

NTI TalkBox

Acoustical STI-PA Reference



Built in Generator

Individually Calibrated

Compact Size

Line Output

Excellent Flatness

According IEC 60268-16

NTI TalkBox greatly simplifies the acoustical feed of the STI-PA intelligibility test source signal into closed sound reinforcement systems. It presents the standardized voice-like acoustical signal emission simulating a human talker according to IEC 60268-16,

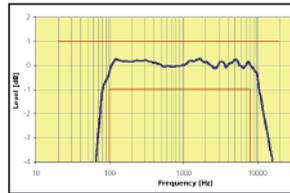
NTI TalkBox features human head-like dimensions and is based on a Solid-State-Generator with CF-Card. It perfectly equalizes the STI-PA test signal and replays it at the precisely correct playback sampling rate, also minimizing systematic errors through the internal amplifier and internal precision loudspeaker.

Due to the required overall accuracy of ± 1 dB over the relevant frequency range, each TalkBox is individually equalized and calibrated for precision output. The radiation characteristic complies with the ITU-T P.51 in wide ranges.

TalkBox Rear Panel View



combined with a TNO certified speech intelligibility signal at standardized levels. The built-in combination of solid state generator and DSP ensures highest playback accuracy and lowest sample frequency deviations with minimized jitter effects.



Individually Equalized

NTI TalkBox is equipped with a precision broadband loudspeaker. To guarantee perfect flatness and highest quality requirements, every TalkBox is individually equalized using advanced FIR filtering and DSP technology.



Adjusted output level

The IEC60268-16 standard specifies a sound pressure level for a speaker simulator of 60 dBA in 1 meter distance. Talk-Box levels are calibrated to comply with this standard. To avoid operating failures the TalkBox has no volume control.



Lombard Effect

Human voice tends to be raised in emergency situations. In order to cope with this so called Lombard effect, all STI-PA related signals are alternatively offered with 10 dB increased level (70 dBA @ 1m).

Balanced Line Out

Using the balanced line out, the TalkBox operates as a signal generator. Sampling frequency deviations - dangerous trap when using portable CD players for STI-PA measurements - are completely eliminated.

Balanced Line In

Any external signal can be connected to the system using the balanced line input. The applied signal is transparently looped to the line output and processed in the internal DSP in real-time to appear equalized at the speaker.

Different Test Signals

Beside the STI-PA test signal the TalkBox is able to generate additional wave forms: White- and Pink-Noise, Sine wave and the Delay Time Measurement Chirp. Custom designed signals may be loaded onto the CF-Card externally and are seamlessly looped.

Mic Stand Mount

The exact positioning of the NTI TalkBox in front of a microphone (at the place where a real human speaker would be) is easy using a conventional mic stand. A universal mic stand mount is available at the bottom of the box.

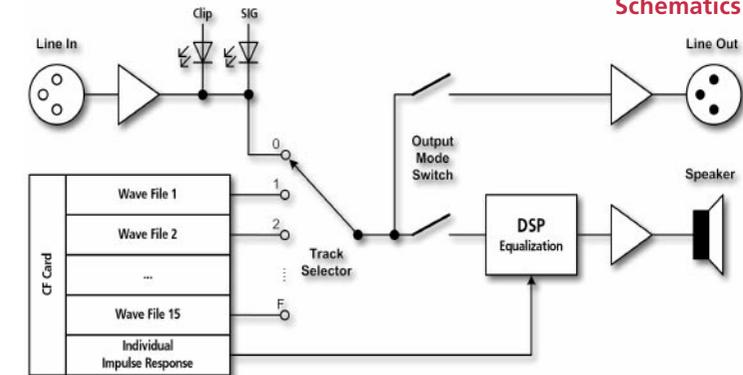
Remote Mute

For measuring STI-PA in large buildings the remote mute functionality of the TalkBox may be of great help. Any external switching device may be connected to the mute input, allowing to build e.g. a cell phone controlled ON/OFF functionality.

Universal Power Supply

The TalkBox handles a wide DC power supply input voltage range. This allows its operation even from a battery pack (available as optional accessory). An external power supply for worldwide operation is supplied as standard.

Schematics

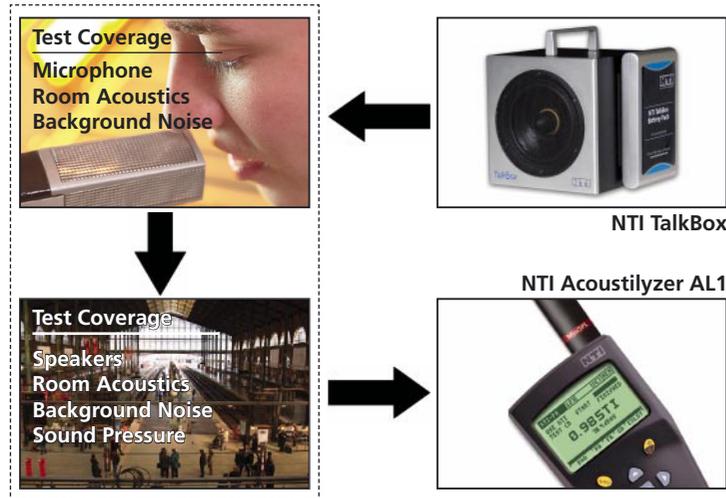


NTI TalkBox

Extends Test Coverage

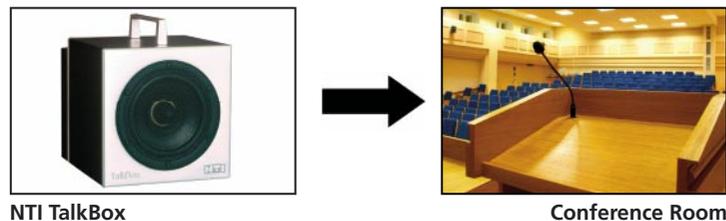
STI-PA Testing

Using an acoustical test source for STI-PA measurements provides two major advantages: An extended test coverage and an easy to handle test signal injection. Sampling frequency deviations - a dangerous trap when using portable CD players - are completely eliminated.



One, Two, Test

When setting up microphones for either reinforcement or conference systems, a human speaker commonly repeats the familiar phrases "one, two, test" or "check - check" to stimulate the system and check for level. The NTI TalkBox simplifies and improves this method. For basic adjustments, the reference human speech signal makes this task easy for one person. For more precise work, e.g. in teleconference applications, also the system flatness and response effects can be determined.



Technical Data NTI TalkBox

Waveforms	<ul style="list-style-type: none">• Up to 15 different signals• Waveforms can be added / changed by the user• Factory signal set: NTI STI-PA Test Signal, Reference Speech Signal, Sine 1kHz, White Noise, Pink Noise, Delay Test Signal
Line Out	<ul style="list-style-type: none">• XLR, balanced 100 Ohm, unbalanced 50 Ohm• Maximum output level: +18 dBu, 1 kHz file with 60 dB @ 1 meter: typically -11 dBu
Line Input	<ul style="list-style-type: none">• XLR, balanced 38 kOhm• Maximum input level: +18 dBu• Internal delay from XLR input to speaker: 59 ms
CF-Card	<ul style="list-style-type: none">• 128 MB included, FAT32 formatted• Wave File format: 16 Bit, 44.1 kHz mono
Acoustical Flatness	STI-PA band levels (in axis): <ul style="list-style-type: none">• typ. < +/- 0.5 dB @ 24°C• typ. < +/- 1.0 dB @ 10°C - 30°C
Acoustical Output Level	<ul style="list-style-type: none">• STI-PA: 60 dBA @ 1m +/- 0.5 dB, acc. IEC60268-16• STI-PA band sensitivity gradient: -0.07 dB / °C (average)• Others see track list in user manual
Power Supply	<ul style="list-style-type: none">• 10 - 18 VDC, 10 W• External switching power supply included (for worldwide usage 100 V .. 240 V)
External Mute	<ul style="list-style-type: none">• Jack 3.5 mm (1/8")• Floating switch required
Dimensions (LxWxH)	150 x 150 x 175 mm (5.9 x 5.9 x 6.9 inch)
Weight	3.5 kg
Temperature	0° to +45°C (32° to 113°F)
Accessories	Mains Power Adapter, 128 MB CF-Card and Bag included

NTI article code:

NTI TalkBox	600 000 085
Battery Pack for NTI TalkBox	600 000 086



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NTI TalkBox

The Reference for Speech Intelligibility Measurements



TB 10/07 E 10.000 WE 10.07