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| Document Title: **Specification, sound quality evaluation based on time-frequency analyze** | | | | | | |
| Document No: **001** | | | | |  | Rev: **1.0** |
|  | |  | | |  | GN ReSound as  Technology Research  Document |
| Orig. Author | | Chandler Chen | | | Oct 12th , 2017 |
| APPROVALS | | | | | |
| Approver 1 | | [initials] | | | [dd-mm-yyyy] |
| Approver 2 | | [initials] | | | [dd-mm-yyyy] |
| Approver 3 | | [initials] | | | [dd-mm-yyyy] |
| Document Revision History | | | | | | |
| REV | Issue Date | | Change Owner | Change Description | | |
| 1.0 | 2017-10-12 | | Chandler | Initial version | | |
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Overview

Setup a 2D holography with probe microphone 40SA (GRAS).

This document is a guidance to use this scan system.

Proposals and implementation

## Equipment

NI-PXI4461

Probe microphone 40SA

12AK preamplifier (**GRAS preamplifier is necessary here, like 12AK. The preamplifier of B&K can’t compatible with 40SA**)

Programable Mechanical arm

## Process

How to do this scan work?

Power on all equipment.

Calibrate whole system, mainly the probe microphone 40SA

Open SoundCheck sequence “2D acoustic Scan\_core\_txt\_out.sqc”

Before running this sequence, should make sure the communication between mechanical arm and PC is ok.

Open the MC to check

Place the HI at the test field, and start running the sequence.

The sequence will output a data text file.

Meanwhile, take a shot of the test field of DUT. This will be used the base of the contour figure.

Run the Matlab Script “read\_data\_multi\_header.m” to make 2D holography figure.

Before instruments test, we need figure out the floor noise in this environment.

No HI is placed, run the SC sequence.

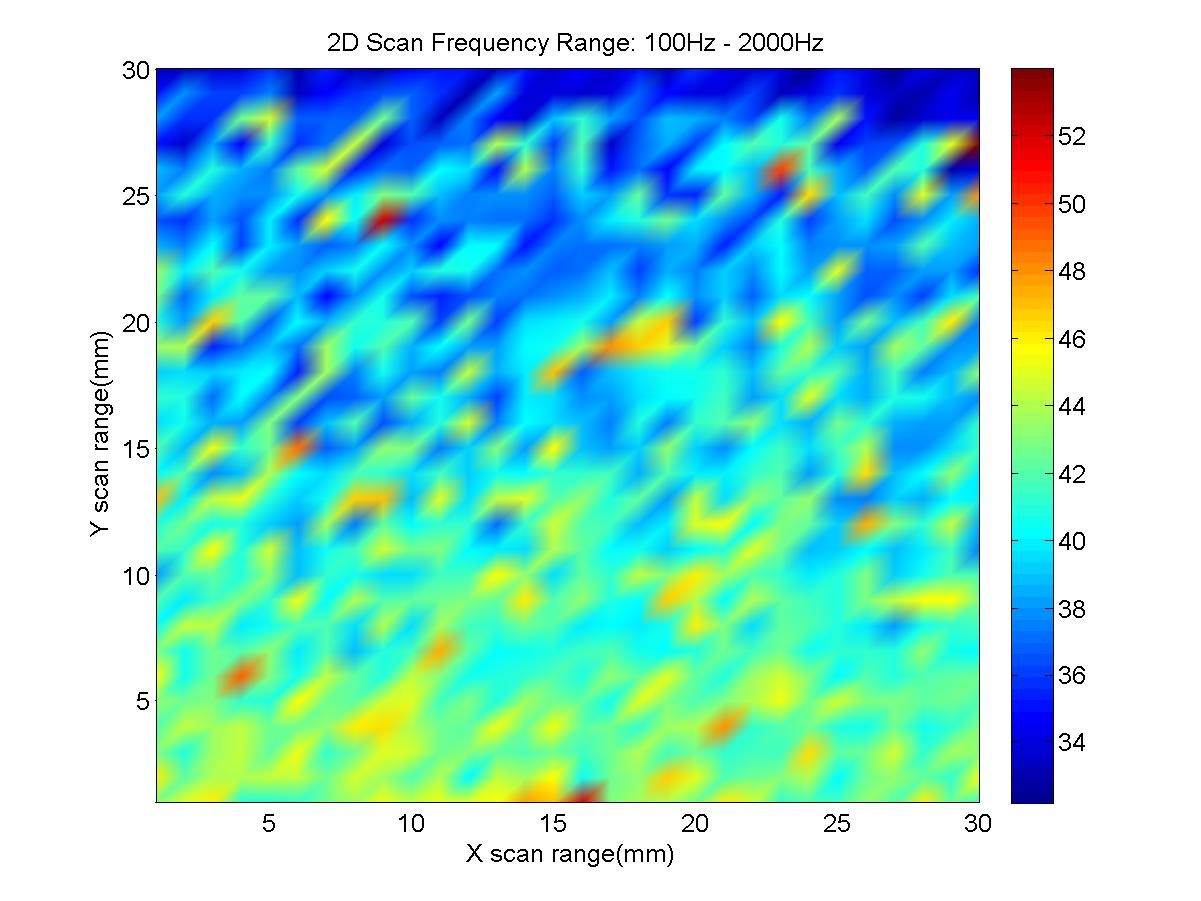
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From the figure above, we can calculate the noise=

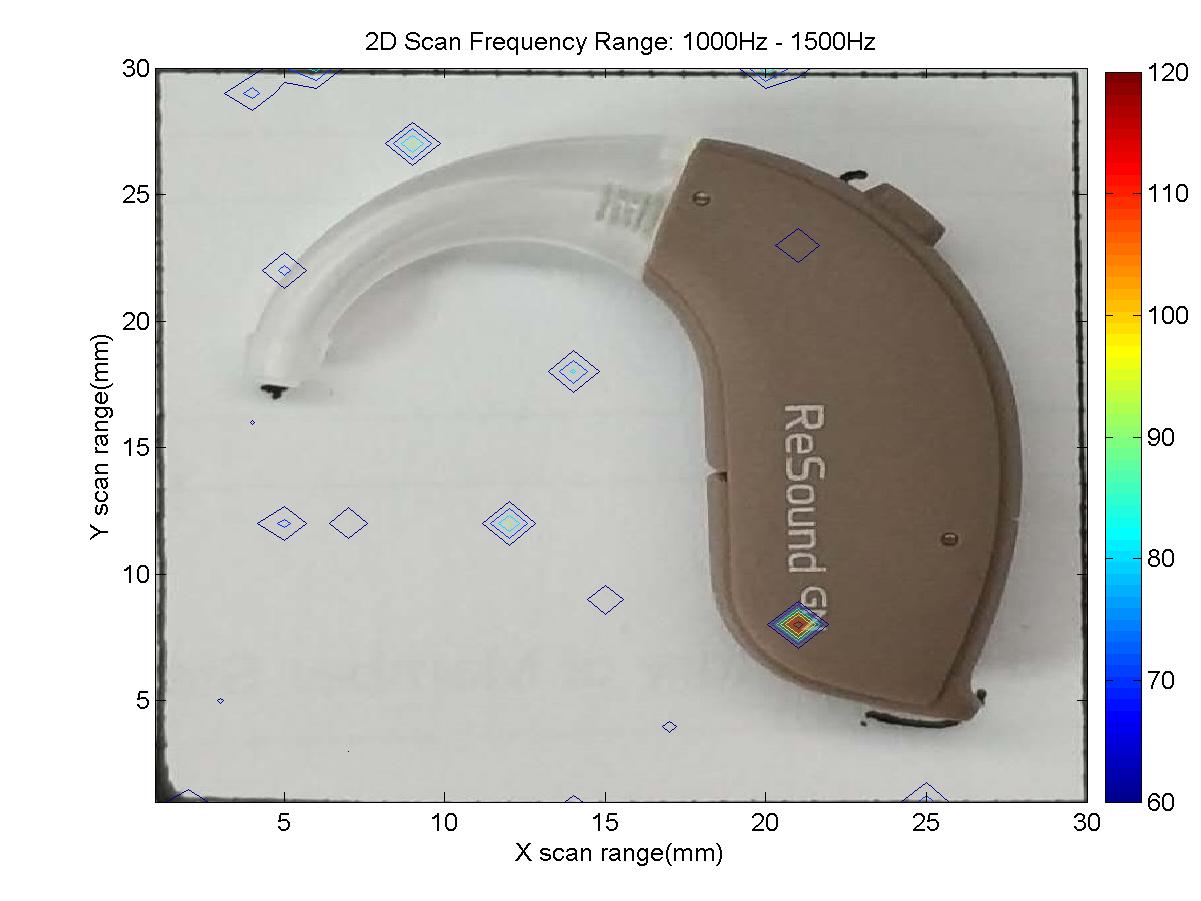
## Examples

This is the pcolor example. No base figure.

*Source vs. output (time field /s)*



Contour example:



TPIS

It is best to start the scan from the centre of the field arm can cover. To avoid to reach axis end before finishing the test.