

DR-7100

Portable Data Recorder for
Acoustics & Vibration

DR-7100

● Overview

The DR-7100 is a portable data recorder for acoustic and vibration with high accuracy. In recent years, we are living surrounded by the equipments which make noise and vibration such as a car, a railroad, a household electric appliance, and a wind power. These equipments are now required for “more quiet” “more comfortable” and “lower vibration” than ever. The DR-7100 greatly helps to make such comfortable acoustic environment by recording sound and vibration on site with ease and high accuracy.

● Feature

- Data recording with high speed, high accuracy (4ch 40 kHz range 24 bit *1)
- Dynamic range of 90 dB or more
- Equipped with a connector for rotation pulse input
- Available for high-capacity SDHC 32 GB
- Speedy setup by TEDS sensor
- Compact body of A5-size
- 2-Unit synchronicity function (option)



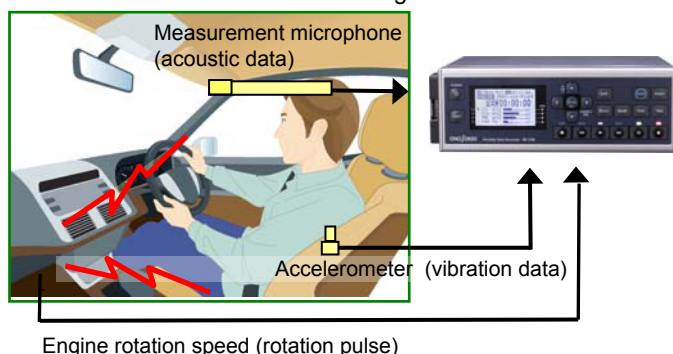
*1 40 kHz range: option

● Lead user

- Automotive/railway filed (Recordubg of noise & vibration in driving a vehicle etc.)
- Equipment diagnosis (Routine recording)
- Inspection line (Recording of NG data etc.)
- Part manufacturer (Service after the sales etc.)
- Users of DAT data recorder (Replacement of a recorder etc.)

● Application

Vehicle interior noise and vibration in driving time



Simultaneous data recording of rotation speed and acoustic·vibration

Sound and vibration according to the rotation speed can be evaluated by simultaneous recording of rotation speed (rotation pulse) and acoustic·vibration data.

● Specification

Input	Input x 4 rotation speed/external trigger/BNC (voltage/CCLD 4mA selectable)
TEDS	IEEE1451.4 (Ver.1.0 or later)
Input voltage range	0.01 to 10 V (7 steps) *Can be used at ±10V max.
Input impedance	1MΩ±0.5%
A/D conversion	Quantization bit rate 24 bit
Frequency range	100 Hz to 40 kHz (7-step) *1
Frequency characteristics	3 Hz to 40 kHz ±0.5dB *1
Dynamic range	90 dB or more (frequency range 20 kHz, 1 V range, TYP)
Rotation input	AC: sine wave or square wave / DC: rectangular wave with pulse width 5μs or more
Output	Audio output x 4 (φ2.5 mini jack), monitor output x 1 (φ3.5 stereo mini jack)
Trigger type	External, internal, time
Pretrigger	0, 1, 5 s (pretime from trigger event)
Calibration function	TEDS direct (setup by sensor sensitivity value)
File format	ORF format (Onosokki Record Format)
Recording media	SD (256 MB), SDHC (4, 8, 32 GB) * Recording media only after operation check
Recording time	Approx. 43 minutes (when 4ch recording), approx. 172 minutes (when 1ch recording) (20 kHz range x 2.56, 24-bit,, 2 GB memory card in used.)
Display	128 x 64 dots (with back light), level bar graph
Power supply	Battery cell (Type AA battery, alkaline or nickel hydride) External DC (DC +10 to +18 V)
Battery life	4.5 hours or more (when nickel hydride in used *2) (Frequency range 50 kHz, 4ch, CCLD ON)
Outer dimension/ weight	199 x 148 x 70 mm, 1.1 kg or more (not including batteries)

*1. 40 kHz: option

*2. Battery life may change depending on temperature, setup condition, manufacturer/model of the battery cell to be used.

● Option

DR-0720	40 kHz range expansion function	-	AC adapter (STD-1533PA)
DR-0730	Unit synchronicity function *1	-	AC cable
DR-0703	Cable for unit synchronicity	-	Power supply cable for battery (5.4 m)
DR-0745	AA filter (Anti-Alias Filter) OFF function *2	-	SDHC memory card (4 GB, 8 GB)
DR-0711	Remote controller		
AX-501	Signal cable 2 m (for output, BNC←→φ2.5 mini-mini plug)		
MX-101	Signal cable 1.5 m (for input, BNC←→BNC)		

*1 The DR-0730 (unit synchronicity function) is required for each unit to be connected. The DR-0703 (cable) is also required for a connection.

*2 AA filter means low-pass filter to avoid aliasing error which may be generated during sampling.

● Accessory

Type AA battery (LR6)	x4	SD memory card (256 MB)	x1
Carrying case	x1	Shoulder strap	x1
Earphone with microphone	x1 set	Instruction manual	x1 set

Guide of recording time (unit: minute) *+REV: simultaneous recording with rotation speed

Recording ch	24-bit recording	16-bit recording	Recording ch	24-bit recording	16-bit recording
4+REV	34	58	4	42	87
2+REV	68	116	2	84	174
1+REV	116	232	1	172	348

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