



INSTRUCTION MANUAL

**NOISE CANCELLER TRANSFORMER
MODEL NCT**

NOISE LABORATORY CO., LTD.

NOTICE

- The contents of this instruction manual (the “Manual”) are subject to change without prior notice.
- No part of the Manual may be reproduced or distributed, in any form or by any means, without the authorization of Noise Laboratory Co., Ltd. (the “Company”).
- The contents of the Manual have been thoroughly examined. However, if you find any problems, misprints, or missing information, please feel free to contact our sales agent who you purchased our product from.
- The Company assumes no responsibility for any loss or damage resulting from improper usage, failure to follow the Manual, or any repair or modifications of this product undertaken by a third party other than the Company or the agent authorized by the Company.
- The Company assumes no responsibility for any loss or damage resulting from remodeling or conversion solely undertaken by the user.
- Please note that the Company cannot be held responsible for any consequences arising from the use of this product.

APPLICATION FOR INSTRUCTION MANUAL

We place an order for an instruction manual.

Model: NCT- _____

Applicant:

Company name: _____

Address: _____

Department: _____

Person in charge: _____

Tel No.: _____

Fax No. _____

Cut off this page “APPLICATION FORM FOR INSTRUCTION MANUAL” from this volume and keep it for future use with care.

When an INSTRUCTION MANUAL is required, fill in the above Application Form and mail or fax it to the following sales department of our company.

To: Noise Laboratory Co., Ltd.

1-4-4 Chiyoda, Chuo-ku, Sagamihara City,

Kanagawa Pref., 252-0237 Japan

Tel: +81-(0)42-712-2051

Fax: +81-(0)42-712-2050

Cut
line

Thank you very much for your purchasing our Noise Canceller Transformer (NCT).
 Before using this unit, thoroughly read this manual and use it as ready reference for operation.

- This manual was prepared so that any person who can observe the prescribed instruction method and operating precautions may safely handle and fully utilize this unit.
- Keep this manual by your side or other proper location so that it may be readily available when using this unit.

<Feature>

- ◆ Having superb attenuation characteristics against impulse noises and lightning surges.
- ◆ Wide variety for both 100V type and 200V type

1. Operation voltage

Use the unit within the operational voltage which is indicated on the label.
 If the unit is operated with less than 30% of the rated voltage, voltage fluctuation ratio increases.

2. Operational current

The rated current is the value with resistance load.
 In case of using a switching power supply, note that approximate three times amount of current of the rated input of the switching power supply intermittently flows in the unit in one cycle.

3. Specifications

Item	NCT-160	NCT-1120	NCT-1240	NCT-260	NCT-2120	NCT-2240
Primary Voltage	120V	120V	120V	240V	240V	240V
Secondary Voltage	120V	120V	120V	240V	240V	240V
Current	5A	10A	20A	2.5A	5A	10A
Frequency	50/60Hz					
Voltage fluctuation ratio	Less than 10% with 100% load Less than 4% with 60% load					
Impulse noise	Approx. 6V at normal mode, wave hight 2000V and wave width 1μs					
Temparture rise	Less than 80°C					
Insulation voltage/ resistance	AC1500V (for one minute)/ More than 100MΩ at DC500V (Primary-Secondary wound wire, Primary-Iron core, Secondary-Iron core)					
Withstanding voltage against surge	7kV at 1.2/50μs					
Temperature / Humidity	15~35°C / 25~75%					
Dimensions	(W)241× (H)144× (D)167mm	(W)251× (H)161× (D)192mm	(W)275× (H)200× (D)220mm	(W)244× (H)143× (D)167mm	(W)253× (H)160× (D)192mm	(W)278× (H)202× (D)218mm
Weight	Approx.14kg	Approx.21kg	Approx.31kg	Approx.14kg	Approx.21kg	Approx.31kg

4. Environment

Use this NCT unit in normal temperature.

Do not use it outdoors or in a temperature cycle test chamber.

5. How to install

Detach the covers of both side and connect necessary cables to terminals there. When closing the cover, tighten screws securely.

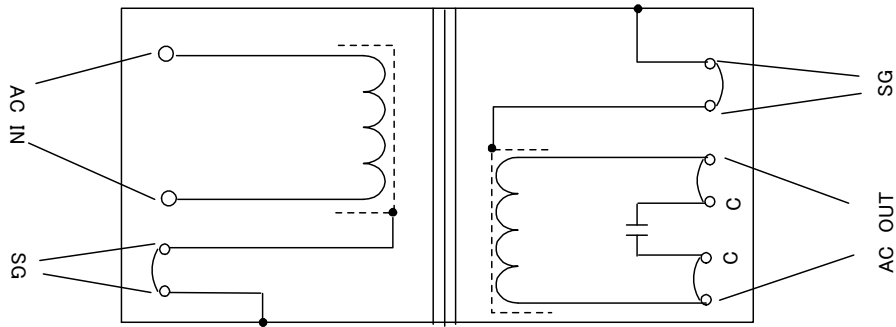


Figure 1

5-1. Installing to auditory equipment

When connecting to existing equipment, connect it to the secondary side of the NCT at the place enough far from the signal cable of the protective system and close to the input power supply (if the AC cable is too long, cut it). If the AC cable has the ground cable, connect the ground cable to to the ground terminal of the NCT and connect the FG of the protective system with another cable (approximate 5.5sq). Since the input cable to the NCT might cause disturbance, it should be separated from the secondary side and the signal cable.

If the ground cable connecting to the protective system is common with that of another instrument, noise will transmit to the ground cable so that another countermeasure should be tyaken.

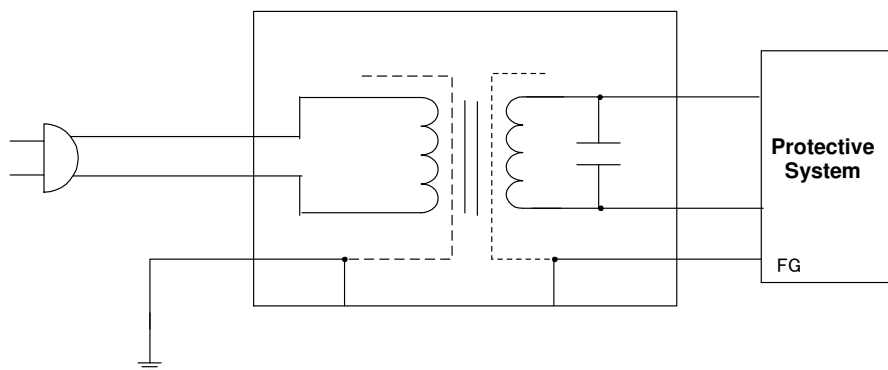


Figure 2

5-2. In case that common ground is available

Install the NCT and the protective system in a shield room on a copper or another metal plate. Follow instructions as follows in those cases.

- a) Tear off coating of the backside of the installation hole of the NCT as large as possible to make this side contact to the metal plate fully and fix them with a screw.
- b) In case of using the NCT for a shield room, isolating inside from outside with installing the NCT at the middle of the shield board and making the primary side outside, the secondary inside of the shield room is recommendable.
- c) In other cases, install the NCT closely to the protective system on the same metal plate with the way shown as the above a) and ground the protective system to the metal plate with a short enough cable which has more than 5.5 sq thickness.

6. Notice

- 6-1. Be sure to use a ground cable for preventing electric shock. Note that the ground cable might cause disturbance.
- 6-2. The NCT is effective against noise transmitted from the AC power supply, but has no effect against noise generating in the instrument itself or electrostatic discharge.
- 6-3. The NCT itself has capability to endure a lightning surge up to 7kV, but has no filter effect. Therefore, installing a surge absorber on to the terminal board of the NCT is recommendable. Since each model of surge absorbers has its own advantage and disadvantage, careful selection should be necessary.

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 replacement parts**
Any faulty parts replaced in the course of repair services shall belong to the Company. In the case when repairs are billed to the customer, replaced faulty parts will be retained by the Company unless other arrangements are made.
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. **Incorrect parts, missing parts, and damage**
In the event that the Company's product purchased by the customer has incorrect parts, missing parts, or is damaged, such that the product is not able to be used, the Company accepts no liability for any losses incurred by the customer that relate to lost earnings, commercial losses, other secondary losses, special losses, or indirect or punitive losses. Nor is any liability accepted for any losses resulting from a responsibility of the customer to compensate any third party.
6. **Refusal to provide repair services**
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

Noise Laboratory Co., Ltd. (hereafter referred to as 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 mercury relay, HV relay, coaxial cable, coaxial connector, automatic switch, and contactor)
- ◇ 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. In case that the fuse of the unit is replaceable, when checking or replacing the fuse, turn off the switch of the unit and disconnect the plug socket beforehand.
4. When cleaning the unit, turn off the switch of this unit and the connected equipment and disconnect the plug socket beforehand.
5. Avoid using chemicals for cleaning. Otherwise, the coating of the unit may peel off or the sight glass may be broken.
6. Do not open the cover of this unit.

9. Contacting technical support

- If you experience a malfunction, please have available both the model and serial number of your unit and contact the nearest distributor/agent or Noise Laboratory Technical Support.
- When it is necessary to send your unit back to Noise Laboratory, fill in the repair order form completely, pack the unit in the original package or equivalent one suitable for transit, and send the package.

NOISE LABORATORY CO., LTD.

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Printed in Japan