Digital Sway Meter

Outline:

We developed a Digital Sway Meter that is easy to carry and convenient for measuring riding comfort.

Features:

[Monitor-Type Digital Sway Meter (see upper photograph)]

This type is convenient or suitable in cases when sway data are recorded simultaneously with other data or when sway data are saved to a computer's hard disk wile they are simultaneously monitored or displayed. Up to 3 Digital Sway Meters can be connected in parallel to a laptop computer.

- Compact and low-price
- All-in-one package including a low-energy-consumption type 3-axis acceleration sensor (silicon piezoresistance type), power supply, digital signal processor, and USB interface.
- Drive power: supplied by either 4 AA batteries or DC9V.

[Automatic-Type Digital Sway Meter (see lower photograph)]

This type is effective for measuring sway at several measuring points or for recording sway data for a long time without an operator. Data can be recorded with a commercially available USB flash memory plugged into the Digital Sway Meter. Start or stop data recording can be commanded using a remote control switch.

Time data are transmitted to each sway meter via the remote control switch, and all data are synchronized according to that data. This type allows practically any number of units to be connected together.

- 3-axis acceleration sensor (the same sensor used in the monitor type)
- Drive power: supplied by either 6 AA batteries or DC9V.
- At least 10 hours of operation is available with commercially available rechargeable batteries.
- The light-receiving element of the remote control is mounted on top of the Digital Sway Meter.
- Data are recorded on a USB flash memory in FAT 32 format.
- Approximately 40 hours of data can be stored using a 512 MB flash memory.

[Software]

For both types of meters, riding comfort evaluation results are displayed and freely processed using commercially available spreadsheet software.





Automatic-Type Digital Sway Meter





Railway Technical Research Institute
2-8-38 Hikaricho, Kokubunji-shi Tokyo 185-8540 JAPAN

Marketing and Business Development Division (Overseas Business) Tel: +81-42-573-5349 E-mail: mbddob08@rtri.or.jp

URL: http://www.rtri.or.jp/index.html