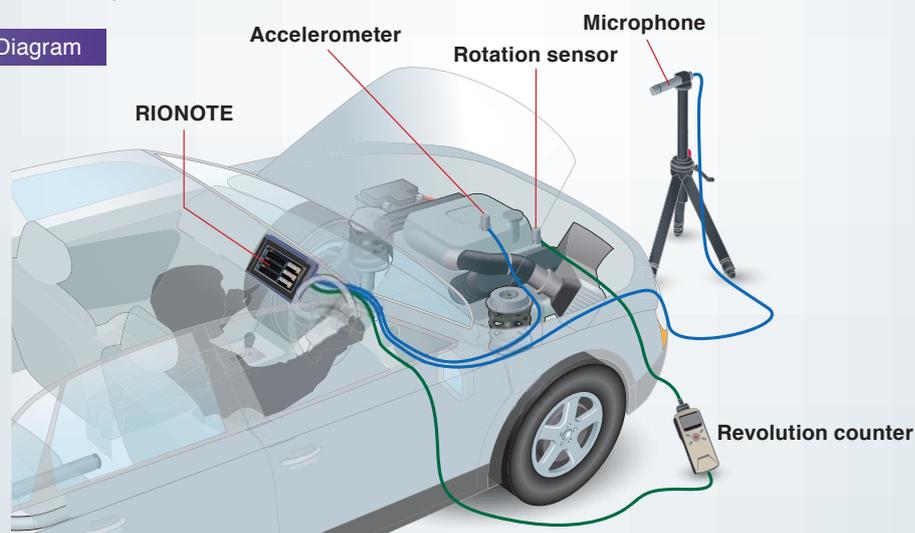




# Order Tracking Analysis System

By using the Order Tracking Program with the RIONOTE Multifunction Measurement System, it becomes possible to record rotation data for a piece of machinery simultaneously with noise and vibration waveform data. The recorded waveform data can then be used offline to perform order tracking analysis for example to assess changes in the sound or vibration state corresponding to a change in rotational speed. The analysis results are shown on the RIONOTE screen as a rotation-level graph. Because analysis is performed offline using the recorded waveform data, parameters such as frequency analysis resolution can be changed later to obtain analysis results for multiple aspects. The concept drawing below shows a system where an accelerometer is placed near a car engine, along with a microphone, rotation sensor, and tachometer to perform measurement.

System Diagram



### Equipment configuration

Product	Model
Multi-function Measuring System (2 channel/4 channel FFT package)	SA-A1FTB2/SA-A1FTB4
Order Tracking Program	CAT-SAA1-ORDTRK
SD card (512 MB/2 GB/32 GB)	MC-51SD1/20SD2/32SD3
Piezoelectric accelerometer (integrated amplifier)	PV-91C/97I etc.
Accelerometer cable	VP-51 series
BNC adapter	VP-52C
1/2 inch electret condenser microphone	UC-59
Preamplifier	NH-22
BNC-BNC coaxial cable	EC-90 series
1/2 inch microphone holder	UA-90
Sound level meter tripod	ST-80
Revolution counter	

## Measurement result examples



RPM - Level (Simultaneous display of multiple orders)



RPM - Level (Enlarged view)

## Application examples

- Vibration and noise analysis of automotive engines
- Vibration analysis of large electric machinery
- Vibration and noise analysis of power transmission shafts and gears
- Motorbike noise analysis
- Turbine blade vibration analysis



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