HAKKO

Connection Box

FN-1201

Instruction Manual

●

Thank you very much for purchasing
the HAKKO FN-1201 (Connection Box).

Be sure to read this manual before operating
the HAKKO FN-1201.

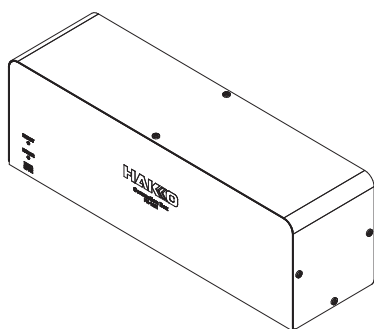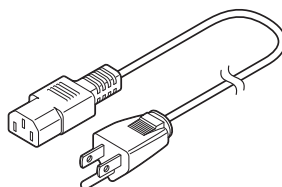Keep this manual readily accessible for reference.

●

Table of Contents

1. PACKING LIST

Please check to make sure that all items listed below are included in the package..

HAKKO FN-1201 (Connection Box) .... 1 **Instruction manual** 1
Power cord 1

**HAKKO FN-1201
(Connection Box)**

Power cord

Instruction manual

2. SPECIFICATIONS

●**FN-1201**

Power supply	AC100 to 240V 50/60Hz
Power consumption	5W
Outside dimensions	340 (W) x 118 (H) x 102 (D) mm
Weight	2.1kg

*1 This product is protected against electrostatic discharge.
*2 Specifications and design are subject to change without notice.

Cautions regarding handling of products with electrostatic protection

Since this product incorporates electrostatic measures such as making plastic parts conductive, grounding of handpiece and station parts, etc., attention should be given to the following points :

1. Plastic parts such as grips, etc. are conductive, not insulated. When performing repairs, be sure to take sufficient care during parts replacement and repair so that electrically live parts are not exposed and that there is no damage to insulation.
2. Be sure to ground the product during use.

3. WARNINGS, CAUTIONS AND NOTES

In this manual, items requiring caution are classified into 2 categories, "WARNINGS" and "CAUTIONS", as defined below. Please make sure to understand these items before reading the main text.

⚠ **WARNING:** Failure to comply with a WARNING may result in serious injury or death.
⚠ **CAUTION:** Failure to comply with a CAUTION may result in injury to the operator, or damage to the objects involved.
   Note: Indicates important steps or items in the procedure being explained.

For safety, be sure to comply with the following cautions.

⚠ WARNING

This product is a Class A device and may cause electromagnetic interference in a residential environment. Take appropriate actions if difficulties occur for a user.

- **Do not allow this product to be used by persons (including children) without knowledge or experience without the approval of the administrator.**
- **Do not allow children to play with this product.**
- **Do not allow children to perform cleaning or user maintenance without supervision.**
- **Before checking the inside of the HAKKO FN-1201 or replacing parts, be sure to disconnect the power plug. Failure to do so may result in electric shock.**

Failure to comply with the following cautions may result in the risk of electric shock, injury, etc.

⚠ CAUTION

- **Do not allow this product to get wet or operate this product with wet hands.**
- **Do not subject the product to strong impact.**
- **Use only genuine replacement parts.**
- **Do not modify this product.**
- **Always hold the power plug when plugging it in or unplugging it.**
- **Do not perform any other actions which seem dangerous.**

4. PART NAMES

4-1 Front View

LED

4-2 Rear View

Blank panels

SELV, non-Hazardous Energy Level

RESET button

POWER switch

REBOOT button

Inlet

Cover bolts   Connector (LAN)   Fuse

3
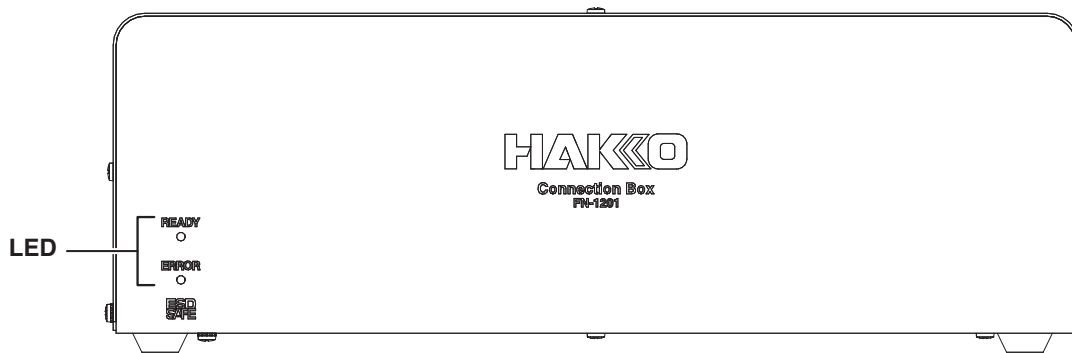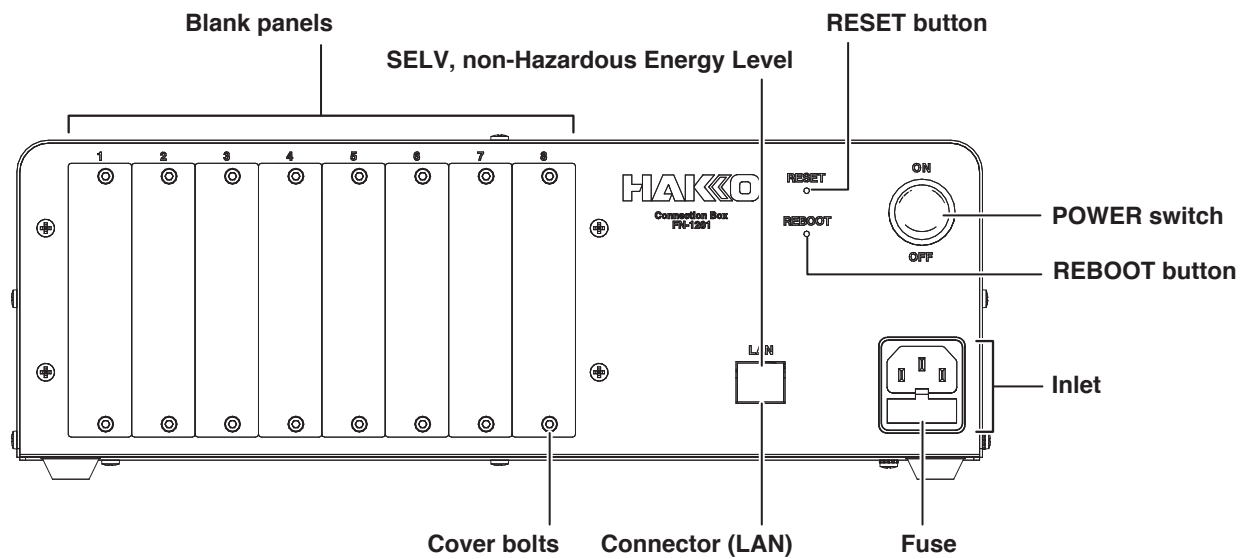
5. INITIAL SETUP

5-1   Installing interface cards

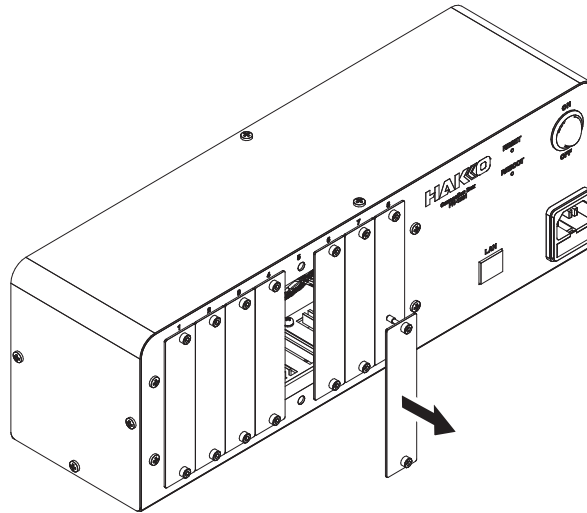| ⚠ WARNING |
| --- |
| **Do not allow this product to be used by persons (including children) without knowledge or experience without the approval of the administrator.** |

1. Remove a blank panel from the back side.

2. Slide the interface card in so that the card edge connector is inserted as far as it will go.
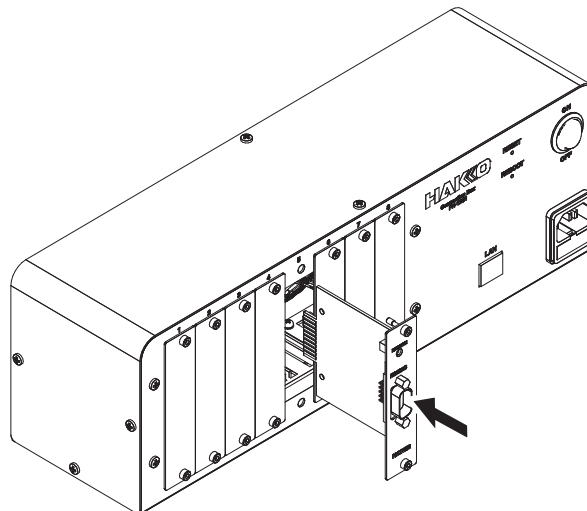
⚠ CAUTION
• **Turn the power off when changing the interface card.** • **If the card is upside-down, the cover bolt cannot be tightened. Also, if the interface card circuit board is not aligned with the guide rails, the edge connector cannot be inserted.** • **When installing an interface card, be sure it is in the correct orientation and be sure to align the circuit board with the guide rails.**

5-2　Connecting the power cord

Plug the power cord into the inlet on the back of the connection box.

SELV, non-Hazardous Energy Level
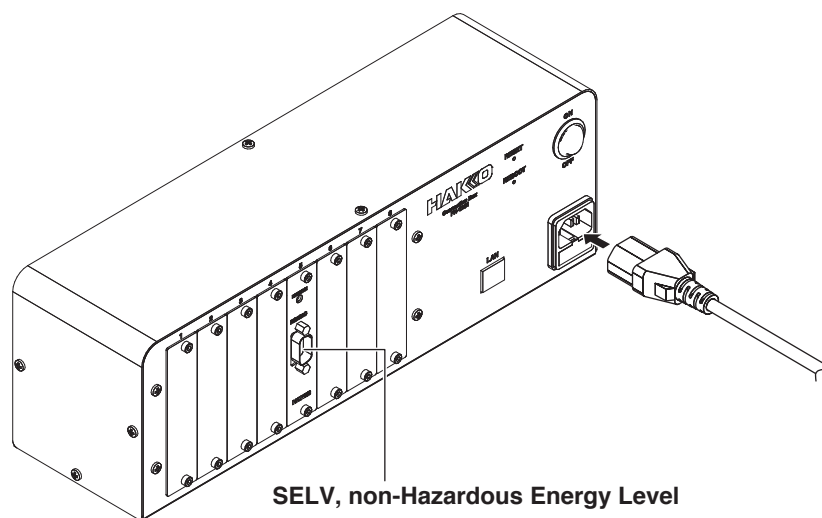
5-3　Connecting the LAN cable

Connect the connection box and PC with a LAN cable.

・Connecting directly

LAN cable
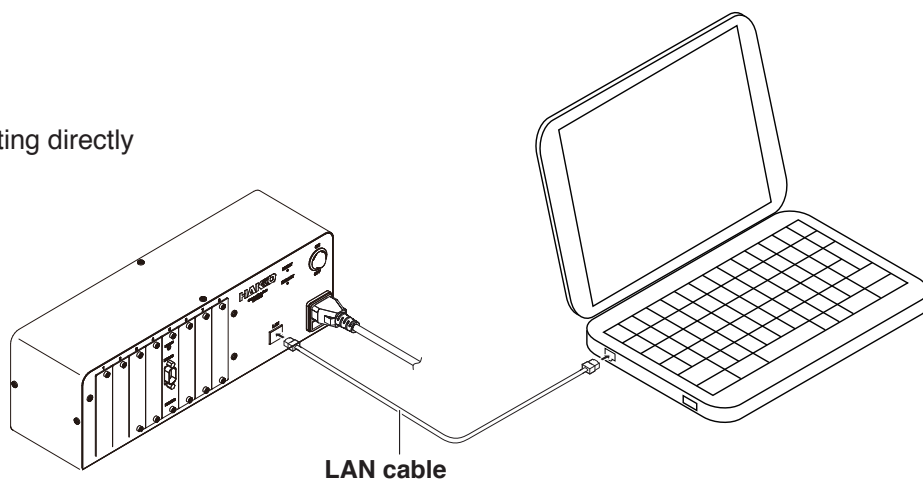
・Connecting via a router

Router

LAN cable

6.   INSTALLATION

You must be logged into the computer with Administrator user rights in order to install the software.
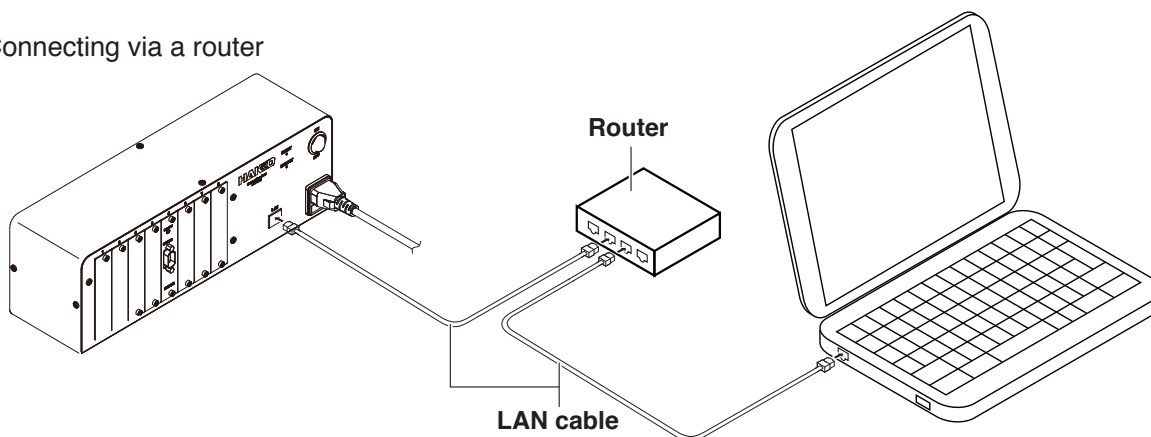
6-1   IP Address Setting Application settings

6-1-1   Initially installing the software

1. Download "FN1201 connection setting utility .zip" file from Document Portal.

2. Choose the folder to install, and decompress the downloaded file at that folder.

6-1-2   Updating the software

1. Download "FN1201 connection setting utility .zip" file from Document Portal.

2. Save the downloaded file in a folder different from the folder where the current software is saved. Decompress the file, and confirm the version of the software.

3. Overwrite the current software by moving all of the decompressed file to the folder where the current software is saved.

6-1-3   Uninstalling the software

Delete the folder where the software is installed.

6-2   Sample Application settings

6-2-1   Initially installing the software

1. Download "FN1201 control application (for FN1010) .zip" file from Document Portal.

2. Choose the folder to install, and decompress the downloaded file at that folder.

6-2-2   Updating the software

1. Download "FN1201 control application (for FN1010) .zip" file from Document Portal.

2. Save the downloaded file in a folder different from the folder where the current software is saved. Decompress the file, and confirm the version of the software.

3. Overwrite the current software by moving all of the decompressed file to the folder where the current software is saved.

6-2-3   Uninstalling the software

Delete the folder where the software is installed.

7. OPERATION

7-1 Network settings

1. Check that all connections in "**5. INITIAL SETUP**" have been performed and then switch on the POWER switch of the connection box and switch on the PC.

2. On the PC, start the IP Address Setting Application.

3. In the IP Address Setting Application, set the internet protocol setting (IPv4 or IPv6) and input the IP address, subnet mask, default gateway, and NTP server address, and then click **[Send]**.

Initial network settings

Internet protocol	IPv4
Network mode	Static address
IP address	192.168.1.10
Subnet mask	255.255.255.0
Default gateway	0.0.0.0
NTP server address	Not set

4. Press the Reboot button of the connection box more than three seconds.

⚠ CAUTION
Changes to the network settings will not be applied until the Reboot button is pressed for three seconds.
The settings in Step 3 can also be performed during normal operation. In such case as well, the changes will be applied when the Reboot button is pressed.
When the power supply is turned off without pushing the reboot button, the connection box may not work normally.

5. Press the Enter key according to instructions of the application, and confirm that the display of the application becomes " writing completion".

⚠ CAUTION
When the POWER switch is turned on while the reset button pressed, the network setting is initialized.

7. OPERATION (continued)

7-2   Basic operation

7-2-1   Startup

1. Check that all connections in "**5. INITIAL SETUP**" have been performed and then switch on the POWER switch of the connection box and switch on the PC.

2. Check that the blinking interval of the green LED on the connection box has changed from 0.3 seconds to 2 seconds.

7-2-2   Starting the application

1. Start the application.

2. Input the IP address set in "**7-1 Network settings**", click **[Connect]**, and after checking that the display has changed to "Connected", click **[Start]**.

3. For information on using the application, refer to the instruction manual included with the application.

7-3   Controlling the connection box (file operations by HTTP methods)

The connection box operates as a file server, and file operations can be used to obtain information and settings from connected equipment, change equipment settings, and control equipment operations. Use the HTTP "GET" method to obtain files and the "POST" method to send files.

●**The files which can be handled by the connection box are as follows:**

system_inf.txt (GET only)	Connection box software version number, list of interface cards connected to the connection box, list of equipment that can be connected to
net_config.txt	Network settings
ifx_stat.txt	Status of equipment connected to interface card x
ifx_setting.txt	List of settings (set temperature, offsets, etc.) of equipment connected to interface card x
ifx_sysparam.txt	List of system settings (sleep, shutoff, etc.) of equipment connected to interface card x
ifx_log.txt	List of time-linked measurement results (sensor temperature, heater drive time, etc.) of equipment connected to interface card x
ifx_value.txt (GET only)	List of measurement results not linked to time (automatic calibration results, temperature measurement results, etc.) of equipment connected to interface card x
ifx_profile.txt	Profile data of equipment connected to interface card x
ifx_program.txt	Program data of equipment connected to interface card x
mac_addr.txt (GET only)	MAC address and status
time_date.txt	Time/date information of connection box

For information on the connection box control commands and each file, refer to the "FN1201 Command Reference".

7-4 Support for new models

In order to add support for a new model to the connection box, it is necessary to install the command support file for that model.

1. With the connection box connected to the PC, start the Command Support File Installation Application.

2. Select the file to be installed and click **[Send]**.

3. Press the Reboot button of the connection box more than three seconds.

4. Check that the Command Support File Installation Application shows the installed model and shut down the application.

⚠ CAUTION
Depending on the operating status of the connected equipment, the contents of each kind of file sent to the connection box will not be applied to the equipment in some cases.   **Whether or not the contents have been applied should be checked each time.**   **When the power supply is turned off without pushing the reboot button, the connection box may not work normally.**

7-5 LED status

initializing	Green LED blinking at 0.3 seconds interval
Normal operation	Green LED blinking at 2 seconds interval
Starting while pressing the reset button	Red LED lights for 1 second, and changes to LED status of normal operation (Green LED blinking at 2 seconds interval).
abnormal status	Red LED blinking at 0.3 seconds interval

When the LED showed abnormal status, please contact the sales office or distributor.

HAKKO

HAKKO CORPORATION

HEAD OFFICE
4-5, Shiokusa 2-chome, Naniwa-ku, Osaka 556-0024 JAPAN
TEL:+81-6-6561-3225 FAX:+81-6-6561-8466
http://www.hakko.com E-mail:sales@hakko.com
OVERSEAS AFFILIATES
U.S.A.: AMERICAN HAKKO PRODUCTS, INC.
TEL: (661) 294-0090 FAX: (661) 294-0096
Toll Free (800)88-HAKKO
http://www.hakkousa.com
                  4 2 5 5 6
HONG KONG: HAKKO DEVELOPMENT CO., LTD.
TEL: 2811-5588 FAX: 2590-0217
http://www.hakko.com.hk
E-mail:info@hakko.com.hk
SINGAPORE: HAKKO PRODUCTS PTE., LTD.
TEL: 6748-2277 FAX: 6744-0033
http://www.hakko.com.sg
E-mail:sales@hakko.com.sg

Please access to the following address for the other Sales affiliates.

http://www.hakko.com

2019.2
MA03033XZ190227