

	Specification for a Groundwater Aeration Sound Measuring Device	
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**1.Overview**

This is a Groundwater Aeration Sound Measuring Device consisting of a pickup sensor, Measuring recording unit and headphone.  
 It measures groundwater aeration sound using the pickup sensor, processes the sound measured using the Measuring recording unit, and then audio visually indicates the intensity of the sound measured.  
 It calculates and displays a representative value of the intensity of the groundwater aeration sound captured at the measuring location, and saves the value in the internal memory. The saved data of the representative value can then be transferred to a PC or other device via RS-232C serial communication interface so that it can be further processed e.g. by a spreadsheet program.

**2.Equipment**

(1)Model GAS-03

(2)Functions

1) Pickup sensor

- a) Acceleration sensor
  - Type: piezoelectric effect
  - Cable: exclusive-use 4-core shield cable, φ4.8 mm, about 1.5 m, vibration isolator of urethane rubber, connector RM12BPE-4S (Hirose make)
  - Material: SUS304 (with a rubber cover)
  - Dimension: φ43x49.5mm  
(Sensor; excluding projective parts)
  - Weight: about 0.5 kg (including the sensor cable)

- b) Sensor rod
  - Sensor rod: 3 different lengths, detachable  
Connect to the accelerated sensor using an M8 nut
  - Material: SUS304
  - Dimension: 10 cm type: φ8 mm, 100 mm
  - Dimension: 15 cm type: φ8 mm, 150 mm
  - Dimension: 20 cm type: φ8 mm, 200 mm

\* The rod length refers to the projection measured from the bottom of the accelerated sensor as assembled.

- Weight: 10 cm type: about 0.04 kg
- Weight: 15cm type: about 0.06 kg
- Weight: 20 cm type: about 0.08 kg

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(3)Measuring recording unit

- a) Input: 1 channel from the pickup sensor
- b) Output: 1 channel to the headphone
  - (φ6.34 mm stereo phone plug)
  - 1 channel LINE OUT
  - (φ3.5 mm stereo phone plug)
  - 1 channel RS-232C
  - (crossover cable, connectable to PC etc.)
- c) Display: Level meter
  - LCD (2 lines, 16 characters each, with backlight)
- d) Functions Clock (lunar inequality of ±30 seconds, backup battery)
  - Data memory (max. 800 data)
  - Frequency filters
    - Low-cut filter: switchable to 200, 300 and 400 Hz
    - High-cut filter: switchable to 600, 800 and 1200 Hz
  - Sound volume adjustment (10 levels)
  - Battery power alarm lamp
  - “Groundwater Aeration Sound data collection software” attached
- e) Material:
  - Main body: aluminum
  - Front panel: SECC
- f) Finish: Main body: anodized aluminum, silver-color
  - Front panel: silver-color paint
- g) Power: AA battery x 8
- h) Dimension: 200W x 150H 75.4 D (mm) (excluding projective parts)
- i) Weight: about 1.3 kg (excluding batteries)

(4)Headphone

- a) Type: enclosed
- b) Plug: φ6.34 mm stereo phone plug
- c) Cable length: about 1 m
- d) Weight: about 0.4 kg

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1. 改版履歴（このページは社内資料の為提出はしない。社外秘）

版数	詳細内容	日付	改版者名	承認印
0	初版作成	2014/02/18	木上	飯島

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