Tohoku Univ. Technology

Waterproof microphone

By devising a signal conversion method, it is possible to detect sound waves that are not disturbed by the surrounding environment!

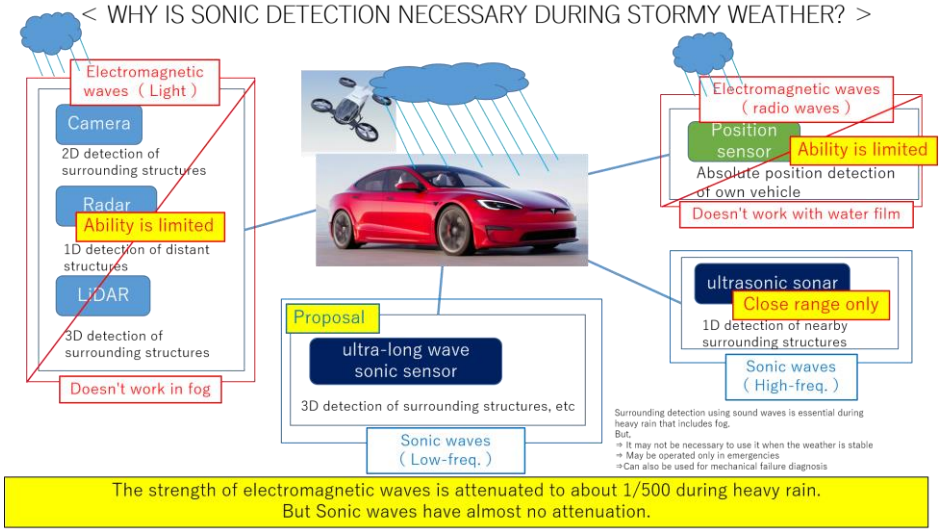
【For those viewing this document】
Because it is a seed for unpublished patents, after concluding an agreement regarding intellectual property rights, we will accept disclosure of the details.

Overview

As represented by the microphone, the industrial application of the equipment using the sound wave for the information acquisition of the surrounding environment is carried out. In recent years, various sensing technologies have been studied for the purpose of realizing the autonomous driving in the transportation field (automobile, etc.). Among them, the technology that utilizes sound wave measurement as a sensing device is attracting attention. Traditionally, lasers and cameras have been considered as detection means, but the loss of detection sensitivity during stormy weather such as rain is a major obstacle to the realization of autonomous driving, and technological innovation has been desired.

The present invention enables the realization of a detection device that is resistant to disturbances in the surrounding environment. In reviewing the process of converting sound waves into electrical signals, the inventors devised a new signal conversion method and successfully demonstrated a new device.

Features・Outstandings



Product Application

- Waterproof microphone
- Surrounding detection device installed in automobiles, etc.
- Non-destructive inspection of areas where gas and liquid are mixed (like Hammer test)

Related Works

IP Data

IP No. : PCT/JP2023/036725
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