

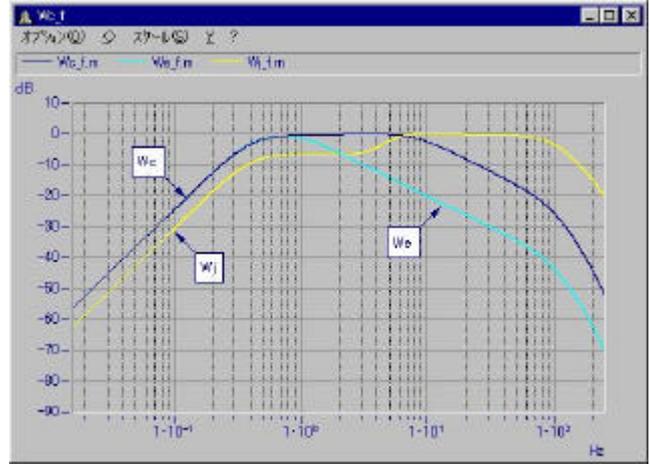
Comfort and ride feeling are for many car drivers the most important criteria for buying a car. For that reason, the many car producers spend more and more development resources on that particular aspect of car construction.

The Suspension Design and Development Group at Honda R&D was eager to use a u-MUSYCS to implement a system that automatically carries out evaluation tests ranging from road surface testing to comprehensive evaluation (Ride Index) instead of using the human ride feeling / comfort test based on a standard Human Response Vibration Meter.

Human Response Vibration Filter ISO 2631 stipulates vibration evaluations in terms of carsickness and comfort within the following frequency bands as shown in the right-hand charts of frequency characteristics (impacts, such as car crashes, are excluded):

- Comfort - 0.5-80Hz
- Carsickness - 0.1-0.5Hz

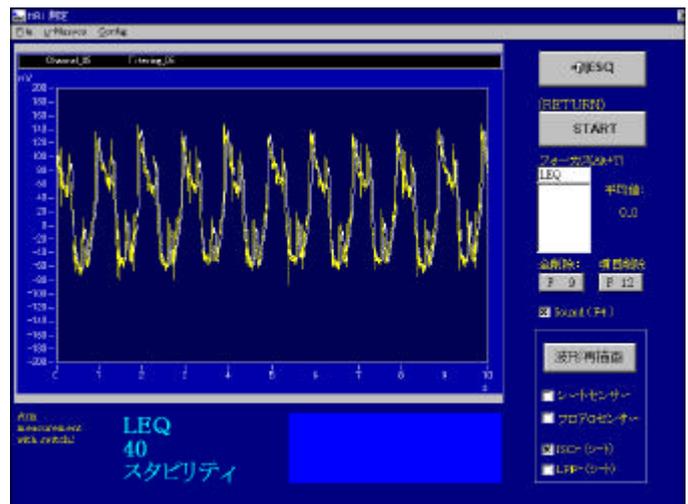
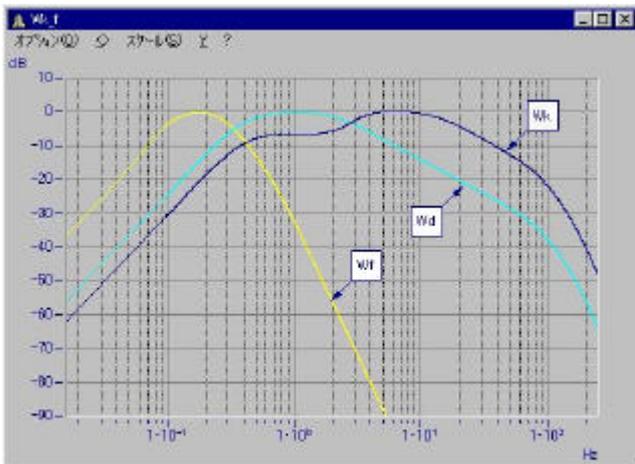
(This feature is implemented in the Spectral-Kit, the kit option of the signal analysis software FAMOS.)



Frequency Characteristic of Human Response Vibration Filter

In response to their request, imc and Toyo Corporation developed and implemented a PC program that automates the evaluation tests, "HONDA Ride Index", in their u-MUSYCS system for their drive ability & stability test (Vehicle Dynamics Test)

This application unites real-time processing by the built-in DSP with recalculation (for real-time monitoring) by PC, and thus enables users to define and carry out automatic test routines changing test conditions (e.g. running speed, road surface, etc.) appropriately. Test results can be output in the format of the Report Generator, an imc-made document generation tool.



Human Ride Feeling/Comfort Test Software