



INSTRUCTION MANUAL

CONFORMING TO
IEC 61000-4-2 Ed 2.0 / ISO 10605 Ed 2.0

CALIBRATION SET
for ESD TARGET
Model : 06-00068A

NOISE LABORATORY CO., LTD.
Edition 1.03
AEC00246-00E-0D

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1. IMPORTANT SAFETY PRECAUTIONS

This product is an adaptor sets which is designed and manufactured for EMC technicians (or electric technicians) to calibrate the current target MODEL: 06-00067A which is designed to calibrate the electrostatic discharge (hereinafter ESD) simulator and cannot be used for other purposes than the above.

Carefully read this manual as well as “Safety precautions” in the instruction manual of 06-00067A (“ESD target”) to take precautions against possible accidents and to proceed calibration correctly and safely.

2. PREFACE

Thank you for your purchasing the calibration set for ESD target MODEL: 06-00068A (“the Set”). In order to obtain the highest performance of the Set, carefully read and thoroughly understand the contents of this instruction manual before using the Set.

- This instruction manual will help operators handle and utilize the Set in safety.
- Keep this instruction manual on a place where it is readily available.

-- Features --

The calibration set exclusively for Noiseken’s current target MODEL: 06-00067A, which is used for calibration for the ESD simulators, conforming to IEC 61000-4-2 Ed 2.0 and ISO 10605 Ed 2.0. The users can calibrate 06-00067A with the Set in accordance with procedures described on the standard.

※Noiseken’s resistive load 06-00001A cannot be calibrated with the Set.

3. BASIC SAFETY PRECAUTIONS

1. Fully be careful not to drop the Set in handling. Connect the target adaptor to the ESD target 06-00067A firmly.

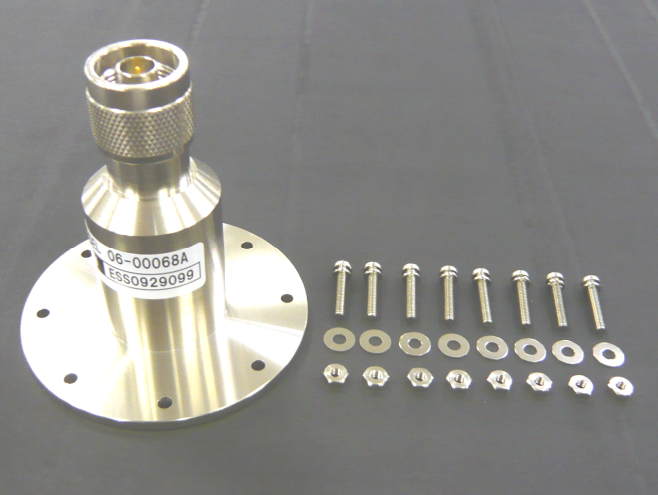
【Precaution for handling and connection】

2. The Set is not designed for calibrating ESD simulators. If ESD waveform is input to the Set, damage or deterioration of the related products might happen, the connected measurement instruments might be damaged, or users might get an electric shock.

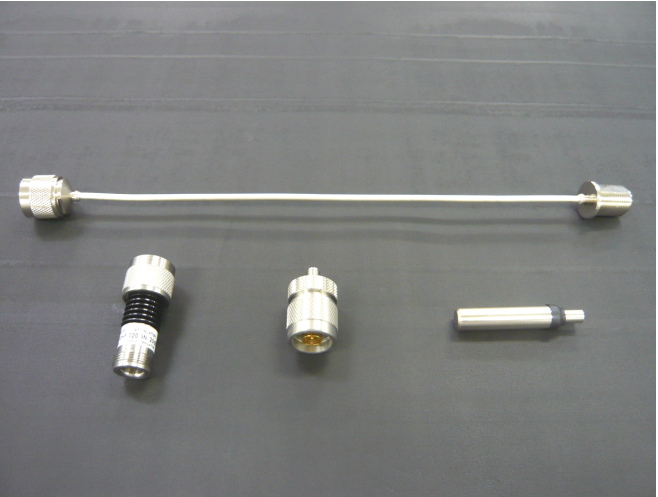
【Precaution for human body and operation】

4. CONTENT

Before using the instrument, please check that none of the associated items are missing.



- Target adaptor main unit..... 1 pc
- Screw set for fixing
- M3 × 16 pot screw..... 8 pcs
 - M3 flat washer..... 8 pcs
 - M3 nut..... 8 pcs

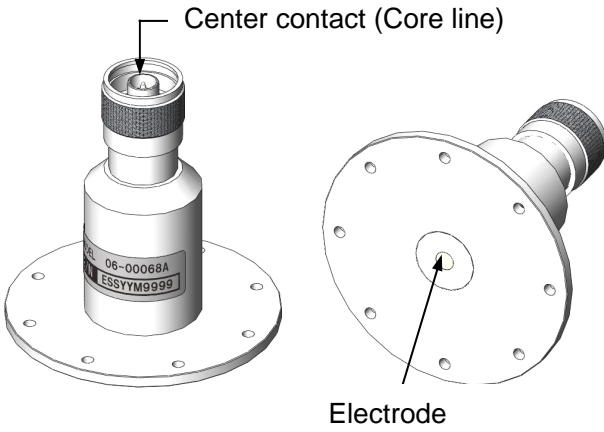


- Semi-rigid cable (NP-NR 0.3m)..... 1 pc
- 20dB attenuator (00-00011A) 1 pc
- SMA-N connector..... 1 pc
- Adaptor adjustment jig..... 1 pc

5. SPECIFICATIONS

The specifications of the target adaptor is prescribed in the IEC 61000-4-2 Ed 2.0 and ISO 10605 Ed 2.0 standard as that of the resistive load is and its basic structure is also illustrated in the standards as example for reference.

This product is designed and manufactured according to the both of the above standards.



☆“Center contact” and “Electrode” are names of the ends of one body part which is produced through integrally precut process.

Items		Specifications
Calibration item		06-00067A
Return loss (S11)	DC～1GHz	Less than -30dB
	1GHz～4GHz	Less than -20dB
Insertion loss (S21)	DC～4GHz	More than -0.3dB
Input side connector		N-P
Dimensions		70 φ x69mm
Weight		Approx. 350g

※ A return loss and an insertion loss are the values measured when two of this products were connected with making opposite to each other in accordance with the standard.

6. USAGE (For reference)

For calibration of the current target 06-00067A, an attenuator which attenuation ratio is more than 20dB (like 02-00011A) and a high-frequency coaxial cable (02-00132A) are necessary. For these items, use the same items connected to the 06-00067A when you calibrate your ESD simulator.

Depending the type of the input connector of the network analyzer, an N(P)-SMA(J) connector or a BNC(P)- SMA(J) connector is necessary.

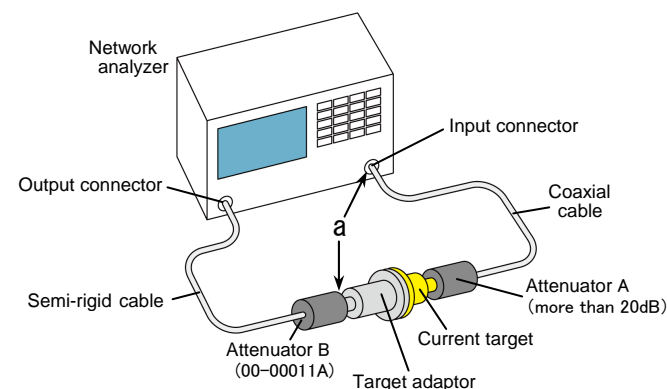
All products which are used for the calibration, for example, a target adaptor, attenuators, high-frequency coaxial cables, connectors, and so on, must be one calibration set which consists of specific products of each item. If a burnt attenuator is replaced with a new one, or if other coaxial cables or connectors are connected even if they are the same types as was used, this combination will be regarded as "another calibration set", so all of measurement system must be calibrated again.

It is recommendable that marking for the individual distinction should be given to the attenuators, the coaxial cables, the connectors, and so on to prevent the calibration set of the wrong combination caused by mixing of other individuals.

Notice

As for network analyzer, conduct two-port calibration just before connecting measurement instruments.

Connect as the following procedure with referring the figure as below



※a : Two-port calibration points of the network analyzer

- ① Insert the adaptor adjustment jig into the N-type connector of the target adaptor and push in the center contact to make the electrode of the adaptor project 1~5mm.

Notice

When inserting the adaptor adjustment jig into the N-type connector, turn the target adaptor sideways. If it is inserted under the condition that the electrode of the target adapter faces the bottom, the electrode might come off from the body, drop, and be damaged.

☆The center contact and the electrode are parts of one body.

- ② Connect the target adaptor to the target with the

target-fixing screws, with making the front side of the target facing the front (the electrode side) of the target adaptor.

Notice

For connection, use the whole set of the attached target fixing screws, tighten eight points of screws equally in diagonal order to connect securely. If they are tightened too strongly, the plastic parts between plates of the 06-00067A might be damaged, so fully pay attention no to damage them when tightening the screws.

- ③ Connect the 20dB attenuator and the semi-rigid cable in this order to the N-shape connector of the target adaptor. Bend the semi-rigid cable gently to make its shape suitable for measurement (calibration). Connect the N-shape connector of the other side of the semi-rigid cable to the output connector of the network analyzer.
- ④ Connect the attenuator which is used for calibration for ESD simulators and the coaxial cable in this order to the N-shape connector of the current target. Connect the SMA connector of the coaxial cable to the input connector of the network analyzer. Connect some connector for conversion (e.g. the attached SMA-N connector) if necessary.

For details of calibration, refer to the 61000-4-2 Ed 2.0 and ISO 10605 Ed 2.0 standard.

Notice

If attenuation ratio of the attenuator which is connected to the current target is big, the insertion loss might not be measured correctly in some cases (the condition depends on the dynamic range of the network analyzer).

7. CALIBRATION

It is recommendable that the Set should be calibrated periodically or at the time just before calibration of the current target as pre-start checkup.

As for the method of calibration of the target adaptor, the method that the return loss (S11) and the insertion loss (S21) are checked by a network analyzer with two same types of target adaptors connecting in face-to-face way is prescribed in the standard. One more set of this product should be prepared to conduct this method. For details, contact Noise Laboratory or your nearest sales agent. Noise Laboratory is taking in orders of calibration of this product. For orders, contact Noise Laboratory or your nearest sales agent.

8. 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

9. 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. When cleaning the Unit, turn off the switch of the connected equipment and disconnect the plug socket beforehand and wipe the surface with a dry, soft cloth.
3. Do not dissolve the Unit more than the status when it was shipped.

10. 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.
1-4-4 Chiyoda, Sagamihara, Kanagawa
229-0037, Japan
Tel: +81 (0)42-712-2051 / Fax: +81 (0)42-712-2050

11. APPLICATION FORM

We apply for buying INSTRUCTION MANUAL.

Model : 06-00068A

Serial Number : _____

Applicant's address:

Company name:

Section:

Name of person in charge:

TEL:

FAX:

Cut off this page "APPLICATION FORM" 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.