

KLIPPEL Expands Capabilities of Scanning Vibrometer Hardware



Press Release March 2021

IN FEBRUARY 2021 KLIPPEL RELEASED THEIR NEW SCN NEAR FIELD ADD-ON (SCN-NF)

KLIPPEL introduces the new SCN Near-Field Add On (SCN-NF), which accurately performs all the most relevant transducer measurements using a single hardware setup in a non-anechoic room.

Add 2pi acoustical measurement capabilities to the same SCN platform you already use to laser scan diaphragm vibration. The SCN hardware is extended with a microphone in addition to the existing laser sensor. Automated axis control ensures repeatable, precise and fast positioning of microphone and laser sensors. In combination with a round baffle for measuring transducers up to 10" / 30 cm in diameter or compact (smart) speakers, acoustic near-field scanning technology is added to the SCN.

THE SMART ALTERNATIVE TO AN ANECHOIC CHAMBER

- Fastest way to get full directivity
- Holographic measurement with ideal half-space conditions
- Extrapolate SPL to any point in 3D half-space
- Balloon, contour, polar and sound power plots

Comprehensive near- & far-field radiation data, such as directional characteristics, sound power and sound pressure output at any point in the 3D half-space, can be calculated. This data is extrapolated from a double shell acoustic measurement and holographic processing for direct sound separation. This is the same technology used in our Near Field Scanner (NFS), now available for the much smaller SCN hardware. KLIPPEL's new solution is perfect for comprehensive transducer analysis because it integrates everything necessary into a space-efficient unified hardware that can quickly perform multi-domain measurements.

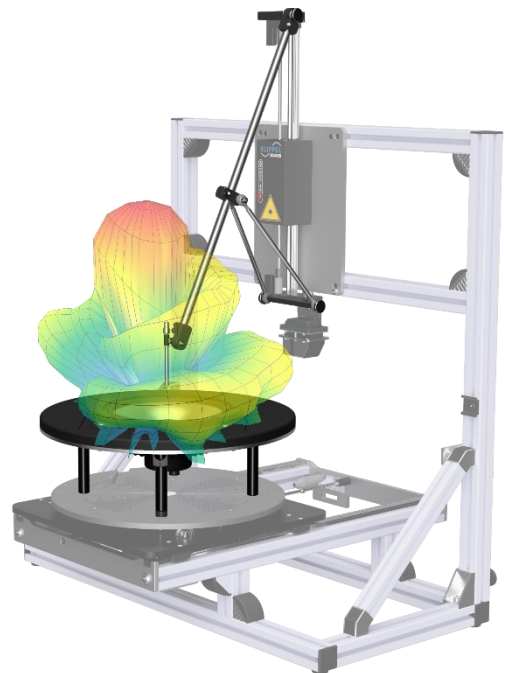


Figure 1: SCN Scanning Vibrometer with the SCN Near Field Add-On

[SCN-NF Module Site](#)

[SCN-NF Specification](#)

ACCURATE RESULTS WITH UNDERSIZED BAFFLES

Create a virtual infinite baffle with acoustical holography. Setups using much larger and often still insufficient baffles can be replaced. An anechoic room is not required; a normal reverberant room such as a (home) office is sufficient. The SCN equipped with the new SCN Near Field Add-On enables mechanical, electrical and acoustical measurements in a very compact space.

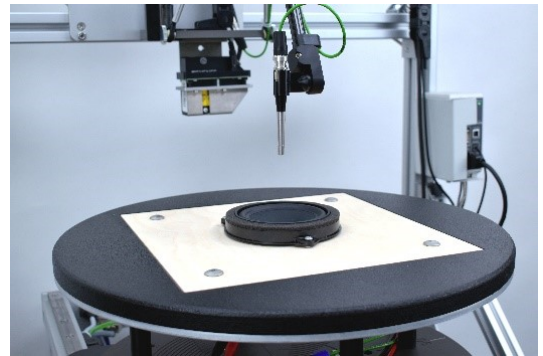


Figure 2: Application Example

Further benefits of a round baffle:

- Remove acoustic shortcut and edge diffractions
- Reduce baffle vibrations to almost zero
- Exploit symmetry to speed up testing

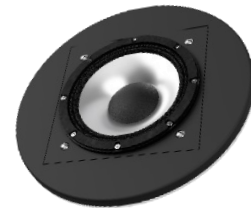


Figure 3: Round Baffle

THE KLIPPEL SCN HARDWARE WILL BE MORE THAN A VIBROMETER

With the SCN Near Field Add-on, Klippel has created a multifunctional device with multiple sensors and domains using the SCN hardware to enable customers to perform a variety of different measurements without having to constantly change their measuring device. As a result, Klippel has expanded its SCN Vibrometer Scanner into a SCN Multi-Scanning Workbench. The multifunctional measurement device supports the international standards IEC 60268-21 and IEC 60268-22 and will be presented in the second KLIPPEL LIVE series "Electrical and Mechanical Measurement of Transducers and Systems according IEC 60268-22" by Dr. Wolfgang Klippel. Further information about the spectrum of the SCN Multi-Scanning Workbench and its associated products as well as about the second KLIPPEL LIVE web seminar will be published soon.