KYOWA

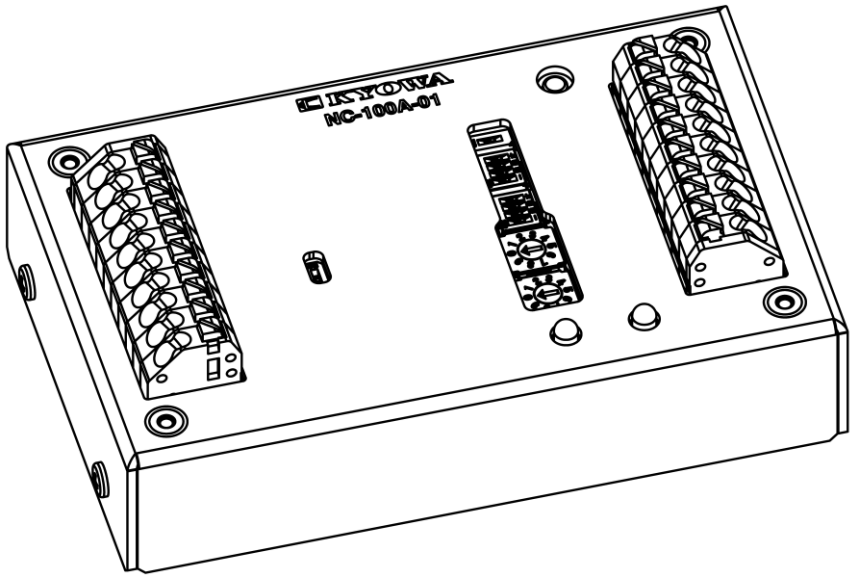
IM-A-1527 December 2025

INSTRUCTION MANUAL SETTING SOFTWARE for NC-100A Series

DIGITAL CONVERSION UNIT

RS-485, with Control I/O：NC-100A-01

RS-485, with CAN：NC-100A-10



Business use only

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INTRODUCTION (PLEASE READ BEFORE USE)

Instruction Manual

Thank you for purchasing this KYOWA product.
This instruction manual describes functions, installation, wiring methods, and operating methods, so that the functions of the NC-100A series can be used appropriately.
To ensure safe and proper use of this product, be sure to read this manual thoroughly and understand its contents before use.
After reading, keep this manual in a safe place where it can be accessed readily.
Refer to the "IM-A-1491 NC-100A Series INSTRUCTION MANUAL" for details on the functions of the NC-100A series introduced in this manual.

Precautions for this document

- Use this device only as described in this document.
- Company names and trade names described in this document are trademarks or registered trademarks of their respective companies.
- This document may not be copied or reproduced, in whole or part, without the consent of KYOWA.
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- For the latest information, please check the product page on the KYOWA website (**https://product.kyowa-ei.com/en**).
- Specifications and product appearances contained in this document are subject to change without prior notice.

Related Documents

The documents related to this software's control target, the NC-100A series, are listed below.
Please refer to them according to your purpose.

Name	Content
NC-100A Series READ BEFORE USING THE PRODUCT	Contains precautions for the safe and correct use of the Digital Conversion Unit NC-100A Series and lists its accessories.
NC-100A Series INSTRUCTION MANUAL	Details the Digital Conversion Unit NC-100A Series' functions, installation, wiring, operation methods, and specifications.

Please download each document from the download page on our product homepage.
The link to our web page is as follows:

https://product.kyowa-ei.com/en/products/category/type-nc-100	

Notations Used in This Instruction Manual

Terms used in this manual

This manual uses the following notation for related products.

The NC-100A series is collectively referred to as the **Digital Conversion Unit**.

In addition, the following terms are defined in this document.

Term	Definition
Digital Conversion Unit	The NC-100A-01 or NC-100A-10 controlled by this software. The Digital Conversion Unit in this manual refers to the NC-100A-01 and NC-100A-10 connected, or attempting to connect, with this software via RS-485 communication.
Original value	The strain gage transducer output received by this device. The unit is mV/V. For example, if 5 N are applied to a load cell with a rated capacity of 10 N and a rated output of 1.0 mV/V, the original value input to this device would be 0.5 mV/V.
Rated capacity value	The setting value used for calibration of this device. The rated load set for the strain gage transducer.
No-load zero value	The setting value used for calibration of this device. This is the original value output by the strain gage transducer when no load is applied.
Rated output value	This is the setting value used to calibrate this device. It is the rated output of the strain gage transducer, calculated by subtracting the no-load zero value from the original value when the rated capacity is applied. For example, if the original value of the transducer at rated load is 1.1 mV/V and the no-load zero value of the transducer is 0.1 mV/V, the rated output value will be 1.0 mV/V.

About other symbols used

The following symbols are used in this manual.

Term	Definition
“”	Double quotation marks are used to indicate links in this document. Example: Refer to "**Notations Used in This Instruction Manual**" for information on notations.
[ ]	Square brackets indicate buttons on the software. Example: Press the [CONNECT...] button on the main screen.
(Bold Text)	**Bold text** indicates the caption of a control on the software. Example: Select **ACTUAL LOAD CALIBRATION** from the combo box on the [CAL] tab.

1.Product Outline

1-1.Product Outline

This software is a PC software designed for simplified function setting and setting confirmation of the Digital Conversion Unit NC-100A series, which is a measuring instrument that converts analog output from a strain gage transducer into digital signals.

You can operate this software on a PC to perform function settings, setting confirmation, and measurement data confirmation via RS-485 communication with the Digital Conversion Unit.

2.Function Description

This section describes the functions of this software

No.	Name	Description
1	RS-485 Communication Connection	Performs communication settings between this software and the Digital Conversion Unit. Refer to "5 RS-485 Communication Connection of the Digital Conversion Unit" for details.
2	Measurement Data Confirmation	Allows confirmation of measurement data, original values, and status of the connected Digital Conversion Unit. Refer to "4 Screen of This Software" for details.
3	Calibration Function Setting	Allows setting of various calibration functions of the Digital Conversion Unit. Refer to "6-2 [CAL] Tab" for details.
4	Zero Function Setting	Allows setting of various zero functions of the Digital Conversion Unit. Refer to "6-3 [ZERO] Tab" for details.
5	Additional Value / Level Test Function Setting	Allows setting of the additional value function and level test function of the Digital Conversion Unit. Refer to "6-4 [ADD] tab" for details.
6	Smoothing Function Setting	Allows setting of the smoothing function of the Digital Conversion Unit. Refer to "6-5 [SMOOTH] Tab" for details.
7	Comparison Function Setting	Allows setting of the comparison function of the Digital Conversion Unit. Refer to "6-6 [COMPARE] Tab" for details.
8	Hold Function Setting	Allows setting of the hold function of the Digital Conversion Unit. Refer to "6-7 [HOLD] Tab" for details.
9	Control I/O Function Setting	Allows setting of the control input function and control output function of the NC-100A-01. This can only be set when RS-485 communication is connected to the NC-100A-01, and cannot be selected when connected to other models. Refer to "6-8 [CTRL I/O] Tab (NC-100A-01 Function)" for details.
10	CAN Function Setting	Allows setting of the CAN function of the NC-100A-10. Additionally, CANdb files corresponding to the Digital Conversion Unit can be created. This can only be set when RS-485 communication is not connected to the Digital Conversion Unit, or when connected to the NC-100A-10, and cannot be selected when connected to other models. Refer to "6-9 [CAN] Tab (NC-100A-10 Function)" for details.
11	Measurement Condition Function Setting	Allows setting of measurement condition switching and initialization to factory settings for the Digital Conversion Unit. Refer to "6-10 [CONDITION] Tab" for details.

12	Self-Check Function Execution	Allows execution of the self-check function of the Digital Conversion Unit. Refer to "6-11 [CHECK] Tab" for details.
13	User String Saving Function Setting	Allows setting of the user string saving function of the Digital Conversion Unit. Refer to "6-11 [CHECK] Tab" for details.
14	Arbitrary Command Execution Function	Allows sending of corresponding RS-485 communication commands to the Digital Conversion Unit and confirmation of the response. Refer to "6-12 [CMD] Tab" for details.
15	Setting Value Loading/Display	Displays a list of setting values that can be loaded from the Digital Conversion Unit. Refer to "6-13 [PRR] Tab" for details.
16	Setting File Management	Allows saving of each setting value of the Digital Conversion Unit as a setting file. By loading the setting file, the settings on this software can be established. Refer to "6-14 [FILE] Tab" for details.

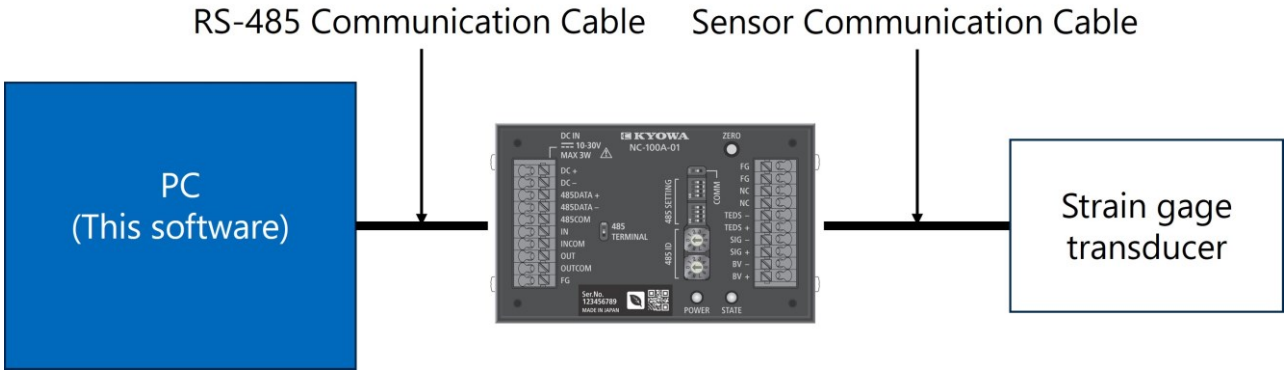
3.Starting This Software

3-1.Settings at Startup of This Software

Before starting this software, please perform the following preparations. For details regarding the connection of the Digital Conversion Unit, refer to "5. WIRING TO THIS DEVICE" in the "IM-A-1491 NC-100A Series INSTRUCTION MANUAL."

1. Connecting the Digital Conversion Unit and PC

Connect the Digital Conversion Unit and the PC running this software to enable RS-485 communication.
A simplified connection diagram is shown below.



2. Connecting the Digital Conversion Unit and Power Supply

Connect the power supply to the Digital Conversion Unit.

3. Preparation of This Software

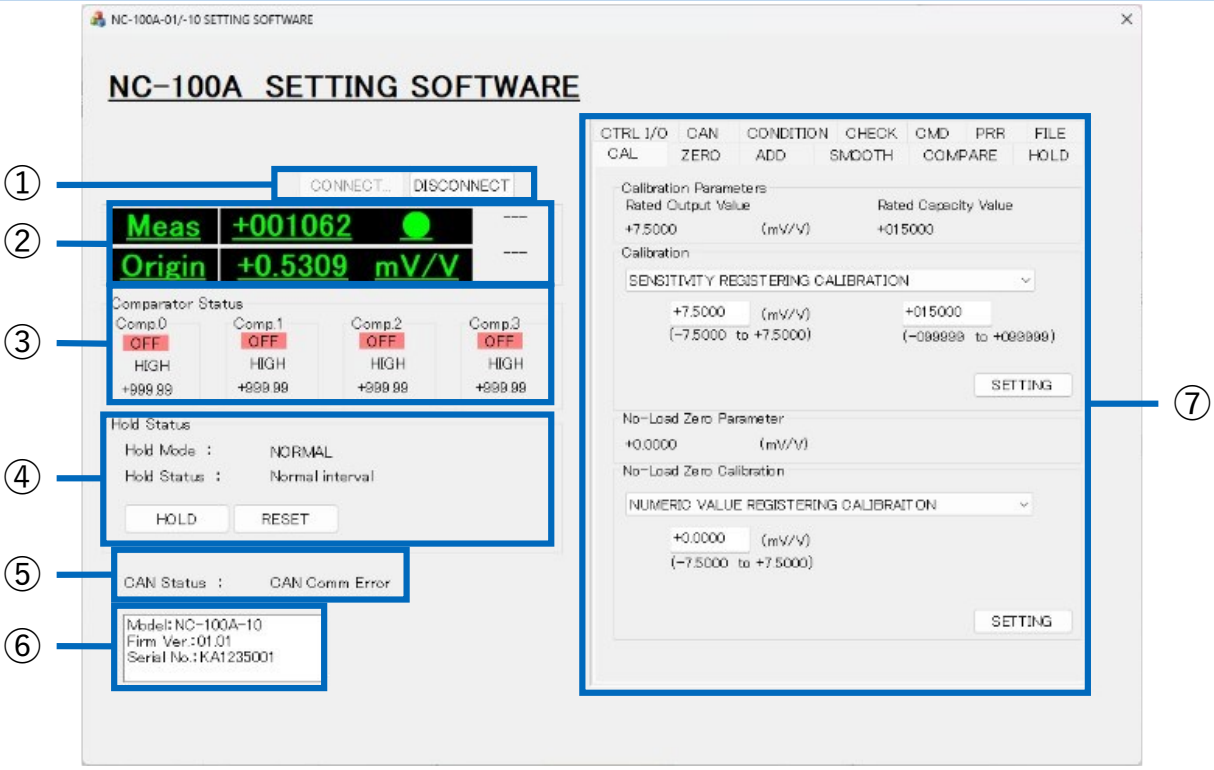
Download the ZIP file of this software from our website
(https://product.kyowa-ei.com/en/products/category/type-nc-100).
Right-click the downloaded ZIP file, select "Extract All", and unzip it to an arbitrary location.

4. Starting This Software

Execute "NC-100A SETTING SOFTWARE.exe" located in the unzipped folder.

4.Screen of This Software

4-1.Main Screen



No.	Name	Description
(1)	CONNECT／ DISCONNECT Button	Buttons to configure/disconnect the RS-485 communication connection between this software and the Digital Conversion Unit. **[CONNECT...] button**: Calls the RS-485 CONNECT screen to configure and connect RS-485 communication between this software and the Digital Conversion Unit. **[DISCONNECT] button**: Disconnects RS-485 communication between this software and the Digital Conversion Unit. Refer to "5 RS-485 Communication Connection of the Digital Conversion Unit" for details.

(2)	Measurement Data Display	Displays the measurement data and original values acquired from the Digital Conversion Unit at an approximate 1-second interval. **Meas**: Displays measurement data at an approximate 1-second interval. If measurement data overflows, **OVER** is displayed to the right. **Origin**: Displays original values at an approximate 1-second interval. If the original value overflows, **OVER** is displayed to the right. Refer to "10. DATA ACQUISITION" in the "IM-A-1491 NC-100A Series INSTRUCTION MANUAL" for details.
(3)	Comparison Function Display	Displays the comparison value settings, detection settings, and detection status for the comparison function of the Digital Conversion Unit at a 1-second interval. **Comp.0** to **Comp.3**: Displays the status, detection settings, and comparison value settings for each comparator. Refer to "11-3. Comparison Function, Hysteresis Function" in the "IM-A-1491 NC-100A Series INSTRUCTION MANUAL" for details.
(4)	Hold Function Display	**Hold Mode**: Displays the hold mode of the Digital Conversion Unit. **Hold Status**: Displays the hold status of the Digital Conversion Unit. [HOLD] button: Issues a hold command when pressed. [RESET] button: Issues a reset command when pressed. Refer to "11-2. Hold Function" in the "IM-A-1491 NC-100A Series INSTRUCTION MANUAL" for details.
(5)	CAN Status Display (NC-100A-10 Function)	When connected to NC-100A-10, displays the CAN communication error status if a CAN communication error occurs. **CAN Connecting**: The NC-100A-10 is connected via CAN communication, or is attempting to connect via CAN communication. **CAN Comm Error**: An error has occurred in the CAN communication of the NC-100A-10. Refer to "13-3. CAN (NC-100A-10 Function)" in the "IM-A-1491 NC-100A Series INSTRUCTION MANUAL" for details.
(6)	Digital Conversion Unit Status Display	Displays the model, serial number, and firmware version when the Digital Conversion Unit is connected. **Model**: Displays the model of the Digital Conversion Unit. **Firm Ver.**: Displays the firmware version of the Digital Conversion Unit. **Serial No.**: Displays the serial number of the Digital Conversion Unit.
(7)	Various Function Setting Tabs	Tabs used to configure various function settings. Select a tab screen at the top to configure various functions of the Digital Conversion Unit on the displayed tab screen below. Refer to "6 Settings and Operations of the Digital Conversion Unit" for details.

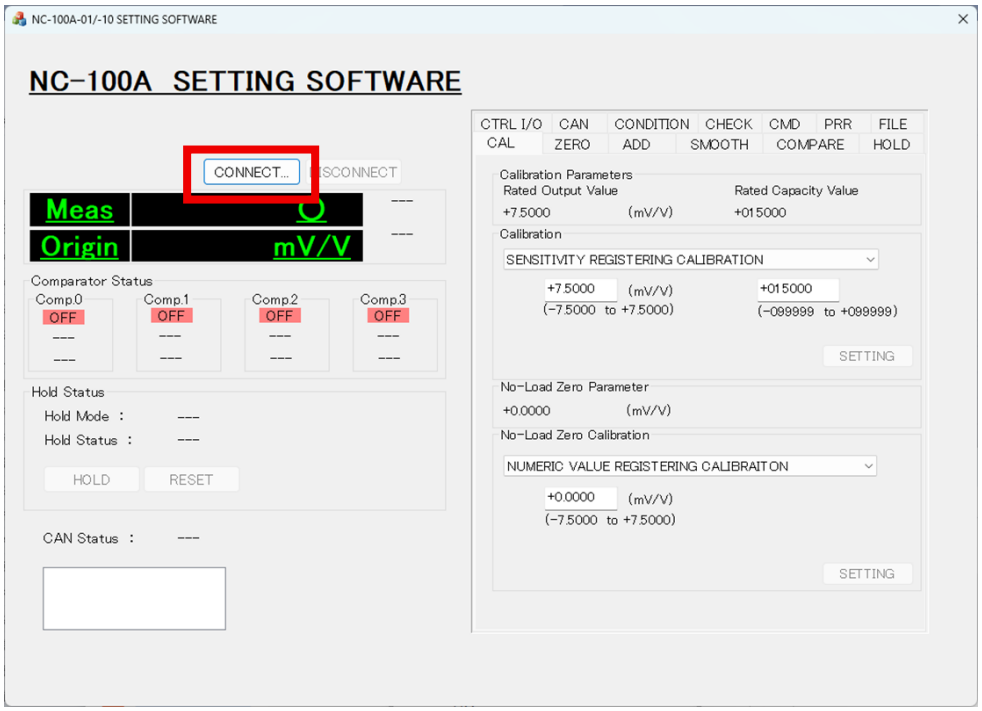
5.RS-485 Communication Connection of the Digital Conversion Unit

5-1.RS-485 Communication Connection

This section describes the procedure for establishing an RS-485 communication connection between this software and the Digital Conversion Unit.

1. Starting the RS-485 CONNECT Screen

Press the **[CONNECT...] button** on the main screen of this software. The RS-485 CONNECT screen will start.



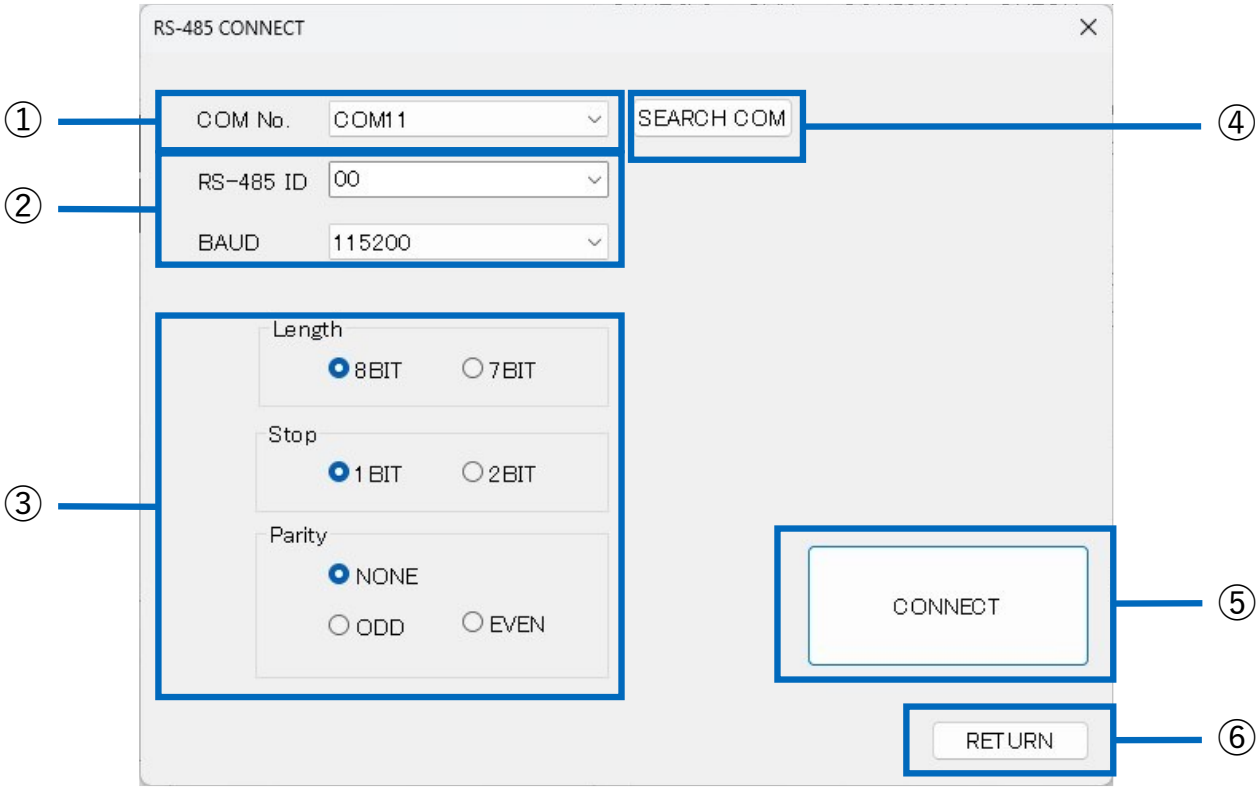
2. Setting the RS-485 CONNECT Screen

On the RS-485 CONNECT screen, configure the RS-485 communication connection settings between this software and the Digital Conversion Unit. Configure the settings on the RS-485 CONNECT screen and perform the communication connection according to the RS-485 communication ID and RS-485 communication settings of the Digital Conversion Unit.

Refer to "5-2 RS-485 CONNECT Screen" for details on each item.

5-2.RS-485 CONNECT Screen

5-2-1.Description of RS-485 CONNECT Screen



No.	Name	Description
(1)	RS-485 Communication Device COM Port Selection Combo Box	When the [CONNECT] button (5) is pressed, the RS-485 communication connection between this software and the Digital Conversion Unit is performed using the COM port selected in this combo box. **Com No.**: Allows selection of COM ports detected by this software. COM ports are loaded when the RS-485 CONNECT screen is displayed. Pressing the [SEARCH COM] button (4) allows re-searching for COM ports.
(2)	RS-485 Communication Condition Settings (Combo Box)	**RS-485 ID**: Sets the RS-485 ID of the Digital Conversion Unit. Can be set in the range of 00 to 99. **BAUD**: Sets the RS-485 baud rate of the Digital Conversion Unit. Selectable items are 1200, 2400, 4800, 9600, 19200, 38400, 57600, and 115200 bps. Refer to "6-1. Setting of RS-485 Communication Setting Switches" in the "IM-A-1491 NC-100A Series INSTRUCTION MANUAL" for details on RS-485 communication settings of the Digital Conversion Unit.

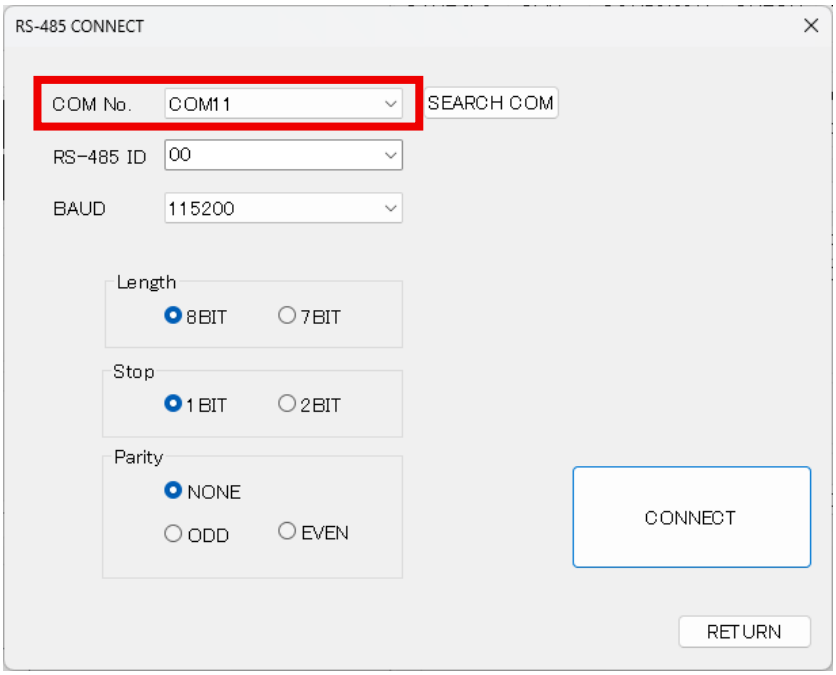
(3)	RS-485 Communication Condition Settings (Radio Buttons)	Configures RS-485 communication conditions with the Digital Conversion Unit. **Length**: Sets the bit length. Selectable items are 7 and 8 bits. **Stop**: Sets the stop bit. Selectable items are 1 and 2 bits. **Parity**: Sets the parity bit. Selectable items are **Odd**, **Even**, and **None**. Refer to "6-1. Setting of RS-485 Communication Setting Switches" in the "IM-A-1491 NC-100A Series INSTRUCTION MANUAL" for details on RS-485 communication settings of the Digital Conversion Unit.
(4)	[SEARCH COM] Button	Searches for RS-485 communication COM ports on the PC. Detected COM ports are added to the RS-485 Communication Device COM Port Selection Combo Box (1).
(5)	[CONNECT] Button	Performs RS-485 communication using the communication conditions set in (1) through (4). If RS-485 communication is successful, the RS-485 CONNECT screen closes, and the software returns to the main screen. If RS-485 communication fails, a message box is displayed.
(6)	[RETURN] Button	Closes the RS-485 CONNECT screen without configuring RS-485 communication settings and returns to the main screen.

5-2-2.RS-485 Communication Setting Procedure

The procedure for configuring RS-485 communication settings between this software and the Digital Conversion Unit is described below.

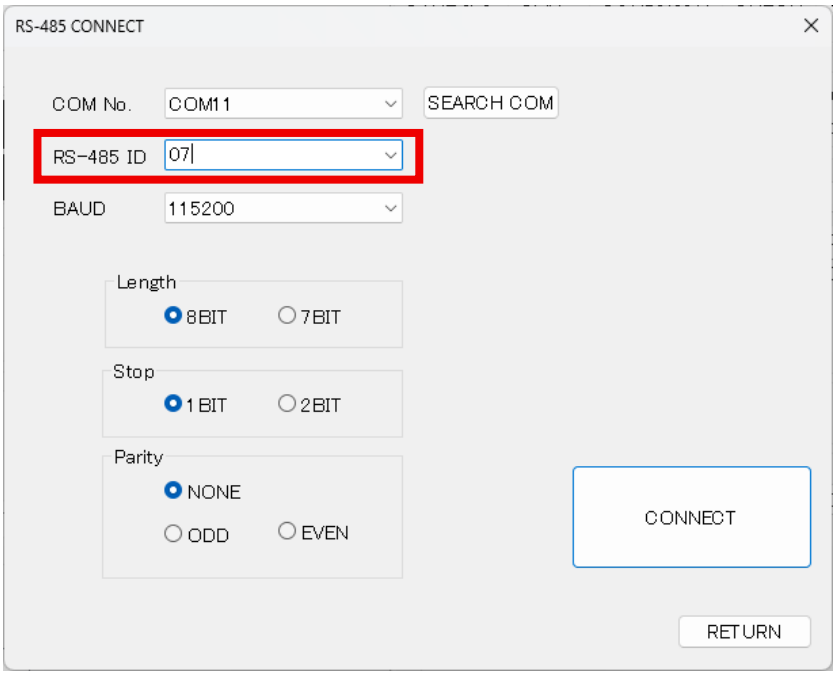
1. Select the COM Port for RS-485 Communication

Operate the area indicated by the red frame in the figure below to select the COM port to be used for RS-485 communication between this software and the Digital Conversion Unit.



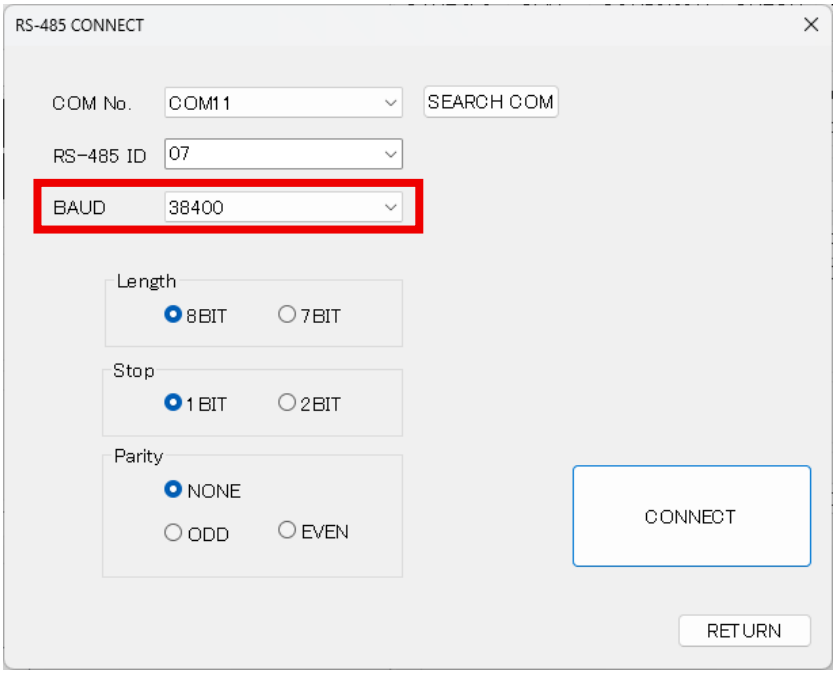
2. Select the RS-485 Communication ID

Operate the area indicated by the red frame in the figure below to select the RS-485 communication ID of the Digital Conversion Unit.



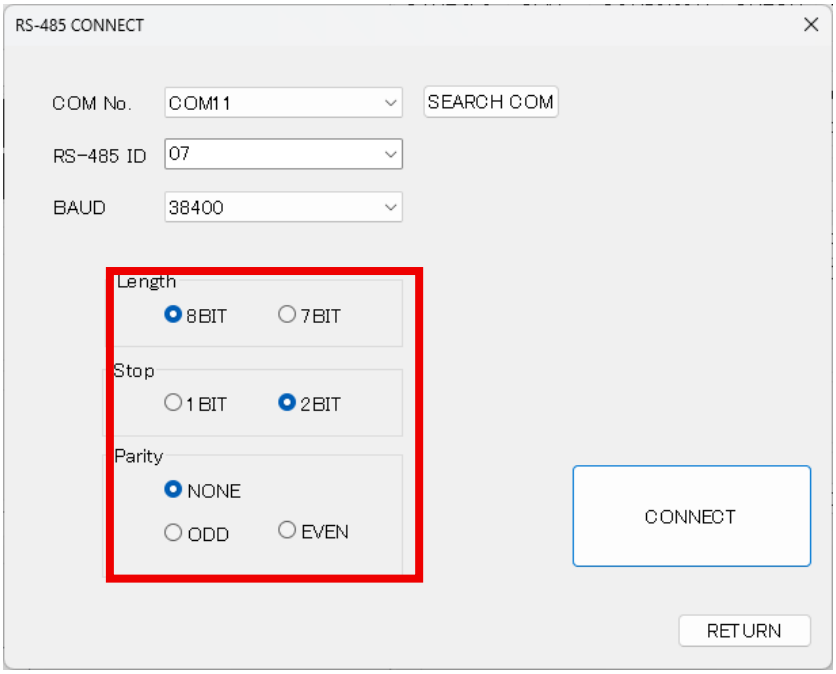
3. Select the RS-485 Baud Rate

Operate the area indicated by the red frame in the figure below to select the RS-485 baud rate set on the Digital Conversion Unit.



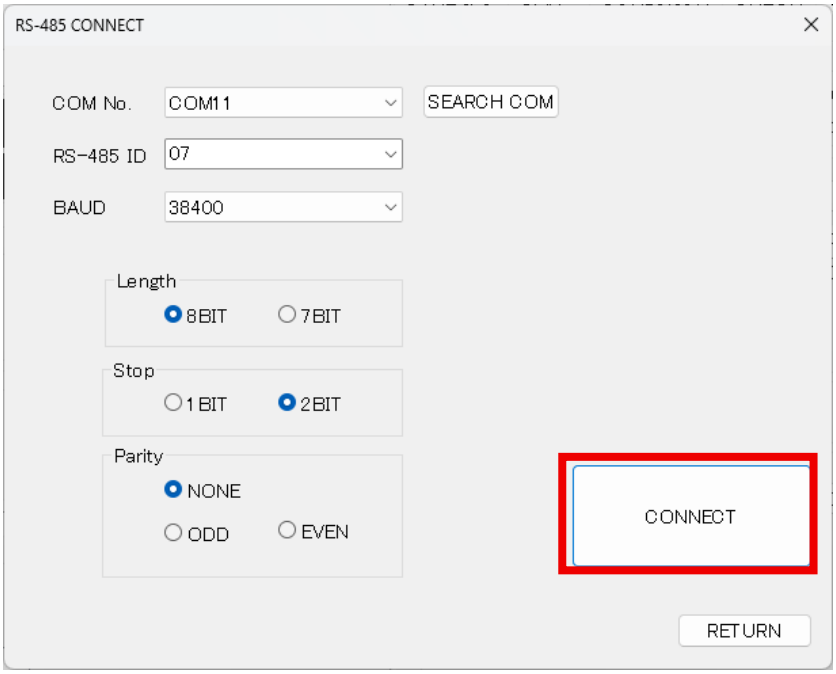
4. Set RS-485 Communication Conditions

Operate the area indicated by the red frame in the figure below to select the RS-485 communication conditions (bit length, stop bit, parity bit) set on the Digital Conversion Unit.



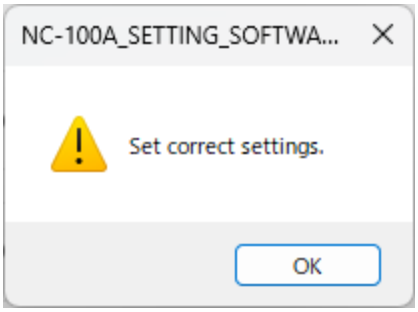
5. Start RS-485 Communication

Pressing the **[CONNECT] button** starts RS-485 communication between this software and the Digital Conversion Unit under the set conditions.



If communication is successful, the RS-485 CONNECT screen closes automatically, and communication starts on the main screen.

If communication fails, a message box is displayed, and the display returns to the RS-485 CONNECT screen.



In this case, please check if there are any errors in the RS-485 communication conditions set on the screen.

5-3.Disconnection of RS-485 Communication

The procedure for disconnecting RS-485 communication between this software and the Digital Conversion Unit is described below.

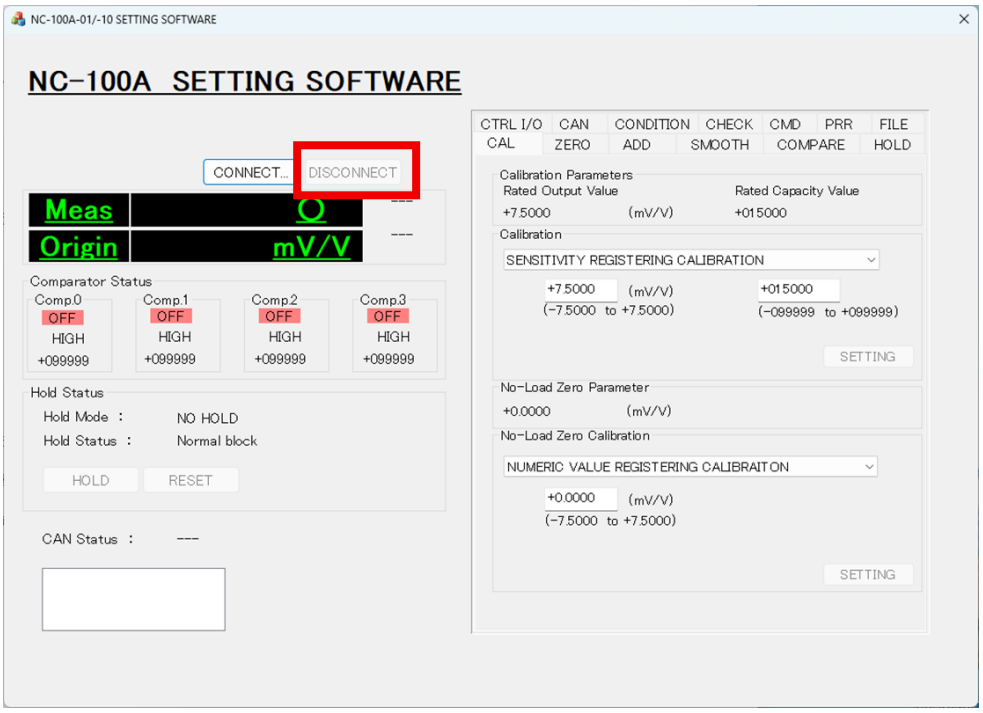
1. Disconnecting RS-485 Communication

Press the **[DISCONNECT] button** on the main screen of this software.

Communication between this software and the Digital Conversion Unit is disconnected, and the [CONNECT...] button becomes enabled.

When RS-485 communication is disconnected, the [DISCONNECT] button becomes disabled.

To start RS-485 communication between this software and the Digital Conversion Unit again, refer to "5-2-2 RS-485 Communication Setting Procedure" and configure the RS-485 communication settings.



6.Settings and Operations of the Digital Conversion Unit

6-1.Tab Screen

6-1-1.Outline of the Tab Screen

The right side of the main screen has a tab structure. Selecting a tab at the top of the screen displays the tab screen for the corresponding function. On the tab screen, various settings can be configured for the Digital Conversion Unit connected to this software.

The setting values displayed when opening each tab change according to the following rules.

1. Setting values in group boxes

The setting values read from the Digital Conversion Unit are displayed when the tab is switched. If the settings of the Digital Conversion Unit are changed on each screen, the new setting values will be displayed when moving to the tab again.
Refer to the description of each tab for details.

2. Settings for radio buttons, combo boxes, text boxes, etc.

Items are selected or input according to the following rules when the tab is switched.

- At startup of this software
  The setting values when opening each tab are the initial values set at the factory shipment of the Digital Conversion Unit.

- When settings are loaded from a file on the [FILE] tab
  The setting values when opening each tab are the setting values loaded from the setting file. They are reset when this software is closed.

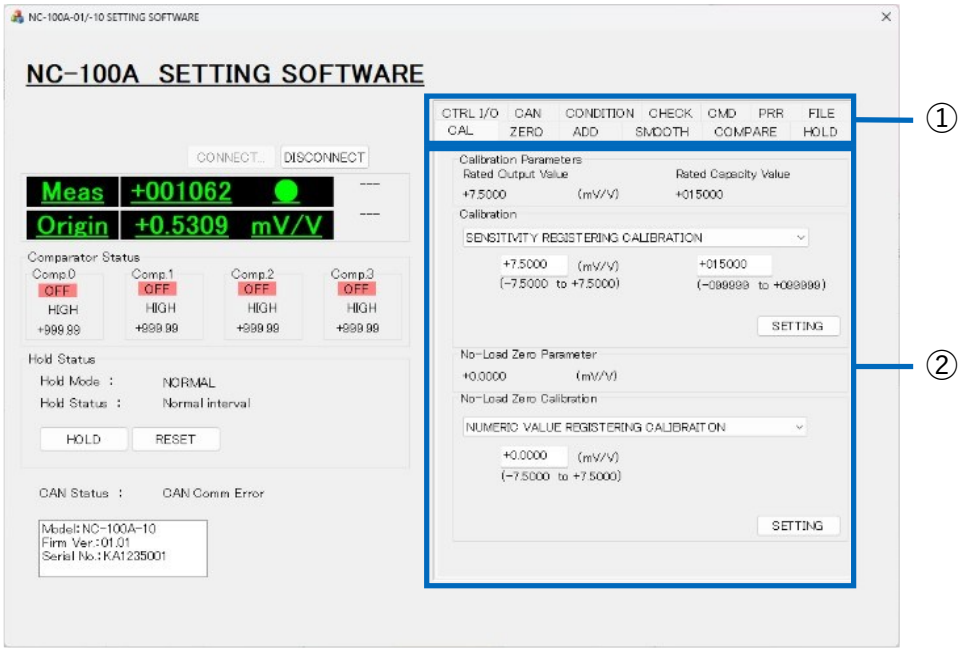
- When settings are configured on each tab
  If settings are configured on that tab after starting this software, those setting values are registered as the setting values when opening the tab.

If setting values are operated on each tab and the tab is switched to another tab without performing operations such as setting or execution using the [SETTING] button, [CHANGE] button, etc., the settings being configured at that time are reset and changed according to the above rules.

Refer to "6-14 [FILE] Tab" for the [FILE] tab. The setting values of the Digital Conversion Unit can be saved to a setting file.

6-1-2.Description of the Tab Screen

This section describes the tab screen.



No.	Name	Description
(1)	Tab Selection Area	Allows switching the screen displayed by this software.
(2)	Tab Screen	Displays the screen related to the function selected in (1).

The tabs that can be selected in (1) are explained below.

Tab Name	Function	Description
CAL	Calibration Function Setting	Allows setting of the calibration functions of the Digital Conversion Unit. Refer to "6-2 [CAL] Tab" for details.
ZERO	Zero Function Setting	Allows setting of the Tare Zero function, Digital Zero function, and Automatic Zero Compensation function of the Digital Conversion Unit. Refer to "6-3 [ZERO] Tab" for details.
ADD	Additional Value Function / Level Test Function Setting	Allows setting of the Additional Value function and Level Test function of the Digital Conversion Unit Refer to "6-4 [ADD] Tab" for details.
SMOOTH	Smoothing Function Setting	Allows setting of the Smoothing function of the Digital Conversion Unit. Refer to "6-5 [SMOOTH] Tab" for details.
COMPARE	Comparison Function Setting	Allows setting of the Comparison function of the Digital Conversion Unit. Refer to "6-6 [COMPARE] Tab" for details.
HOLD	Hold Function Setting	Allows setting of the Hold function of the Digital Conversion Unit. Refer to "6-7 [HOLD] Tab" for details.
CTRL I/O	Control I/O Function Setting	Allows setting of the Control I/O function of the Digital Conversion Unit. Refer to "6-8 [CTRL I/O] Tab (NC-100A-01 Function)" for details.
CAN	CAN Function Setting	Allows setting of the CAN function for NC-100A-10. Also allows creation of a corresponding CANdb file. Refer to "6-9 [CAN] Tab (NC-100A-10 Function)" for details.
CONDITION	Measurement Condition Function Setting	Allows setting of measurement condition switching and initialization to factory settings for the Digital Conversion Unit. Refer to "6-10 [CONDITION] Tab" for details.
CHECK	Self-Check Function Execution / User String Saving Function Setting	Allows setting and execution of the self-check function and User String Saving function of the Digital Conversion Unit. Refer to “6-11 [CHECK] Tab” for details.
CMD	Arbitrary Command Execution	Allows sending of RS-485 communication commands to the Digital Conversion Unit and confirming the response. Refer to “6-12 [CMD] Tab” for details.

PRR	Setting Value Loading/Display	Displays a list of setting values that can be loaded from the Digital Conversion Unit. Refer to "6-13 [PRR] Tab" for details.
FILE	Setting File Management	Allows saving the setting values of the Digital Conversion Unit as a setting file. The settings in this file can be loaded to be the setting values on this software. Refer to "6-14 [FILE] Tab" for details.

6-2.[CAL] Tab

6-2-1.Outline of the [CAL] Tab

1. Functions settable on the [CAL] tab

The [CAL] tab provides the following functions:

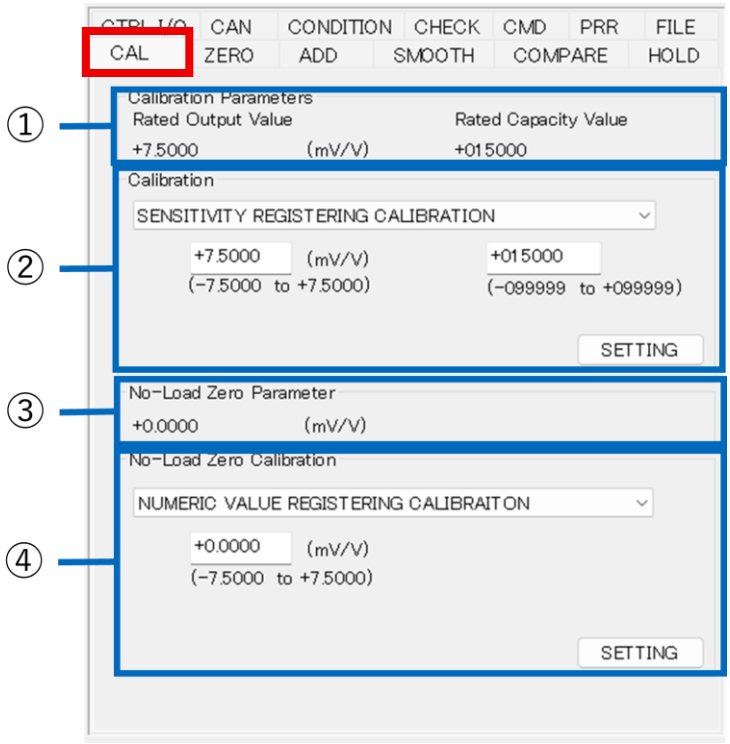
- Display of calibration information of the Digital Conversion Unit (Rated Capacity Value, Rated Output Value, No-Load Zero Value)
- Execution of various calibration functions of the Digital Conversion Unit

Refer to "9. CALIBRATION" in the "IM-A-1491 NC-100A Series INSTRUCTION MANUAL" for details on each calibration function.

2. About saving settings in the [CAL] tab

The information registered when executing each function is always saved to the Digital Conversion Unit.

6-2-2.Description of the [CAL] Tab



No.	Name	Description
(1)	Calibration Parameter Group Box	Reads and displays the calibration settings of the Digital Conversion Unit. Updated to the latest settings when the [SETTING] button in (2) is pressed. **Rated Output Value**: Displays the rated output value. **Rated Capacity Value**: Displays the rated capacity value.
(2)	Calibration Setting Controls (Combo Box, Text Box)	Configures the calibration method using each control. Pressing the [SETTING] button applies each setting to the Digital Conversion Unit. **SENSITIVITY REGISTERING CALIBRATION**: Executes sensitivity registering calibration when the [SETTING] button is pressed. **ACTUAL LOAD CALIBRATION**: Executes actual load calibration when the [SETTING] button is pressed. **TEDS CALIBRATION**: Executes TEDS calibration when the [SETTING] button is pressed. Text boxes for necessary setting items (Rated Capacity Value, Rated Output Value) are displayed according to the selected calibration method. The setting range for Rated Output Value is -7.5000 to +7.5000 (mV/V). The setting range for Rated Capacity Value is -099999 to +099999. Refer to "9. CALIBRATION" in the "IM-A-1491 NC-100A Series INSTRUCTION MANUAL" for details on each calibration.

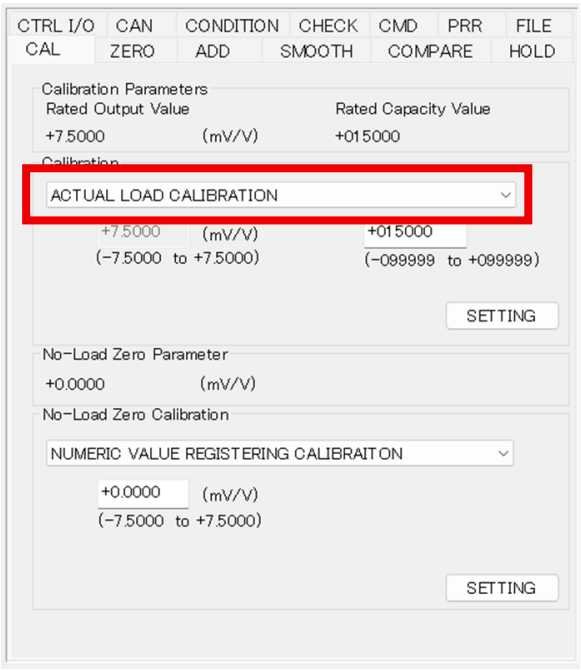
(3)	No-Load Zero Parameter Group Box	Reads and displays the no-load zero setting value of the Digital Conversion Unit connected via RS-485 communication. Updated to the latest setting when the [SETTING] button in (4) is pressed.
(4)	No-Load Zero Calibration Setting Controls (Combo Box, Text Box)	Configures the no-load zero calibration method using each control. Pressing the [SETTING] button applies each setting to the Digital Conversion Unit. **NUMERIC VALUE REGISTERING CALIBRATION**: Executes numeric value registering calibration when the [SETTING] button is pressed. **NO-LOAD ZERO CALIBRATION**: Executes no-load zero calibration when the [SETTING] button is pressed. Text boxes for necessary setting locations are displayed according to the selected no-load zero calibration method. The setting range is -7.5000 to +7.5000 (mV/V). Refer to "9. CALIBRATION" in the "IM-A-1491 NC-100A Series INSTRUCTION MANUAL" for details on each no-load zero calibration.

6-2-3.Actual Load Calibration Procedure

The procedure for performing actual load calibration of the Digital Conversion Unit is described below.
It is recommended to perform no-load zero setting before performing actual load calibration.
Refer to “6-2-6 Numeric Value Registering Calibration Procedure” and ”6-2-7 No-Load Zero Calibration Procedure” for no-load zero setting.

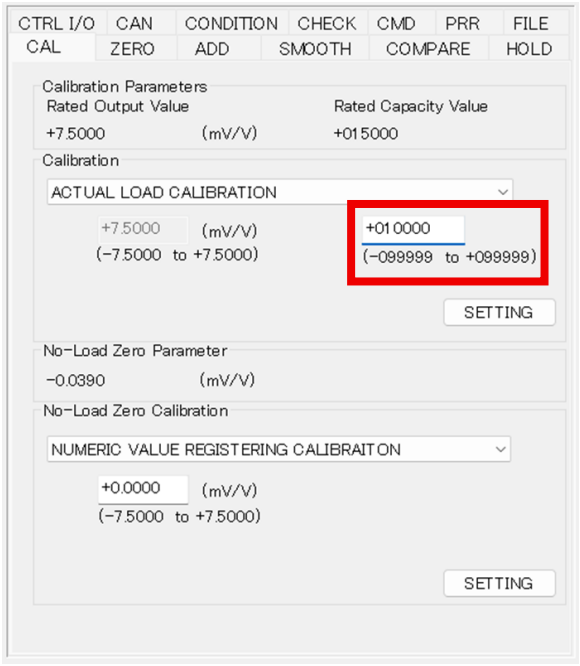
1. Set the Calibration Method

Operate the area indicated by the red frame in the figure below to set the calibration method of the Digital Conversion Unit to **ACTUAL LOAD CALIBRATION**.



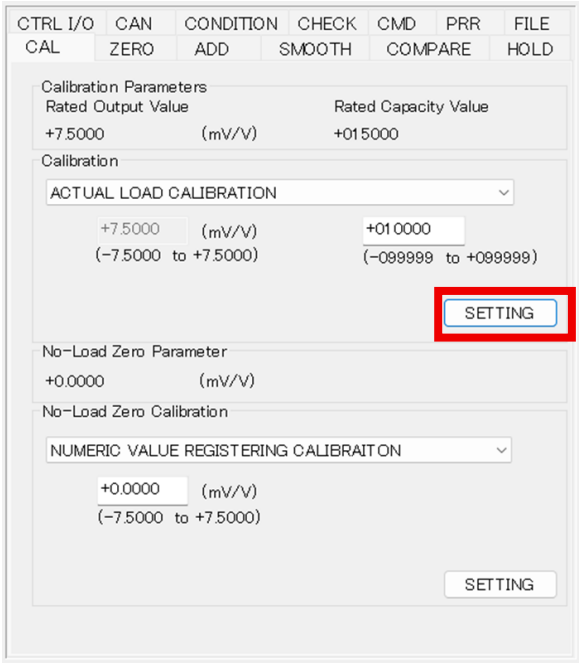
2. Set the Rated Capacity Value

Input the rated capacity value in the area indicated by the red frame in the figure below.

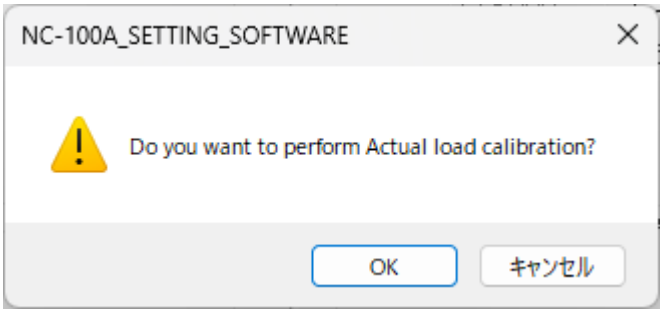


3. Execute Actual Load Calibration

Press the **[SETTING] button** indicated by the red frame in the figure below to execute actual load calibration.

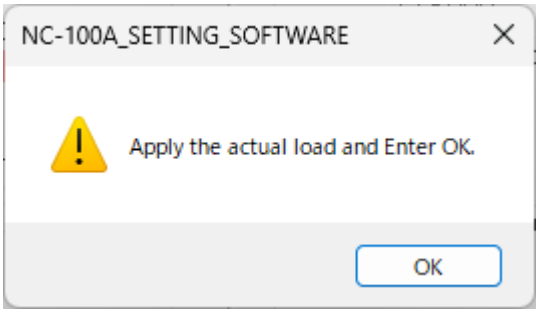


A message box confirming the execution of actual load calibration is displayed. Pressing the **[OK] button** executes actual load calibration.



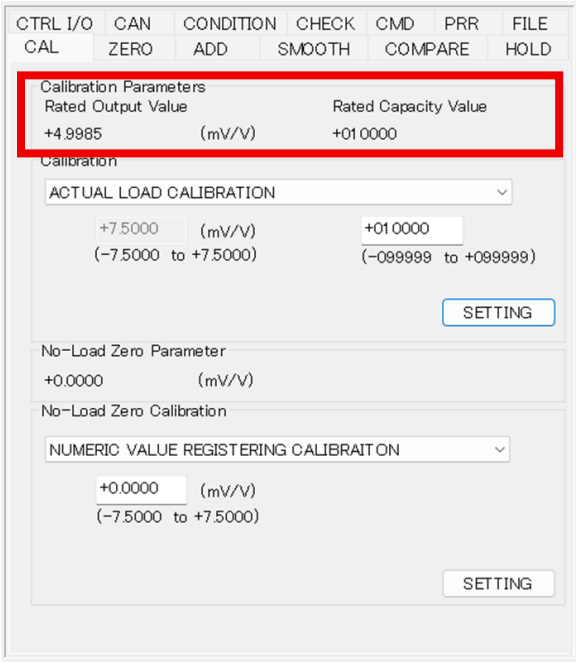
4. Apply Rated Capacity to the Digital Conversion Unit

Follow the instructions in the message box to apply a load equivalent to the rated capacity to the strain gage transducer connected to the Digital Conversion Unit, and press the **[OK] button**.



5. Update Calibration Values

The new calibration values registered by the actual load calibration are reflected in the settings within **Calibration Parameters**.



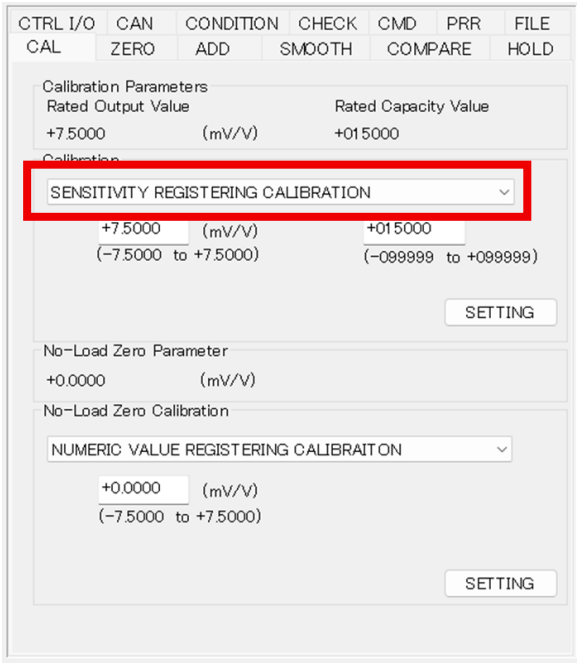
6-2-4.Sensitivity Registering Calibration Procedure

The procedure for performing sensitivity registering calibration of the Digital Conversion Unit is described below.

It is recommended to perform no-load zero setting before performing sensitivity registering calibration. Refer to “6-2-6 Numeric Value Registering Calibration Procedure” and ”6-2-7 No-Load Zero Calibration Procedure” for no-load zero setting.

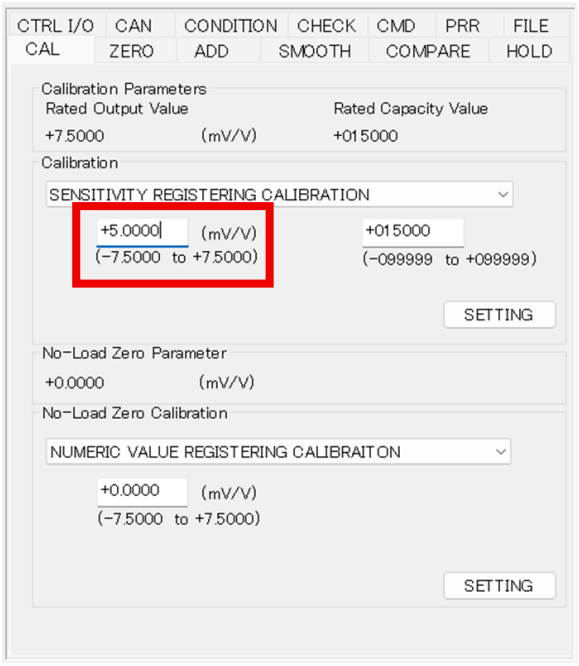
1. Set the Calibration Method

Operate the area indicated by the red frame in the figure below to set the calibration method of the Digital Conversion Unit to **SENSITIVITY REGISTERING CALIBRATION**.



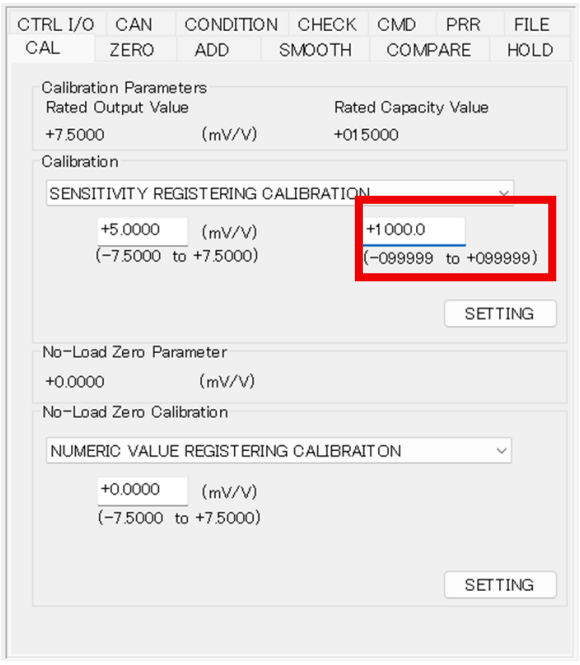
2. Set the Rated Output Value

Input the rated output value in the area indicated by the red frame in the figure below.



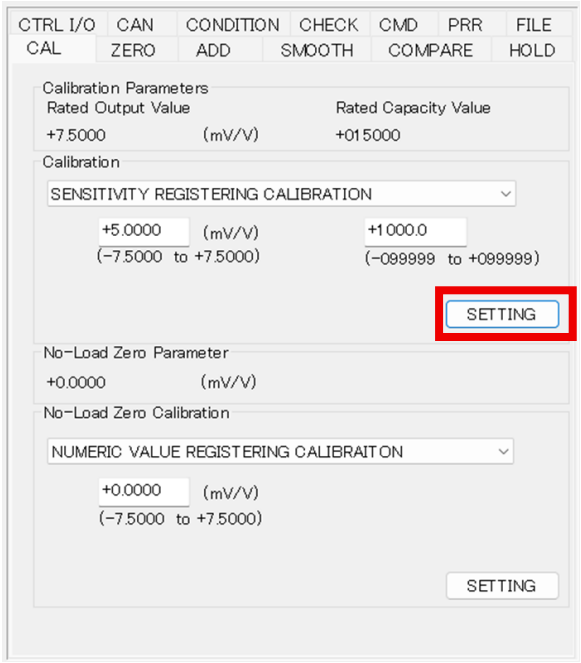
3. Set the Rated Capacity Value

Input the rated capacity value in the area indicated by the red frame in the figure below.

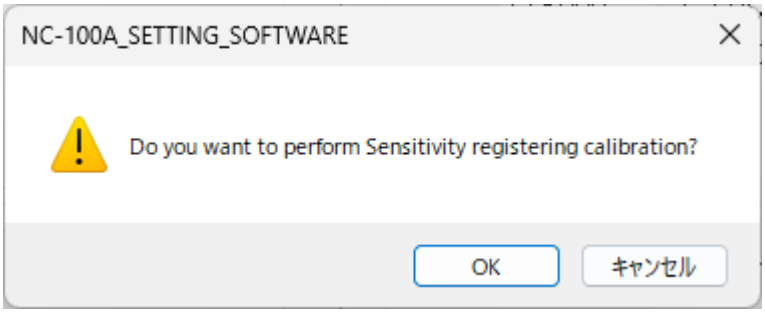


4. Execute Sensitivity Registering Calibration

Press the **[SETTING] button** indicated by the red frame in the figure below to execute sensitivity registering calibration.

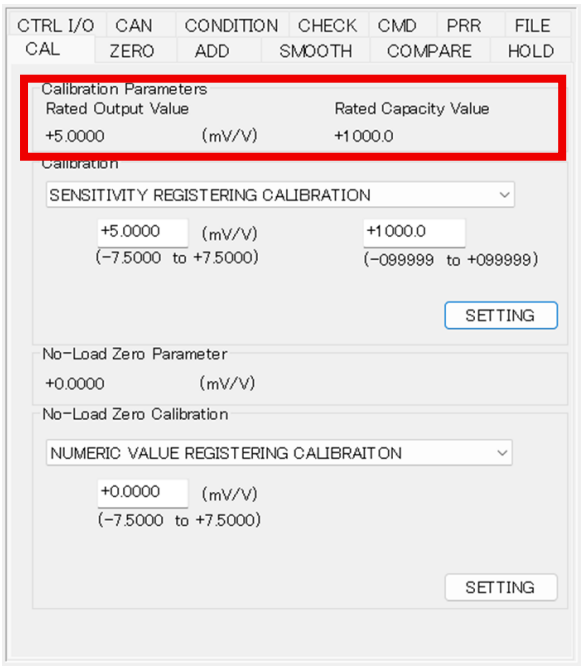


A message box confirming the execution of sensitivity registering calibration is displayed. Pressing the **[OK] button** executes sensitivity registering calibration.



5. Update Calibration Values

The new calibration values registered by the sensitivity registering calibration are reflected in the settings within **Calibration Parameters**.

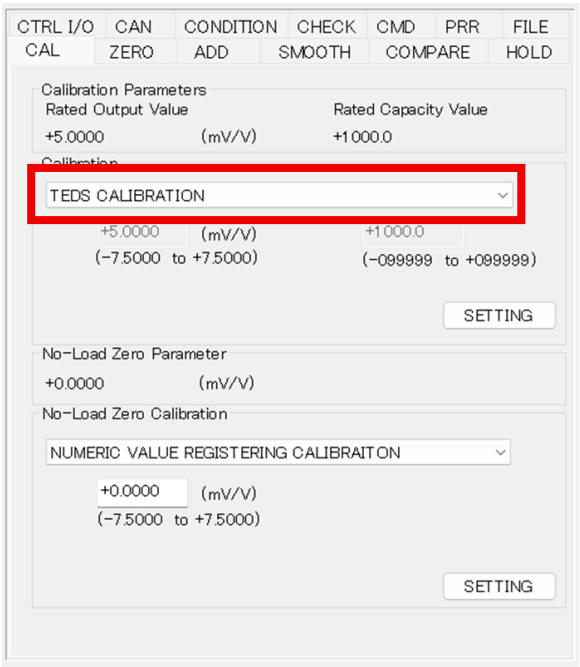


6-2-5.TEDS Calibration Procedure

The procedure for performing TEDS calibration of the Digital Conversion Unit is described below.
It is recommended to perform no-load zero setting before performing TEDS calibration.
Refer to “6-2-6 Numeric Value Registering Calibration Procedure” and ”6-2-7 No-Load Zero Calibration Procedure” for no-load zero setting.

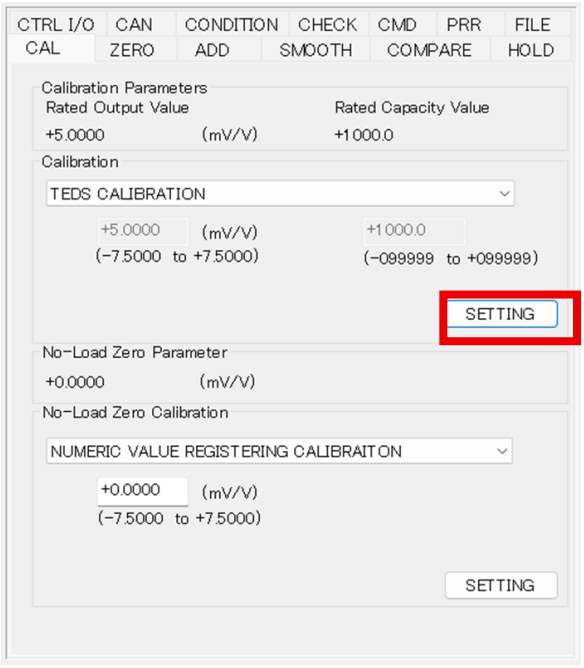
1. Set the Calibration Method

Operate the area indicated by the red frame in the figure below to set the calibration method of the Digital Conversion Unit to **TEDS CALIBRATION**.

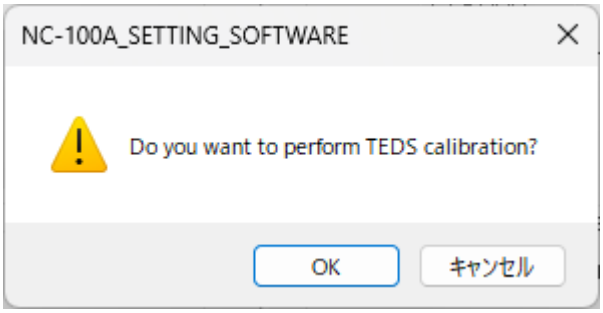


2. Execute TEDS Calibration

Press the **[SETTING] button** indicated by the red frame in the figure below to execute TEDS calibration.

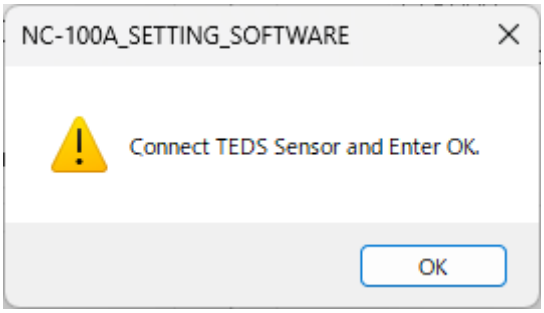


A message box confirming the execution of TEDS calibration is displayed. Pressing the **[OK] button** executes TEDS calibration.



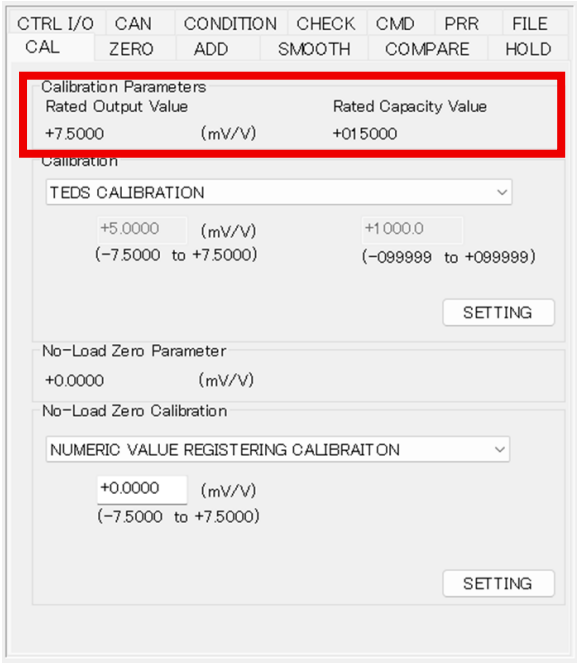
3. Connect TEDS Compatible Sensor to the Digital Conversion Unit

Follow the displayed message to connect a TEDS-compatible strain gage transducer to the Digital Conversion Unit. Refer to "5-1. Strain Gage Transducer Wiring" in the "IM-A-1491 NC-100A Series INSTRUCTION MANUAL" for details on connection methods. After connecting, press the **[OK] button**.



4. Update Calibration Values

The new calibration values registered by the TEDS calibration are reflected in the settings within **Calibration Parameters**.

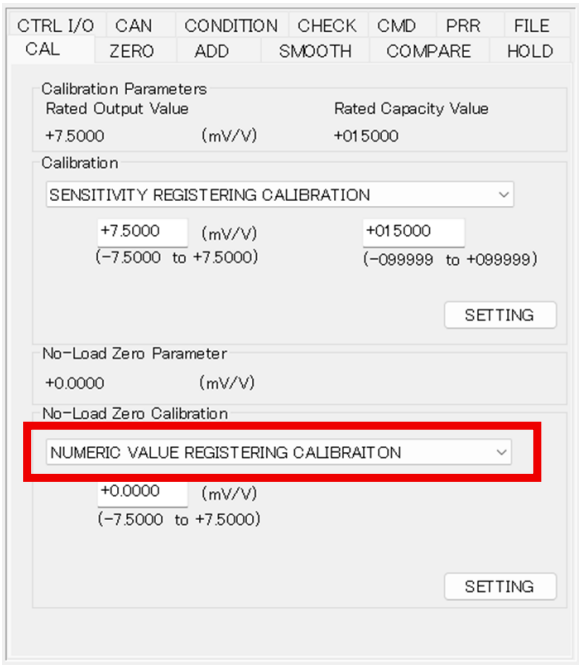


6-2-6.Numeric Value Registering Calibration Procedure

The procedure for performing numeric value registering calibration (no-load zero) of the Digital Conversion Unit is described below.

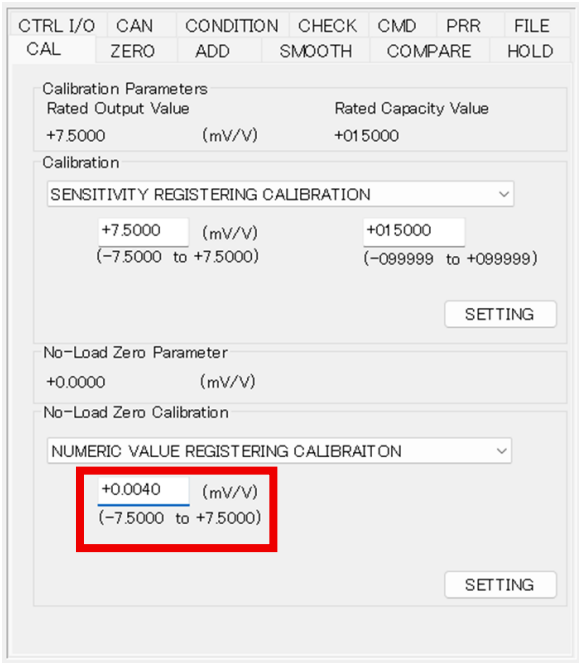
1. Set the No-Load Zero Calibration Method

Operate the area indicated by the red frame in the figure below to set the no-load zero calibration method of the Digital Conversion Unit to **NUMERIC VALUE REGISTERING CALIBRATION**.



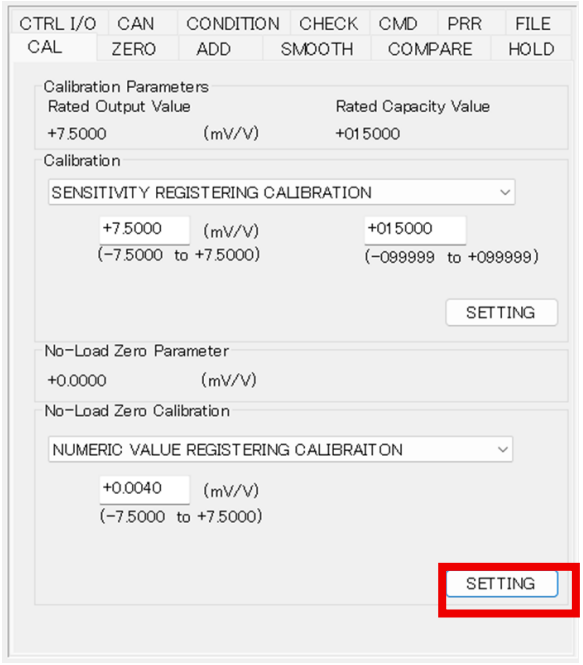
2. Set the No-Load Zero Value

Input the no-load zero value in the area indicated by the red frame in the figure below.

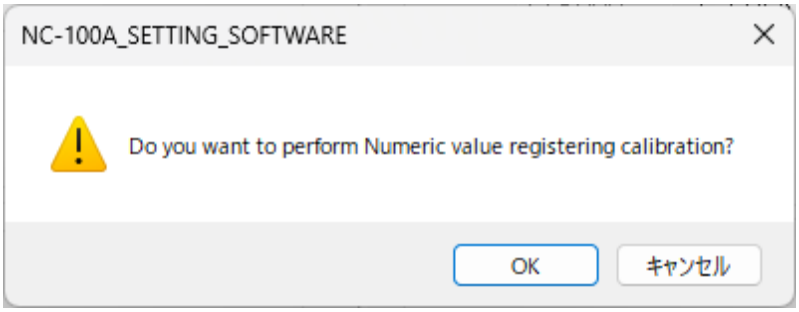


3. Execute Numeric Value Registering Calibration

Press the **[SETTING] button** indicated by the red frame in the figure below to execute numeric value registering calibration.

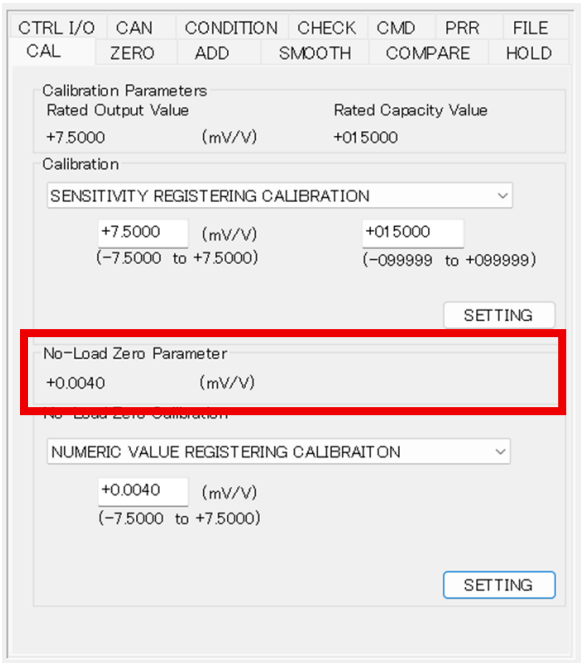


A message box confirming the execution of numeric value registering calibration is displayed. Pressing the **[OK] button** executes numeric value registering calibration.



4. Update No-Load Zero Value

The new no-load zero value registered by the numeric value registering calibration is reflected in the settings within **No-Load Zero Parameter**.

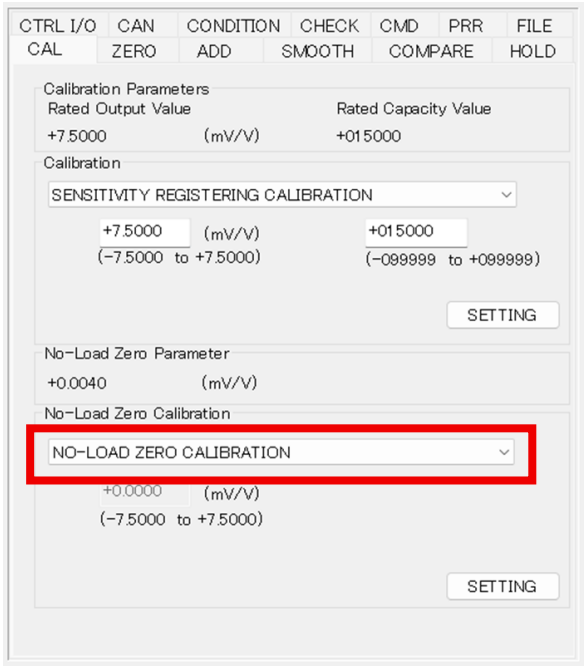


6-2-7.No-Load Zero Calibration Procedure

The procedure for performing no-load zero calibration of the Digital Conversion Unit is described below.

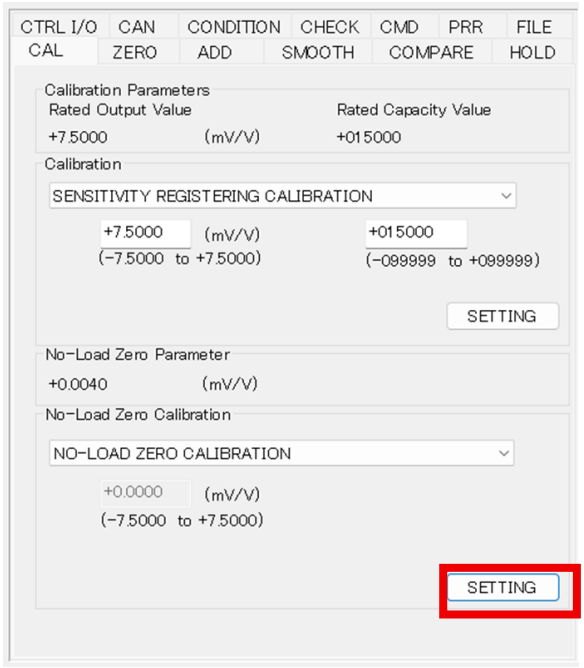
1. Set the No-Load Zero Calibration Method

Operate the area indicated by the red frame in the figure below to set the no-load zero calibration method of the Digital Conversion Unit to **NO-LOAD ZERO CALIBRATION**.

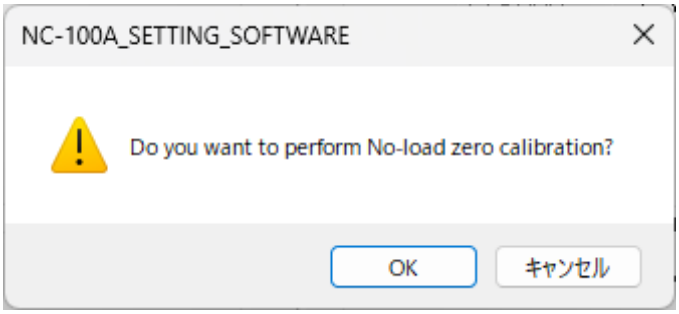


2. Execute No-Load Zero Calibration

Press the **[SETTING] button** indicated by the red frame in the figure below to execute no-load zero calibration.

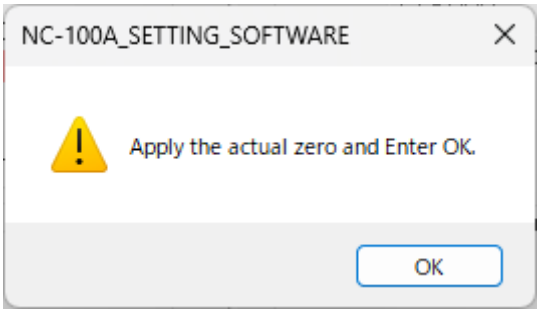


A message box confirming the execution of no-load zero calibration is displayed. Pressing the **[OK] button** executes no-load zero calibration.



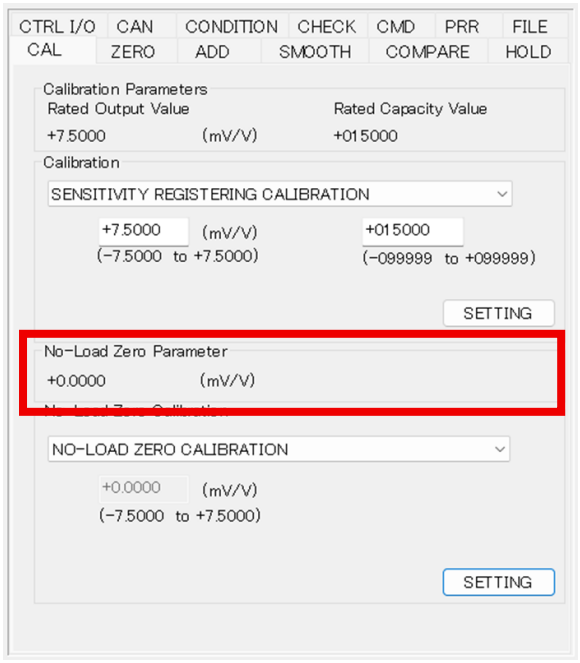
3. Input No-Load State to the Digital Conversion Unit

Follow the displayed message to put the sensor connected to the Digital Conversion Unit into a no-load state. Press the **[OK] button**.



4. Update No-Load Zero Value

The new no-load zero value registered by the no-load zero calibration is reflected in the settings within **No-Load Zero Parameter**.



6-3.[ZERO] Tab

6-3-1.Outline of the [ZERO] Tab

1. Functions settable on the [ZERO] tab

The [ZERO] tab provides the following functions:

- Display of zero function settings of the Digital Conversion Unit (Tare Zero function, Digital Zero function, Automatic Zero Compensation function)
- Setting of zero functions of the Digital Conversion Unit

Refer to "11-1. Zero Functions" in the "IM-A-1491 NC-100A Series INSTRUCTION MANUAL" for details on each function.

2. About saving settings in the [ZERO] tab

If the [SAVE ROM] checkbox is set to ON when setting each item, the setting values are saved to the Digital Conversion Unit.

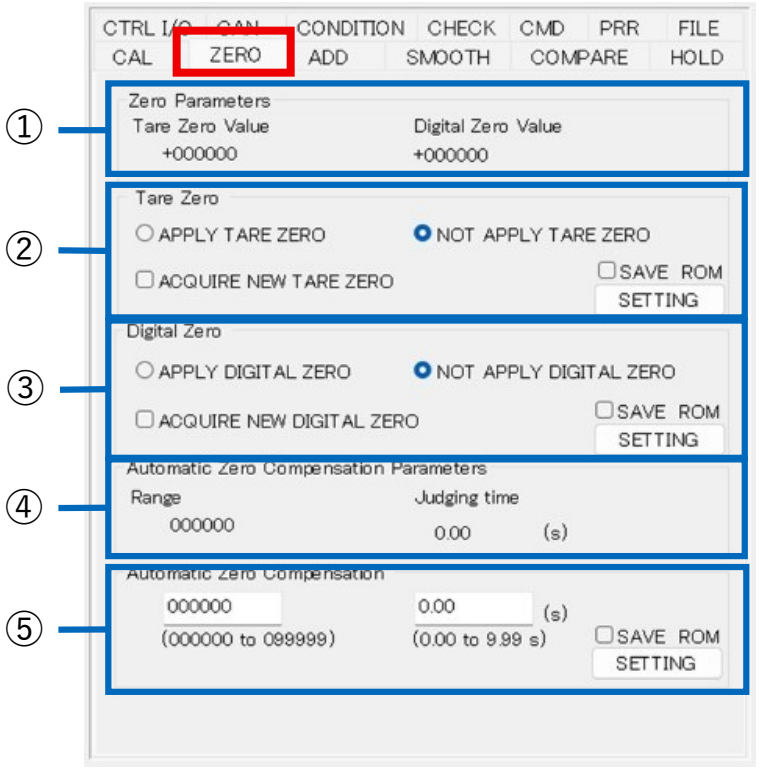
3. About the display of settings in the [ZERO] tab

The digital zero setting value is displayed in the [ZERO] tab.
This setting value is updated when the digital zero function of the Digital Conversion Unit is configured.
However, the display is not updated in the following cases even if the digital zero setting value of the Digital Conversion Unit is updated:

- When the digital zero setting value is updated by automatic zero compensation.
- When the digital zero setting value is updated by the main unit switch of the Digital Conversion Unit.

If the digital zero setting value is updated by the above functions, switching the tab allows loading the digital zero setting value at that time.

6-3-2.Description of the [ZERO] Tab



No.	Name	Description
(1)	Zero Function Setting Values Group Box	Reads and displays the zero function settings of the Digital Conversion Unit connected via RS-485 communication. Updated to the latest settings when the [SETTING] button in (2) or (3) is pressed. **Tare Zero Value**: Displays the tare zero setting value. **Digital Zero Value**: Displays the digital zero setting value.

(2)	Tare Zero Setting Controls (Radio Button, Checkbox, Command Button)	Configures the Tare Zero function using each control. Pressing the [SETTING] button applies each setting to the Digital Conversion Unit. **[APPLY TARE ZERO] Radio Button**: When selected, the tare zero value is reflected in the measurement data. **[NOT APPLY TARE ZERO] Radio Button**: When selected, the tare zero value is not reflected in the measurement data. **[ACQUIRE NEW TARE ZERO] Checkbox**: When set to ON, executes tare zero when the [SETTING] button is pressed. **[SAVE ROM] Checkbox**: When set to ON, saves the setting values within the frame to the Digital Conversion Unit during setting. Refer to "11-1-1. Tare Zero Function" in the "IM-A-1491 NC-100A Series INSTRUCTION MANUAL" for details on the Tare Zero function.
(3)	Digital Zero Setting Controls (Radio Button, Checkbox, Command Button)	Configures the Digital Zero function using each control. Pressing the [SETTING] button applies each setting to the Digital Conversion Unit. **[APPLY DIGITAL ZERO] Radio Button**: When selected, the digital zero value is reflected in the measurement data. **[NOT APPLY DIGITAL ZERO] Radio Button**: When selected, the digital zero value is not reflected in the measurement data. **[ACQUIRE NEW DIGITAL ZERO] Checkbox**: When set to ON, executes digital zero when the [SETTING] button is pressed. **[SAVE ROM] Checkbox**: When set to ON, saves the setting values within the frame to the Digital Conversion Unit during setting. Refer to "11-1-2. Digital Zero Function" in the "IM-A-1491 NC-100A Series INSTRUCTION MANUAL" for details on the Digital Zero function.

(4)	Automatic Zero Compensation Function Setting Values Group Box	Reads and displays the automatic zero compensation function settings of the Digital Conversion Unit connected via RS-485 communication. Updated to the latest settings when the [SETTING] button in (5) is pressed. **Range**: Displays the automatic zero compensation range. **Zero compensation time**: Displays the automatic zero compensation time.
(5)	Automatic Zero Compensation Setting Controls (Radio Button, Checkbox, Command Button)	Configures the Automatic Zero Compensation function using each control. Pressing the [SETTING] button applies each setting to the Digital Conversion Unit. **Text Box (Left)**: Sets the automatic zero compensation range. The setting range is 000000 to 099999. **Text Box (Right)**: Sets the automatic zero compensation time. The setting range is 0.00 to 9.99 (s). **[SAVE ROM] Checkbox**: When set to ON, saves the setting values within the frame to the Digital Conversion Unit during setting. Refer to "11-1-4. Automatic Zero Compensation Function" in the "IM-A-1491 NC-100A Series INSTRUCTION MANUAL" for details on the Automatic Zero Compensation function.

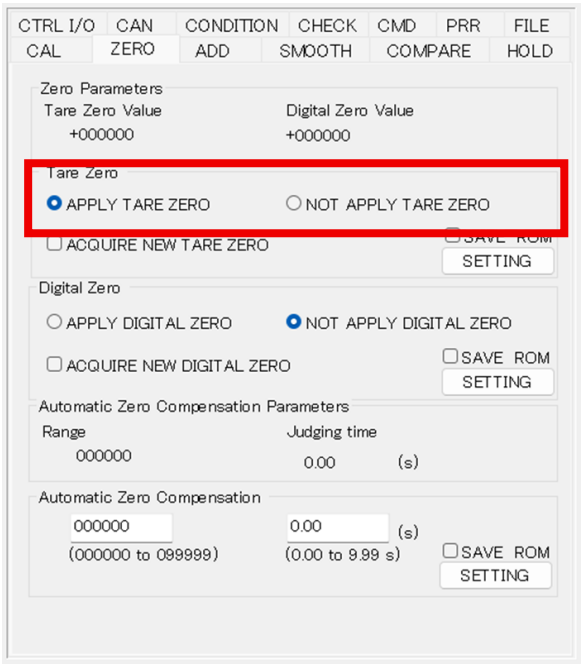
6-3-3.Tare Zero Setting Procedure

The procedure for configuring tare zero settings for the Digital Conversion Unit is described below.

1. Set Whether to Reflect Tare Zero in Measurement Data

Operate the area indicated by the red frame in the figure below to set whether to reflect the tare zero setting value in the measurement data of the Digital Conversion Unit.

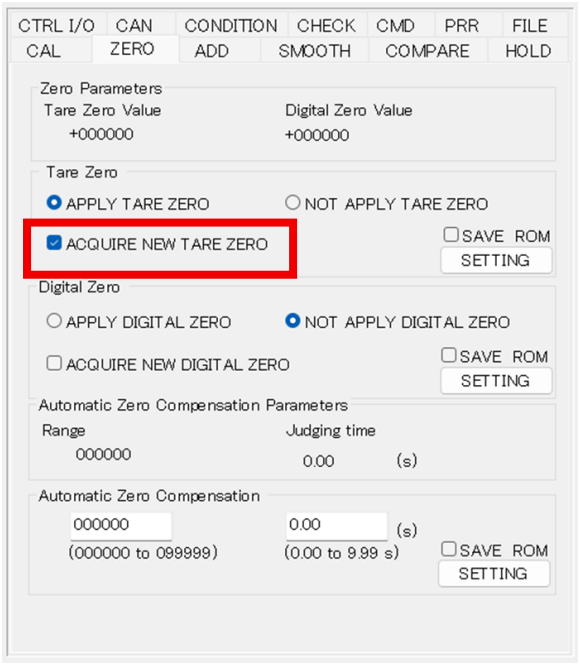
Setting the **[APPLY TARE ZERO] button** to ON configures it to reflect the tare zero setting value, and setting the **[NOT APPLY TARE ZERO] button** to ON configures it not to reflect tare zero.



2. Set Whether to Update Tare Zero

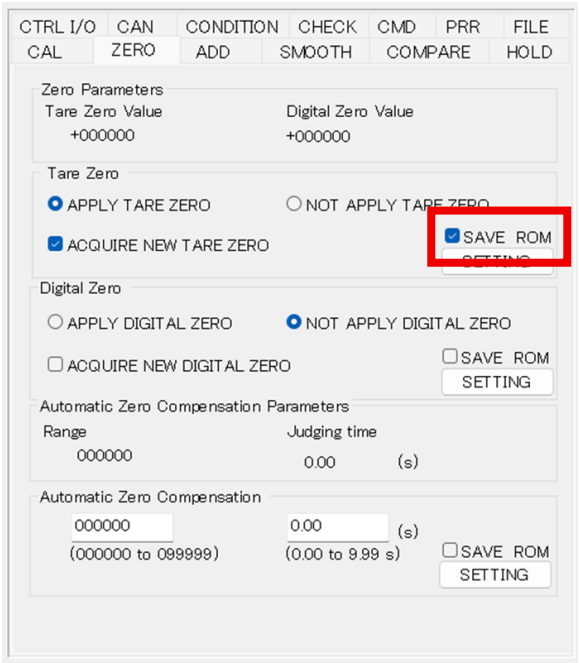
Operate the **[ACQUIRE NEW TARE ZERO] checkbox** to set whether to update the tare zero value of the Digital Conversion Unit.

Setting the **[ACQUIRE NEW TARE ZERO] checkbox** to ON configures it to update the tare zero value, and setting it to OFF configures it not to update the tare zero value.



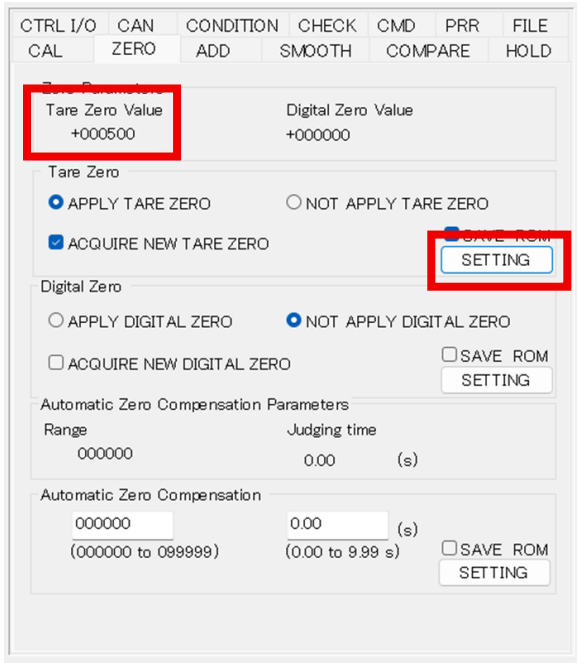
3. Set Whether to Save Tare Zero Settings to the Digital Conversion Unit

Operate the **[SAVE ROM] checkbox** to set whether to save the setting values to the Digital Conversion Unit. Setting the **[SAVE ROM] checkbox** to ON configures it to save the setting values to the Digital Conversion Unit, and setting it to OFF configures it not to save the setting values to the Digital Conversion Unit.



4. Execute Tare Zero Setting

Press the **[SETTING] button** to send and apply the set contents to the Digital Conversion Unit. The latest setting value of the Digital Conversion Unit is reflected in **Tare Zero Value**.



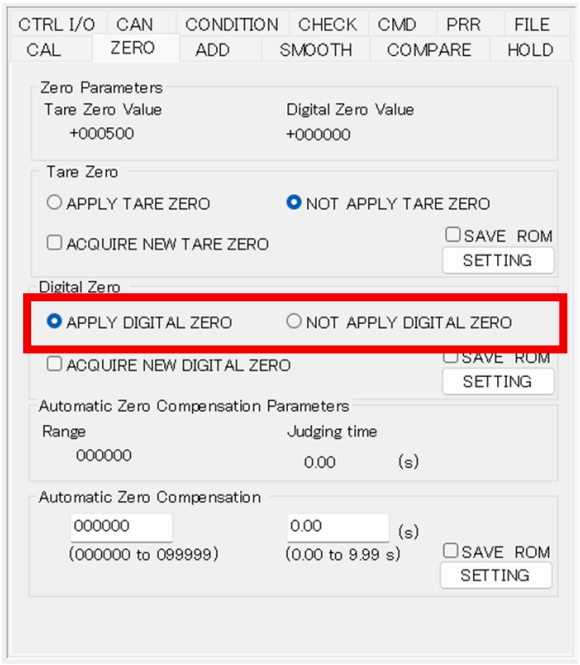
6-3-4.Digital Zero Setting Procedure

The procedure for configuring digital zero settings for the Digital Conversion Unit is described below.

1. Set Whether to Reflect Digital Zero in Measurement Data

Operate the area indicated by the red frame in the figure below to set whether to reflect the digital zero setting value in the measurement data of the Digital Conversion Unit.

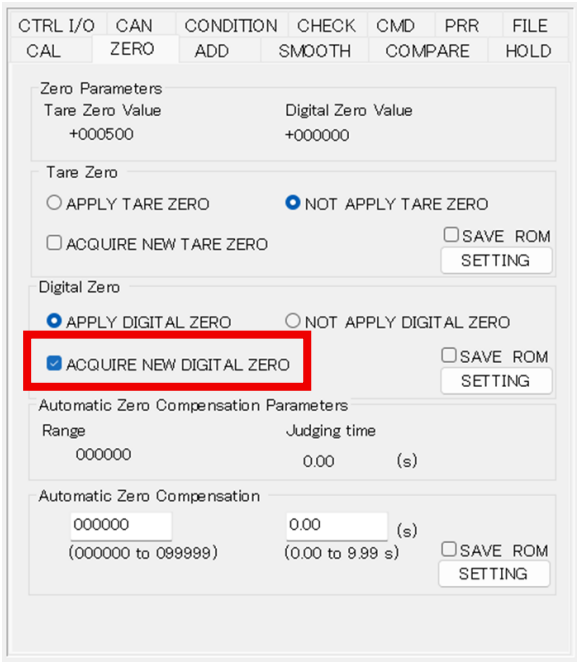
Setting the **[APPLY DIGITAL ZERO] button** to ON configures it to reflect the digital zero setting value, and setting the **[NOT APPLY DIGITAL ZERO] button** to ON configures it not to reflect digital zero.



2. Set Whether to Update Digital Zero

Operate the **[ACQUIRE NEW DIGITAL ZERO] checkbox** to set whether to update the digital zero value of the Digital Conversion Unit.

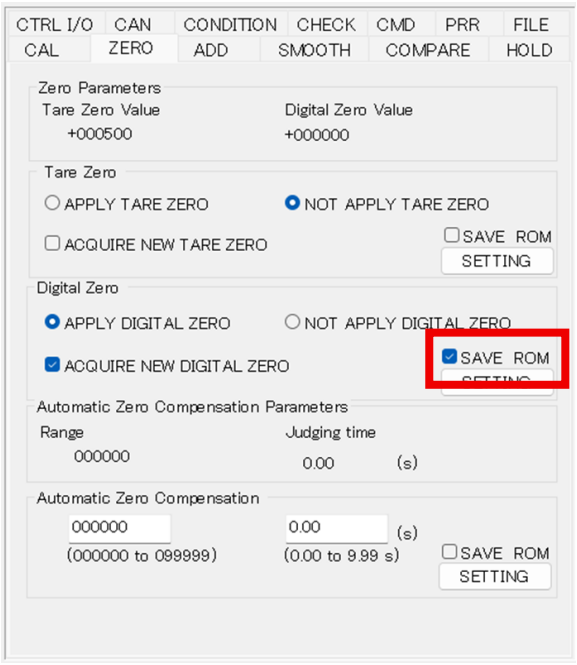
Setting the **[ACQUIRE NEW DIGITAL ZERO]** checkbox to ON configures it to update the digital zero value, and setting it to OFF configures it not to update the digital zero value.



3. Set Whether to Save Digital Zero Settings to the Digital Conversion Unit

Operate the **[SAVE ROM] checkbox** to set whether to save the setting values to the Digital Conversion Unit.

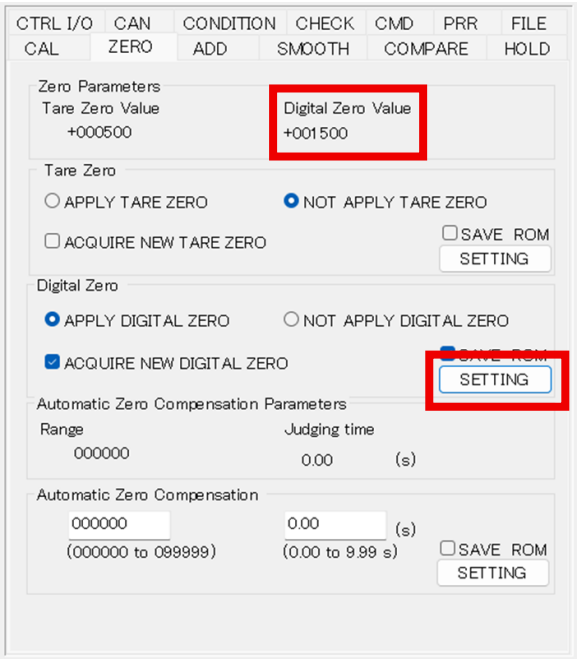
Setting the **[SAVE ROM] checkbox** to ON configures it to save the setting values to the Digital Conversion Unit, and setting it to OFF configures it not to save the setting values to the Digital Conversion Unit.



4. Execute Digital Zero Setting

Press the [**SETTING] button** to send and apply the set contents to the Digital Conversion Unit.

The latest setting value of the Digital Conversion Unit is reflected in **Digital Zero Value**.

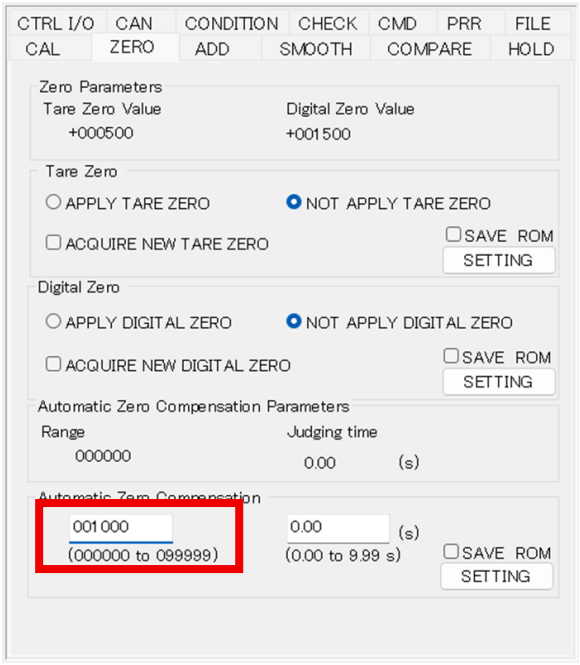


6-3-5.Automatic Zero Compensation Setting Procedure

The procedure for configuring automatic zero compensation settings for the Digital Conversion Unit is described below.

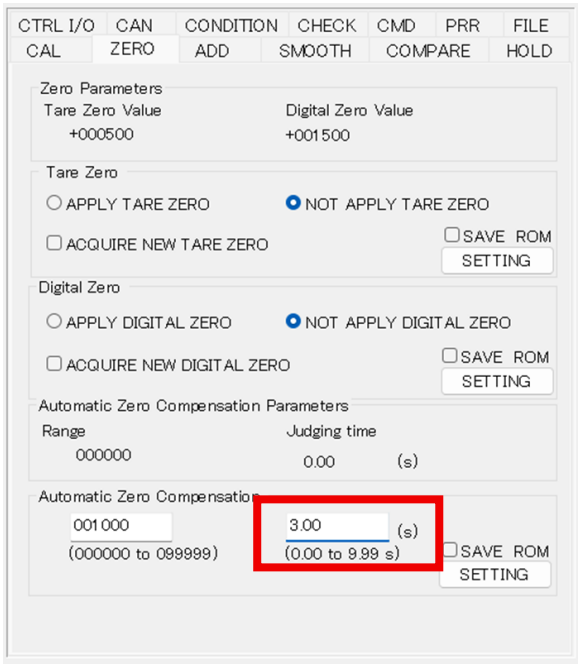
1. Set the Automatic Zero Compensation Range

Input the automatic zero compensation range of the Digital Conversion Unit into the **text box** indicated by the red frame in the figure below.



2. Set the Automatic Zero Compensation Time

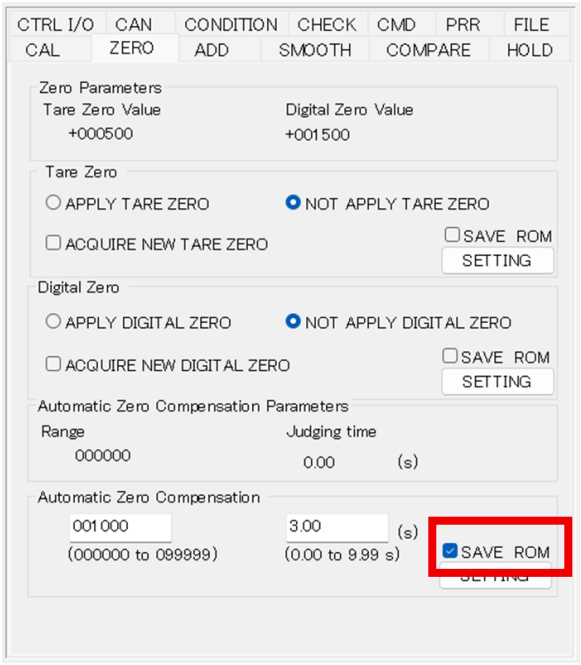
Input the automatic zero compensation time of the Digital Conversion Unit into the **text box** indicated by the red frame in the figure below.



3. Set Whether to Save Automatic Zero Compensation to the Digital Conversion Unit

Operate the **[SAVE ROM] checkbox** to set whether to save the setting values to the Digital Conversion Unit.

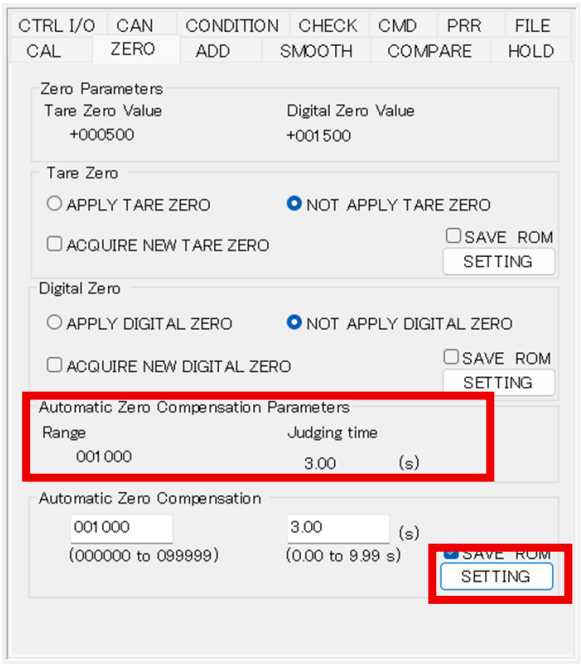
Setting the **[SAVE ROM] checkbox** to ON configures it to save the setting values to the Digital Conversion Unit, and setting it to OFF configures it not to save the setting values to the Digital Conversion Unit.



4. Execute Automatic Zero Compensation Setting

Press the **[SETTING] button** to send and apply the set contents to the Digital Conversion Unit.

The latest setting values of the Digital Conversion Unit are reflected in **Auto Zero Compensation Parameters**.



6-4.[ADD] Tab

6-4-1.Outline of the [ADD] Tab

1. Functions settable on the [ADD] tab

The [ADD] tab provides the following functions:

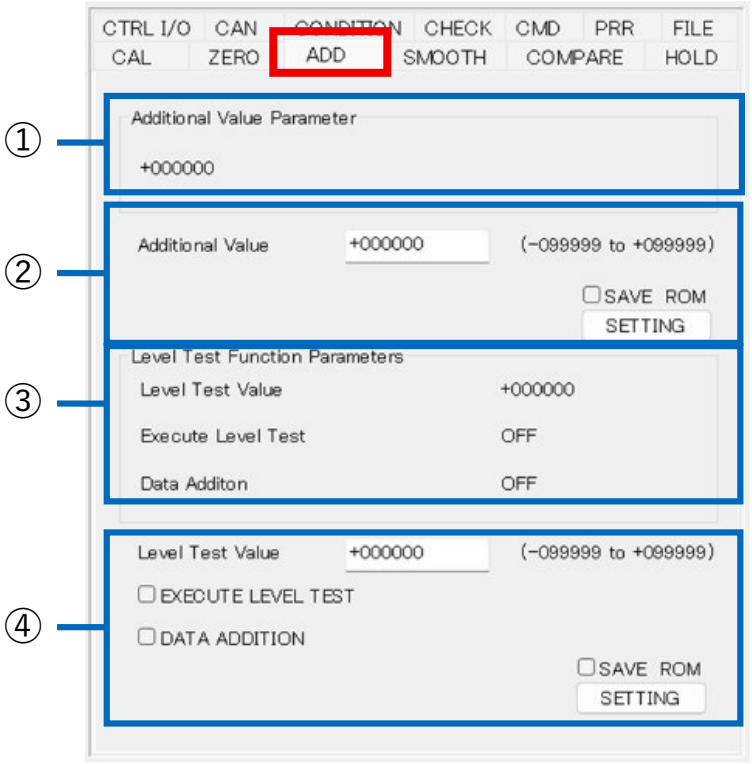
- Display of Additional Value function settings of the Digital Conversion Unit
- Display of Level Test function settings of the Digital Conversion Unit
- Setting of the Additional Value function of the Digital Conversion Unit
- Setting of the Level Test function of the Digital Conversion Unit

Refer to "11-5. Additional Value Function" and "11-6. Level Test Function" in the "IM-A-1491 NC-100A Series INSTRUCTION MANUAL" for details on each function.

2. About saving settings in the [ADD] tab

If the [SAVE ROM] checkbox is set to ON when setting each item, the setting values are saved to the Digital Conversion Unit.

6-4-2. Description of the [ADD] Tab



No.	Name	Description
(1)	Additional Value Function Setting Values Group Box	Reads and displays the Additional Value function settings of the Digital Conversion Unit connected via RS-485 communication. Updated to the latest settings when the [SETTING] button in (2) is pressed.
(2)	Additional Value Setting Controls (Text Box, Checkbox, Command Button)	Configures the Additional Value function using each control. Pressing the [SETTING] button applies each setting to the Digital Conversion Unit. **[Additional Value] Text Box**: Inputs the additional value numerically. The setting range is -099999 to +099999. **[SAVE ROM] Checkbox**: When set to ON, saves the setting values within the frame to the Digital Conversion Unit during setting. Refer to "11-5. Additional Value Function" in the "IM-A-1491 NC-100A Series INSTRUCTION MANUAL" for details on the Additional Value function.

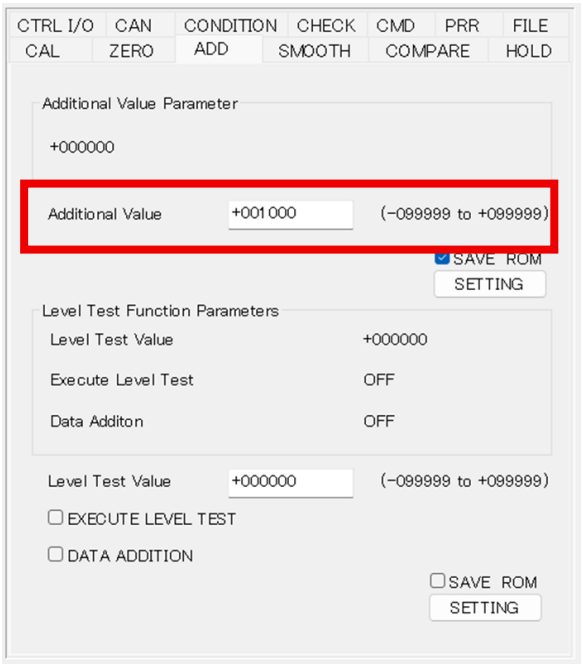
(3)	Level Test Function Setting Values Group Box	Reads and displays the Level Test function settings of the Digital Conversion Unit connected via RS-485 communication. Updated to the latest settings when the [SETTING] button in (4) is pressed. **Level Test Value**: Displays the level test value. **Execute Level Test**: Displays the execution status of the level test. **Data Addition**: Displays the execution status of the function to add measurement data to the level test value.
(4)	Level Test Function Setting Controls (Text Box, Checkbox, Command Button)	Configures the Level Test function using each control. Pressing the [SETTING] button applies each setting to the Digital Conversion Unit. **[Level Test Value] Text Box**: Inputs the level test value numerically. The setting range is -099999 to +099999. **[EXECUTE LEVEL TEST] Checkbox**: Sets the Level Test function to Enabled/Disabled. **[DATA ADDITION] Checkbox**: Sets the function to add measurement data to the level test value to Enabled/Disabled. **[SAVE ROM] Checkbox**: When set to ON, saves the setting values to the Digital Conversion Unit during setting. Refer to "11-6. Level Test Function" in the "IM-A-1491 NC-100A Series INSTRUCTION MANUAL" for details on the Level Test function.

6-4-3.Additional Value Function Setting Procedure

The procedure for configuring the Additional Value function setting for the Digital Conversion Unit is described below.

1. Set the Additional Value

Input an arbitrary additional value into the **text box** indicated by the red frame in the figure below.



2. Set Whether to Save Additional Value Function Setting to the Digital Conversion Unit

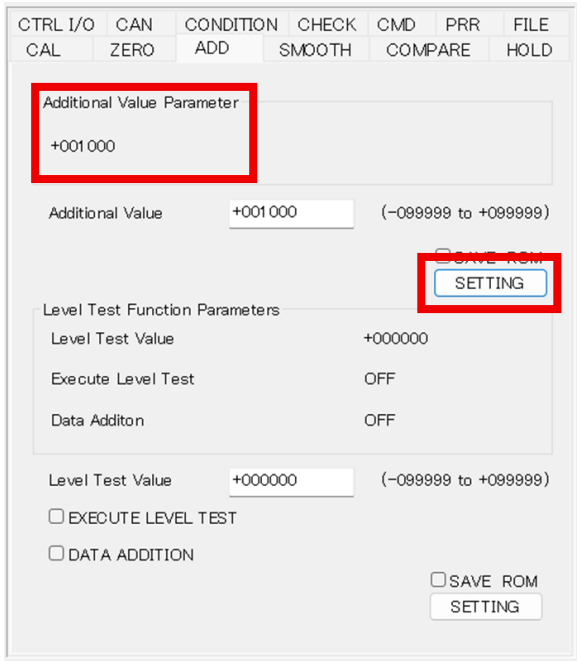
Operate the **[SAVE ROM] checkbox** to set whether to save the setting values to the Digital Conversion Unit.

Setting the **[SAVE ROM] checkbox** to ON configures it to save the setting values to the Digital Conversion Unit, and setting it to OFF configures it not to save the setting values to the Digital Conversion Unit.

3. Execute Additional Value Function Setting

Press the **[SETTING] button** indicated by the red frame in the figure below to send and apply the set contents to the Digital Conversion Unit.

The latest setting value of the Digital Conversion Unit is reflected in **Additional Value Parameter**.

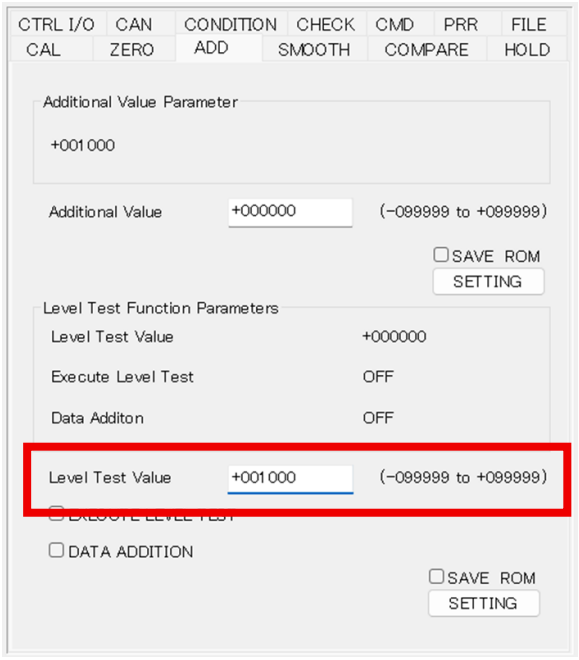


6-4-4.Level Test Function Setting Procedure

The procedure for configuring the Level Test function setting for the Digital Conversion Unit is described below.

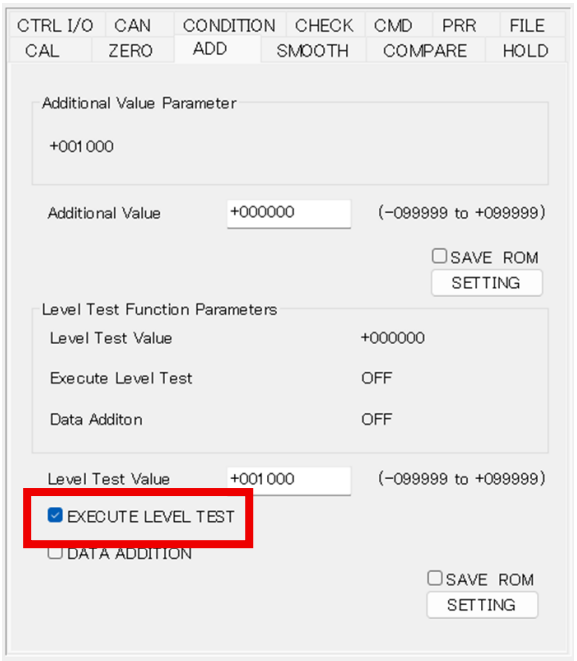
1. Set the Level Test Value

Input an arbitrary level test value into the **text box** indicated by the red frame in the figure below.



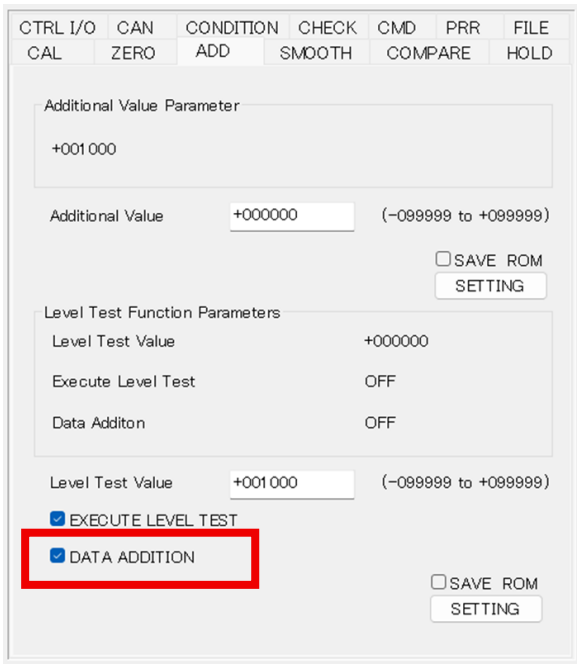
2. Set Level Test ON/OFF

Operate the **[EXECUTE LEVEL TEST] checkbox** to set ON/OFF of the Level Test function.
Setting the **[EXECUTE LEVEL TEST] checkbox** to ON enables the Level Test function, and setting it to OFF disables the Level Test function.



3. Set Whether to Add Measurement Data to Level Test Value

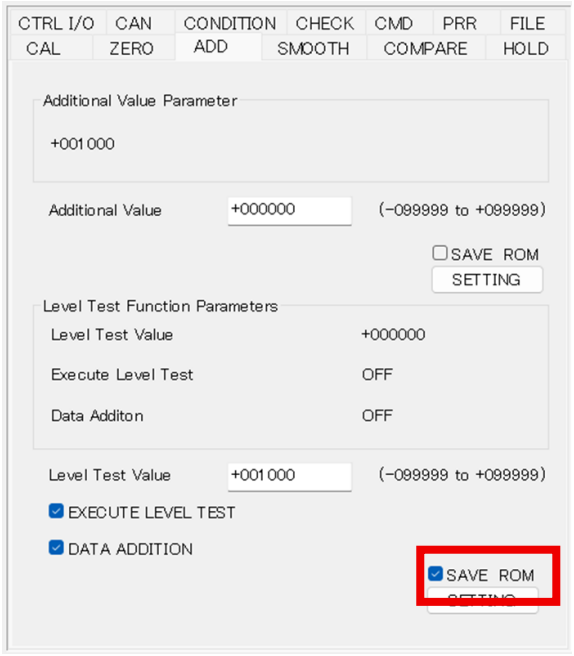
Operate the **[DATA ADDITION] checkbox** to set whether to add measurement data to the level test. Setting the **[DATA ADDITION] checkbox** to ON configures it to add measurement data to the level test, and setting it to OFF configures it not to add measurement data to the level test.



4. Set Whether to Save Level Test Function Setting to the Digital Conversion Unit

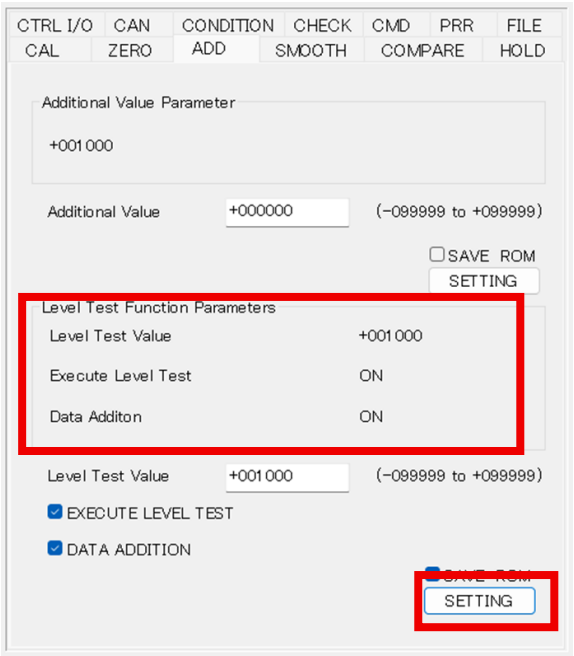
Operate the **[SAVE ROM] checkbox** to set whether to save the setting values to the Digital Conversion Unit.

Setting the **[SAVE ROM] checkbox** to ON configures it to save the setting values to the Digital Conversion Unit, and setting it to OFF configures it not to save the setting values to the Digital Conversion Unit.



5. Execute Level Test Function Setting

Press the **[SETTING] button** indicated by the red frame in the figure below to send and apply the set contents to the Digital Conversion Unit. The latest setting values of the Digital Conversion Unit are reflected in **Level Test Function Parameters**.



6-5.[SMOOTH] Tab

6-5-1.Outline of the [SMOOTH] Tab

1. Functions settable on the [SMOOTH] tab

The [SMOOTH] tab provides the following functions:

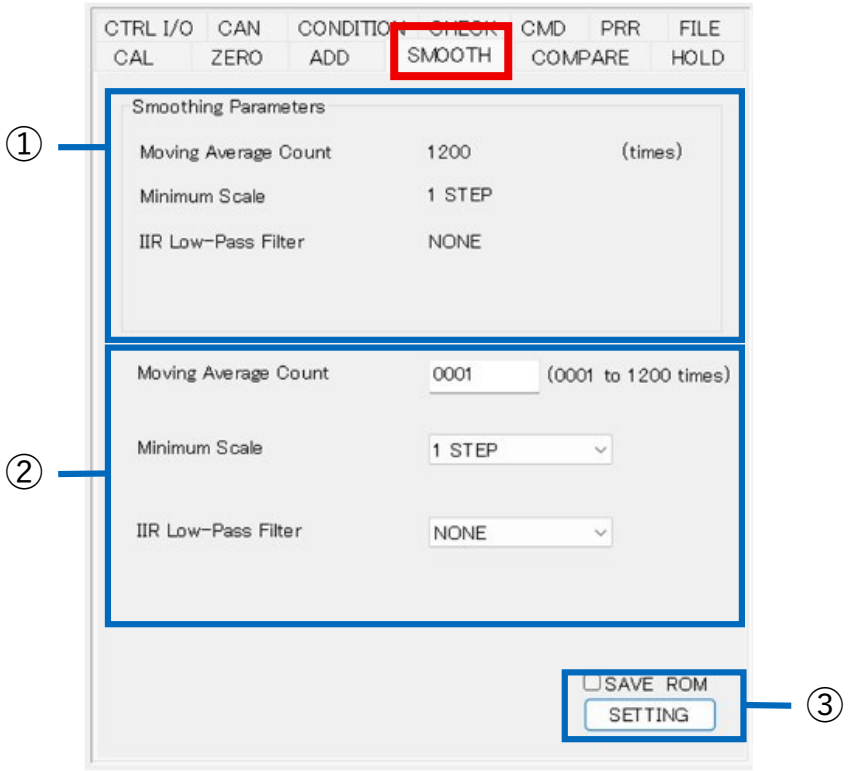
- Display of Smoothing function settings of the Digital Conversion Unit
- Setting of the Smoothing function of the Digital Conversion Unit

Refer to "11-4. Smoothing Function" in the "IM-A-1491 NC-100A Series INSTRUCTION MANUAL" for details on each function.

2. About saving settings in the [SMOOTH] tab

If the [SAVE ROM] checkbox is set to ON when the [SETTING] button for the smoothing function is pressed, the setting values are saved to the Digital Conversion Unit.

6-5-2. Description of the [SMOOTH] Tab



No.	Name	Description
(1)	Smoothing Function Setting Values Group Box	Reads and displays the Smoothing function settings of the Digital Conversion Unit connected via RS-485 communication. **Moving Average Count**: Displays the moving average setting value. **Minimum Scale**: Displays the minimum scale setting value. **IIR Low-Pass Filter**: Displays the low-pass filter setting value.
(2)	Smoothing Function Setting Controls (Text Box, Combo Box)	Inputs each setting value of the Smoothing function to be set to the Digital Conversion Unit. **Moving Average Count**: Inputs the moving average setting value in the text box. The setting range is 1-1200 (times). **Minimum Scale**: Selects the minimum scale setting value in the combo box. The setting range is 1-1000, settable in 1, 2, 5 steps. **IIR Low-Pass Filter**: Selects the low-pass filter setting value in the combo box. Selectable items are: NONE, 30Hz, 60Hz, 120Hz. Refer to "11-4. Smoothing Function" in the "IM-A-1491 NC-100A Series INSTRUCTION MANUAL" for details on the Smoothing function.

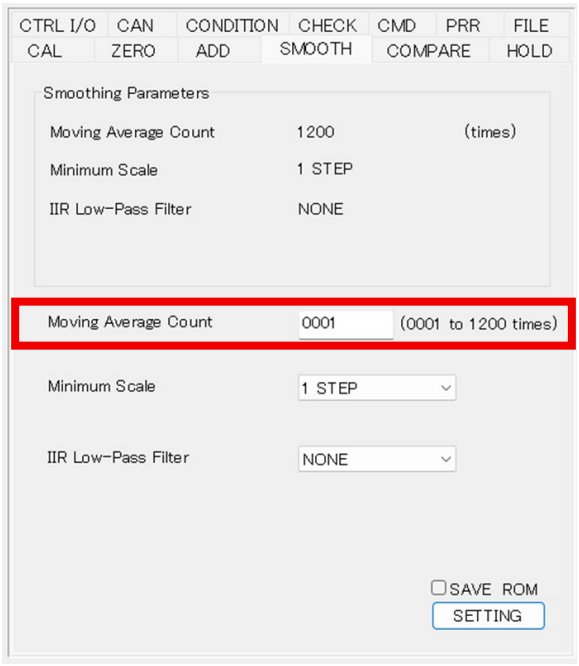
(3)	[SMOOTH] Tab Setting Controls (Checkbox, Command Button)	Pressing the [SETTING] button applies the settings in (2) to the Digital Conversion Unit. **[SAVE ROM] Checkbox**: When set to ON, saves the setting values within the frame to the Digital Conversion Unit during setting.

6-5-3.Smoothing Function Setting Procedure

The procedure for configuring the Smoothing function setting for the Digital Conversion Unit is described below.

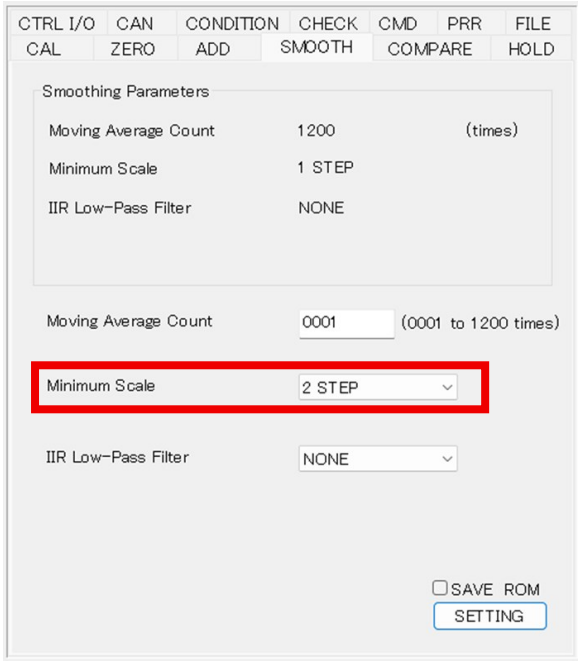
1. Set the Moving Average Setting Value

Input an arbitrary moving average count into the **Moving Average Count text box.**



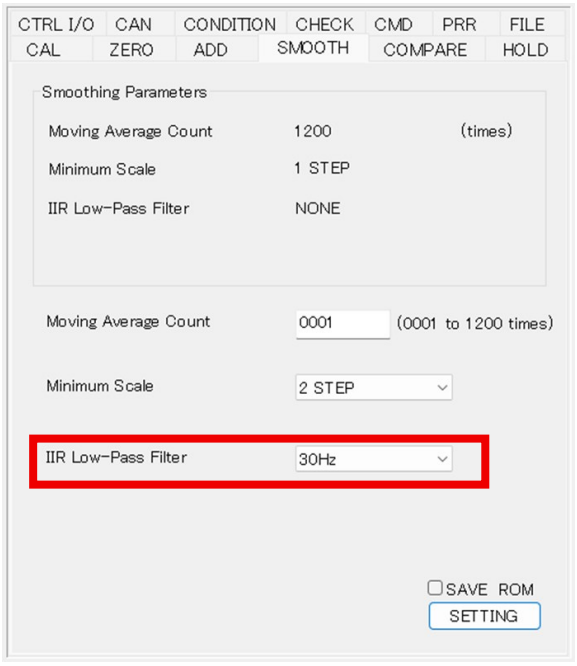
2. Select the Minimum Scale Setting Value

Operate the **Minimum Scale combo box** to select the minimum scale setting value.



3. Select the Low-Pass Filter Setting Value

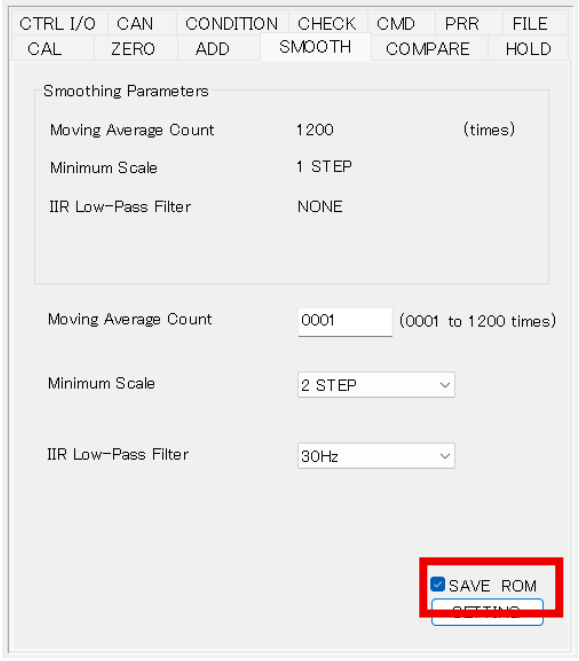
Operate the **IIR Low-Pass Filter combo box** to select the low-pass filter setting value.



4. Set Whether to Save Smoothing Function Setting to the Digital Conversion Unit

Operate the **[SAVE ROM] checkbox** to set whether to save the setting values to the Digital Conversion Unit.

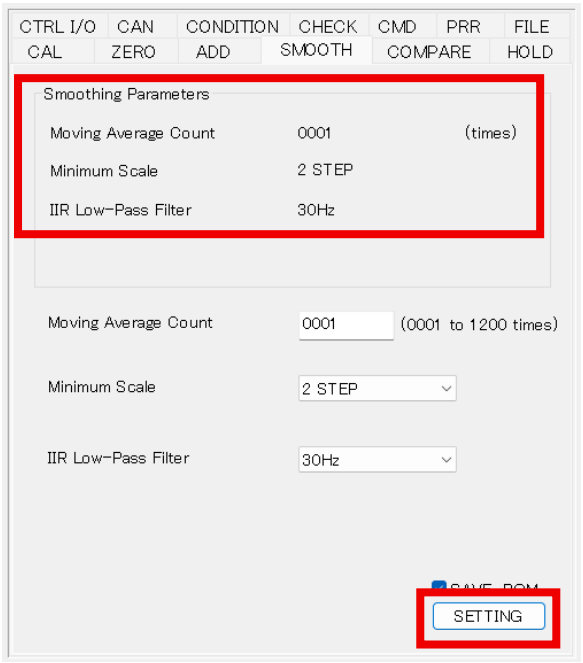
Setting the **[SAVE ROM] checkbox** to ON configures it to save the setting values to the Digital Conversion Unit, and setting it to OFF configures it not to save the setting values to the Digital Conversion Unit.



5. Execute Smoothing Function Setting

Press the **[SETTING] button** indicated by the red frame in the figure below to send and apply the set contents to the Digital Conversion Unit.

The latest setting values of the Digital Conversion Unit are reflected in **Smoothing Parameters**.



6-6.[COMPARE] Tab

6-6-1.Outline of the [COMPARE] Tab

1. Functions settable on the [COMPARE] tab

The [COMPARE] tab provides the following functions:

- Display of Comparison function settings of the Digital Conversion Unit
- Display of Hysteresis function settings of the Digital Conversion Unit
- Setting of the Comparison function of the Digital Conversion Unit
- Setting of the Hysteresis function of the Digital Conversion Unit

Refer to "11-3. Comparison Function, Hysteresis Function" in the "IM-A-1491 NC-100A Series INSTRUCTION MANUAL" for details on each function.

2. About settings in the [COMPARE] tab

The [COMPARE] tab allows setting of the following functions:

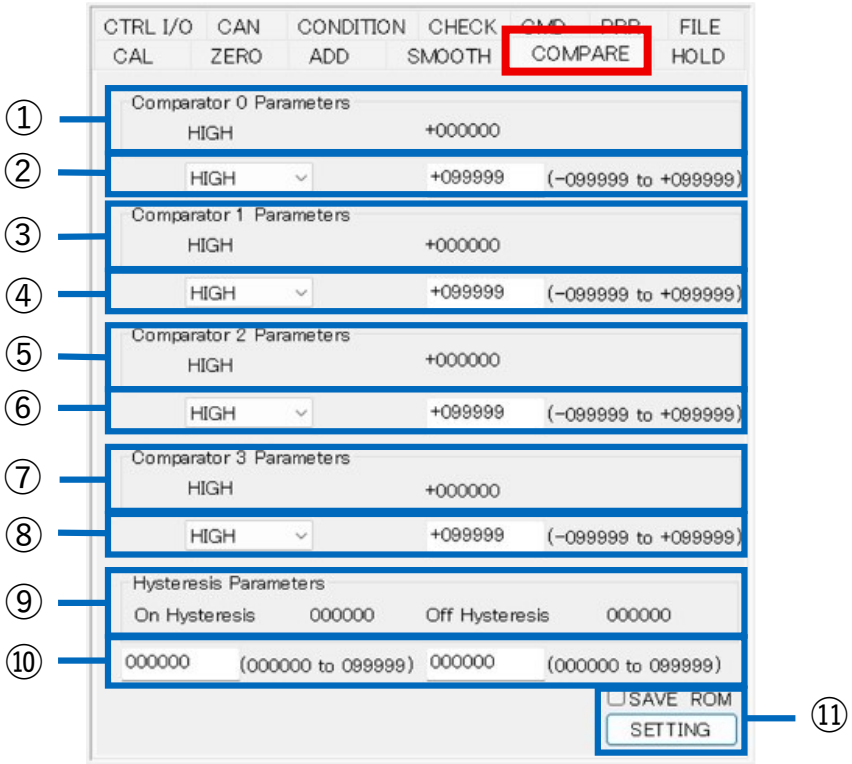
- Comparator 0 Function Setting
- Comparator 1 Function Setting
- Comparator 2 Function Setting
  Comparator 3 Function Setting
- Hysteresis Function Setting

The settings in the [COMPARE] tab are set collectively when the [SETTING] button is pressed. When changing multiple functions in the [COMPARE] tab, configure all of them before operating the [SETTING] button.

3. About saving settings in the [COMPARE] tab

If the [SAVE ROM] checkbox is set to ON when the [SETTING] button for the comparison/hysteresis functions is pressed, the setting values are saved to the Digital Conversion Unit.

6-6-2.Description of the [COMPARE] Tab



No.	Name	Description
(1)	Comparator 0 Function Setting Values Group Box	Reads and displays the Comparator 0 function settings of the Digital Conversion Unit connected via RS-485 communication. **Left text**: Displays the comparison detection direction of Comparator 0. **Right text**: Displays the comparison value of Comparator 0.
(2)	Comparator 0 Function Setting Controls (Combo Box, Text Box)	Inputs the setting values of the Comparator 0 function to be set to the Digital Conversion Unit. **Combo Box**: Selects the detection direction of Comparator 0. Selectable items are HIGH, LOW. **Text Box**: Inputs the comparison value of Comparator 0. The setting range is -099999 to +099999.
(3)	Comparator 1 Function Setting Values Group Box	Reads and displays the Comparator 1 function settings of the Digital Conversion Unit connected via RS-485 communication. **Left text**: Displays the comparison detection direction of Comparator 1. **Right text**: Displays the comparison value of Comparator 1.

(4)	Comparator 1 Function Setting Controls (Combo Box, Text Box)	Inputs the setting values of the Comparator 1 function to be set to the Digital Conversion Unit. **Combo Box**: Selects the detection direction of Comparator 1. Selectable items are HIGH, LOW. **Text Box**: Inputs the comparison value of Comparator 1. The setting range is -099999 to +099999.
(5)	Comparator 2 Function Setting Values Group Box	Reads and displays the Comparator 2 function settings of the Digital Conversion Unit connected via RS-485 communication. **Left text**: Displays the comparison detection direction of Comparator 2. **Right text**: Displays the comparison value of Comparator 2.
(6)	Comparator 2 Function Setting Controls (Combo Box, Text Box)	Inputs the setting values of the Comparator 2 function to be set to the Digital Conversion Unit. **Combo Box**: Selects the detection direction of Comparator 2. Selectable items are HIGH, LOW. **Text Box**: Inputs the comparison value of Comparator 2. The setting range is -099999 to +099999.
(7)	Comparator 3 Function Setting Values Group Box	Reads and displays the Comparator 3 function settings of the Digital Conversion Unit connected via RS-485 communication. **Left text**: Displays the comparison detection direction of Comparator 3. **Right text**: Displays the comparison value of Comparator 3.
(8)	Comparator 3 Function Setting Controls (Combo Box, Text Box)	Inputs the setting values of the Comparator 3 function to be set to the Digital Conversion Unit. **Combo Box**: Selects the detection direction of Comparator 3. Selectable items are HIGH, LOW. **Text Box**: Inputs the comparison value of Comparator 3. The setting range is -099999 to +099999.
(9)	Hysteresis Function Setting Values Group Box	Reads and displays the comparison ON hysteresis / OFF hysteresis function settings. **Left text**: Displays the comparison ON hysteresis setting value. **Right text**: Displays the comparison OFF hysteresis setting value.

(10)	Hysteresis Function Setting Controls (Text Box)	Inputs the setting values of the Hysteresis function. **Text Box (Left)**: Inputs the comparison ON hysteresis setting value. Range: 000000 to 099999. **Text Box (Right)**: Inputs the comparison OFF hysteresis setting value. Range: 000000 to 099999. Refer to "11-3-3. ON/OFF Hysteresis Function" in the "IM-A-1491 NC-100A Series INSTRUCTION MANUAL" for details.
(11)	[COMPARE] Tab Setting Controls (Checkbox, Command Button)	Pressing the [SETTING] button applies the settings of (2)(4)(6)(8)(10) to the Digital Conversion Unit. **[SAVE ROM] Checkbox**: When set to ON, saves the setting values within the frame to the Digital Conversion Unit during setting.

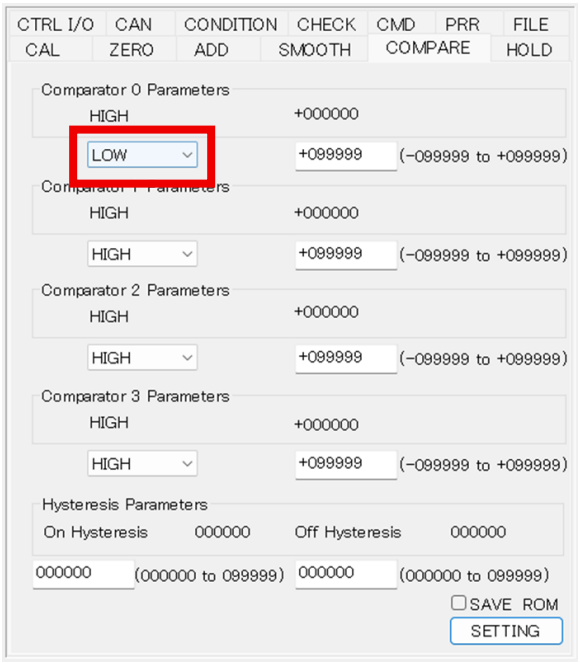
6-6-3.Comparison Function Setting

The procedure for configuring the Comparison function setting for the Digital Conversion Unit is described below.

Since the Digital Conversion Unit has four comparators from Comparator 0 to Comparator 3, Comparator 0 is explained here as an example.

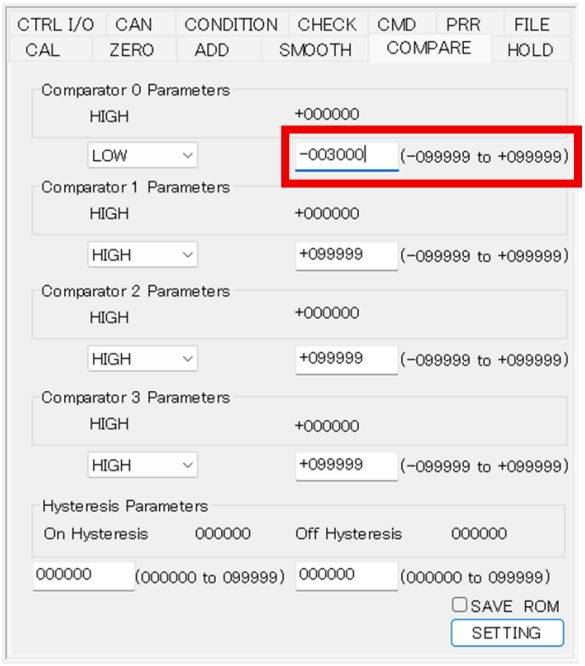
1. Select the Comparison Detection Direction for Comparator 0

Select the comparison detection direction for Comparator 0 from the **combo box** indicated by the red frame in the figure below.



2. Set the Comparison Value for Comparator 0

Input the comparison value for Comparator 0 into the **text box** indicated by the red frame in the figure below.



3. Setting Comparator 1 to Comparator 3

Set **Comparator 1 to Comparator 3** indicated by the red frame in the figure below, referring to Step 1 and Step 2.

4. Execute Comparison Function Setting

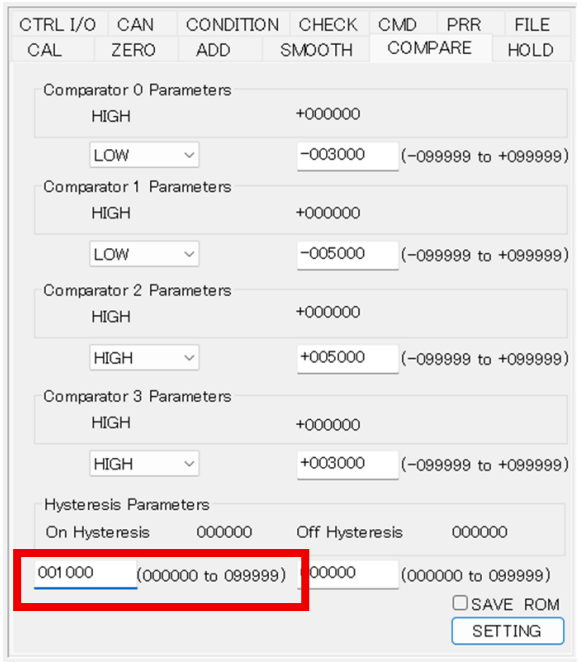
Since settings in the [COMPARE] tab are performed collectively, Comparison function setting and Comparison ON hysteresis/Comparison OFF hysteresis function setting are performed simultaneously.

If you wish to set the Comparison ON hysteresis/OFF hysteresis functions first, refer to "6-6-4 Hysteresis Function Setting". Refer to "6-6-5 Execution of Settings in the [COMPARE] Tab" for execution of settings.

6-6-4.Hysteresis Function Setting

1. Set ON Hysteresis

Input the ON hysteresis value during comparison into the **text box** indicated by the red frame in the figure below.



2. Set OFF Hysteresis

Input the OFF hysteresis value during comparison into the **text box** indicated by the red frame in the figure below.

3. Execute Comparison Function Setting

Since settings in the [COMPARE] tab are performed collectively, Comparison function setting and Hysteresis function setting are performed simultaneously.

If you wish to set each Comparison function first, refer to "6-6-3 Comparison Function Setting".

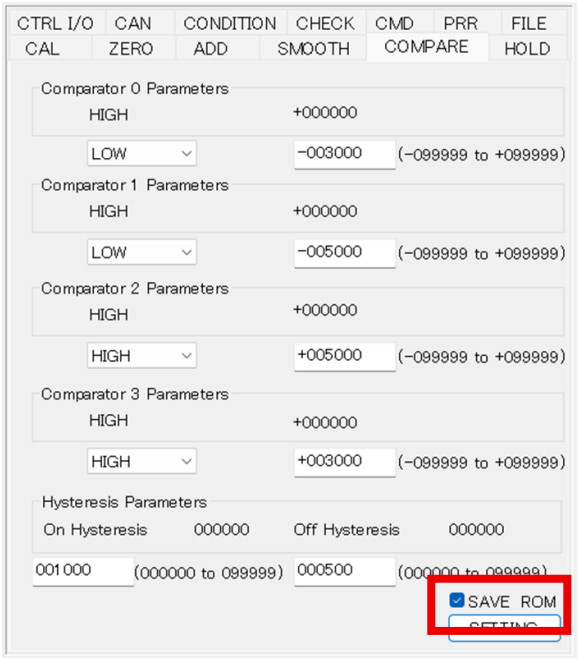
Refer to "6-6-5 Execution of Settings in the [COMPARE] Tab" for execution of settings.

6-6-5.Execution of Settings in the [COMPARE] Tab

1. Set Whether to Save Function Settings in [COMPARE] Tab to the Digital Conversion Unit

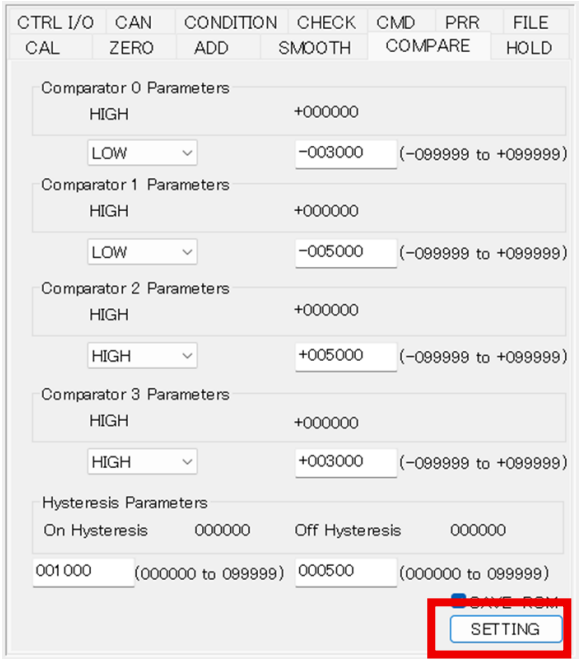
Operate the **[SAVE ROM] checkbox** to set whether to save the setting values to the Digital Conversion Unit.

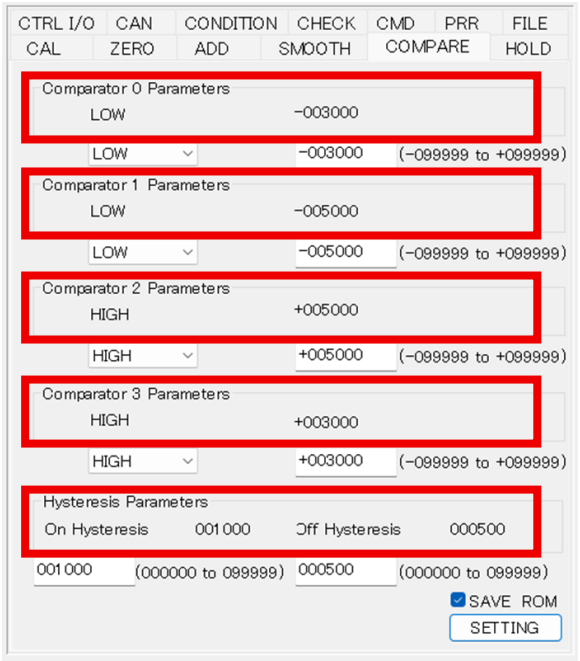
Setting the **[SAVE ROM] checkbox** to ON configures it to save the setting values to the Digital Conversion Unit, and setting it to OFF configures it not to save the setting values to the Digital Conversion Unit.



2. Execute Function Settings in [COMPARE] Tab

Press the **[SETTING] button** to send and apply the set contents to the Digital Conversion Unit. The latest setting values of the Digital Conversion Unit are reflected in **Comparator 0 Parameters** to **Comparator 3 Parameters** and **Hysteresis Parameters**.





6-7.[HOLD] Tab

6-7-1.Outline of the [HOLD] Tab

1. Functions settable on the [HOLD] tab

The [HOLD] tab provides the following functions:

- Display of Hold function settings of the Digital Conversion Unit
- Setting of the Hold function of the Digital Conversion Unit

Refer to "11-2. Hold Function" in the "IM-A-1491 NC-100A Series INSTRUCTION MANUAL" for details on the function.

2. About saving settings in the [HOLD] tab

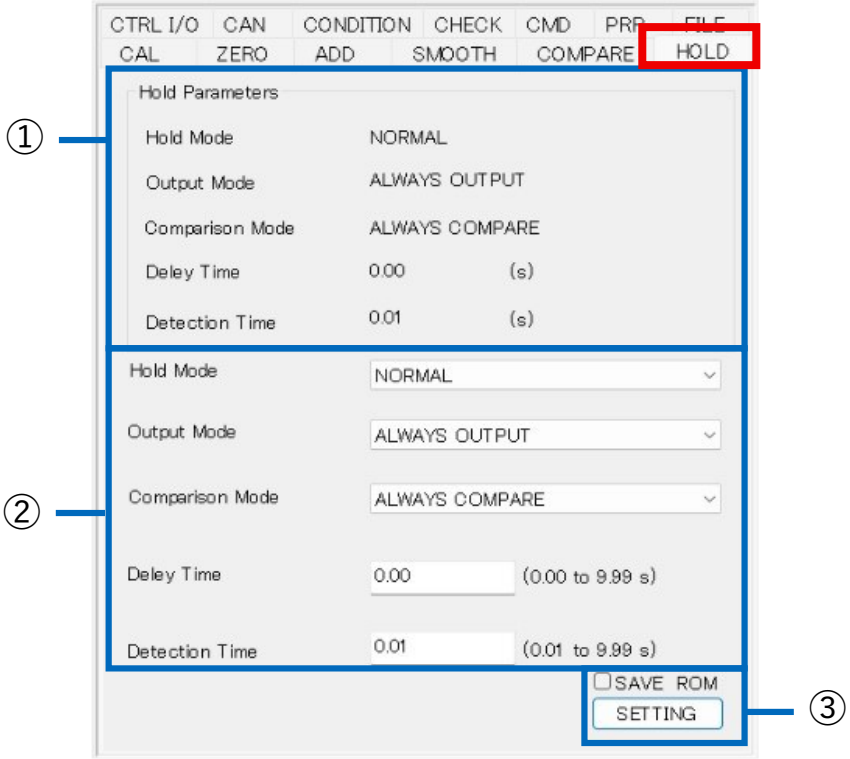
If the [SAVE ROM] checkbox is set to ON when the [SETTING] button for the hold function is pressed, the setting values are saved to the Digital Conversion Unit.

3. About notations in the [HOLD] tab

The "INTERVAL" notation on this software corresponds to "Interval definition" in the Digital Conversion Unit Instruction Manual.

Also, the "TIME" notation on this software corresponds to "Time specification" in the Digital Conversion Unit Instruction Manual.

6-7-2.Description of [HOLD] Tab



No.	Name	Description
(1)	Hold Function Setting Values Group Box	Reads and displays the Hold function settings of the Digital Conversion Unit connected via RS-485 communication. **Hold Mode**: Displays the hold mode setting value. **Output Mode**: Displays the output mode setting value. **Comparison Mode**: Displays the comparison mode setting value. **Delay Time**: Displays the delay time setting value. **Detection Time**: Displays the detection time setting value.

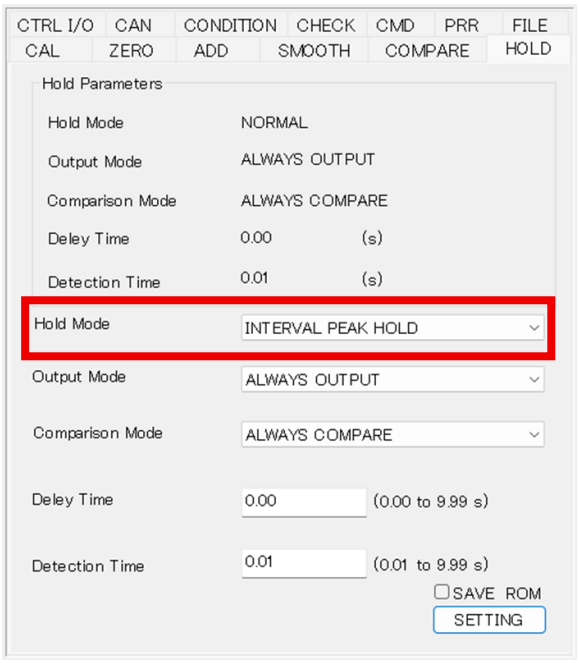
(2)	Hold Function Setting Controls (Combo Box, Text Box)	Inputs the setting values of the Hold function to be set to the Digital Conversion Unit. **Hold Mode Combo Box**: Sets the hold mode setting value. Selectable items are: NORMAL, ARBITRARY POINT HOLD, INTERVAL PEAK DETECT, INTERVAL PEAK HOLD, TIME PEAK HOLD, INTERVAL BOTTOM DETECT, INTERVAL BOTTOM HOLD, TIME BOTTOM HOLD, INTERVAL P-P DETECT, INTERVAL P-P HOLD, TIME P-P HOLD **Output Mode Combo Box**: Sets the output mode setting value. Selectable items are: ALWAYS OUTPUT, OUTPUT AT HOLD MOMENT. **Comparison Mode Combo Box**: Sets the comparison mode setting value. Selectable items are: ALWAYS COMPARE, COMPARE AT HOLD MOMENT. **Delay Time**: Sets the delay time setting value. Range: 0.00 to 9.99 (s). **Detection Time**: Sets the detection time setting value. Range: 0.01 to 9.99 (s).
(3)	[HOLD] Tab Setting Controls (Checkbox, Command Button)	Pressing the [SETTING] button applies the settings in (2) to the Digital Conversion Unit. **[SAVE ROM] Checkbox**: When set to ON, saves the setting values within the frame to the Digital Conversion Unit during setting.

6-7-3.Hold Function Setting Procedure

The procedure for configuring the Hold function setting for the Digital Conversion Unit is described below.

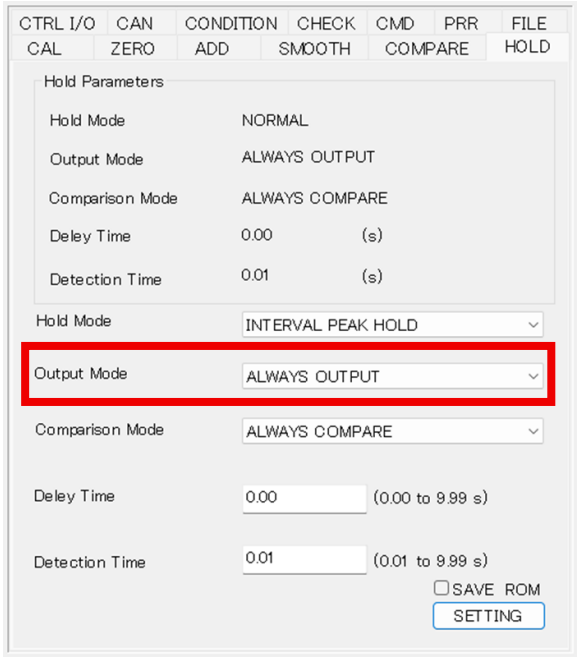
1. Select Hold Mode

Select the hold mode from the **Hold Mode combo box**.



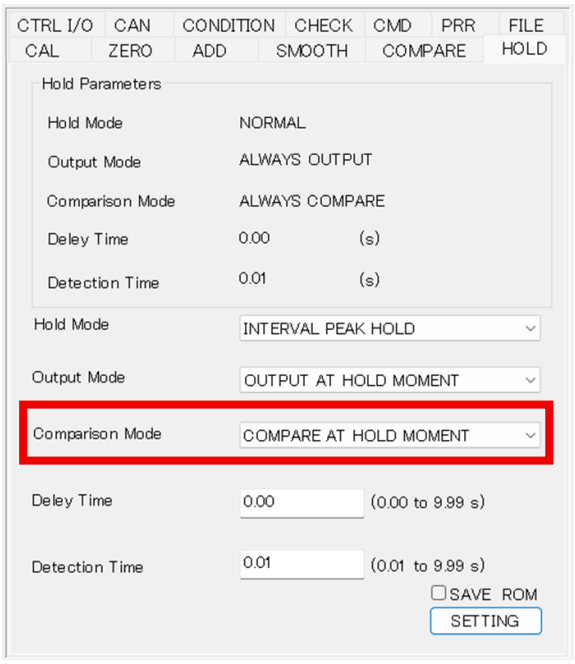
2. Select Output Mode

Select the output mode from the **Output Mode combo box**.



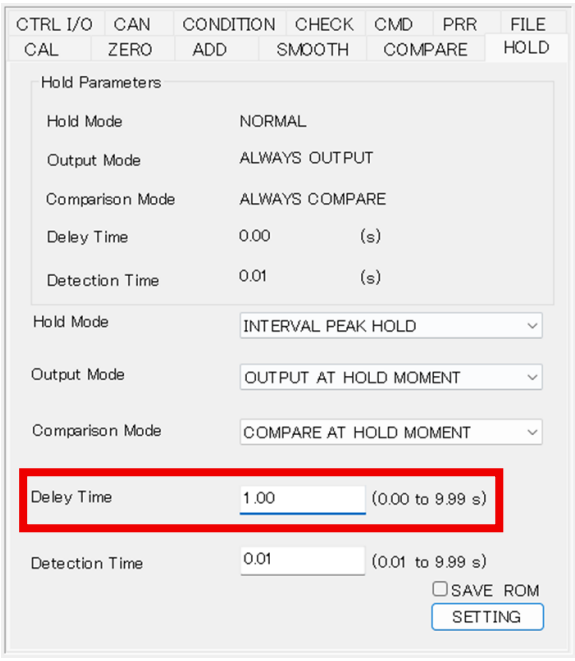
3. Select Comparison Mode

Select the comparison mode from the **Comparison Mode combo box**.



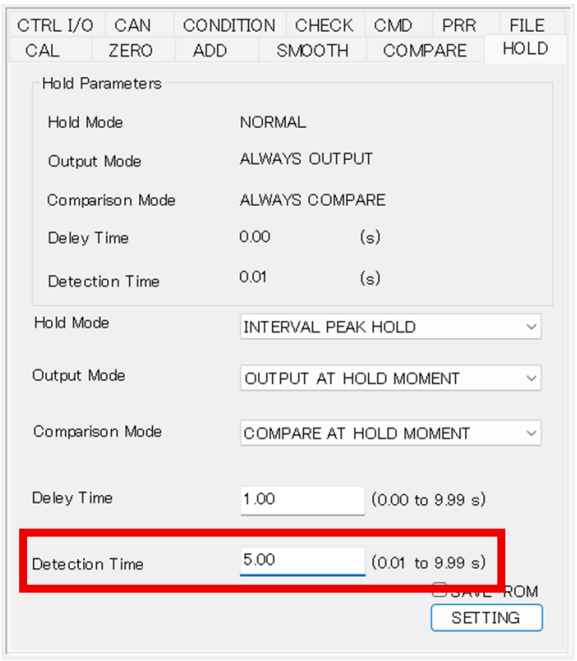
4. Input Delay Time

Input the delay time into the **Delay Time text box**.



5. Input Detection Time

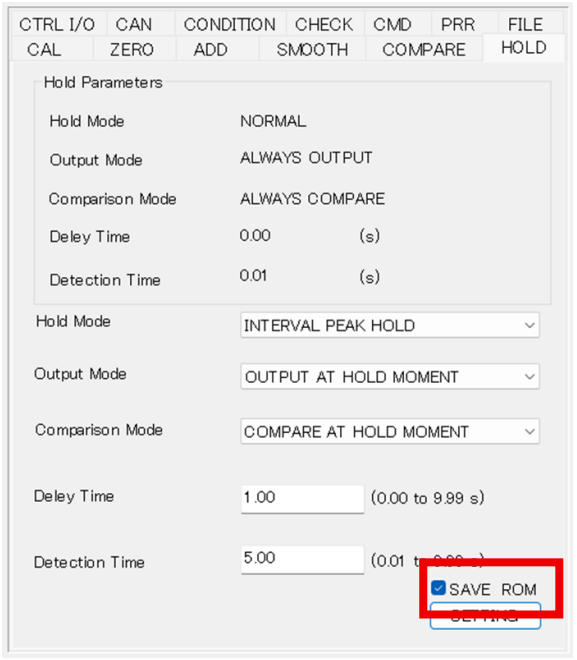
Input the detection time into the **Detection Time text box**.



6. Set Whether to Save Hold Function Setting to the Digital Conversion Unit

Operate the **[SAVE ROM] checkbox** to set whether to save the setting values to the Digital Conversion Unit.

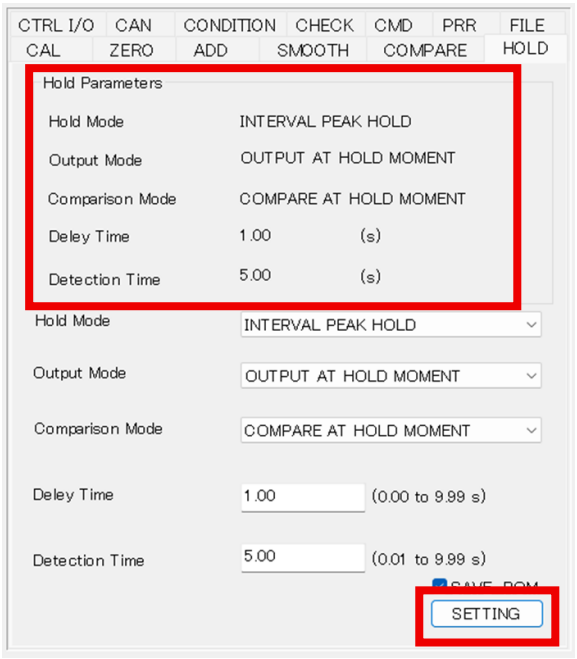
Setting the **[SAVE ROM] checkbox** to ON configures it to save the setting values to the Digital Conversion Unit, and setting it to OFF configures it not to save the setting values to the Digital Conversion Unit.



7. Execute Hold Function Setting

Press the **[SETTING] button** indicated by the red frame in the figure below to send and apply the set contents to the Digital Conversion Unit.

The latest setting values of the Digital Conversion Unit are reflected in **Hold Parameters**.



6-8.[CTRL I/O] Tab (NC-100A-01 Function)

6-8-1.Outline of the [CTRL I/O] Tab

The content settable in the [CTRL I/O] tab is the function of NC-100A-01.
If this software is communicating with an NC-100A-10, a warning is displayed when the [CTRL I/O] tab is selected, and you cannot move to the [CTRL I/O] tab.

1. Functions settable on the [CTRL I/O] tab

The [CTRL I/O] tab provides the following functions:

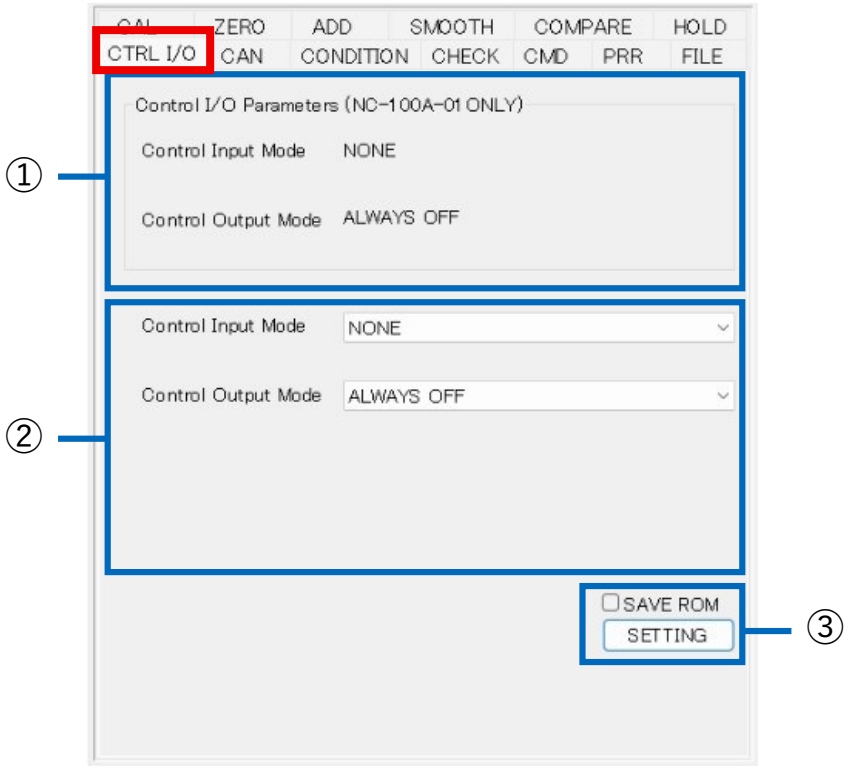
- Display of Control I/O function settings of the Digital Conversion Unit
- Setting of the Control I/O function of the Digital Conversion Unit

Refer to "13-2. Control I/O (NC-100A-01 Function)" in the "IM-A-1491 NC-100A Series INSTRUCTION MANUAL" for details on the function.

2. About saving settings in the [CTRL I/O] tab

If the [SAVE ROM] checkbox is set to ON when the [SETTING] button for the control I/O function is pressed, the setting values are saved to the Digital Conversion Unit.

6-8-2. Description of the [CTRL I/O] Tab



No.	Name	Description
(1)	Control I/O Function Setting Values Group Box	Reads and displays the Control I/O function settings of the Digital Conversion Unit connected via RS-485 communication. **Control Input Mode**: Displays the control input setting value. **Control Output Mode**: Displays the control output setting value.
(2)	Control I/O Function Setting Controls (Combo Box)	Configures the Control I/O function settings to be set to the Digital Conversion Unit. **Control Input Mode Combo Box**: Selects the control input setting value. Selectable items are: NONE, HOLD COMMAND, RESET COMMAND, TARE ZERO EXECUTION, DIGITAL ZERO EXECUTION. **Control Output Mode Combo Box**: Selects the control output setting value. Selectable items are: ALWAYS OFF, HEALTHY, COMPARATOR 0 RESULT, COMPARATOR 1 RESULT, COMPARATOR 2 RESULT, COMPARATOR 3 RESULT, RESULT OF ALL COMPARATORS IS OFF, MEASUREMENT DATA OVERFLOW.

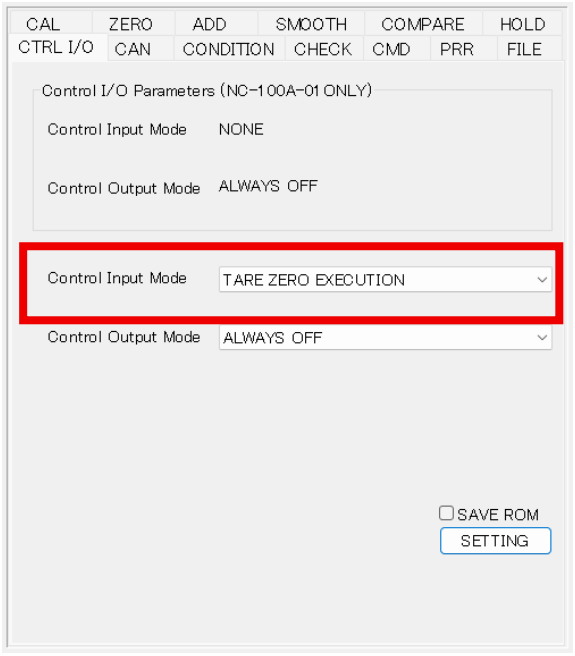
(3)	[CTRL I/O] Tab Setting Controls (Checkbox, Command Button)	Pressing the [SETTING] button applies the settings in (2) to the Digital Conversion Unit. **[SAVE ROM] Checkbox**: When set to ON, saves the setting values within the frame to the Digital Conversion Unit during setting.

6-8-3.Control I/O Function Setting Procedure

The procedure for configuring the Control I/O function setting for the Digital Conversion Unit is described below.

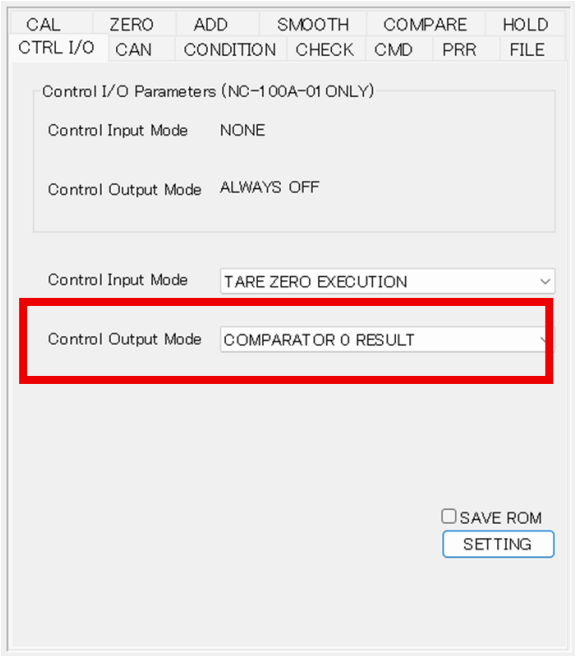
1. Select Control Input Function

Select the control input function from the **Control Input Mode combo box**.



2. Select Control Output Function

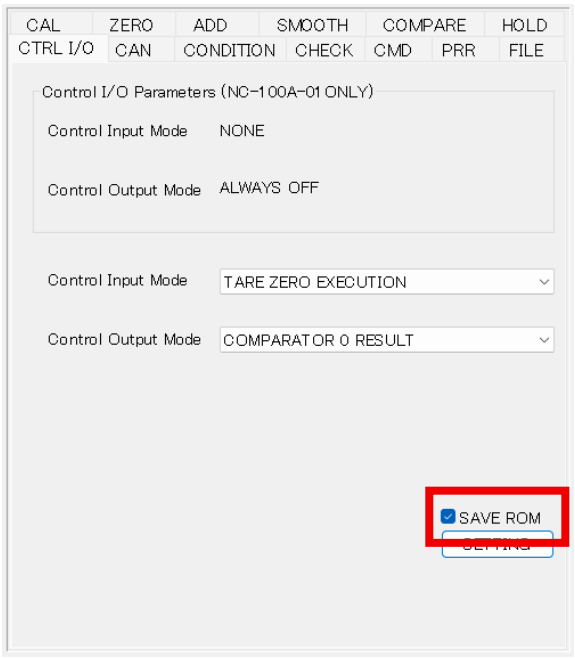
Select the control output function from the **Control Output Mode combo box**.



3. Set Whether to Save Control I/O Function Setting to the Digital Conversion Unit

Operate the **[SAVE ROM] checkbox** to set whether to save the setting values to the Digital Conversion Unit.

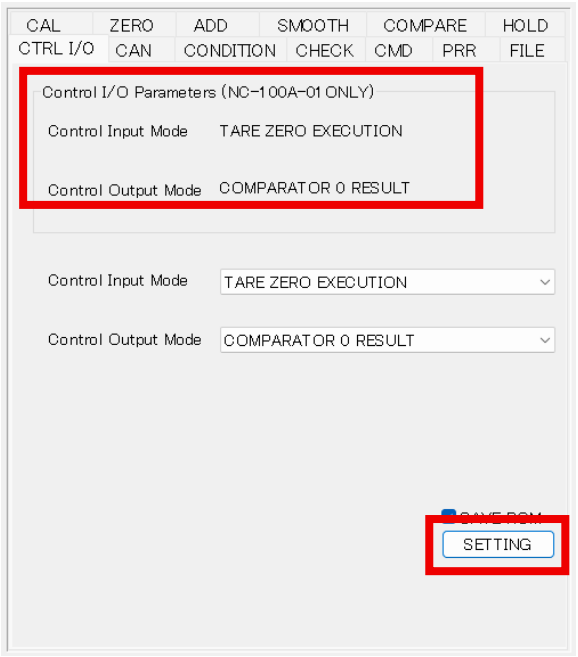
Setting the **[SAVE ROM] checkbox** to ON configures it to save the setting values to the Digital Conversion Unit, and setting it to OFF configures it not to save the setting values to the Digital Conversion Unit.



4. Execute Control I/O Function Setting

Press the **[SETTING] button** indicated by the red frame in the figure below to send and apply the set contents to the Digital Conversion Unit.

The latest setting values of the Digital Conversion Unit are reflected in **Control I/O Parameters**.



6-9.[CAN] Tab (NC-100A-10 Function)

6-9-1.Outline of the [CAN] Tab

The content settable in the [CAN] tab is the function of NC-100A-10.
If this software is communicating with an NC-100A-01, a warning is displayed when the [CAN] tab is selected, and you cannot move to the [CAN] tab.

1. Functions settable on the [CAN] tab

The [CAN] tab provides the following functions:

- Display of CAN function settings of the Digital Conversion Unit
- Setting of the CAN function of the Digital Conversion Unit
- Creation of CANdb (.dbc) file

Refer to "13-3. CAN (NC-100A-10 Function)" in the "IM-A-1491 NC-100A Series INSTRUCTION MANUAL" for details on the function.

2. About CAN communication

This software performs settings and checks measurement data via RS-485 communication connection with the Digital Conversion Unit, and cannot perform CAN communication.

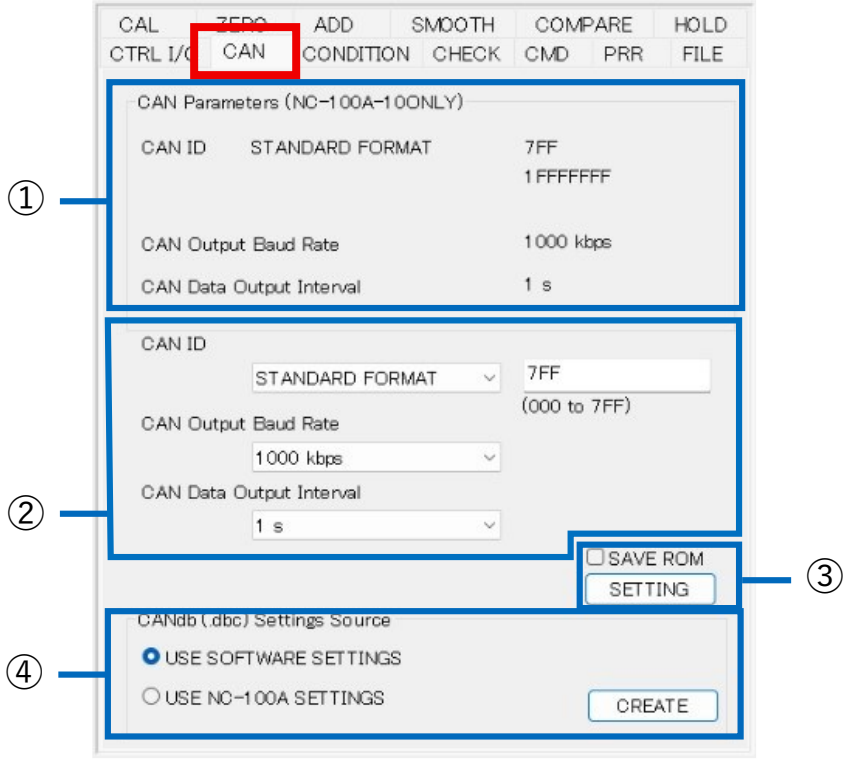
3. About saving settings in the [CAN] tab

If the [SAVE ROM] checkbox is set to ON when the [SETTING] button for the CAN function is pressed, the setting values are saved to the Digital Conversion Unit.

4. About creating CANdb files

This software can create CANdb (.dbc) files for the Digital Conversion Unit.
The CANdb file creation function can be used even when not communicating with the Digital Conversion Unit.
However, in that case, the settings registered in the file will be the settings selected on this software.

6-9-2. Description of the [CAN] Tab



No.	Name	Description
(1)	CAN Communication Function Setting Values Group Box	Reads and displays the CAN communication function settings of the Digital Conversion Unit connected via RS-485 communication. **CAN ID**: Displays the CAN ID setting value (ID mode, ID). **CAN Output Baud Rate**: Displays the CAN communication baud rate setting value. **CAN Data Output Interval**: Displays the CAN output interval.

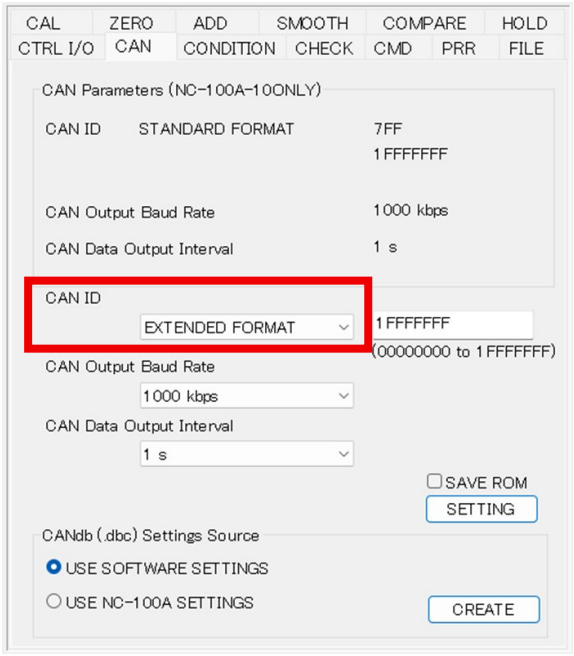
(2)	CAN Communication Function Setting Controls (Combo Box, Text Box)	**CAN ID Combo Box, Text Box**: Selects the CAN ID mode setting value in the combo box. Selectable items are STANDARD FORMAT, EXTENDED FORMAT. Inputs the CAN ID setting value numerically in the text box. The setting range depends on the CAN ID mode: STANDARD FORMAT: 000 to 7FF EXTENDED FORMAT: 00000000 to 1FFFFFFF **CAN Output Baud Rate Combo Box**: Selects the CAN communication baud rate setting value. Selectable items are: 10, 20, 25, 33.3, 50, 62.5, 83.3, 100, 125, 250, 500, 1000 kbps. **CAN Data Output Interval Combo Box**: Selects the CAN output interval setting value. Selectable range is 0.5 ms, and numerical values represented by the 1-2-5 series from 1 ms to 1000 ms (1 s).
(3)	[CAN] Tab Setting Controls (Checkbox, Command Button)	Pressing the [SETTING] button applies the settings in (2) to the Digital Conversion Unit. **[SAVE ROM] Checkbox**: When set to ON, saves the setting values within the frame to the Digital Conversion Unit during setting.
(4)	CANdb File Creation Controls (Radio Button)	Creates a CANdb file according to the control settings. Changes the settings to be registered based on the radio button selected when the [CREATE] button is pressed. **[USE SOFTWARE SETTINGS] Button**: Uses this software settings for the CANdb file settings. Creates a CANdb file based on the contents set in (2). **[USE NC-100A SETTINGS] Button**: Uses the Digital Conversion Unit settings for the CANdb file settings. Creates a CANdb file based on the contents displayed in (1). [USE NC-100A SETTINGS] can only be selected while communicating with NC-100A-10.

6-9-3.CAN Communication Function Setting Procedure

The procedure for configuring the CAN communication function setting for the Digital Conversion Unit is described below.

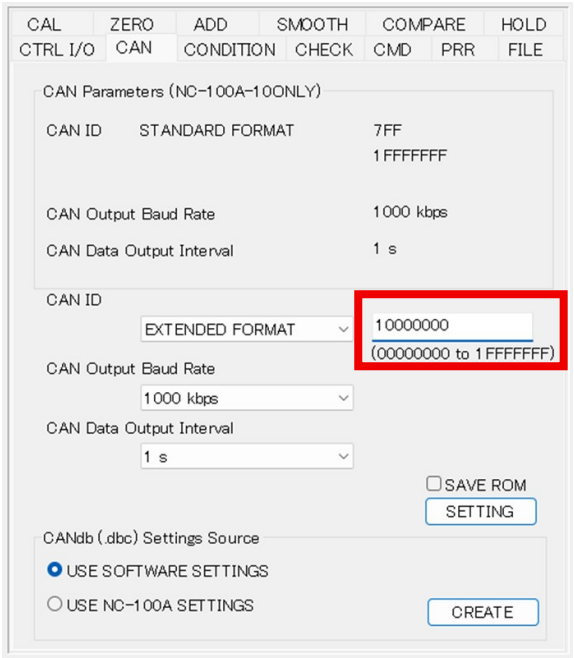
1. Select CAN ID Mode Setting Value

Select the CAN ID mode setting value from the **CAN ID combo box** indicated by the red frame in the figure below.



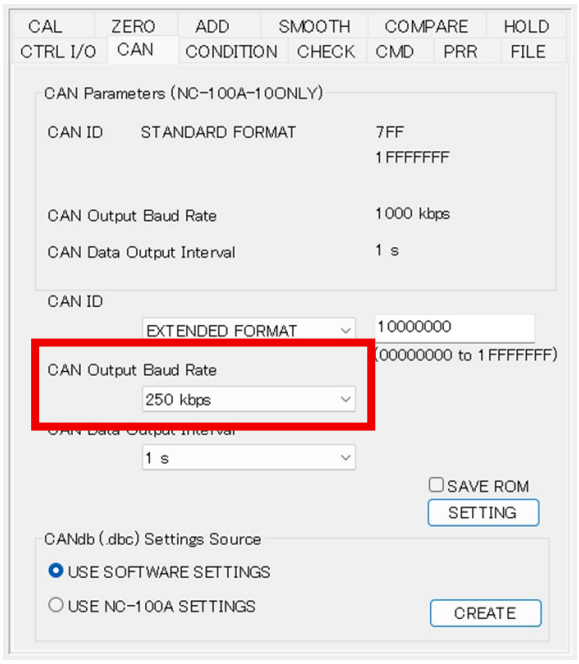
2. Input CAN ID Setting Value

Input the CAN ID setting value into the **CAN ID text box** indicated by the red frame in the figure below.



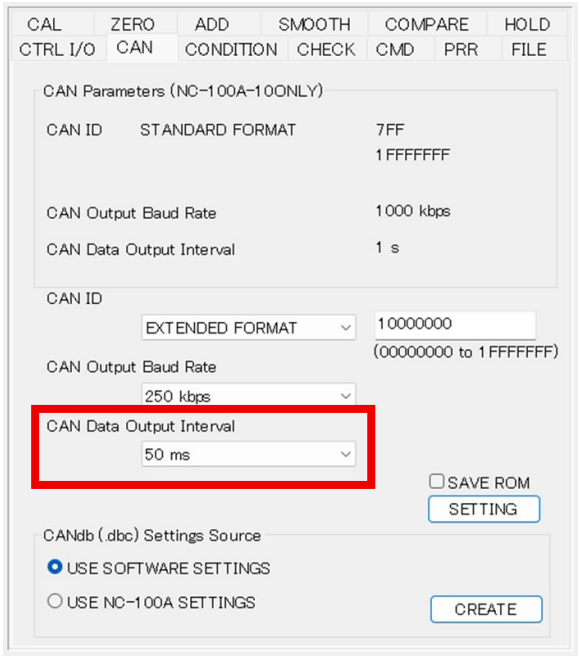
3. Select CAN Communication Baud Rate Setting Value

Select the CAN communication baud rate setting value from the **CAN Output Baud Rate combo box**.



4. Select CAN Communication Output Interval Setting Value

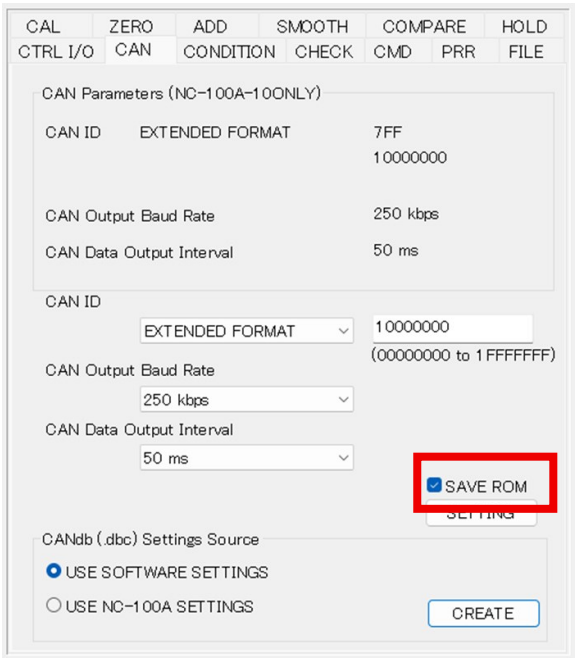
Select the CAN communication output interval setting value from the **CAN Data Output Interval combo box**.



5. Set Whether to Save CAN Communication Function Setting to the Digital Conversion Unit

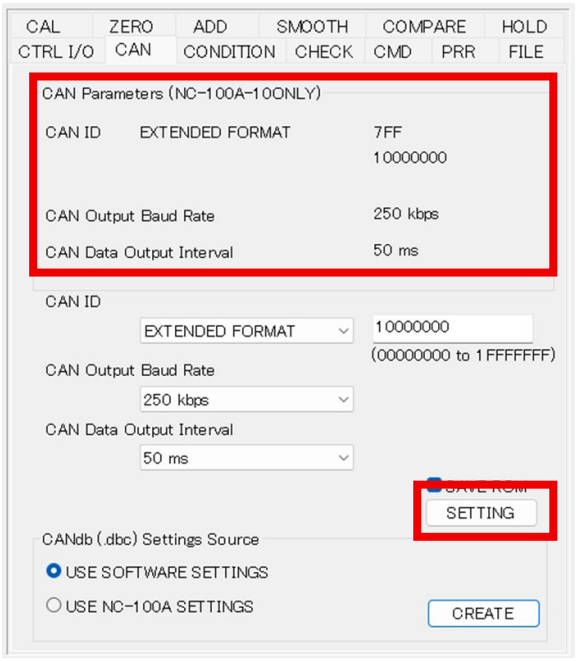
Operate the **[SAVE ROM] checkbox** to set whether to save the setting values to the Digital Conversion Unit.

Setting the **[SAVE ROM] checkbox** to ON configures it to save the setting values to the Digital Conversion Unit, and setting it to OFF configures it not to save the setting values to the Digital Conversion Unit.



6. Execute CAN Communication Function Setting

Press the **[SETTING] button** to send and apply the set contents to the Digital Conversion Unit. The latest setting values of the Digital Conversion Unit are reflected in **CAN Parameters**.



6-9-4.Creating a CANdb File

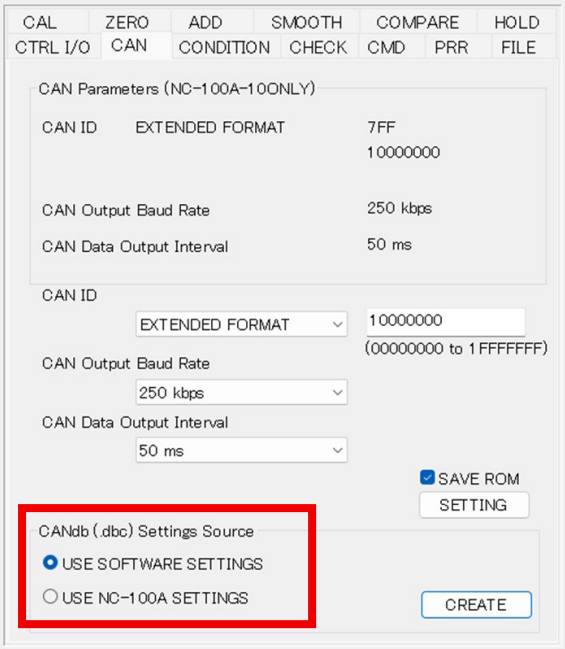
The procedure for creating a CANdb file using this software is described below.

1. Select Settings to Register in CANdb File

Select settings from **CANdb (.dbc) Settings Source**.

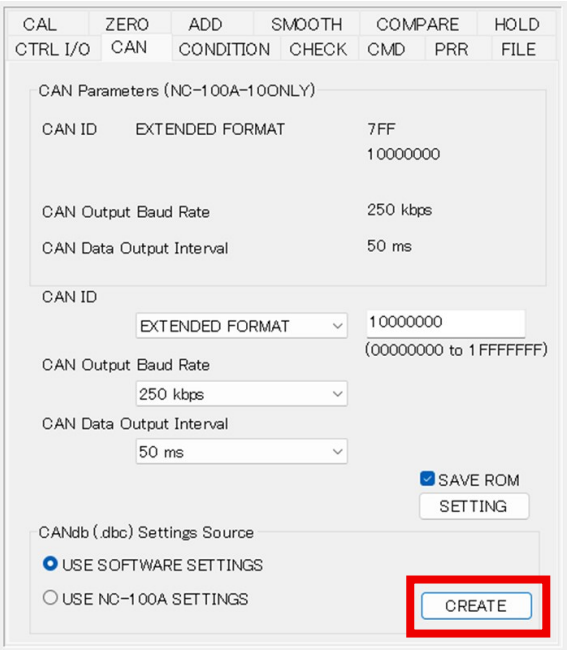
If **[USE SOFTWARE SETTINGS]** is selected, a CANdb file is created based on the setting values being edited when the [CREATE] button is pressed.

If **[USE NC-100A SETTINGS]** is selected, a CANdb file is created based on the setting values of the Digital Conversion Unit.

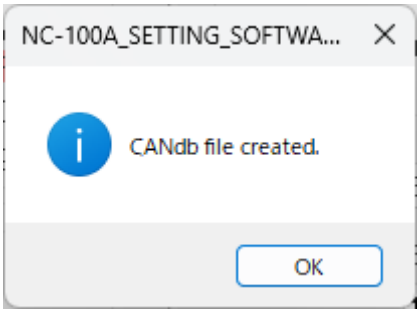


2. Execute CANdb File Creation

Press the **[CREATE] button** to create a CANdb file.



Input an arbitrary file name in the file save dialog and press the **[Save] button**.
When the creation of the CANdb file is completed, a message box is displayed.



6-10.[CONDITION] Tab

6-10-1.Outline of the [CONDITION] Tab

1. Functions settable on the [CONDITION] tab

The [CONDITION] tab provides the following functions:

- Display of measurement condition number of the Digital Conversion Unit
- Operation of measurement condition management function of the Digital Conversion Unit
- Initialization of the Digital Conversion Unit

The Digital Conversion Unit can save 16 types of measurement conditions from 00 to 15.
By performing the operations in this section, you can switch measurement conditions and copy to another measurement condition number.

When the measurement condition number is switched, subsequent setting values are saved as the measurement condition after switching.
Please be careful of the current measurement condition number when using the measurement condition number switching.

Example:

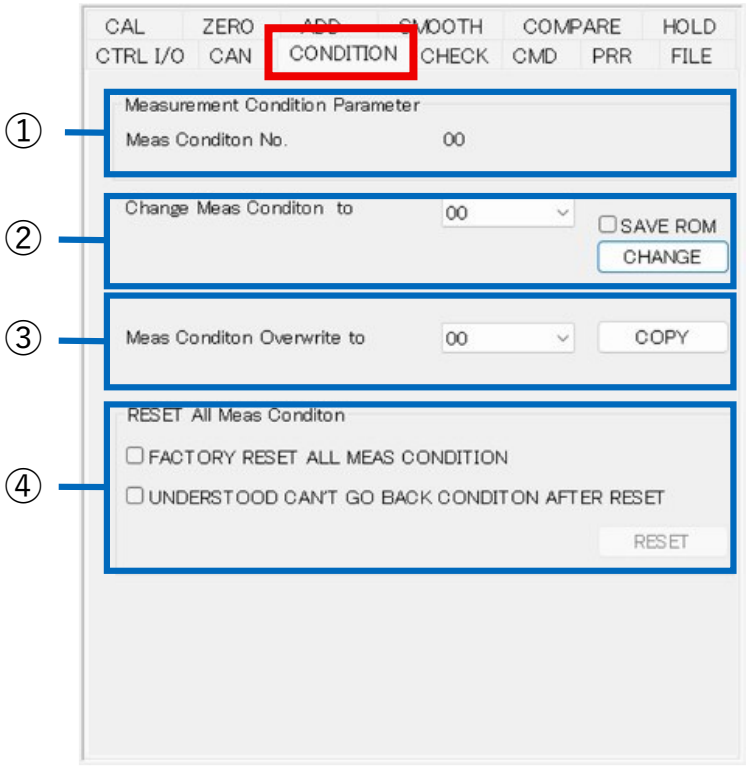
When switching from measurement condition number 00 at startup of the Digital Conversion Unit to measurement condition number 03 Settings after switching are saved as measurement condition number 03.
If the [SAVE ROM] checkbox was OFF, it becomes measurement condition number 00 when the power is restarted.

Refer to "11-8. Measurement Condition Management Function" in the "IM-A-1491 NC-100A Series INSTRUCTION MANUAL" for details on the measurement condition function.

2. About saving settings in the [CONDITION] tab

Copying measurement conditions and initializing the Digital Conversion Unit saves the setting values to the Digital Conversion Unit.

6-10-2.Description of the [CONDITION] Tab



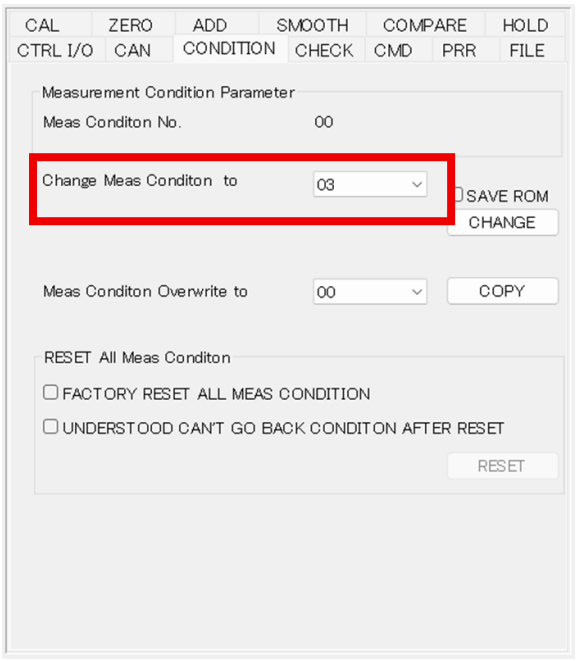
No.	Name	Description
(1)	Measurement Condition Function Setting Value Group Box	Reads and displays the measurement condition number setting value currently used by the Digital Conversion Unit connected via RS-485 communication.
(2)	Measurement Condition Setting Controls (Combo Box, Checkbox, Command Button)	Selects the destination measurement condition number in the combo box. Pressing the [CHANGE] button applies the setting in (2) to the Digital Conversion Unit. **[SAVE ROM] Checkbox**: When set to ON, saves the setting values within the frame to the Digital Conversion Unit during setting.
(3)	Measurement Condition Copy Setting Controls (Combo Box, Command Button)	Selects the measurement condition number to copy the current measurement conditions to in the combo box. When the [COPY] button is pressed, the various measurement conditions currently used by the Digital Conversion Unit are copied to the selected measurement condition number.
(4)	Digital Conversion Unit Initialization Setting Controls (Checkbox, Command Button)	Allows initialization of the Digital Conversion Unit settings to factory settings. Refer to "6-10-5 Setting Initialization Procedure" for details on operation.

6-10-3.Measurement Condition Changing Procedure

The procedure for changing the measurement condition of the Digital Conversion Unit is described below.

1. Select Destination Measurement Condition Number

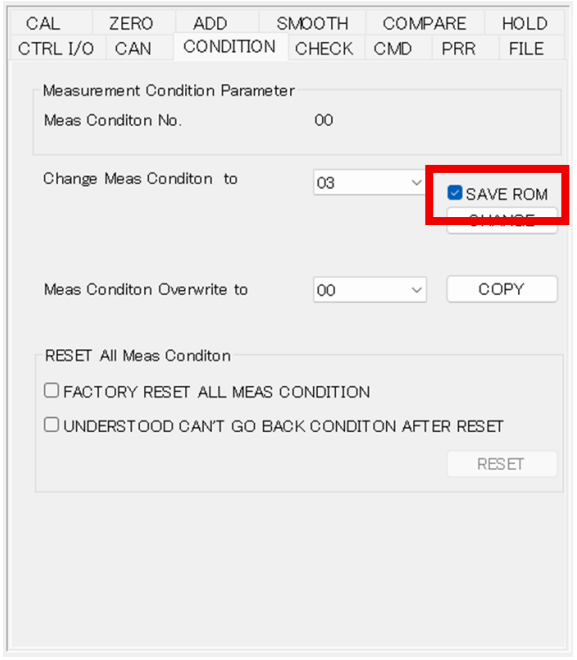
Select the destination measurement condition number from the **combo box** indicated by the red frame in the figure below.



2. Set Whether to Save Measurement Condition Change to the Digital Conversion Unit

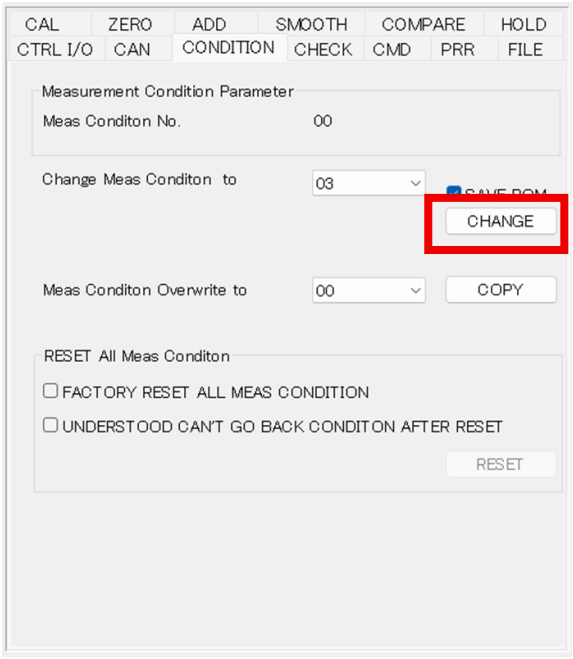
Operate the **[SAVE ROM] checkbox** to set whether to save the setting values to the Digital Conversion Unit.

Setting the **[SAVE ROM] checkbox** to ON configures it to save the setting values to the Digital Conversion Unit, and setting it to OFF configures it not to save the setting values to the Digital Conversion Unit.

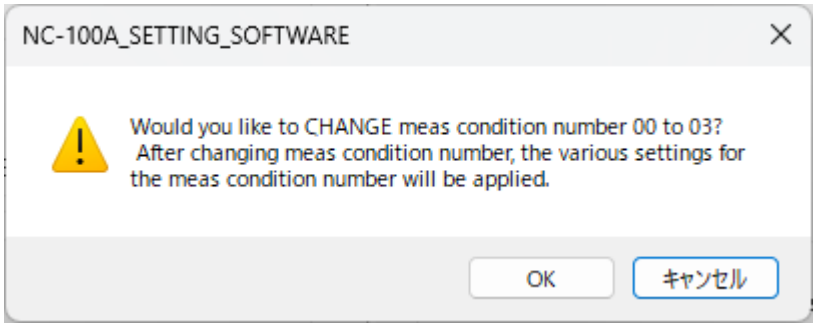


3. Execute Measurement Condition Change

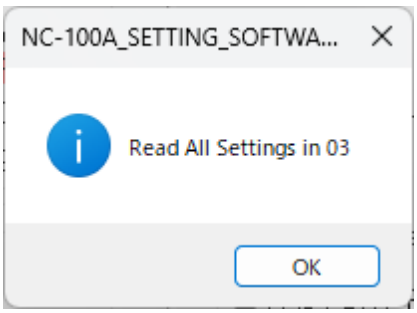
Press the **[CHANGE] button** indicated by the red frame in the figure below to send and apply the set contents to the Digital Conversion Unit.



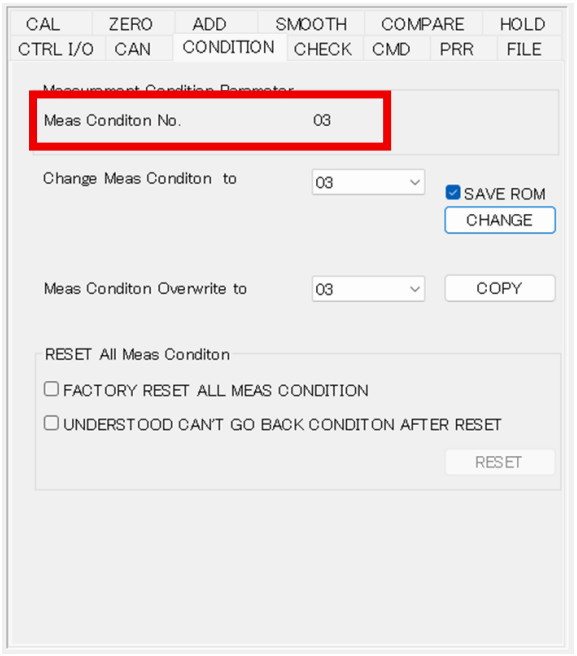
A confirmation message for measurement condition change is displayed. Pressing the **[OK] button** executes the measurement condition change.



A message indicating that the Digital Conversion Unit has completed loading the measurement condition is displayed, so press the **[OK] button**.



The current measurement condition number of the Digital Conversion Unit is reflected.

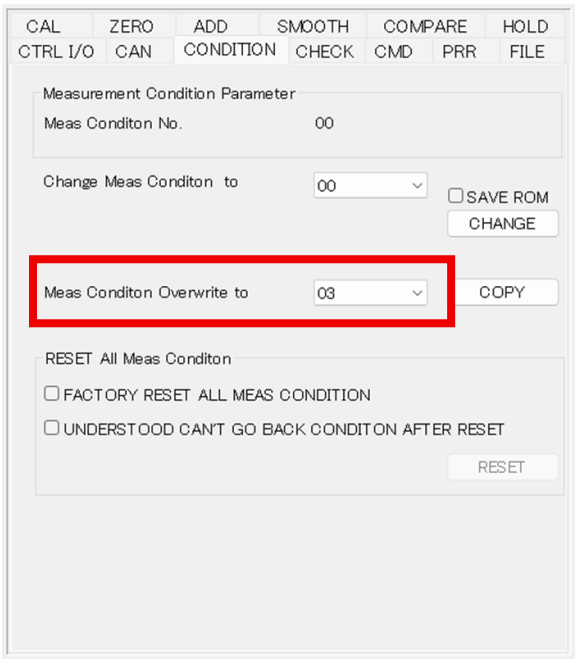


6-10-4.Measurement Condition Copy Procedure

The procedure for copying the measurement condition of the Digital Conversion Unit is described below.

1. Select Destination Measurement Condition Number

Select the measurement condition number to copy the current measurement conditions to from the **combo box** indicated by the red frame in the figure below.

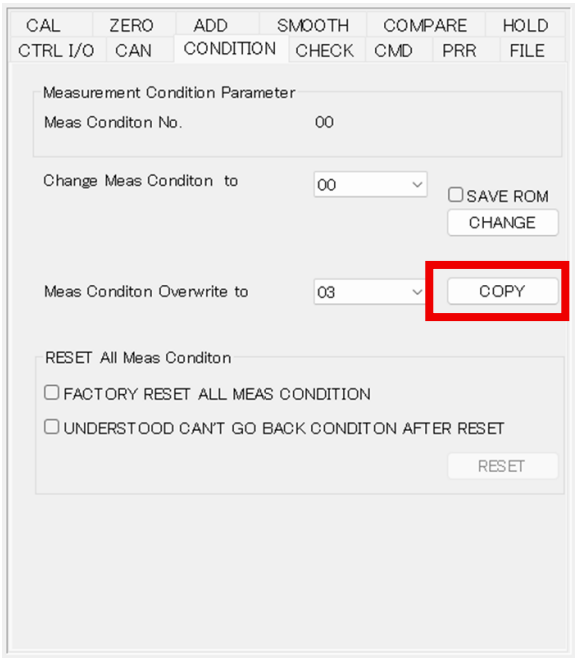


2. Execute Measurement Condition Copy

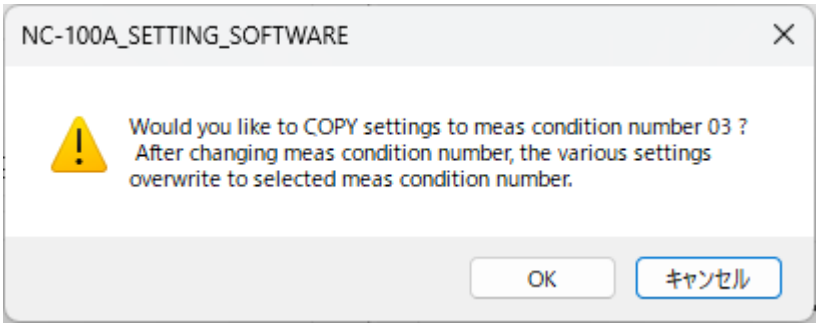
Press the **[COPY] button** indicated by the red frame in the figure below to send and apply the set contents to the Digital Conversion Unit.

Overwrites the specified measurement condition number with the current measurement conditions.

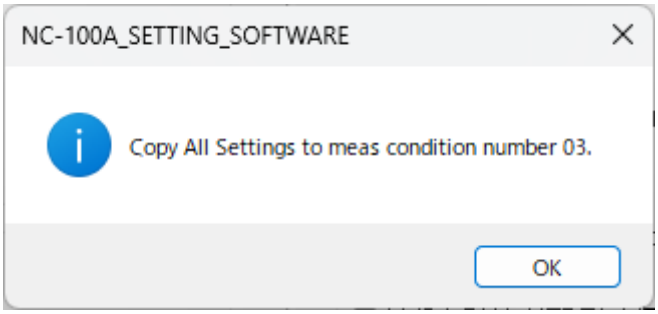
It cannot be restored after overwriting.



A confirmation message for overwriting the destination is displayed. Pressing the [OK] button executes the copy.



A message is displayed after the copy is completed.



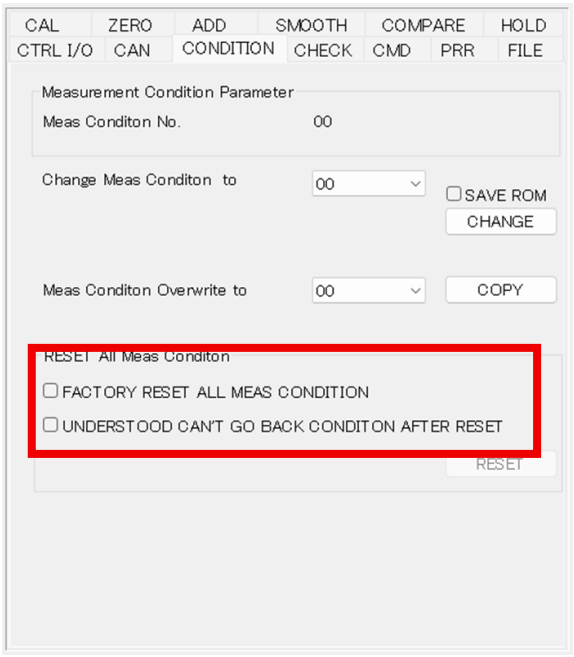
6-10-5.Setting Initialization Procedure

The procedure for initializing various settings of the Digital Conversion Unit to factory settings is described below.

If initialization to factory settings is performed, it is not possible to restore to the original state.

1. Turn ON Checkboxes

Read the contents of the **two checkboxes** indicated by the red frame in the figure below carefully, and if there are no problems, turn ON the checkboxes.



2. Execute Initialization to Factory Settings

Press the **[RESET] button** to initialize the Digital Conversion Unit to factory settings. The setting values of all measurement condition numbers are initialized to factory settings.
It takes about 7 seconds, so do not turn off the power.
After completion, the connection between this software and the Digital Conversion Unit is disconnected.

If the power of the Digital Conversion Unit is turned off during initialization, it may lead to failure of the Digital Conversion Unit.

Refer to "11-8-2. Measurement Condition Setting Initialization" in the "IM-A-1491 NC-100A Series INSTRUCTION MANUAL" for details.

6-11.[CHECK] Tab

6-11-1.Outline of the [CHECK] Tab

1. Functions settable on the [CHECK] tab

The [CHECK] tab provides the following functions:

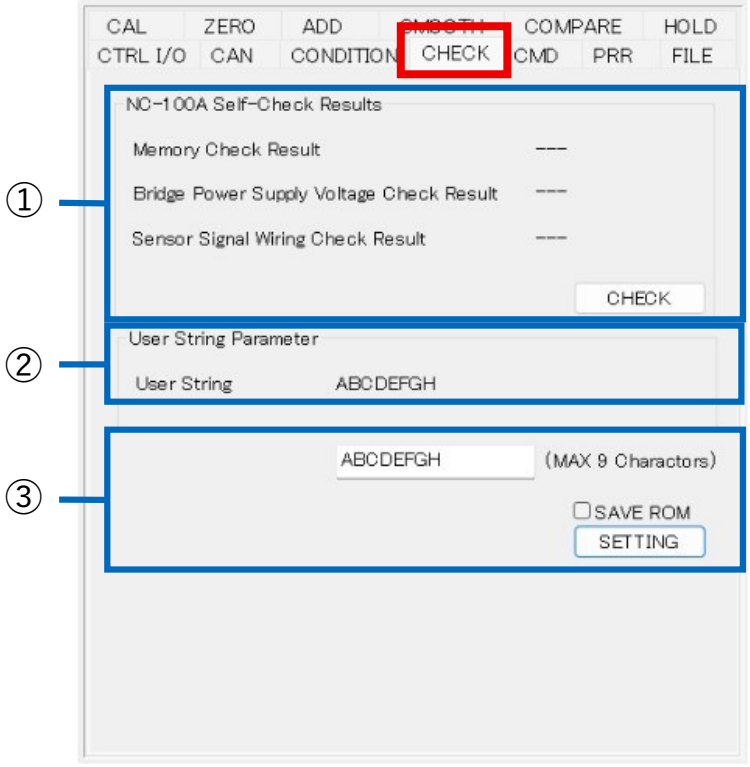
- Execution of self-check of the Digital Conversion Unit and display of execution results
- Display of User String Saving function settings of the Digital Conversion Unit
- Setting of User String Saving function of the Digital Conversion Unit

Refer to "11-7. User String Saving Function" and "11-9. Self-Check Function" in the "IM-A-1491 NC-100A Series INSTRUCTION MANUAL" for details on the function.

2. About saving settings in the [CHECK] tab

If the [SAVE ROM] checkbox is set to ON when the [SETTING] button for the user string saving function is pressed, the setting values are saved to the Digital Conversion Unit.

6-11-2.Description of the [CHECK] Tab



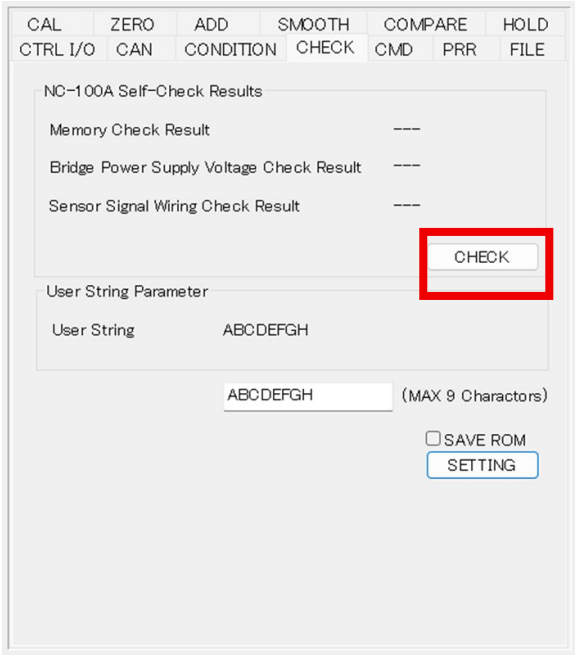
No.	Name	Description
(1)	Check Function Group Box	Allows execution of check functions for the Digital Conversion Unit connected via RS-485 communication. Pressing the [CHECK] button executes the check function and displays the results. **Memory Check Result**: Displays the result of memory check. **Bridge Power Supply Voltage Check Result**: Displays the result of BV power supply check. **Sensor Signal Wiring Check Result**: Displays the result of sensor connection check.
(2)	User String Saving Function Setting Group Box	Reads and displays the user string setting value for the Digital Conversion Unit connected via RS-485 communication. **User String**: User string is displayed in ASCII characters.
(3)	User String Setting Controls (Text Box, Checkbox, Command Button)	Inputs user string into the text box. Pressing the [SETTING] button applies the setting to the Digital Conversion Unit. **[SAVE ROM] Checkbox**: When set to ON, saves the setting values within the frame to the Digital Conversion Unit during setting.

6-11-3.Check Function Execution Procedure

The procedure for executing the check function for the Digital Conversion Unit is described below.

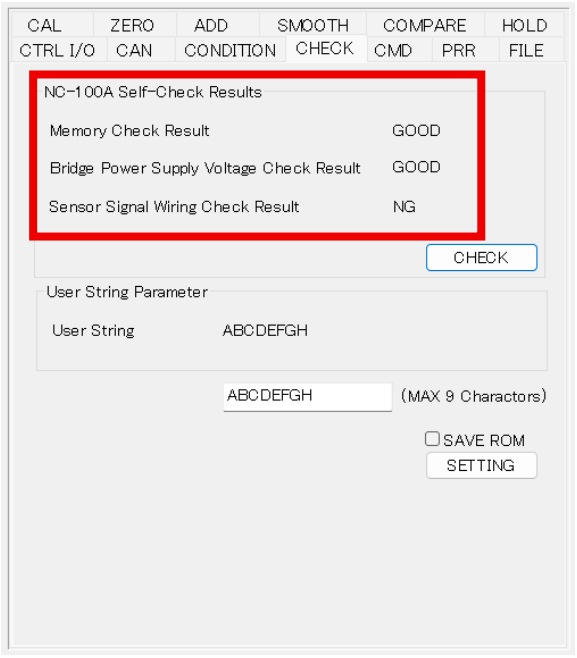
1. Execute Check Function

Press the **[CHECK] button** indicated by the red frame in the figure below to execute the check function.



2. Confirm Check Function Execution Result

The execution result of the check function is displayed in the red frame in the figure below.

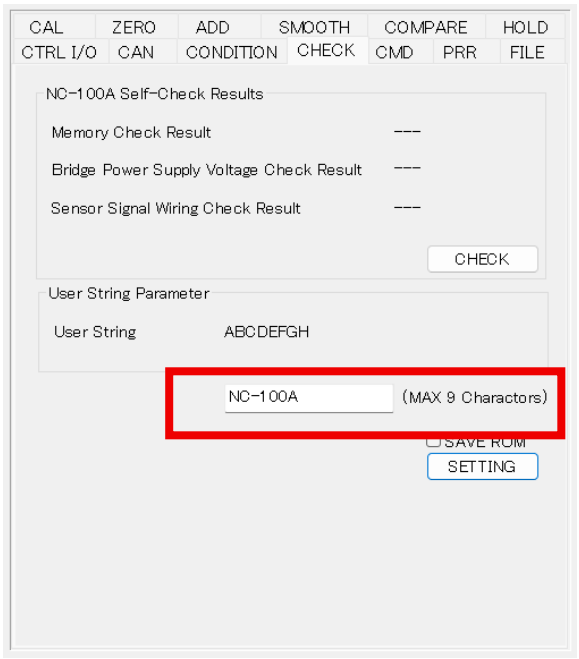


6-11-4.User String Saving Function Setting Procedure

The procedure for configuring the User String Saving Function setting for the Digital Conversion Unit is described below.

1. Input User String

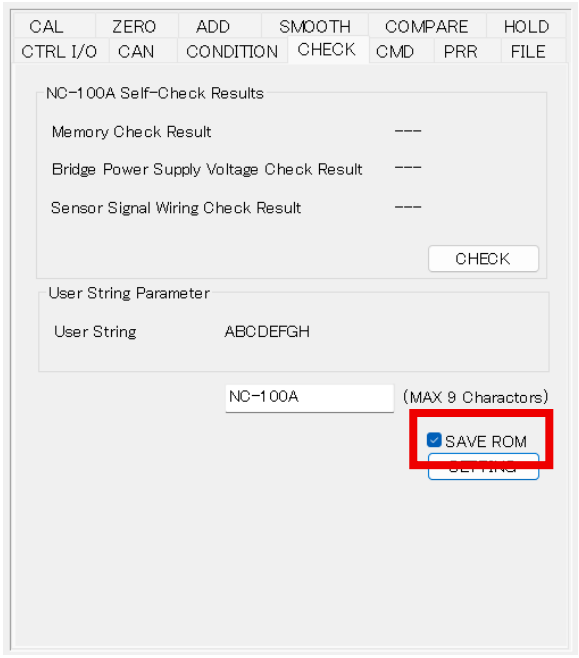
Input an arbitrary string into the **text box** indicated by the red frame in the figure below.



2. Set Whether to Save User String Saving Function Setting to the Digital Conversion Unit

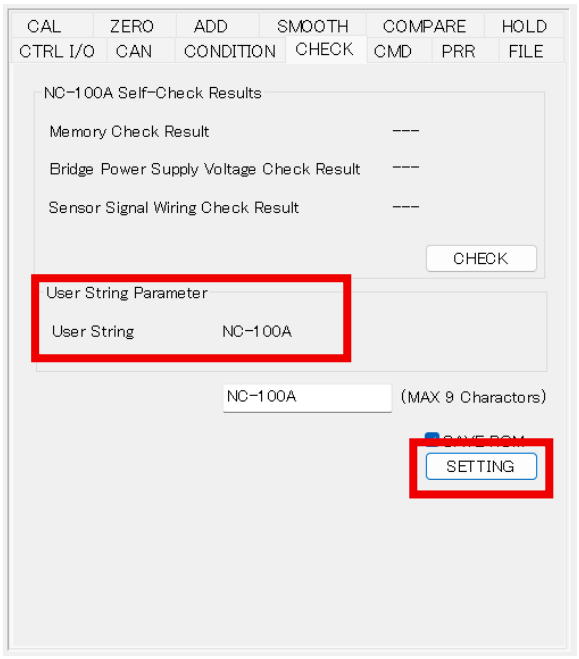
Operate the **[SAVE ROM] checkbox** to set whether to save the setting values to the Digital Conversion Unit.

Setting the **[SAVE ROM] checkbox** to ON configures it to save the setting values to the Digital Conversion Unit, and setting it to OFF configures it not to save the setting values to the Digital Conversion Unit.



3. Execute User String Saving Function Setting

Press the **[SETTING] button** indicated by the red frame in the figure below to send and apply the set contents to the Digital Conversion Unit. The latest setting value of the Digital Conversion Unit is reflected in **User String Parameter**.



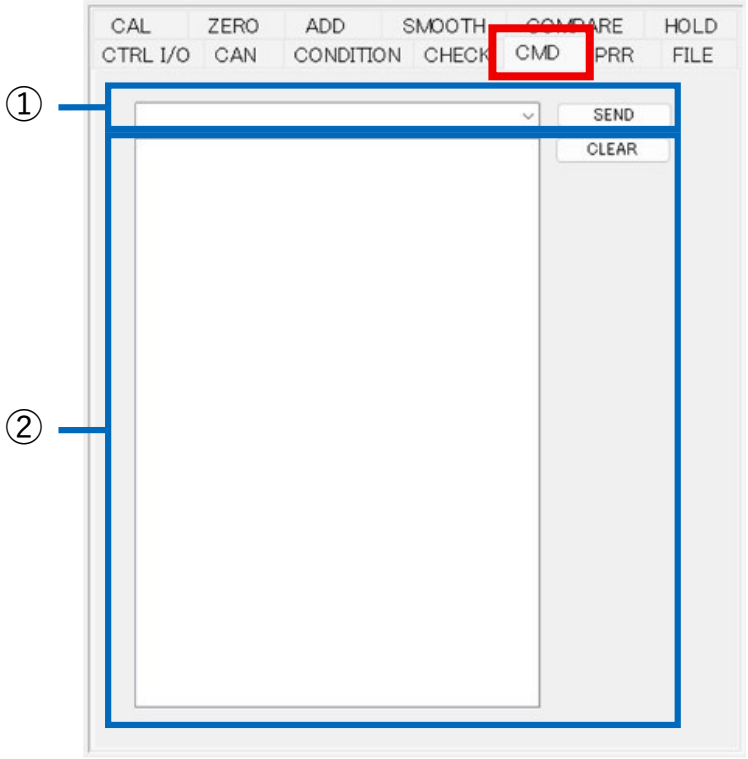
6-12.[CMD] Tab

6-12-1.Outline of the [CMD] Tab

The [CMD] tab allows sending arbitrary strings to the Digital Conversion Unit.
The sent string and received response are displayed in the list box.
This can be used for operation checks when RS-485 communication is sent.

Refer to "13-1. RS-485 Commands" in the "IM-A-1491 NC-100A Series INSTRUCTION MANUAL" for details on RS-485 communication commands.

6-12-2.Description of the [CMD] Tab



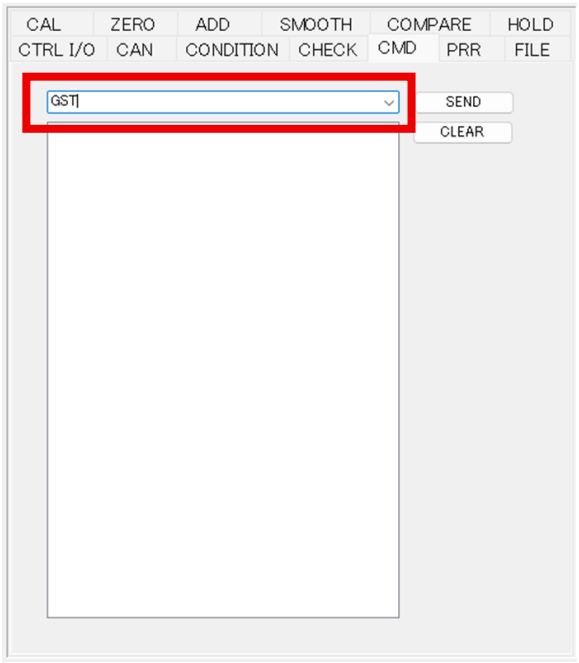
No.	Name	Description
(1)	Command Transmission Function Controls (Combo Box, Command Button)	Allows sending of arbitrary commands to the Digital Conversion Unit connected via RS-485 communication. Arbitrary commands can be input into the combo box. Sent commands are registered in the combo box and can be selected and sent again. Pressing the [SEND] button sends the command entered in the combo box to the Digital Conversion Unit. Pressing the [CLEAR] button clears all displays in the list box (2).
(2)	Command Transmission/Reception History List Box	Displays sent strings and received strings in the command transmission function. Displays up to 50 lines; if it exceeds 50 lines, old lines are deleted.

6-12-3.Arbitrary Command Transmission Procedure

The procedure for sending arbitrary commands to the Digital Conversion Unit is described below.

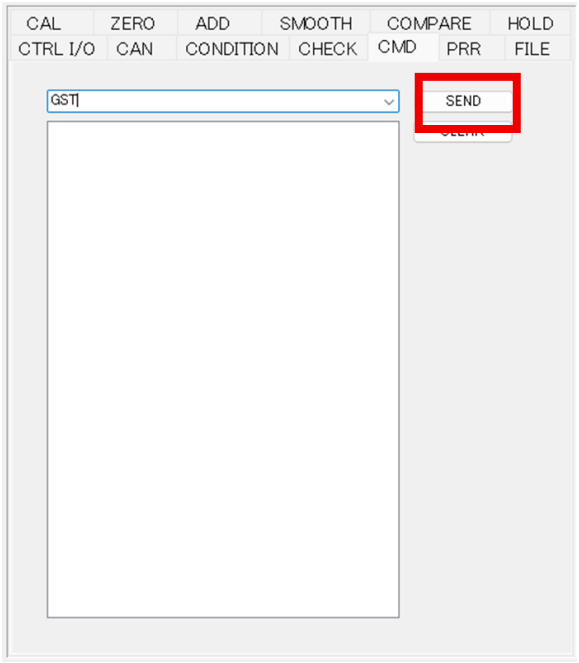
1. Input Arbitrary Command

Input an arbitrary command into the **combo box** indicated by the red frame in the figure below.



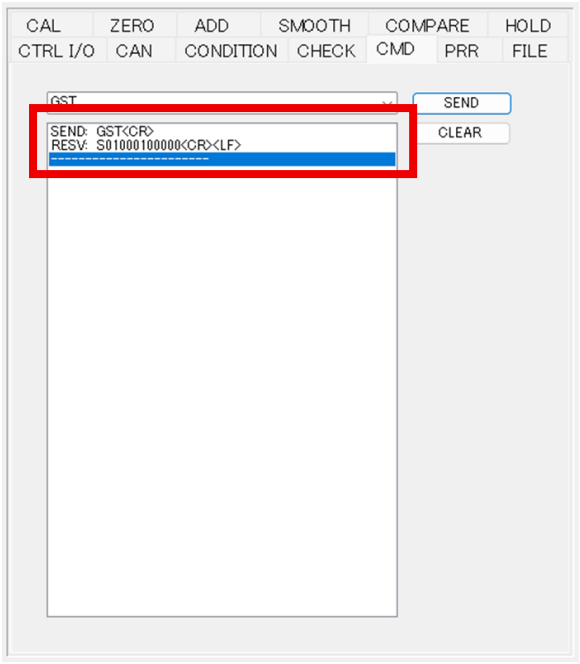
2. Send Command

Press the **[SEND] button** indicated by the red frame in the figure below to send the string in the combo box.



3. Confirm Command Transmission Result

The transmission/reception result is displayed in the **list box** indicated by the red frame in the figure below.



If transmission/reception is performed normally, the sent command and received command are displayed in order. If the sent command is displayed but the response is not displayed, the following cases are considered:

- There is an error in the command
- It is a command that takes time to respond
-

Refer to "13-1. RS-485 Commands" in the "IM-A-1491 NC-100A Series INSTRUCTION MANUAL" for details on RS-485 communication commands.

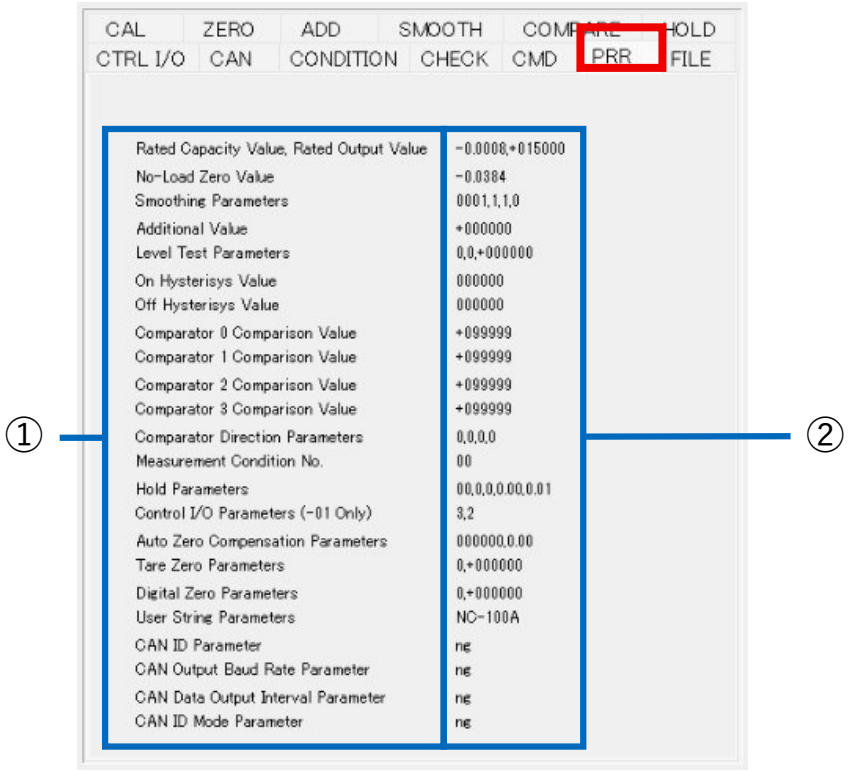
6-13.[PRR] Tab

6-13-1.Outline of the [PRR] Tab

This tab displays the setting values automatically loaded when this software and the Digital Conversion Unit are connected via RS-485 communication, in accordance with the PRR command.
The contents displayed in the group boxes of each setting tab are displayed in the order of the PRR command.

Refer to "13-1-9. PRR: Parameter Loading" in the "IM-A-1491 NC-100A Series INSTRUCTION MANUAL" for details on the PRR command.

6-13-2.Description of the [PRR] Tab



No.	Name	Description
(1)	Digital Conversion Unit Setting Value List	Describes the breakdown of the response listed in the PRR command of the Digital Conversion Unit connected via RS-485 communication.
(2)	Digital Conversion Unit Setting Value Response List	Describes the PRR command response loaded from the Digital Conversion Unit connected via RS-485 communication.

6-14.[FILE] Tab

6-14-1.Outline of the [FILE] Tab

1. Functions settable on the [FILE] tab

The [FILE] tab provides the following functions:

- Function to save setting values of the Digital Conversion Unit to a setting file
  (hereinafter, Setting Value File Saving Function)

- Function to set the setting values of a setting file to this software
  (hereinafter, Setting Value File Loading Function)

- Function to collectively register calibration values among the setting values of this software to the Digital Conversion Unit
  (hereinafter, Calibration Value Registering Function)

- Function to collectively register setting values **other than** calibration values among the setting values of this software to the Digital Conversion Unit
  (hereinafter, Setting Value Registering Function)

2. About saving settings in the [FILE] tab

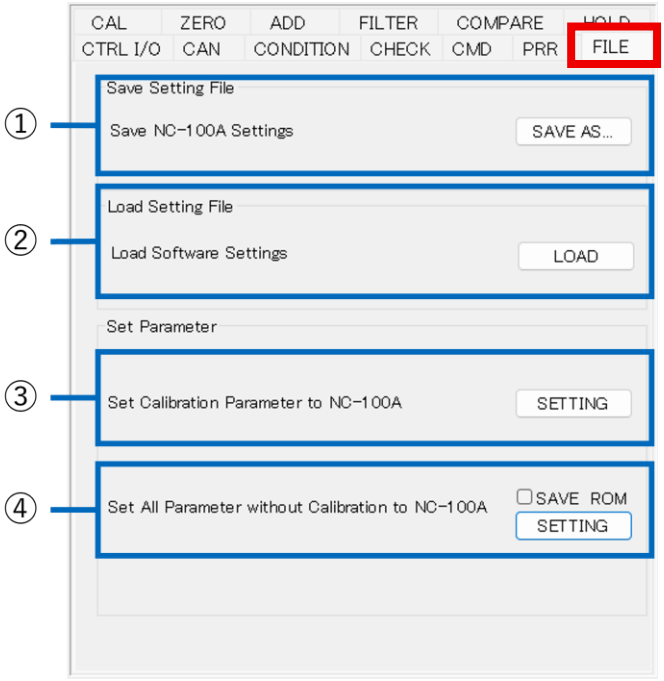
If the [SAVE ROM] checkbox is set to ON when the [SETTING] button for the Setting Value Registering Function is pressed, the setting values are saved to the Digital Conversion Unit.

3. Handling of setting values of files loaded in the [FILE] tab

Setting Value File Loading Function is used, the setting values when opening each tab are updated.
Even after loading a setting file, if settings are made to the Digital Conversion Unit individually on each tab, the setting values of this software are overwritten and updated.

Even in the above case, the file name in the caption of this software is not updated until a new file is loaded or the software is restarted.

6-14-2. Description of the [FILE] Tab



No.	Name	Description
(1)	Setting Software Setting Content Saving Controls (Text Box, Command Button)	Allows saving of setting values of the Digital Conversion Unit connected via RS-485 communication as a setting file. The extension is ".ncs". Pressing the [SAVE AS...] button opens a file save dialog, allowing saving of the file.
(2)	Setting Software Setting Content Loading Controls (Combo Box, Command Button)	Allows loading of a setting file output by this software as the setting values on this software. The extension is ".ncs". Pressing the [LOAD...] button opens a file loading dialog, allowing loading of setting values of the selected file as setting values on this software. Setting values are reflected when each tab is opened. The loaded file name is displayed in the caption of this software.
(3)	Digital Conversion Unit Calibration Value Collective Setting Controls (Command Button)	Pressing the [SETTING] button collectively registers the rated capacity value, rated output value, and no-load zero value to the Digital Conversion Unit connected via RS-485 communication.

(4)	Digital Conversion Unit Setting Other Than Calibration Value Collective Setting Controls (Command Button, Checkbox)	Pressing the [SETTING] button collectively registers settings other than the rated capacity value, rated output value, and no-load zero value to the Digital Conversion Unit connected via RS-485 communication. **[SAVE ROM] Checkbox**: When set to ON, saves the setting values within the frame to the Digital Conversion Unit during setting.

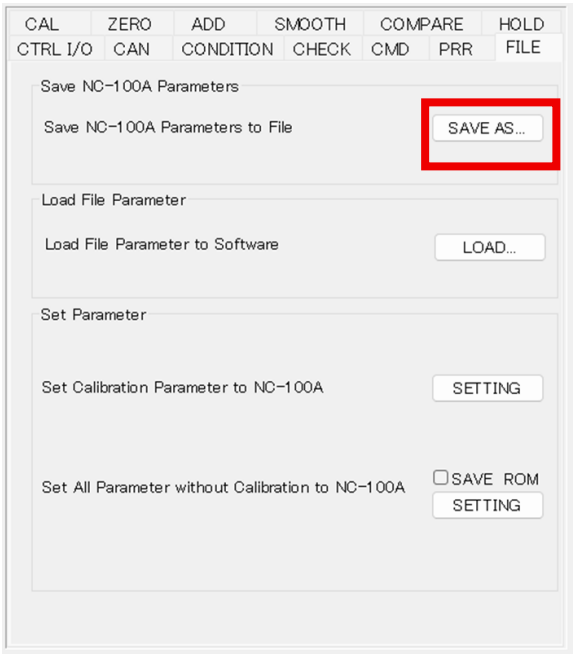
6-14-3.Setting Value Saving Function Procedure

The procedure for saving various setting values of the Digital Conversion Unit to a file is described below.

1. Input File Name

Pressing the **[SAVE AS...] button** displays a save dialog, allowing creation of a setting file with an arbitrary file name.

The extension is .ncs.

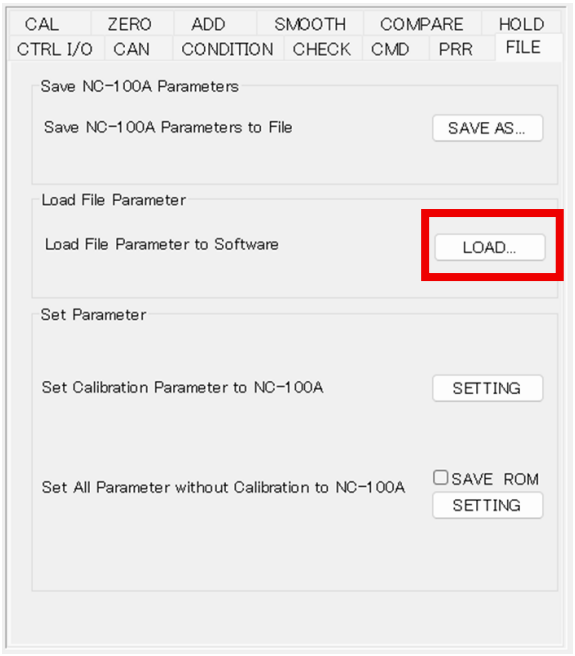


6-14-4.Setting Value Loading Function Procedure

The procedure for loading various setting values of this software from a specified setting file is described below.

1. **Select File**

Pressing the **[LOAD...] button** displays a file selection dialog, allowing loading of a setting file. The target is files with the extension ".ncs". When file loading is performed, the setting values of the setting file are loaded as the setting values on this software.
The setting values of controls when opening each tab on this software are updated to the loaded setting values.
They are reset when this software is closed.



The loaded file name is displayed as the caption of this software.

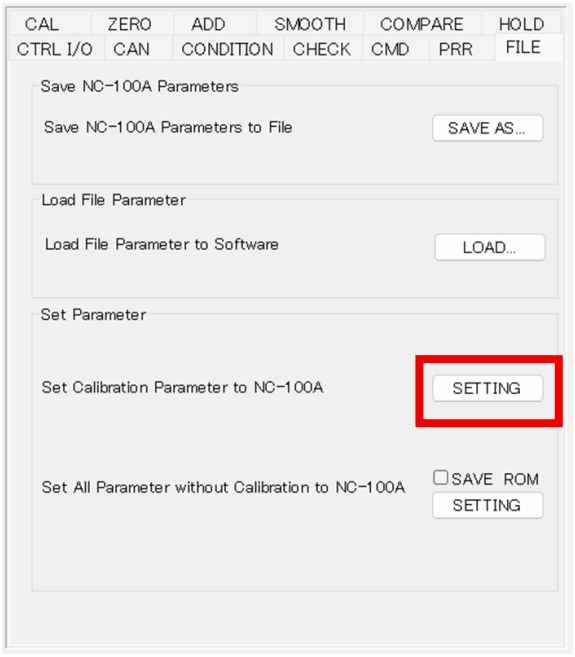
6-14-5.Calibration Value Registering Function Procedure

The procedure for registering calibration setting values on this software to the connected Digital Conversion Unit is described below.

1. Execute Calibration Value Registering Function

Press the **[SETTING] button** indicated by the red frame in the figure below to execute the calibration value registering function.

The setting targets are rated capacity value, rated output value, and no-load zero value. Calibration values are always saved to the Digital Conversion Unit.

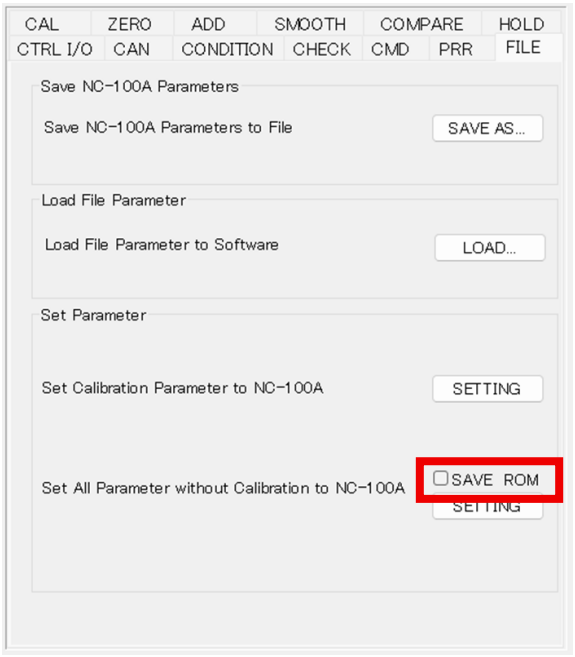


6-14-6.Various Setting Values Registering Function Procedure

The procedure for registering setting values other than calibration values on this software to the connected Digital Conversion Unit is described below.

1. **Set Whether to Save Various Setting Values Registering Function Setting to the Digital Conversion Unit**

Operate the [SAVE ROM] checkbox to set whether to save the setting values to the Digital Conversion Unit. Setting the [SAVE ROM] checkbox to ON configures it to save the setting values to the Digital Conversion Unit, and setting it to OFF configures it not to save the setting values to the Digital Conversion Unit.

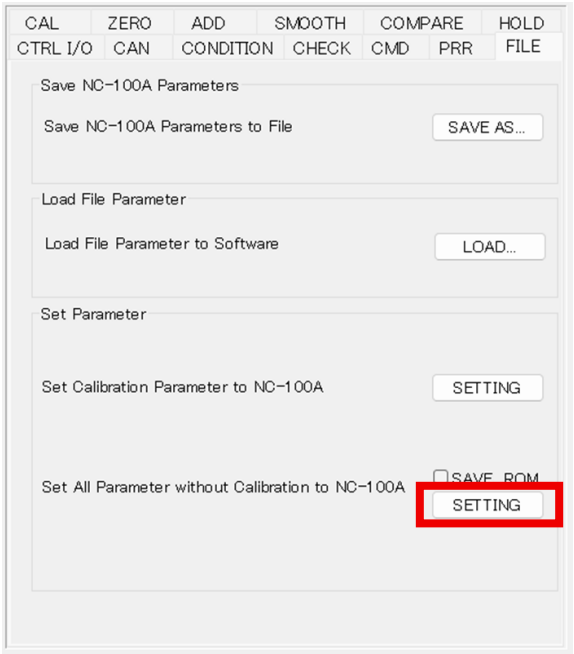


2. Execute Various Setting Values Registering Function

Press the **[SETTING] button** indicated by the red frame in the figure below to execute the various setting values registering function.

The setting targets are as follows:

- Zero Function
- Additional Value Function
- Level Test Function
- Comparison Function, Hysteresis Function
- Hold Function
- Control I/O Function (NC-100A-01 only)
- CAN Function (NC-100A-10 only)
- User String Saving Function



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