Re-Generative AC/DC Electronic Load

Ene-phant Series
Control Software

M-2486 Ver1.1

NT-AA Controller

KEISOKU GIKEN Co., Ltd

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Warranty Information

KG (KEISOKU GIKEN CO. LTD.) certifies that this product met its published specifications in this manual at time of shipment from factory with rigorous product inspection.
KG hardware product is warranted against defects in material and workmanship for a period of one year from date of delivery.
During the warranty period KG will, at its option, either repair or replace products without charge which prove to be defective. Please contact a dealer you purchased from or KG directly for any request or questions of the warranty service and inform of product model number and serial number for the manufacturing traceability.

*This warranty is valid only in Japan.

Chapter 1：Introduction

1. 1. Introduction

We would like to thank you for purchasing our Ene-phant series. This software is compatible with AC / DC regenerative electronic load device, model name NT-AA-10KE-L, and is software which enables remote operation from PC by communication via Ethernet.

1. 2. Registered trademark

Microsoft Windows is a registered trademark of Microsoft Corporation in the US and other countries..
LabVIEW is a registered trademark of National Instruments Corporation in the United States and other countries.

1. 3. Copylight

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1. 4. Install

Since it is supplied in a form including runtime, it can be operated even on a PC on which LabVIEW is not installed.

Chapter 1: Preparation

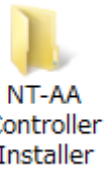
2. 1. Recommended PC operating environment

OS : Windows 7(32bit,64bit) or later
CPU : Compliant with the system requirements of each OS
Memory : 4GB or more
HDD : 300MB or more

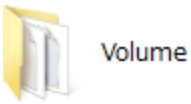
2. 2. Install

1. Insert the product CD into the drive of the PC.

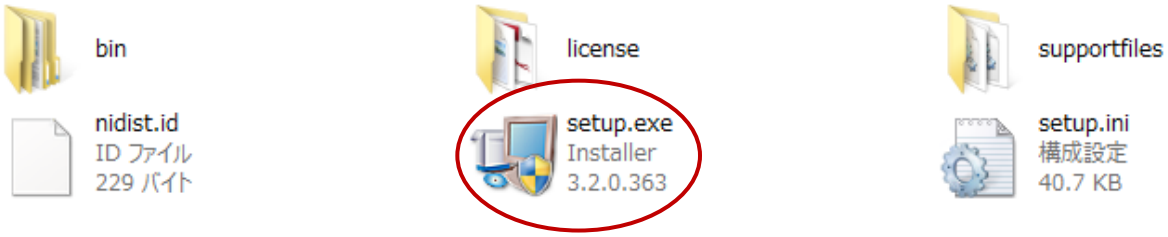
2. Double click on the"NT-AA Controller Installer" folder.



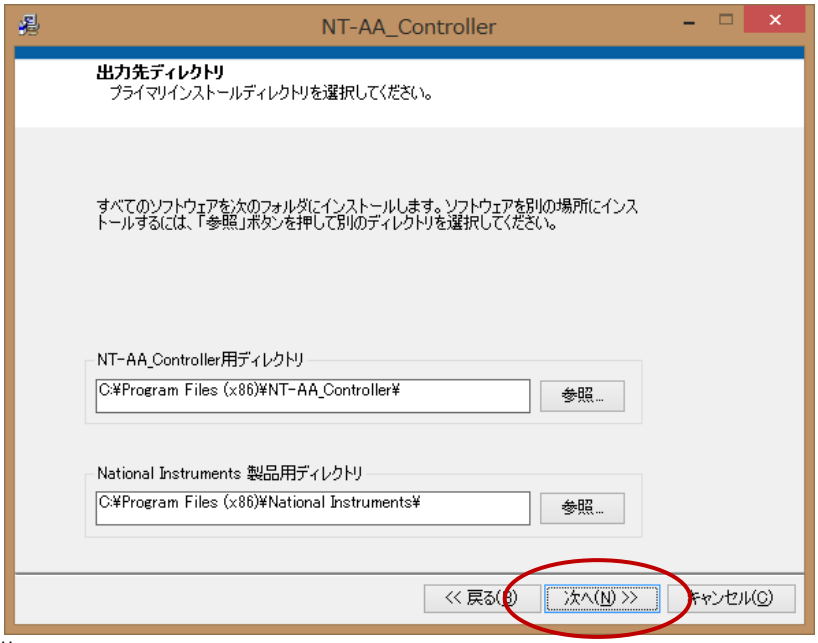
3. Double click on the"Volume"folder.



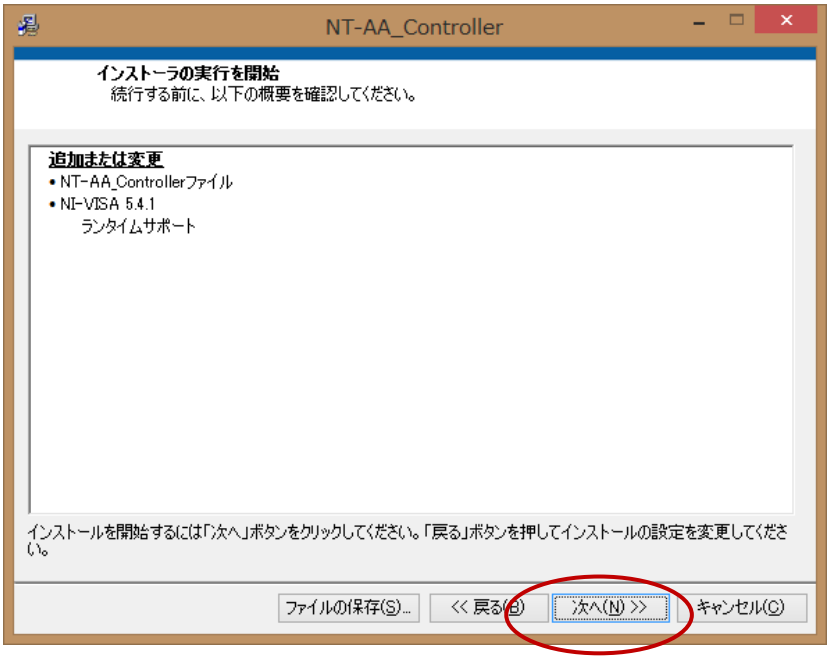
4. Double click on the"setup.exe" file.



5. Click on the、"Next" button.



6. Click on the "Next" button.



7. Installation will be done to the specified location, click on the、"End" button.。

8. A software shortcut is created on the desktop.

Chapter 3：How to use

3. 1 Overview

3. 1. 1. Specification of NT-AA Controller

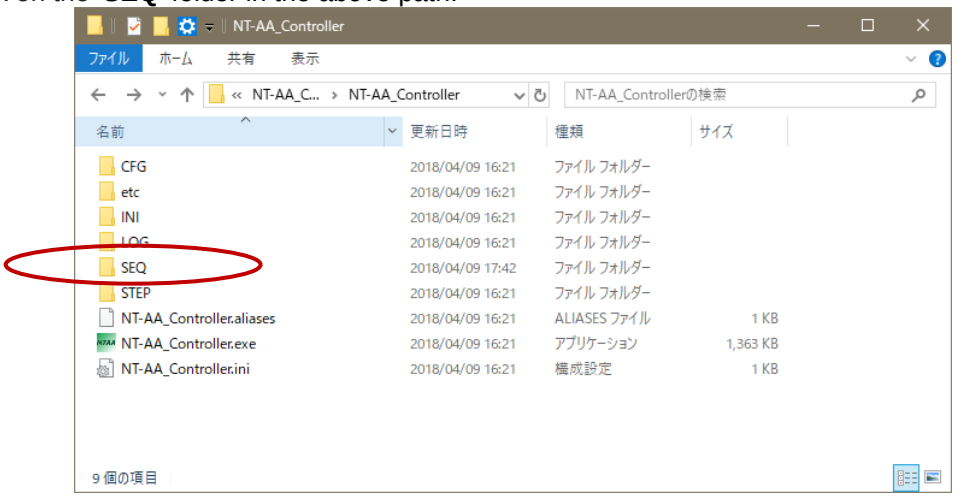
Specification	Contents
Interface	Ethernet
Measurement item	Voltage Current Power Frequency P.F. Peak Current Apparent Power Grid Power (Option) Alarm
Measurement interval	1s
Step interval time	1～99999s
Step interval resolution	1s
Step max rows	86400
Log interval time	1s
Log data max rows	86400
Log item	Sequence time PC time Voltage Current Power Frequency P.F. Peak Current Apparent Power Grid Power (Option) Set Load Value Alarm

3. 2. Sequence File

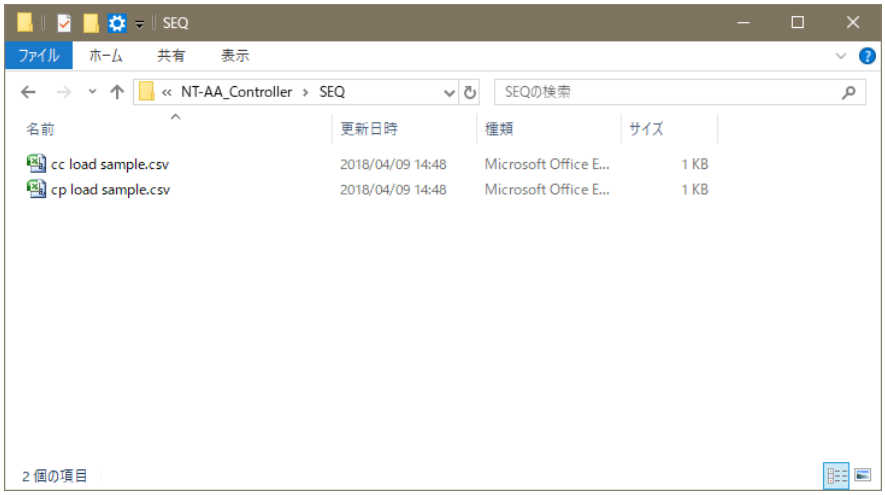
1.The default location of the software is as follows.

C:\Program Files (x86)\NT-AA_Controller

2.Double click on the**"SEQ"**folder in the above path.

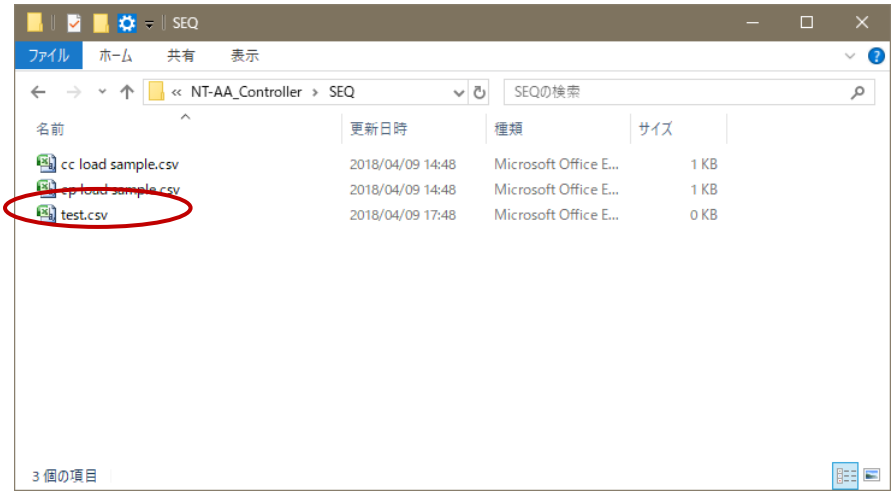


3.At the time of installing the software, the following sample file exists.
If necessary, create a text file with a new name.

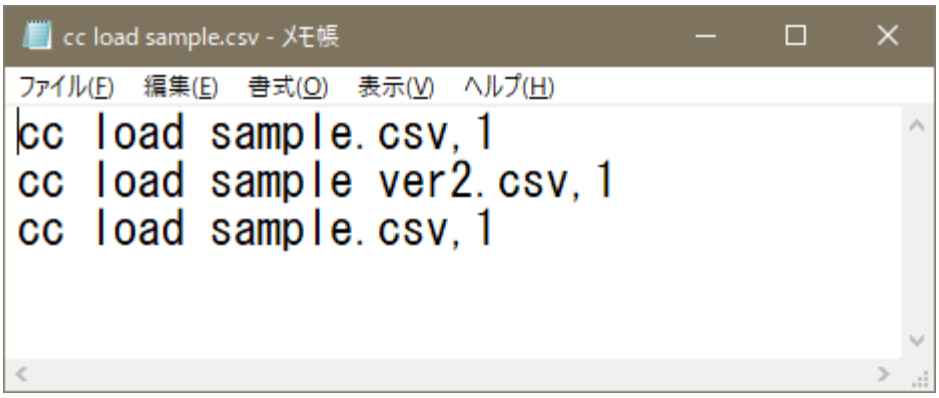


＊The procedure for creating a new sequence file called **"test.csv"** is described below.

4.Create an empty **"test.csv".**



5. Create the sequence file in the following format.
Row n(n≧1)：<StepFile Name>,<Step Repeat Time> <CR> <LF>



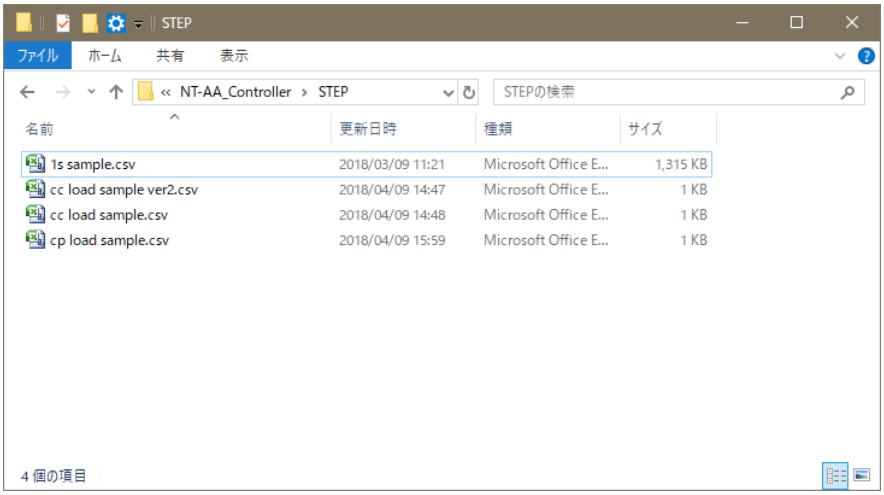
Row	Name	Meaning	Input
n	StepFile Name	Specify the Step file name to be described later.	String
	Step Repeat Time	Specify the number of times to execute Step of line n. For example, if you specify 3, execute Step three times and move on to the next line.	1 -

3. 3. Step File

1.The default location of the software is as follows.
C:\Program Files (x86)\NT-AA_Controller

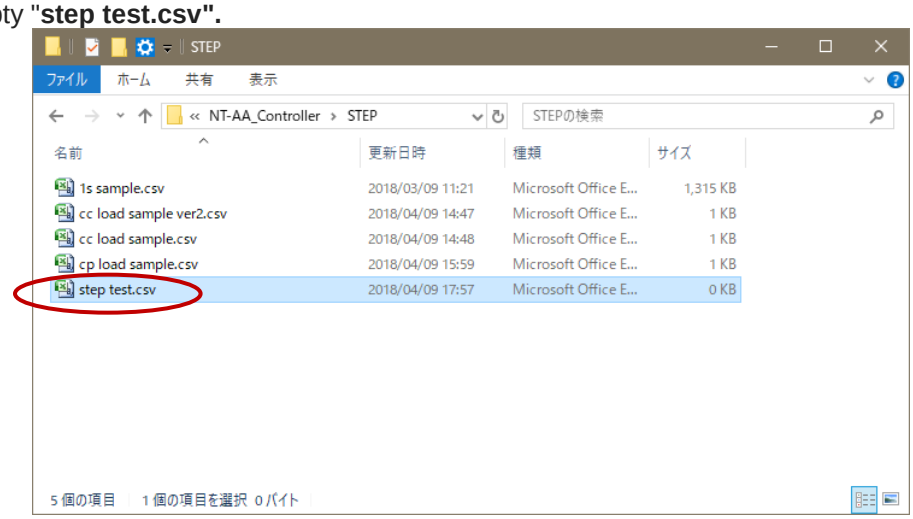
2.Double click on the**"STEP"**folder in the above path.

3. At the time of installing the software, the following sample file exists.
If necessary, create a text file with a new name.



＊The procedure for creating a new sequence file called **"step test.csv"** is described below.

4.Create an empty "**step test.csv".**



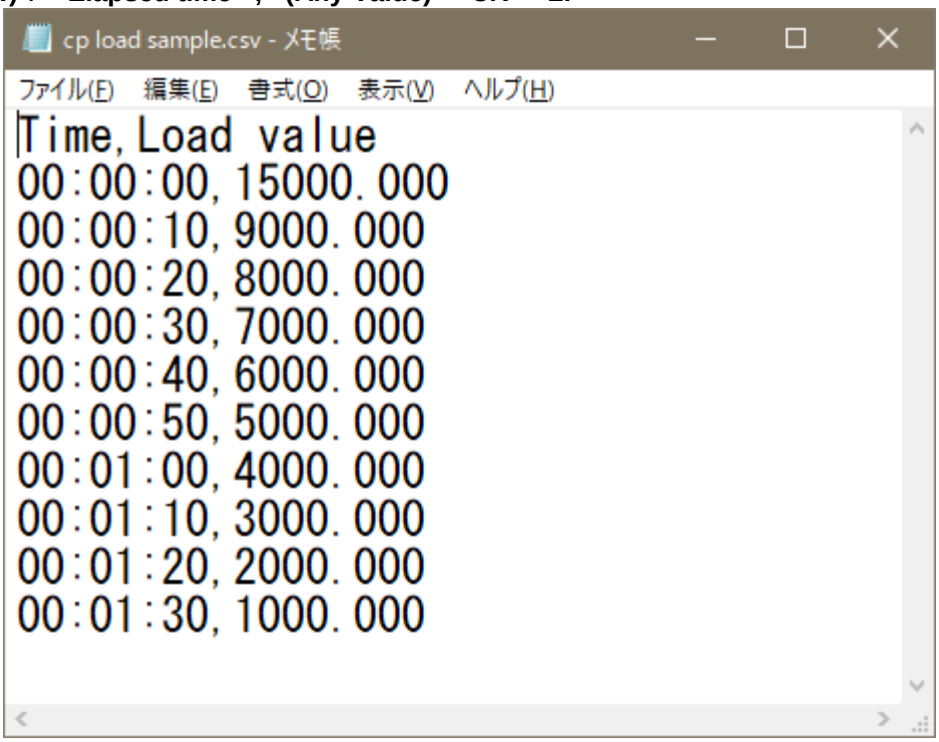
5. Create the step file in the following format.

Row 1(header)：Time, Load Value<CR> <LF>

Row n(n≧2)：< Elapsed time >, < Load Value > <CR> <LF>

・・・

Row m(Last row)：< Elapsed time >, <(Any Value)> <CR> <LF>

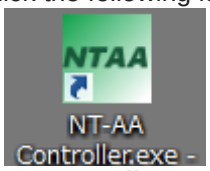


Row	Name	Meaning	Input
n	Elapsed Time	Step specify the elapsed time..	String
	Load Value	Specify the amount of load in elapsed time.	Number
m	(Any Value)	Since the step ends when the last line is reached, the value here is not used. Enter an arbitrary value.	-

3. 4. Start of test

This section describes the activation of the software installed in Chapter 2. It is assumed that software is installed on your PC based on Chapter 2 in advance. Also, connect the NT - AA - 10KE - L main unit to the PC with a LAN cable and turn on the power.

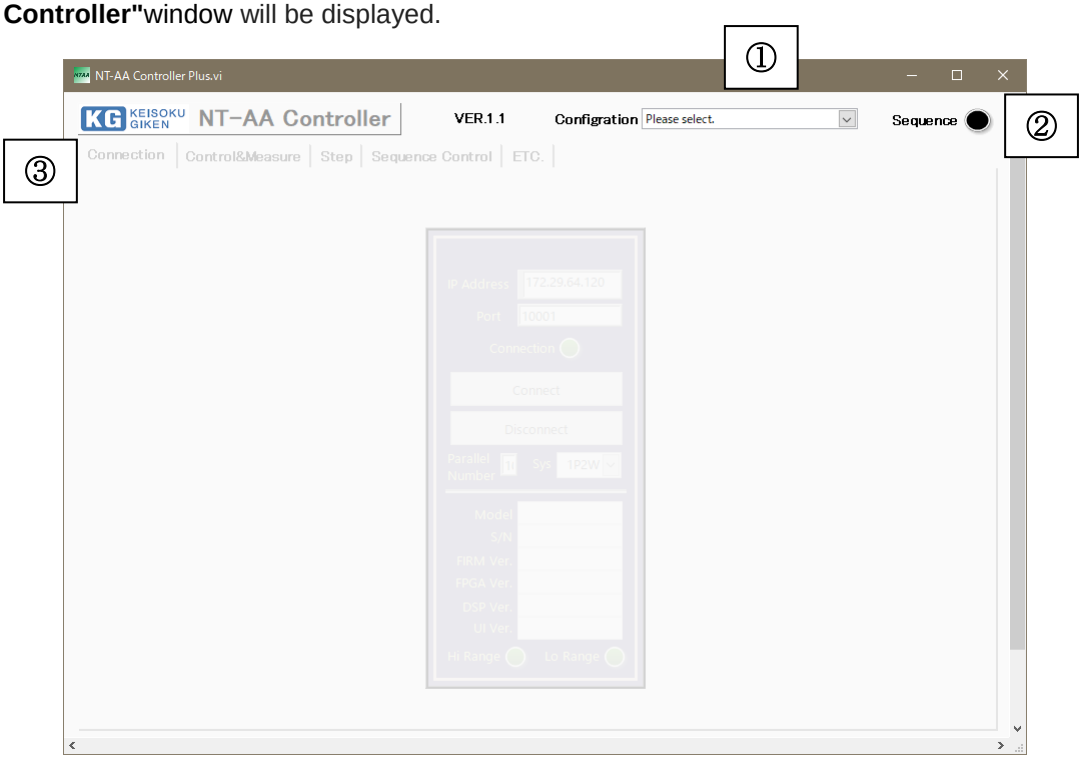
1.If the shortcut exists on the desktop, double-click the following icon..



If the above does not exist, double-click **"NT - AA Controller.exe"** which exists below.

C:\Program Files (x86)\NT-AA Controller

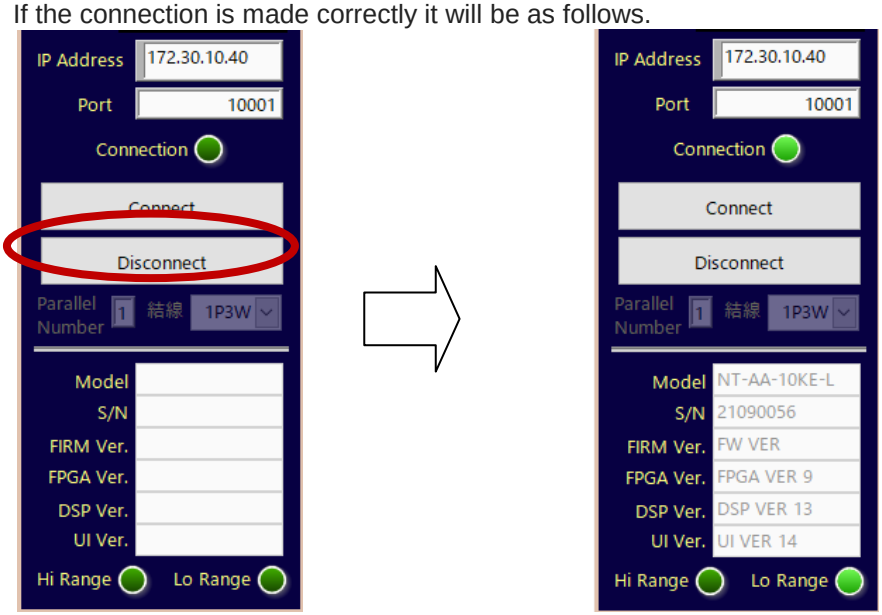
2.**"NT-AA Controller"**window will be displayed.



Num	Measning
①	Configuration ... Specify the configuration. The following patterns are provided. 1P2W System.CFG · · ·1 unit NT-AA is used on the load side by single phase 2 wire connection. 3P3W System.CFG · · ·3 unit NT-AA is used on the load side by threee phase 3 wire connection.
②	Sequence · · · The lamp lights up during configuration operation.
③	Each tab · · · can be selected after configuration selection.

3. When you select the configuration, it looks like the following. We will make a communication connection here.

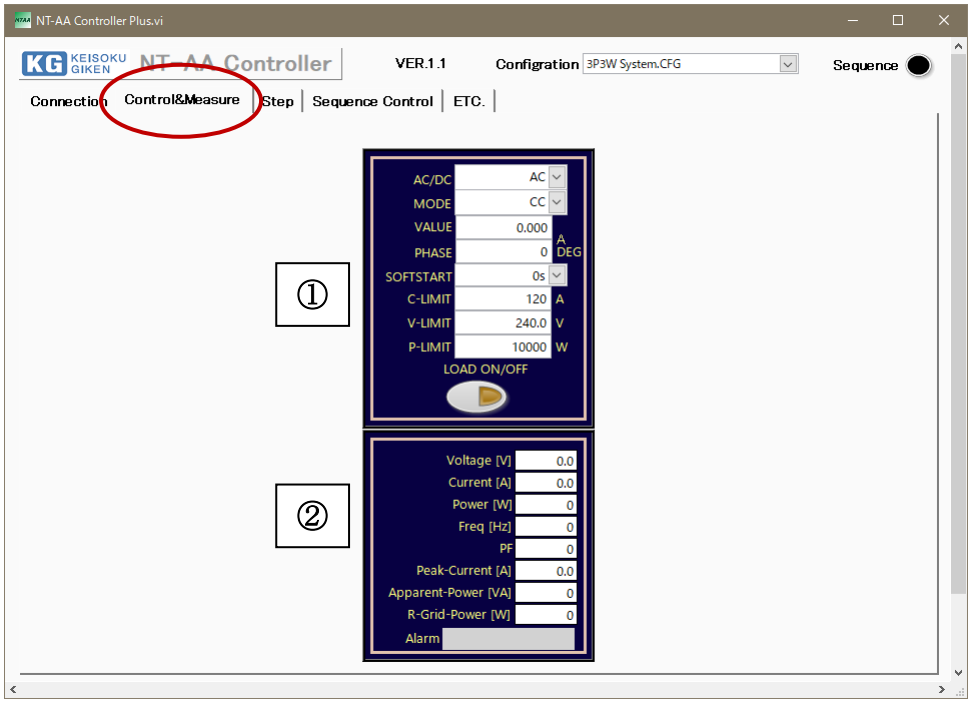
4. Confirm the connection destination IP address and port number and press the Connect button.
If the connection is made correctly it will be as follows.



* Please confirm the following when the above does not go well.
The power of NT - AA - 10KE - L is on.
· NT - AA - 10KE - L and PC are Ethernet connected.
· The IP address and port number setting of NT - AA - 10KE - L matches the software setting.
· Some devices have the same IP address in addition to NT - AA - 10KE - L in the intra.

3. 5. Manual Control

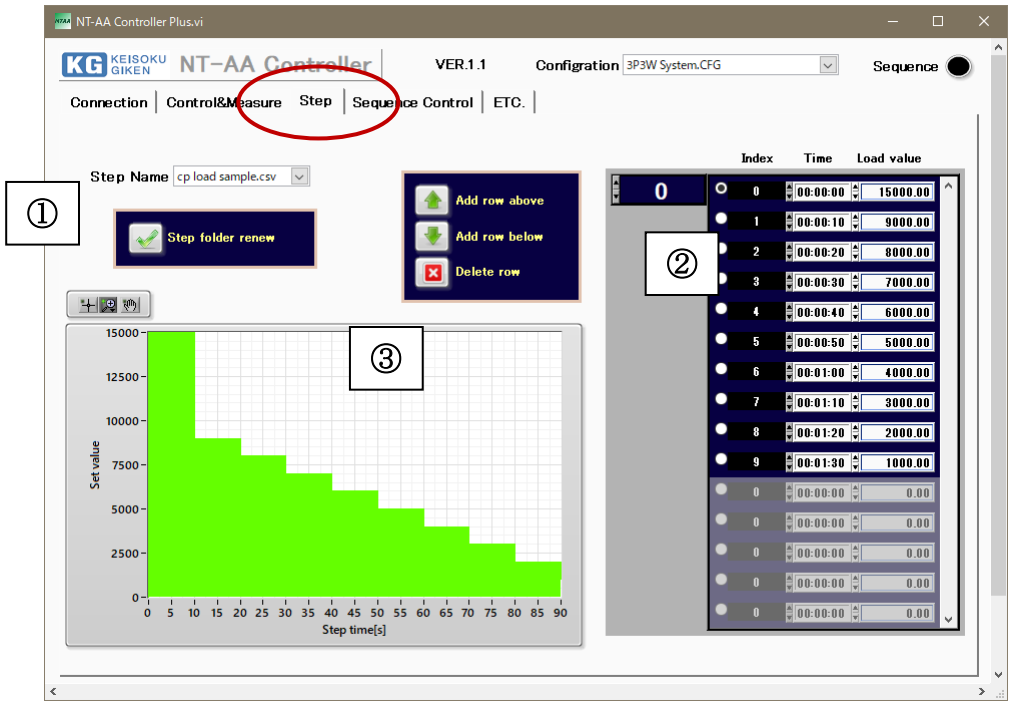
1. Go to **"Control & Measure"** tab.



Num	Measning
①	It is a UI that can make various settings for T-AA-10KE-L. The setting is reflected in the body every time the entered numerical value or the changed list is changed. For the meaning of each item, refer to the operation manual of the main unit.
②	Measurement values of NT - AA - 10KE - L and alarm status information are substituted in hexadecimal notation. For meaning of alarm status information, refer to the main unit manual. It is divided into two by the space, but the front is Status Register 1 and the back is Status Register 2.

3. 6. Confirm step

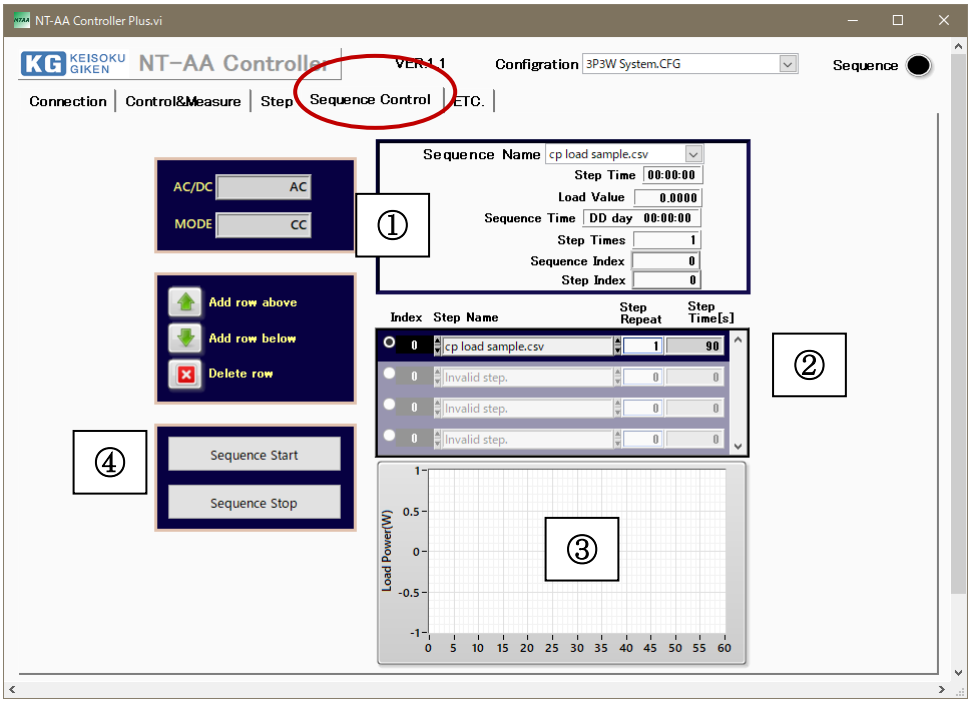
1. Go to **"Step"** tab.



Num	Meaning
①	**Step Name**・・・The Step file names in the STEP folder are displayed in a list. If you changed Step folder during software startup, please click **"Step Folder renew"** button.
②	The elapsed time and set value of the loaded Step file are displayed. You can not change the value here.
③	A graph of elapsed time and setting value of the loaded Step file is displayed.

3. 7. Sequence Control

1. Go to **"Sequence Control"** tab.

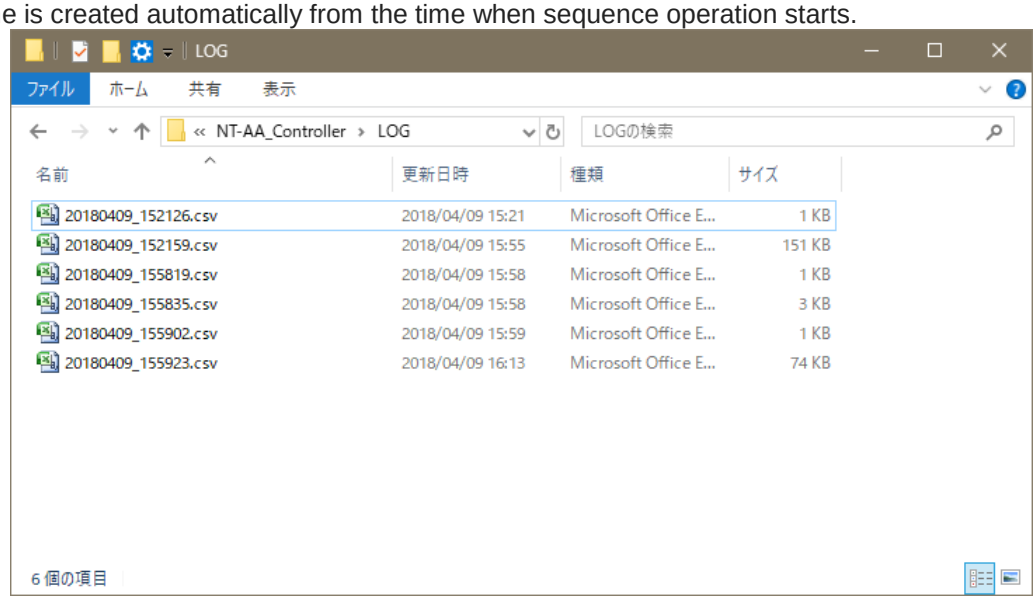


番号	意味
①	***Sequence Name*** ・・・Specify the sequence file name used for the operation of the electronic load here.
②	The contents of the sequence file read above will be displayed here
③	Trend graphs up to the past 60 s are updated during sequence operation.
④	Controls the start and stop of the sequence.

2. During sequence operation, log data is saved in csv format.

.

The file name is created automatically from the time when sequence operation starts.

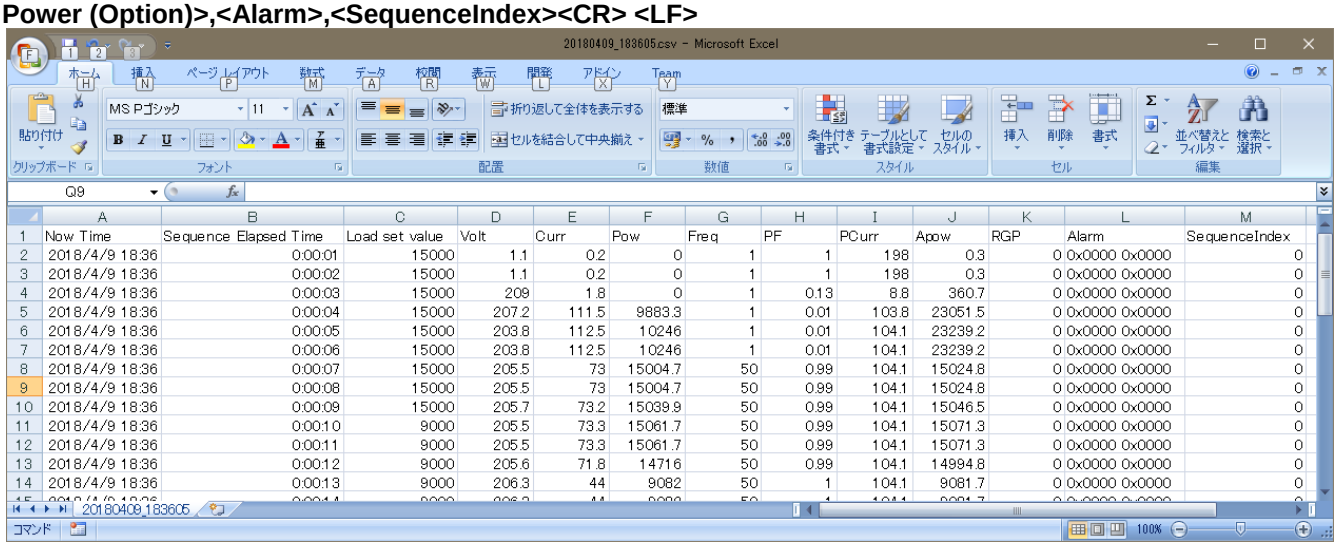


The format of the saved file is as follows.

Row 1(Header)：(See sample below)<CR> <LF>

Row 2～86400：

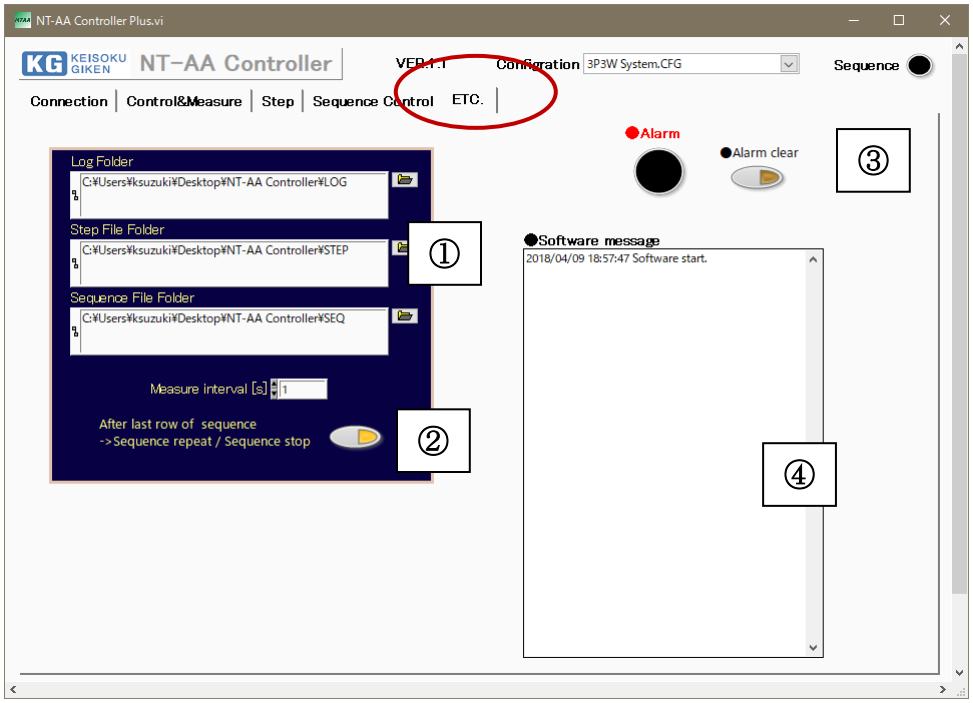
<Now time>,<Sequence elapsed time>,<Load set value>,<Voltage>,<Current>,<Power>,<Frequency>,<P.F.>,<Peak Current>,<Apparent Power>,<Grid Power (Option)>,<Alarm>,<SequenceIndex><CR> <LF>



	A	B	C	D	E	F	G	H	I	J	K	L	M
1	Now Time	Sequence Elapsed Time	Load set value	Volt	Curr	Pow	Freq	PF	PCurr	Apow	RGP	Alarm	SequenceIndex
2	2018/4/9 18:36	0:00:01	15000	1.1	0.2	0	1	1	198	0.3	0	0x0000 0x0000	0
3	2018/4/9 18:36	0:00:02	15000	1.1	0.2	0	1	1	198	0.3	0	0x0000 0x0000	0
4	2018/4/9 18:36	0:00:03	15000	209	1.8	0	1	0.13	8.8	360.7	0	0x0000 0x0000	0
5	2018/4/9 18:36	0:00:04	15000	207.2	111.5	9883.3	1	0.01	103.8	23051.5	0	0x0000 0x0000	0
6	2018/4/9 18:36	0:00:05	15000	203.8	112.5	10246	1	0.01	104.1	23239.2	0	0x0000 0x0000	0
7	2018/4/9 18:36	0:00:06	15000	203.8	112.5	10246	1	0.01	104.1	23239.2	0	0x0000 0x0000	0
8	2018/4/9 18:36	0:00:07	15000	205.5	73	15004.7	50	0.99	104.1	15024.8	0	0x0000 0x0000	0
9	2018/4/9 18:36	0:00:08	15000	205.5	73	15004.7	50	0.99	104.1	15024.8	0	0x0000 0x0000	0
10	2018/4/9 18:36	0:00:09	15000	205.7	73.2	15039.9	50	0.99	104.1	15046.5	0	0x0000 0x0000	0
11	2018/4/9 18:36	0:00:10	9000	205.5	73.3	15061.7	50	0.99	104.1	15071.3	0	0x0000 0x0000	0
12	2018/4/9 18:36	0:00:11	9000	205.5	73.3	15061.7	50	0.99	104.1	15071.3	0	0x0000 0x0000	0
13	2018/4/9 18:36	0:00:12	9000	205.6	71.8	14716	50	0.99	104.1	14994.8	0	0x0000 0x0000	0
14	2018/4/9 18:36	0:00:13	9000	206.3	44	9082	50	1	104.1	9081.7	0	0x0000 0x0000	0

3. 8. ETC.

1. Go to **"ETC."** tab.



Num	Meaning
①	***File Path*** ・・・The path to each folder of LOG, STEP, SEQ.
②	After setting the last line of the sequence file, set whether to return to the beginning or end the sequence as it is.
③	Sequence operation This lights up when an alarm occurs. Alarm clear is done with the next button.
④	Software message ・・・Displayed here if there is a debugging message, such as when the software issues an error or an alarm occurs.

NT-AA Controller

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