility Functions in Option-1 and adds the accessories needed to perform speech intelligibility measurements through public address, fire alarm, and other mass notification systems (MNS). With this option, you will receive a portable CD device, along with the calibrated test signal CD.

Speech Intelligibility can be a subjective assessment by polling listeners but from a regulatory and standards standpoint it must be verified objectively using a proven methodology. There have been a number of these methods developed over the years including using the Speech Transmission Index (STI), the Room Acoustics Speech Transmission Index (RASTI), and now the most prevalent method named Speech Transmission Index for Public Address Systems (STI-PA).

STI-PA was developed through research that included the TNO Research Institute in the Netherlands. The BOSE Corporation in the U.S.A. incorporates this proprietary technology covering use of this method in a handheld portable analyzer. Quest has obtained a license agreement with BOSE to use this technology.

How it Works

STI-PA is measured using at least seven octave bands and 12 modulation indices. A typical measurement takes 15 seconds using the SoundPro SE or DL models. A small device is used to send a signal from an audio CD containing the calibrated test signal through the PA system simulating human speech in the form of the sum of the bands of noise, each modulated with two frequencies as specified in IEC 60268-16. The SoundPro is then placed in the area where the sound is expected to be intelligible and a measurement is made and logged. The instrument then calculates the STI value according to the STI-PA method, and it is displayed on the LCD indicating Bad, Poor, Fair, Good, or Excellent. The actual STI-PA numerical values are also displayed.

Another method to report Speech Intelligibility is the Common Intelligibility Scale (CIS) shown in IEC 60849 which attempts to map all methods including the STI, percentage articulation loss of consonants, word lists, etc. The SoundPro can be set up to make and report measurements on the CIS and display the final value as Bad, Poor, Fair, Good, or Excellent. The actual CIS numerical rating is also displayed.

Full support for Speech Intelligibility measurements is included in QuestSuite Professional II with graphical representations of the measurements and results and full report generation. In addition, the user is able to average multiple runs and archive the data that you have recorded.

Features

• **Easy user set up & operation with results in STI-PA and CIS formats.**
• **Easy to read digital readout takes the guesswork out of whether you are in compliance or not.**
• **Quick 15 second measurement intervals with post processing from meter or QuestSuite® Professional II software.**
• **CD device and calibrated test signal CD included.**
• **Captured Curves for display and logging.**
• **Supports Criterion Curve Families: NC, PNC, RC, NCB, NR, and Audiometric background curves (ANSI3.1 & OSHA).**

Specifications

Standards:	• **IEC 60849 Sound Systems For Emergency Purposes** • **NFPA 72 National Fire Alarm Code** • **BS 5839-8 Fire Detection and Alarm Systems for Buildings** • **UFC 4-021-01 United Facilities Criteria (UFC): Mass Notification Systems** • **IEC 60268-16 Objective rating of speech intelligibility by speech transmission index**
Available Measurements:	• **STI-PA, CIS, A-weighted Broadband SPL, Leq and Z-weighted SPL, Leq for full octave bands**
Weighting:	• **A, Flat**
Special Functions:	• **Selectable gender specific weighting** • **Post Processing via the meter or QuestSuite® Professional II** • **4 stored background noise profiles for use with post processing**

***** Ordering Information - Please specify SoundPro® SE or DL model with Option-2***

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