

FUJI DIGITAL SOUND DETECTOR

FSB-8D

INSTRUCTION MANUAL



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Thank you very much for selecting Fuji FSB-8D digital sound detector.

This instruction manual describes handling of Fuji FSB-8D digital sound detector.

As this manual contains methods for use, make sure to carefully read this manual before use and to properly understand its handling method before use.

*If you have lost this instruction manual, please notify your local agent or us of it.

USE

Fuji FSB-8D digital sound detector is capable of judging water leakage by detecting minor vibration tone, by amplifying it and by then comparing the detected tone with the reference based on the sound and numerical value information. It is particularly suitable for water supply pipes made of PVC and polyethylene.

WARRANTY

Fuji FSB-8D Digital Sound Detector is repaired or replaced by free of charge under the warranty within the period of twelve (12) months after the purchase from Fuji representatives in case that the FSB-8D is malfunctioned in spite of the ordinary operation or handling in accordance with the cautions and instructions given in this instruction manual.

FOR SAFE USE



WARNING

This symbol is used for showing presence of potential danger that may trigger death or serious personal injury.



CAUTION

This symbol is used for showing presence of potential danger that may trigger personal injury of medium or minor level.



WARNING

- If a headphone is used for hearing leak sound during operation of this detector, it is hard to listen to the surrounding sound.
Pay full attention to the surrounding traffic circumstances at the time of use of this detector.
- Do not operate this detector by wet hands, and do not replace the batteries by wet hands.
- Pay attention to the polarity of the batteries at the time of replacement of the batteries.
(Liquid leakage, heat-up, breakage or the like may arise.)
- Do not throw the batteries into any open flame.
(Breakage, fire, personal injury or the like may arise.)
- Do not try to disassemble the batteries.
(Breakage, fire, personal injury or the like may arise.)
- Do not swing around this detector.
(Unexpected personal injury may result.)

FOR SAFE USE

CAUTION

- Do NOT use this detector for other than detection of leak sound from pipes.
- Positively mount the battery cover. The batteries will come off, if mounting of the battery cover is incomplete.
- Do not shelve or leave this detector at a place of high temperature. (Troubles may arise otherwise.)
- Do not use this detector for a purpose other than water leak detection.
- This detector is not a completely waterproofed device.
Do not immerse it in the water, and do not use it in the heavy rain.
- This detector is not of impact-resistant structure. Do not apply strong impact to it. Troubles may arise otherwise.
- Do not try to disassemble this detector.
- Remove the batteries, if it is anticipated that this detector will not be used for a long time.
- Observe ordinances or regulations of your local government at the time of disposal of this detector.

BEFORE USE THE DETECTOR

Make sure conduct simple inspection before use, in order to correctly use the detector.

Simple inspection is of three items indicated below.

1. Check of components
2. Check of batteries
3. Check of operation of the detector

ATTENTION

We recommend you to have the entire functions of this detector inspected by our maintenance department periodically to permit safe and pleasant use of this detector as the above mentioned inspection is simple inspection.

DETECTOR COMPOSITION

This detector is composed of eight (8) items indicated below. Check if all the components are provided. If there is any missing item, please contact your dealer.

- Main Amplifier 1



- Contact Rod 1



- Extension Contact Rod 2



- Short Contact Rod (100mm) 1



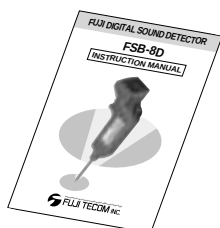
- Headphones 1



- AA (cell) Alkaline Batteries 2



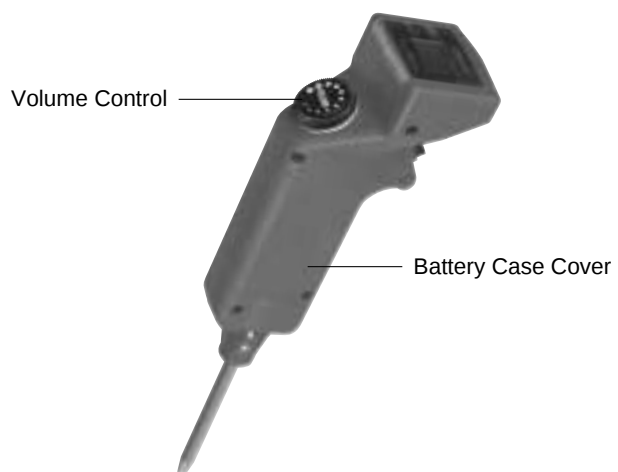
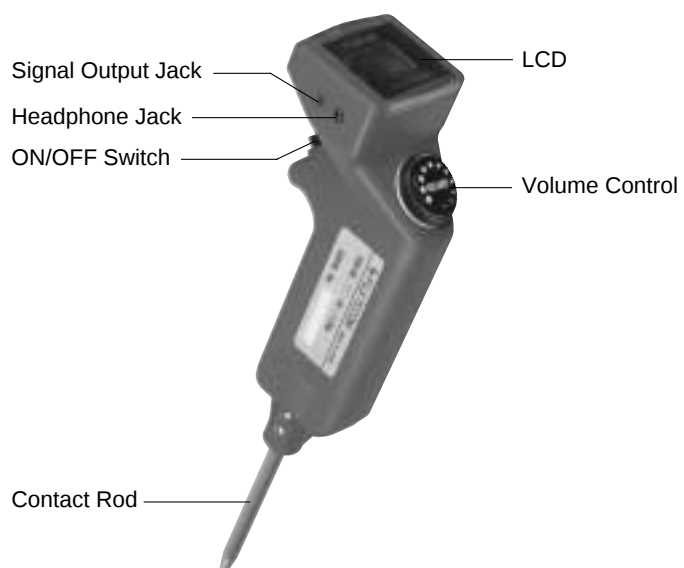
- Operation Manual 1



- Carrying Case 1



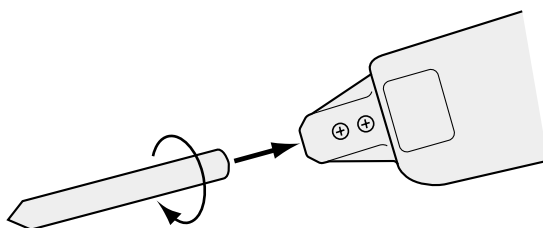
NAME OF EACH PART



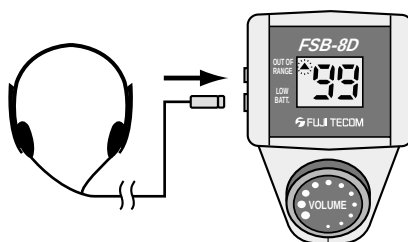
HOW TO USE

1. HOW TO SET UP

(1) Connect the sensing bar to the main unit.



(2) Insert the headphone plug into the jack () in the main unit.



(3) Locate the intermediate point of the volume control dial at the ▲ mark.



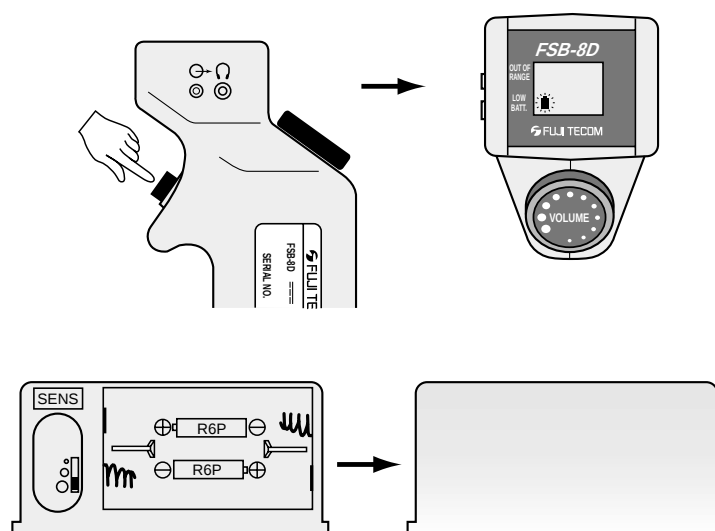
HOW TO USE

2. REPLACEMENT OF BATTERIES

If the battery capacity is short, a battery mark (🔋) begins to flicker in the left lower part of the display screen when the ON/OFF switch is pressed. Replace the batteries with new one in such a case.

Use two alkali dry batteries (LR6).

Positively mount the battery cover.



CAUTION

If no numerical value or mark is displayed at all by the LCD when the power switch is pressed. There is a possibility where the batteries were completely exhausted or the detector has failed. Replace batteries and see what will happen in such a case.

Make sure that batteries are located in the correct polarity.

* Remove batteries from this detector, if it is anticipated that this detector will not be used for a long time.

HOW TO USE



CAUTION

If batteries that are other than what is specified by us were used, troubles resulting from such use will not be covered by our warranty.

If batteries that are other than what is specified by us were used, a difference in the continuous working time will arise due to the difference in the battery capacity.



WARNING

Make sure that batteries are located in the correct polarity at the time of replacement of batteries.

(Burst, fire, personal injury or the like may arise otherwise.)

Do not use batteries of different types in mixture.

(Burst, liquid leakage or the like may arise otherwise.)

Dispose used batteries in accordance with instructions given by your local government.

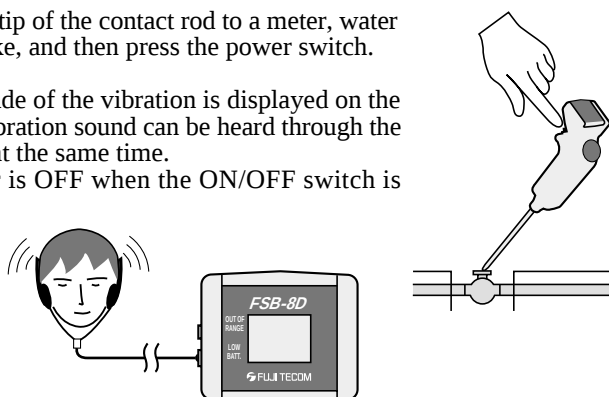
HOW TO USE

3. HOW TO USE

(1) Light fit the tip of the contact rod to a meter, water tap or the like, and then press the power switch.

(2) The magnitude of the vibration is displayed on the LCD, the vibration sound can be heard through the headphone at the same time.

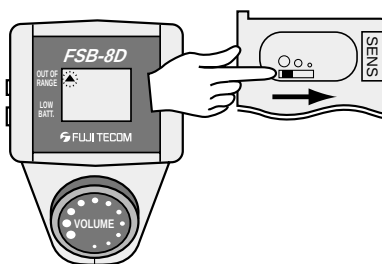
* The power is OFF when the ON/OFF switch is released.



CAUTION

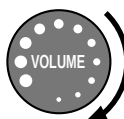
This detector is not capable of self-supporting on a paved road. Lay it on the ground at a non-wet place that will not obstruct pedestrians, bicycles, vehicles, etc.

If the OUT OF RANGE mark (⚡) flickers in the left upper part of the display screen, it means that the set display level is exceeded. Open the battery cover and lower the SENS switch by one step.



* If the volume is excessive, turn the volume control counterclockwise. If the volume is too small, turn it clockwise.

* The numerical value displayed will remain unchanged, even if the volume control is turned.



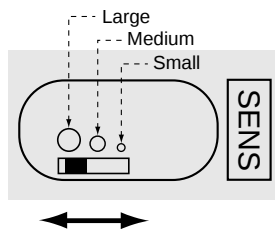
HOW TO USE

4. SWITCHING THE SENSITIVITY (SENS)

The SENS switch is of three (3) positions. It is used for attenuating the signal by a certain value for output. [The initial setup is Large (○).]

Medium (○): The signal level is about 1/10 of that of Large ($\frac{1}{10}$).

Small (◦): The signal level is about 1/100 of that of Large ($\frac{1}{100}$).



The LCD displays the output level by numerical value of 00~99.

When the output level exceeds 99, the OUT OF RANGE mark (⚠) in the left upper part of the display screen flickers, indicating that the set display level is exceeded.

In such a case, lower the degree of amplification of the amplifier by sliding the SENS switch rightward [○ (large) -> ○ (medium) or ○ (medium) -> ◦ (small)].



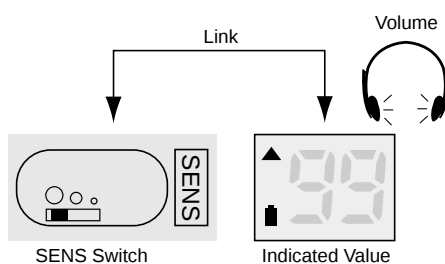
* The numerical value displayed in the flickering state is not an actually measured level value.

When the displayed value is of one digit, increase the degree of amplification of the amplifier by sliding the SENS switch leftward [◦ (small) -> ○ (medium) or ○ (medium) -> ○ (large)].

HOW TO USE

5. SENS SWITCH AND VOLUME CONTROL

The volume is separated from the display circuit so that the numerical value displayed on the LCD will not change when the volume control is turned. The SENS switch is linked with volume and displayed value. The volume and displayed value change simultaneously when the switch position changes.



SPECIFICATION

■MAIN AMPLIFIER

Pickup	: NPC Piezoelectric element
Amplification degree	: 55dB
Frequency band	: 100Hz~2000Hz
Notch filter	: 150, 180Hz
Lowest voltage to operate	: 2.0V
Battery warning indication	: 2.2V
Operation temperature range	: -5~+55°C
Consumption current	: 22mA (At no signal)
Continuous operation time	: Minimum 25 hours (Condition : Alkaline Battery, Indication level 99, +25°C)
Battery	: Two AA(cell)alkaline batteries 2 pcs
Size (Main amplifier)	: 60×84×207mm
Weight	: 250g (Excl.Contact rods, Batteries)

■Contact rod

Size	: 340mm
Weight	: 125g

■Extension contact rod

Size	: 330mm×2pcs.
Weight	: 128g×2

■Short contact rod

Size	: 100mm
Weight	: 34g

■Headphones	: Stereo, 24 Ω, Headphone jack
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■Total weight (Incl. Carrying case)	: Approx. 1.5kg
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HOW TO STORE THE DETECTOR

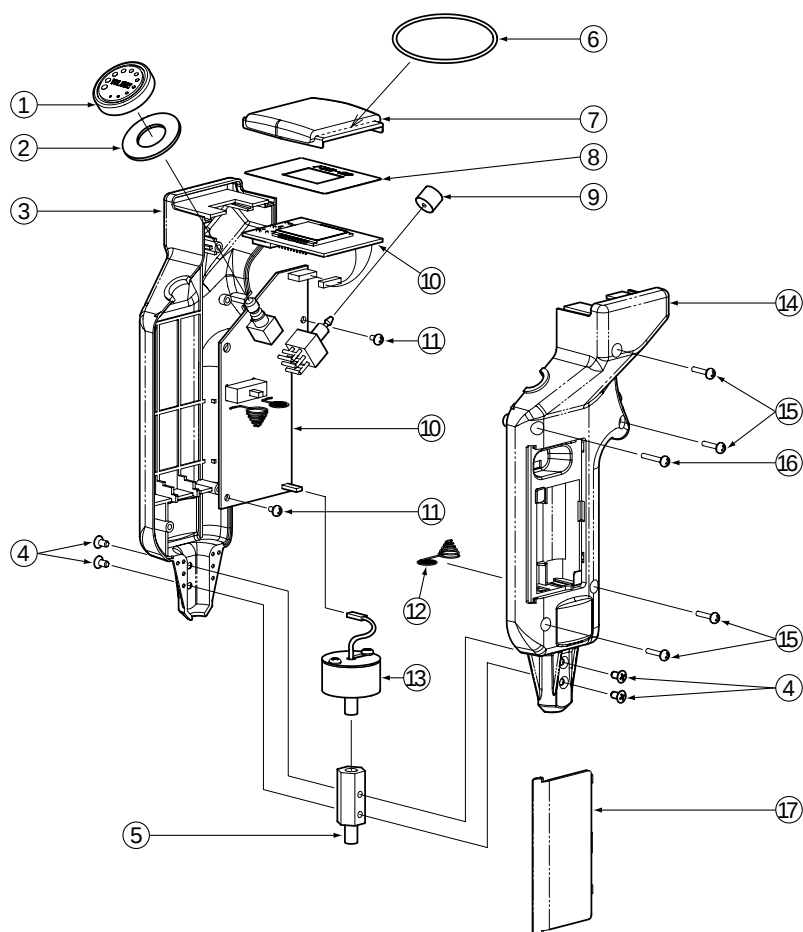
Care after use

- Carefully wipe off dust and contaminants and clean the detector after use of this detector, and store it in the carrying case.
- If this detector was wetted, carefully wipe off the moisture before storage.
- Do not contain any article other than this detector in the case for storage of this detector. Damage and troubles may result otherwise.

If your detector is not used for a long time.

- Assure that all the components including the instruction manual are all together.
The instruction manual is needed at the time of use of this detector next time.
- Remove batteries.
If batteries are kept contained in this detector for a long time, damage to the device may result in liquid leakage.
- Do not store this detector at a place of high moisture.

PARTS LIST AND ILLUSTRATIONS



PARTS LIST AND ILLUSTRATIONS

< >=Order Code

- ① Volume Control <010113>
- ② Dust-Control Sheet <054135>
- ③ Housing (Left) <218109>
- ④ M3×6 Sus Screw (4PCS.) <218126>
- ⑤ Pick-Up Fixing Axis <218118>
- ⑥ O-Ring <218125>
- ⑦ Panel Cover <218111>
- ⑧ Panel <218112>
- ⑨ Black Button <218114>
- ⑩ Main PCB & LCD PCB Assy <218101>
- ⑪ 3×4 Steel Screw (2PC.) <218127>
- ⑫ Battery Spring <218115>
- ⑬ Pick-Up Sensor Assy <218103>
- ⑭ Housing (Right) <218108>
- ⑮ 3×12 Sus Screw (4PCS.) <218128>
- ⑯ 3×16 Sus Screw (1PC.) <218129>
- ⑰ Battery Case Cover <218110>

INSPECTION CERTIFICATE

MODEL : **FSB-8D** DATE : _____

SERIAL No : _____

We hereby certify that the undersigner checked the above instrument with careful attention under the Fuji interoffice inspection standard consisting of four main items as follows:-

(1) EXTERNAL APPEARANCE ☐

(2) MECHANICAL WORK

*Knob, lever & key *Connector *Joint

(3) ELECTRIC FUNCTION ☐

*Indicator & Display *Output *Sensitivity

*Frequency *Input *Power

(4) OPERATION ON TEST SITE ☐

*Distance *Location *Level

*Depth *Flow

*Direction *Pressure

Inspected by: _____



Instruments for the location of underground utilities and water leaks.

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