

NoiseKen

INSTRUCTION MANUAL NOISE INJECTION PROBE 01-00034A

Edition 1.01
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1. IMPORTANT SAFETY PRECAUTIONS

As each of the following items is very important matter to be attended, thoroughly read it before operation of the 01-00034A (hereinafter "the Unit").

- The Unit cannot be used in a fire prohibited area or other explosive areas. If used in such an area, the simulator using with the Unit is liable to cause combustion or ignition due to electric discharge etc.**
- A person who has a pacemaker on should not operate the Unit and also should not enter the area where it is operating.**
- Be careful to handle the Unit not get an electric shock caused by electric pulses generated by INS or FNS simulator.**
- Safety recommendations are listed in Par. "3. Basic safety precautions". Thoroughly read these recommendations before setting connection and starting a test.**

2. PREFACE

We thank you for your purchasing Noise injection probe model: 01-00034A (the Unit). In order to the highest performance of the Unit, thoroughly understand the contents of this manual (the Manual).

- The Manual will help operators handle and utilize the Unit in safety.
- Keep the Manual on a place where it is readily available.

§ Outline

The Unit enables noise injection to minute places, e.g. a pin of component on PCB with Noise Laboratory's INS or FNS series as a noise generator.

§ Features

Capable of injecting to each pin of LSI, the Unit realizes wider variety of immunity tests as more detailed level on PCB.

- ◆ Input voltage: Up to 500V available.
- ◆ With the optional coupling capacitors, capable of conducting immunity tests on various frequencies.
- ◆ You can utilize the Unit with Noise laboratory's INS or FNS series simulator you own currently as is.

3. BASIC SAFETY PRECAUTIONS

3-1. Symbols of hazards

 **WARNING 警告** It expresses a warning.

WARNING indicates a potentially hazardous situation which, if not avoided, could result in **death or serious injury**.

 **CAUTION 注意** It expresses a caution.


CAUTION indicates a potentially hazardous situation which, if not avoided, may result in **minor or moderate injury**.

3-2. Basic safety precautions

 **WARNING 警告**

- The Unit cannot be used in an explosive area, fire prohibited area, etc. Use of the Unit in such an area is liable to cause combustion or ignition. 【Precautions for human body and environments】
- A person who has a pacemaker on should not operate the Unit and also should not enter the area where it is operating. 【Precautions for human body and operation】
- The Company or the Dealer will not accept any responsibility for any loss or damage resulting from improper usage, failure to follow the Manual, or any repair or modifications of the Unit undertaken by a third party other than the Company or parties authorized by the Company. 【Precautions for human body, operation, environments and connection】
- Mishandling or careless operation may result in a fatal wound. 【Precautions for human body, operation, environments and connection】
- Do not connect a cable etc. to any terminal unnecessary for setting a test. Do not mistake cable setting or connection. Otherwise, you may receive an electric shock or the internal unit of this unit and equipment connected to it may be damaged. 【Precautions for human body, operation and connection】
- Be careful of generated pulse from INS or FNS simulator and an electric shock which may occur in the power supply to Equipment Under Test (EUT). 【Precautions for human body and operation】
- When connecting the Unit or other instrument to the simulator, be sure to turn off power supply of the simulator beforehand. Otherwise you may receive an electric shock. 【Precautions for human body and connection】

- Connect the coaxial cable connector firmly with making clicking sound. 【Precautions for human body and connection】

 **CAUTION 注意**

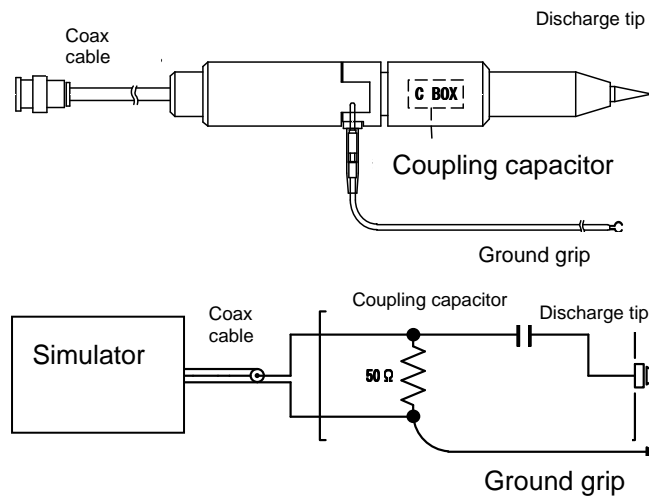
- When a test is performed, a great amount of electromagnetic waves are emitted according to the type of EUT, sometimes adversely affecting the neighboring electronic equipment and radio communication apparatus. The user is required to provide a Faraday gage, shield room, shielding cable, etc. as necessary. 【Precautions for environments】
- If dewing or condensation occurs, thoroughly dry it before operating the Unit. 【Precautions for environments】
- Avoid using the Unit in an extremely humid or dusty place. 【Precautions for environments】
- Avoid giving a strong shock (e.g. a fall) to the Unit. 【Precautions for environments】
- Do not wipe the Unit with thinner, alcohol or similar solvent. When the body is dirty, soak a cloth in detergent, squeeze the cloth and wipe the body with it.
- Repair, maintenance and internal adjustment should be performed by a qualified service engineer.

4. SPECIFICATIONS

| ITEMS | SPECIFICATIONS |
|----------------------|--|
| Input voltage | 500V MAX |
| Keeping temperature | -5~55 °C |
| Usable temperature | 15~35 °C |
| Usable humidity | 25~75 % |
| Applicable impedance | 50Ω type |
| Applicable waveform | Noise Laboratory's Impulse Noise Simulator INS series |
| | Noise Laboratory's Fast Transient Burst Simulator FNS series |
| Applicable simulator | INS—×00AX, AX2, 40×0, 43×0, 400L, 4001 |
| | FNS—10×AX, 10×L, AX2 |

- Connection to FNS-2002
Connect the Unit to FNS-2002 via the conversion connector 02-00118A (option).
- Connection to INS-410, INS-420 series
Connect the Unit via the conversion cable 02-000034A (option).
- Connection to INS-44×0 series
Connect the Unit via the conversion cable 02-00111A (option).

5. STRUCTURE OF THE UNIT



- A : Main Unit 1
 B : C BOX (Coupling capacitor)※ 1

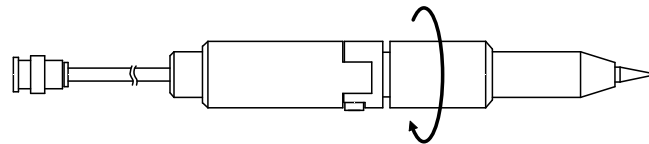
※C BOX (Coupling capacitor) is not included in the Unit. Please purchase it separately. Select proper ones considering conditions of your simulator (INS or FNS series) and EUT.

| Model | Specification |
|-----------|---------------|
| 06-00039A | 220pF ± 20% |
| 06-00040A | 330pF ± 20% |
| 06-00041A | 3pF ± 10% |
| 06-00042A | 500pF ± 20% |

~20MHz

6. HOW TO USE

1. Turn the top part and detach it from the main body. Insert C BOX to be used into the Unit and attach the top part.



2. Connect the input connector to PULSE OUT of INS or FNS series simulator. Connect the coaxial cable connector firmly with making clicking sound.
3. Connect the ground grip to the reference ground to the line to be injected noise.
4. After confirming the simulator's set output voltage is less than 500V, put the discharge tip to part to be tested and start test procedure.

7. WARRANTY

Servicing terms

The following terms are applicable to servicing by Noise Laboratory Co., Ltd., (hereafter referred to as the Company) provided to maintain the intended performance of its products.

1. Scope
The following terms shall apply only to products made by the Company.
2. Technical servicing fee
In the event of a failure of a product within the warranty period (see warranty section), the Company will repair a product without charge. After the warranty expires, repairs will be billed at a nominal cost.

3. Ownership of defective parts
Any defective part exchanged under the Company's servicing belongs to it.

4. Limited liability
In the event that damages resulting from servicing by the Company are intentional or caused by negligence, the Company will pay the cost but at the purchase value of the relevant product maximum. But, notwithstanding the foregoing, the Company shall not be responsible for any incidental or consequential damages of any nature, including without limitation thereof loss of would-be profit or compensation demanded from a third party.

5. Refusal to offer servicing
The company may not accept a repair order in the following cases:
 - More than 5 years have passed since the product discontinued
 - More than 8 years have passed after delivery
 - Required component for servicing already discontinued and no alternative is available.
 - Product changed, repaired or remodeled without obtaining a prior permission from the Company.
 - Product severely damaged to the extent it has lost its original form

Limited warranty

The company warrants its products to be free from defects in materials and workmanship under normal use and service for a period of one year from date of delivery. In the event of failure of a product covered by this warranty, the Company will repair the product or may, at its option, replace it in lieu of repair without charge.

Notwithstanding the foregoing, the Company shall not be responsible for any incidental or consequential damages of any nature, including without limitation thereof loss of would-be profit or compensation demanded from a third party. This warranty is valid only in Japan.

1. Scope

This warranty shall only apply to products made by the Company.

2. Period
One year from date of delivery. The warranty may be valid in 6 months after servicing if the same failure on the same component has repeated.
3. Exclusions
The followings are exclusions from this warranty:
 - Consumable parts (including HV relay)
 - Failure caused by misuse, neglect, accident or abnormal conditions of operation
 - Failure caused by remodeling on the user side without prior permission from the Company
 - Failure caused by servicing by unauthorized personnel by the Company
 - Failure due to force majeure including but not limited to, acts of God, fire, war, riot, rebellion and others
 - Failure due to shock or drop in or after transit
 - Failure due to operation in environment being out of ambient specifications.
 - A unit shipped to overseas.

8. MAINTENANCE

1. When repair, maintenance or internal adjustment of the unit is required, a qualified service engineer takes charge of such work.
2. Maintenance on the user side is restricted to the outside cleaning and functional check of the Unit.
3. When cleaning the unit, turn off the switch of this unit and the connected equipment and disconnect the plug socket beforehand.
4. Avoid using chemicals for cleaning. Otherwise, the coating of the unit may peel off or the sight glass may be broken.
5. Do not open cover of the Unit.

9. SUPPORT NETWORK

- If a symptom which seems a trouble is found, inform the model name and serial number of the product together with the symptom to Noise Laboratory or your nearest sales agent of Noise Laboratory.
- When the product is returned to Noise

Laboratory, write the state of the trouble, contents of your request, model name and serial number in a repair order, and pack the product and repair order sheet in the former package of equivalent suitable for transit and send them back.

For repair and other services, contact:

International Dept.
 Noise Laboratory Co., Ltd.
 1-4-Chiyoda, Chuo-ku, Sagami-hara, Kanagawa
 252-0237, Japan
 Tel: +81 (0)42-712-2051
 Fax: +81 (0)42-712-2050

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10. APPLICATION FORM

We apply for buying INSTRUCTION MANUAL.

Model: 01-00034A

Applicant's address:

Company name:

Section:

Name of person in charge:

TEL:

FAX:

Cut off this page "APPLICATION FORM FOR BUYING INSTRUCTION MANUAL" from this booklet and keep it for future use with care.

When an INSTRUCTION MANUAL is required, fill out the above Application Form and mail or fax it to NOISE LABORATORY CO., LTD. or our sales agent.