

**A Method of Sound Monitoring for Railway Vehicles
with Acceleration on a Bogie**

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Sound monitoring of railway vehicles is essential for securing ride comfort and safety for passengers. However, the sound monitoring system equipped with many sensors may not only be expensive, but also require much expense for maintenances of the sensors. Therefore, we have developed a system to evaluate the sound conditions of railway vehicles with fewer sensors. In this paper, we demonstrated the system under development detected damping malfunctions of an axle damper or an air spring, a puncture of air springs and a derailment that caused singular vertical acceleration with only one accelerometer on a bogie.