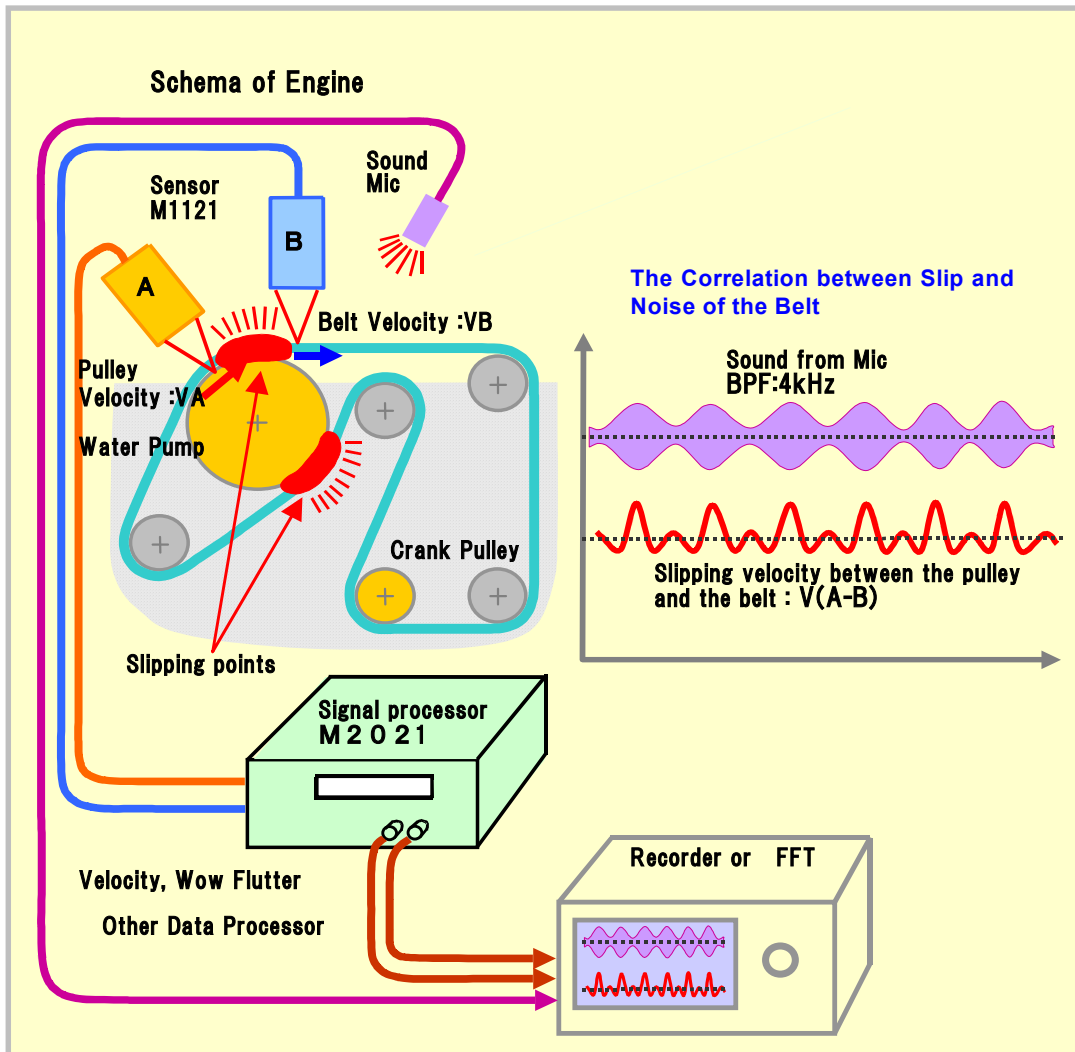# MODEL-2021 Application

Automobile: Measurement between Slip and Noise of the Belt.

The figure pictured above is a diagram of the measurement of the correlation between a slip and noise on a serpentine belt for automobile, by using 2-channel Laser Doppler Velocity Meter **MODEL-2021**.

For automobile engines, **the belt for driving auxiliary machine** is very important part.
This belt is used under hard condition therefore some slip of belt may occur due to a problem of control of tensions or other factor.
And this slip also makes a harsh noise, which is so unpleasant that it may be a subject of a user claim not only for the deterioration in function or durability of belt but also for spoiled quality of premium image of a car.

For confirming the **correlation between a slip and noise**, **MODEL-2021** is available for measuring a slip of belt and harsh noise (applox. 4kHz) which is collected with a sound collector.
The status of a auxiliary pulley and belt is closely related to noise, therefore the quantitative check for this correlation is very helpful to find a slipping point and prompt action for it.

MODEL-2021 uses the optical method for velocity measurement. This method is Non-contact measuring system therefore the measurement does not require the alignment of axes and coupling such as for a rotary encoder.
The measurement result by using this system has no interference from colours and any other status on the surface of the object, and also this optical measuring method does not apply any pressure on rotations. This feature is available for detecting imperceptible value of velocity variation.

And having an analog velocity output, wow-flutter output, and wow-flutter calculation output, it is capable of connecting a FFT analyzer, data storage system, or a signal processing system.
In the automobile field, our **Non-Contact measuring system** is **one of the best measuring** at this situation.