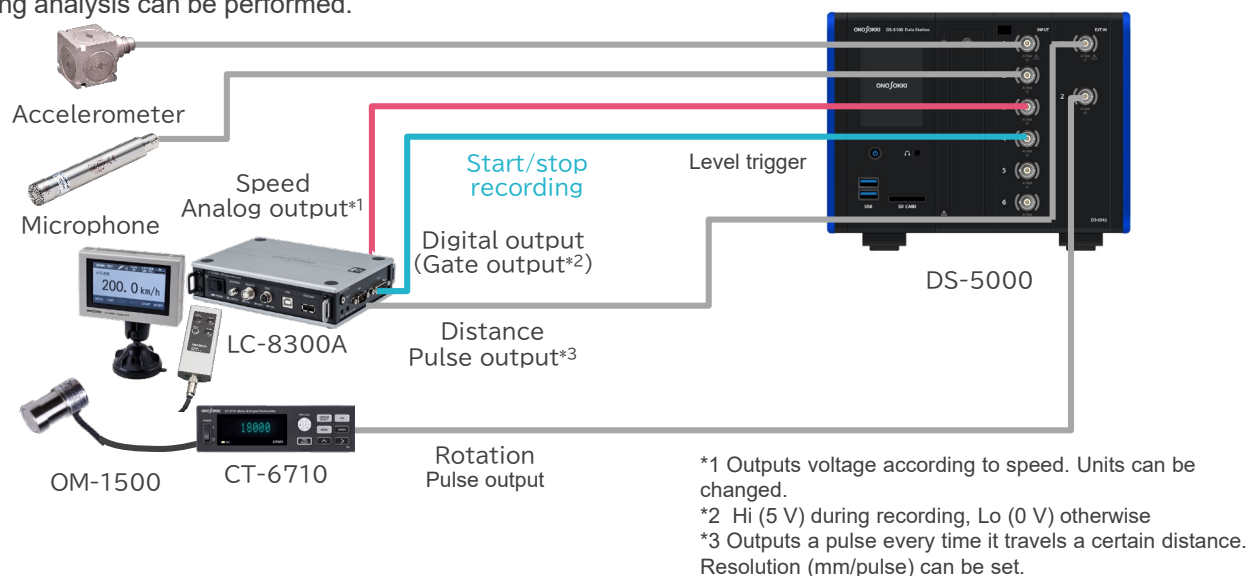**ONO SOKKI**

Actual vehicle NV test

Overview

Actual vehicle NV test is performed using a combination of FFT analyzer and GPS speedometer. Input the digital signals output from the LC-8300A to the DS-5000, apply trigger, and execute synchronized recording. With the various functions of LC-8300A, you can perform tests with good reproducibility.

By inputting the rotation pulse signal of CT-6710 into the DS-5000, the rotation speed tracking analysis can be performed, and by inputting the distance pulse signal of LC-8300A into the DS-5000, the vehicle speed tracking analysis can be performed.
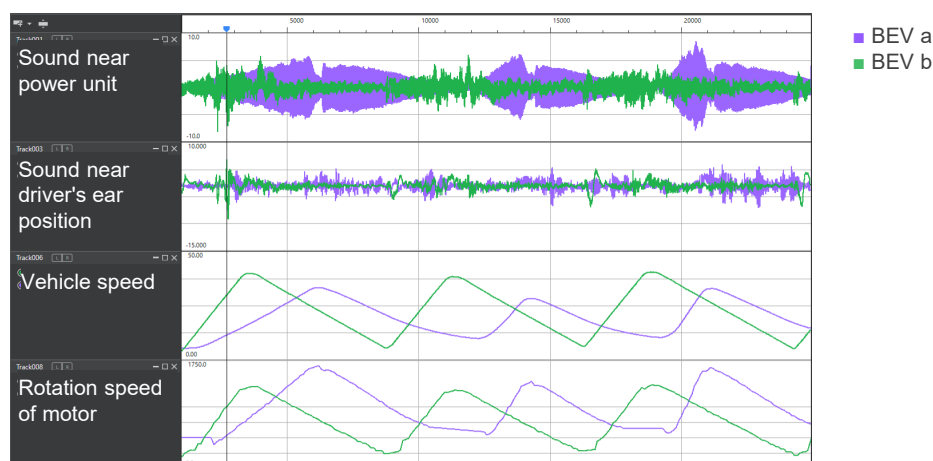
Accelerometer

Microphone

Speed
Analog output*1

Start/stop
recording

Level trigger

Digital output
(Gate output*2)

LC-8300A

Distance
Pulse output*3

DS-5000

OM-1500   CT-6710   Rotation
Pulse output

*1 Outputs voltage according to speed. Units can be changed.
*2 Hi (5 V) during recording, Lo (0 V) otherwise
*3 Outputs a pulse every time it travels a certain distance. Resolution (mm/pulse) can be set.

Flow of Start/ Stop recording by LC-8300A

● Start recording by operating the remote box, and then stop recording after traveling 100 m.
● Start recording at the moment the vehicle starts moving (vehicle speed > 0.2 km/h), and then stop recording when reaching 100 km/h.
● Start recording at the first white line on ISO compliant road surface, stop recording at the second white line.

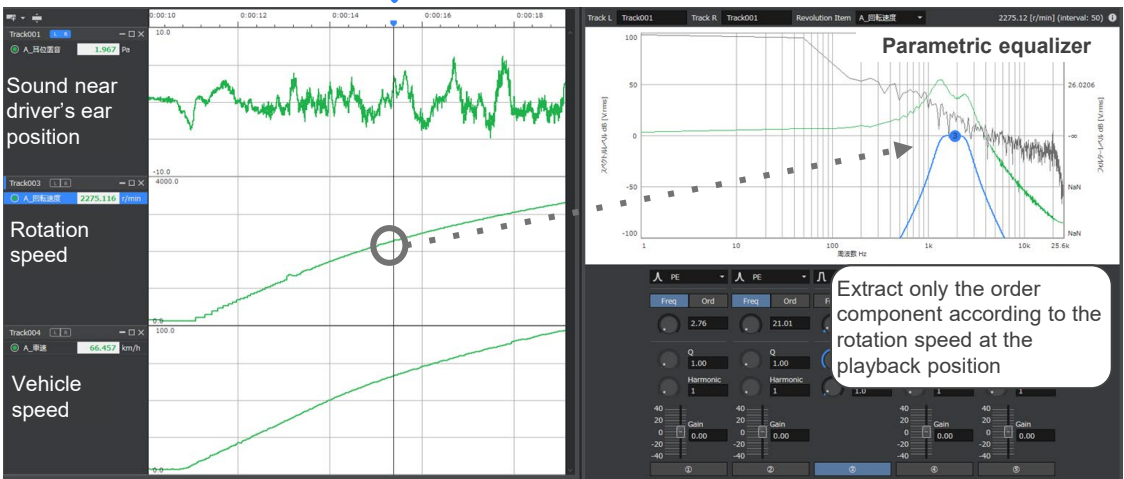## Measurement results

Tipi-in-Tip-out 10 ⇔ 40 km/h

Sound near power unit

Sound near driver's ear position

Vehicle speed

Rotation speed of motor

■ BEV a
■ BEV b

Visualized and analyzed by the O-Solution

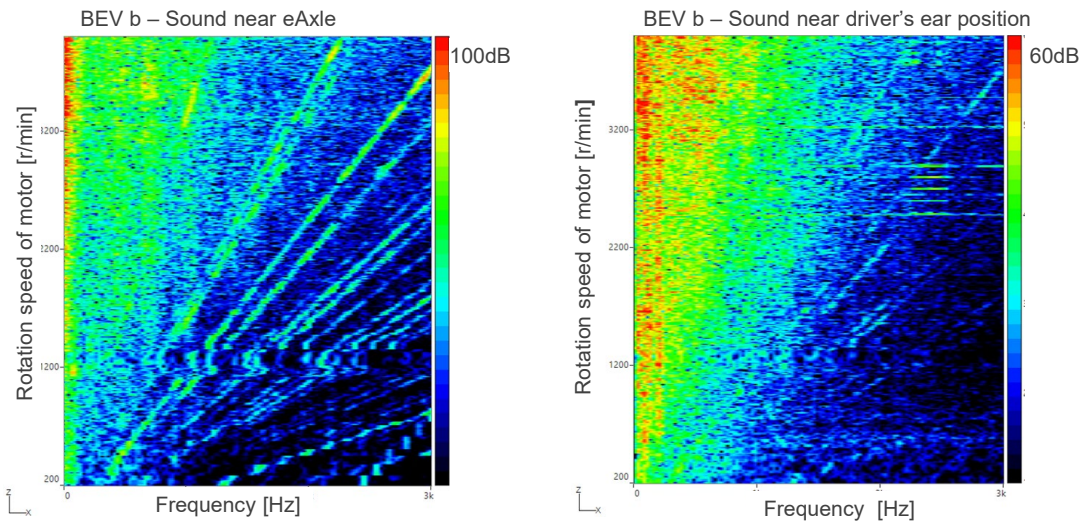∗ Contents of this document may change without prior notice.

Measurement results

Sudden acceleration
(0→ 90 km/h) BEV b

Playback

Sound near driver's ear position

Rotation speed

Vehicle speed

Parametric equalizer

Extract only the order component according to the rotation speed at the playback position

Visualized and analyzed by the O-Solution

Sudden acceleration (0→ 90 km/h)
Rotational tracking analysis

BEV b – Sound near eAxle

100dB

Rotation speed of motor [r/min]

Frequency [Hz]

BEV b – Sound near driver's ear position

60dB

Rotation speed of motor [r/min]

Frequency [Hz]

Visualized and analyzed by the O-Solution

System configurations

Model	Product name
DS-5100	Main unit
DS-0526	6ch 40kHz Input unit
DS-0542	2ch External input Unit
DS-0501	Battery unit
OS-5100	O-Solution Platform
OS-0522	FFT Analysis function
OS-0523	Tracking Analysis function
OS-0512	Hardware Connection function
NP series	Accelermeter
MI series	Microphone

Model	Product name
LC-8300A	GPS Speedometer
LC-0866	Auxiliary input/output cable
OM-1500	Motor/gasoline engine RPM detector
CT-6710	Motor & Engine Tachometer

＊Please select sensors according to applications.

＊Contents of this document may change without prior notice.