RM3545 Sample Software

Rm3545App

User Manual

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Contents

1. Overview

This software (Rm3545App) allows you to monitor measurement data in real time, log measurement data, and configure the instrument from a computer by accessing a Resistance Meter RM354x series instrument using its USB, RS-232C or LAN interface.

1.1. Operating Environment

Recommended operating environment:

Supported operating systems	Windows 10 (32-bit/64-bit), Windows 11
CPU	1 GHz or faster
RAM	512 MB or more
Display	1920 × 1080 or greater
Available disk space	30 MB or more
Communications interface	USB 2.0 (virtual COM port), RS-232C, LAN[*1]

1.2. Supported products

This software can be used with the following products:

- RM3545
- RM3545-01
- RM3545-02
- RM3545A-1
- RM3545A-2

[*1] RM3545A-1 and RM3545A-2 only

2. Using the Software

2.1. Main Screen
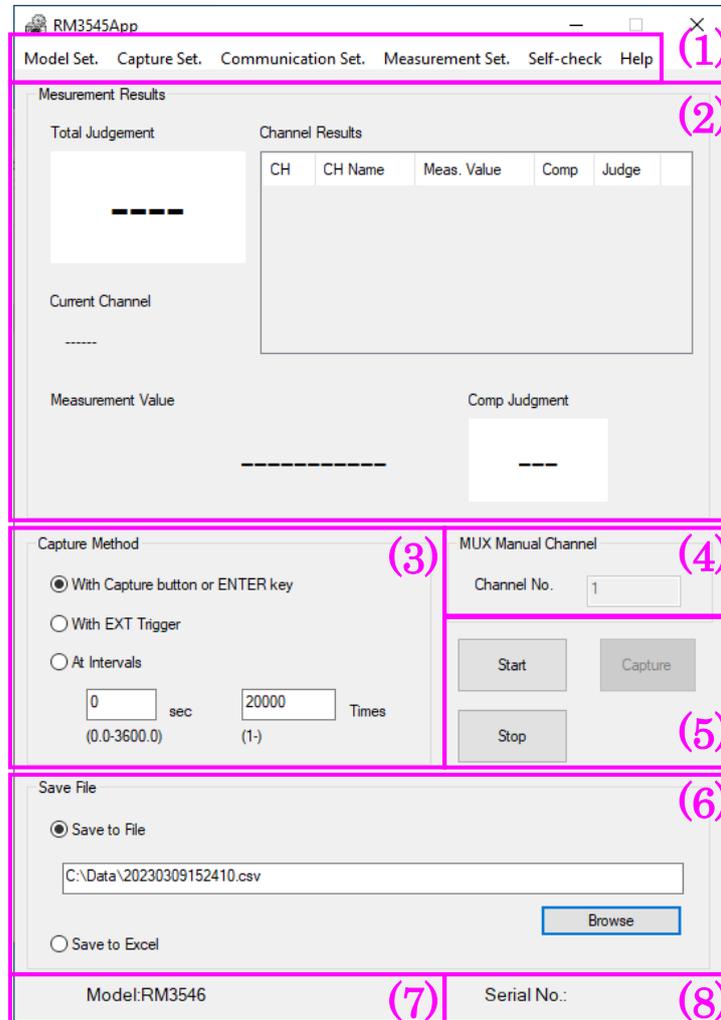
Figure 2-1

No.	Function	Overview
1	Menu bar	Provides access to settings, self-check, and help functionality.
2	Measured value/judgment results display	Displays measured values, judgment results, and other information.
3	Capture method settings	Sets how to capture measured values.
4	MUX manual measurement channel	Sets the channel for which to perform manual MUX measurement.
5	Measurement buttons	Starts measurement, captures measured values, and stops measurement.
6	Save file settings	Sets whether to save files in the text or Excel format.

7	Model	Displays the selected model.
8	Serial number	Displays the serial number of the connected instrument.

## 2.1.1. Menu Bar Layout
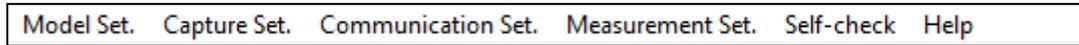
Figure 2-2

[Model Set.]:	Model setting
[Capture Set.]:	Save parameters, save file format, external trigger filter settings
[Communication Set.]:	Communications port setting, communications test
[Measurement Set.]:	Measurement conditions
[Self-check]:	Self-check
[Help]:	Version information

2.2. Settings

2.2.1. Model Setting

Sets the model to be used. (See Figure 2-3.)
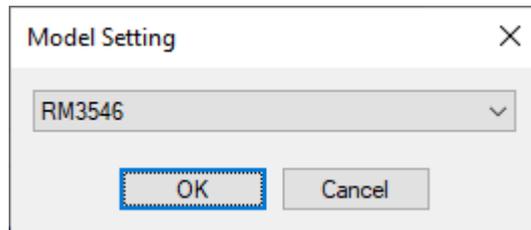
Figure 2-3

*The measurement settings are initialized when the model is changed.

2.2.2. Capture Method (Main Screen)

Set how to capture measured values. (See Figure 2-4.)
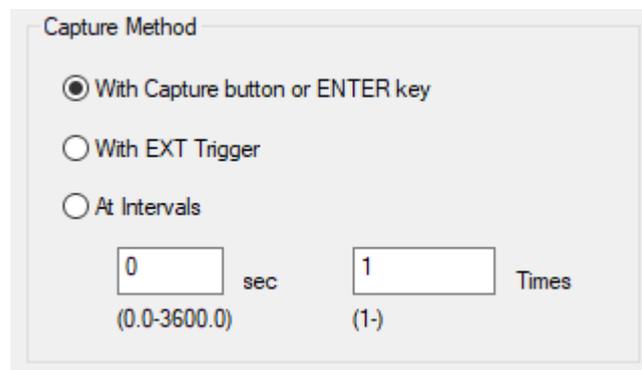
Figure 2-4

(1) Capture with "Capture" button (Enter key)

Clicking the "Capture" button or pressing the keyboard's "Enter" key after starting measurement by clicking the "Start" button causes measured values to be captured to a text file or Excel file.

(2) Capture with external trigger

Inputting an external trigger after starting measurement by clicking the "Start" button causes measured values to be captured to a text file or Excel file.

(3) Capture with specified time interval and count

When the "Start" button is clicked, the set number of measured values will be captured to a text file or Excel file at the specified time interval.

*When using MUX scan measurement with a large number of channels, the time interval may end up being about 1 sec. due to the effects of capturing measured values even if a time interval of less than 1 sec. has been specified.

*Mux step scan measurement is not supported.

2.2.3. Save File (Main Screen)

Set where to save measured values.

*The parameters that are saved are set with the capture settings (2.2.4). (See Figure 2-5.)

Figure 2-5

(1) Save to file

Measured values are saved to the specified file in the text format.

*Delimiter and decimal point settings are configured with the capture settings (2.2.4).

(2) Save to Excel

Measured values are saved in order starting with the selected cell in Excel. If Excel is not open, it will be automatically opened at the start of measurement, and saving of values will start with the A1 cell. If Excel is already open, saving will start with the selected cell on the active sheet.

2.2.4. Capture Settings

Set the parameters to save, the save file format, and the external trigger filter. (See Figure 2-6.)
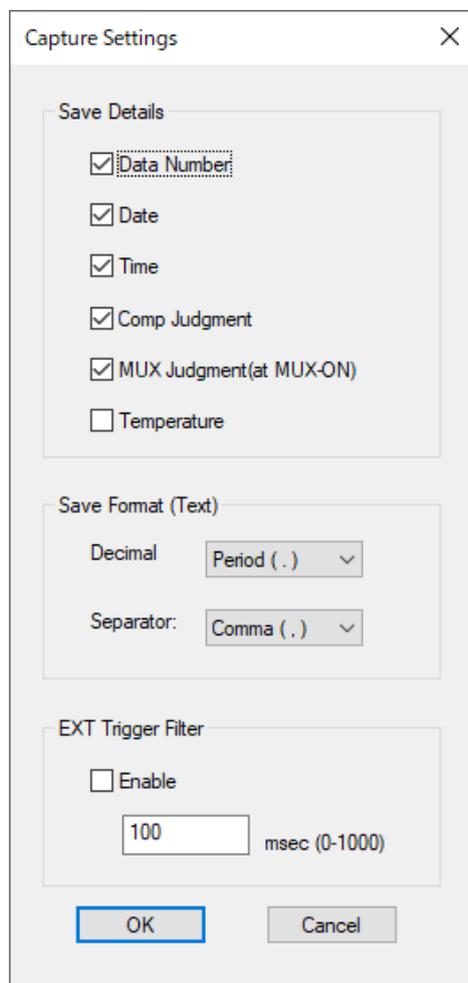
Figure 2-6

(1) Parameters to save

Select the checkboxes for the parameters you wish to save.

*The "MUX judgment" checkbox is available only when MUX is on.

(2) Save file format

Sets the decimal point and delimiter to use when the save file setting (2.2.3) is set to "Save to file." The following settings are available:

Decimal point: Period (.), comma (,)

Separator: Comma (,), semicolon (;), tab, space

*These settings do not apply to values that are displayed in the software. A period is always used as the decimal point in values displayed in the software.

(3) External trigger filter

Disables triggers detected before the set time has elapsed after capturing a measured

value.

*This setting is enabled only when the capture method setting is "Capture with external trigger" and the resistance meter's trigger setting is "Internal trigger."

2.2.5. Communications Settings

Configure communications settings and perform communications tests. (See Figure 2-7.)
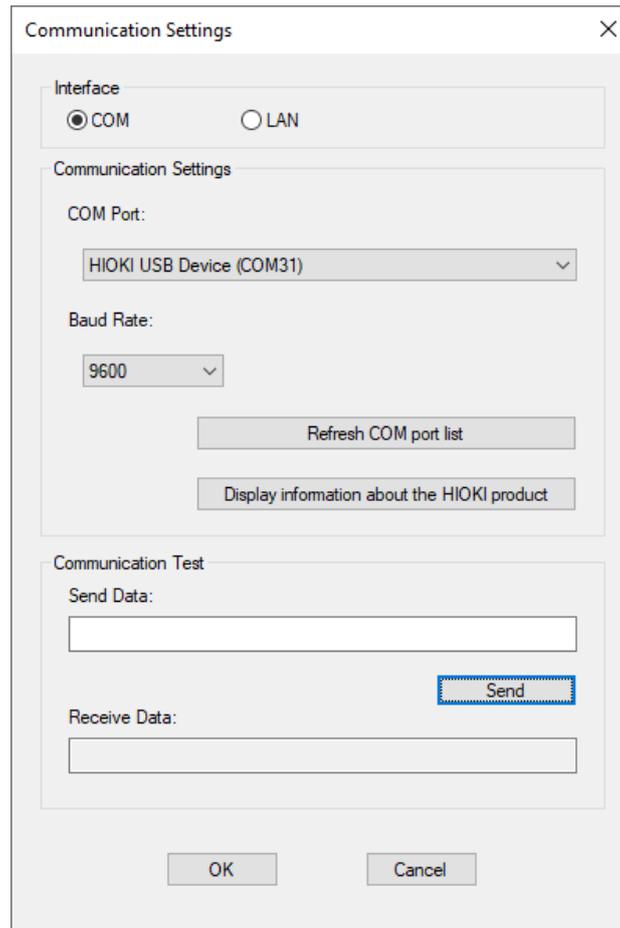
Figure 2-7

(1) Interface

Set the interface to be used. (See Figure 2-8.)
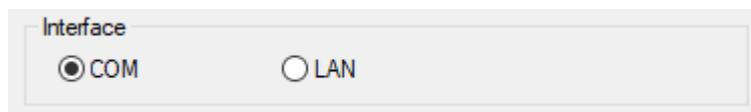
Figure 2-8

(2) Communications settings (COM)

Sets the port and baud rate to use. Clicking the "Refresh COM port list" button causes the COM port list to be refreshed. (The COM port list is automatically refreshed when the "Communications Settings" dialog box is opened.) Clicking the "Display information about the HIOKI product" button displays HIOKI products in the format "HIOKI-Model-Serial Number" in the list as shown in Figure 2-8 and automatically updates the baud rate to a supported value.
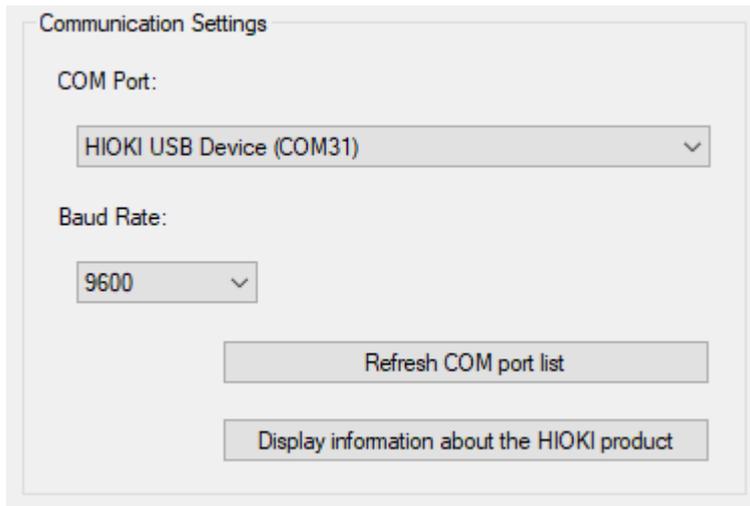
Figure 2-9
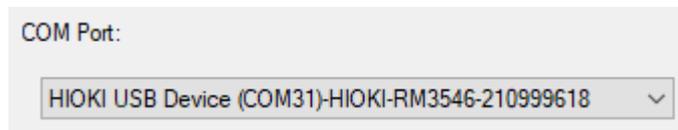
Figure 2-10

(3) Communications settings (LAN)

Sets the IP address and port number to use.
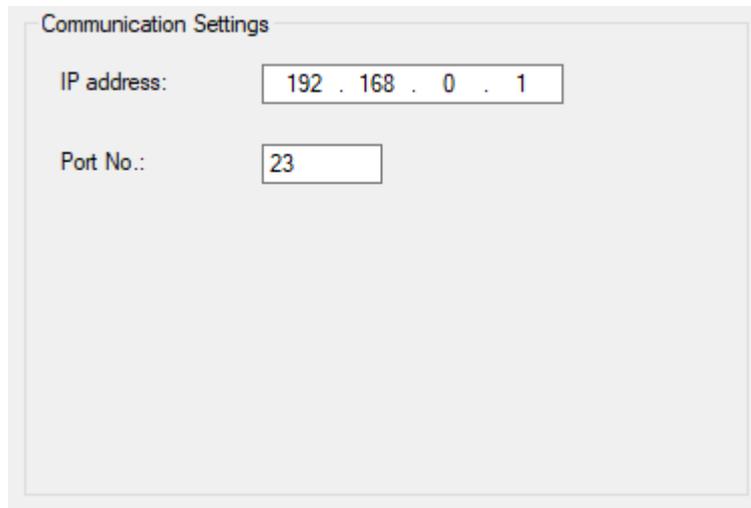
Figure 2-11

(4) Communications test

Allows you to send the command entered in the "Transmit data" field to the selected interface. If you send a query command, the received data will be displayed in the "Receive data" field.

2.2.6. Measurement Settings

2.2.6.1 Front Setting (MUX Off)

Set the measurement terminals to "FRONT" and set the measurement conditions. (See Figure 2-12.)
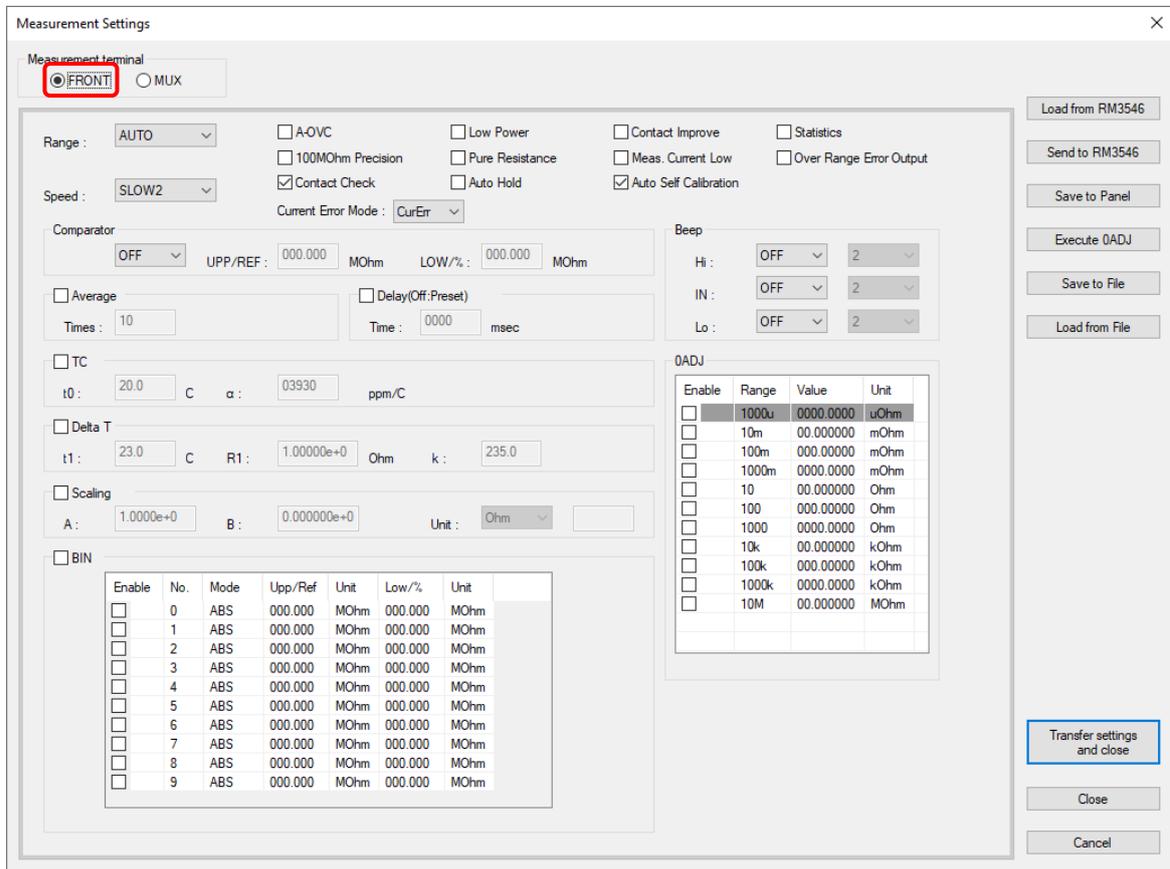
Figure 2-12

Select the checkboxes for the functions you wish to enable and configure the associated parameters where necessary. By double-clicking a cell or selecting a cell and then clicking it under the BIN and 0ADJ settings, you can edit the values as shown in Figure 2-13.
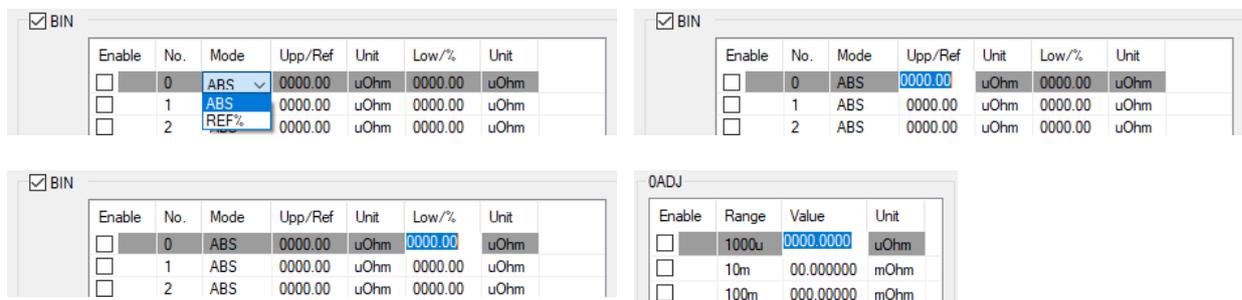
Figure 2-13

2.2.6.2 MUX Setting (MUX On)

Set the measurement terminals to "MUX" and set the measurement conditions. (See Figure 2-14.)
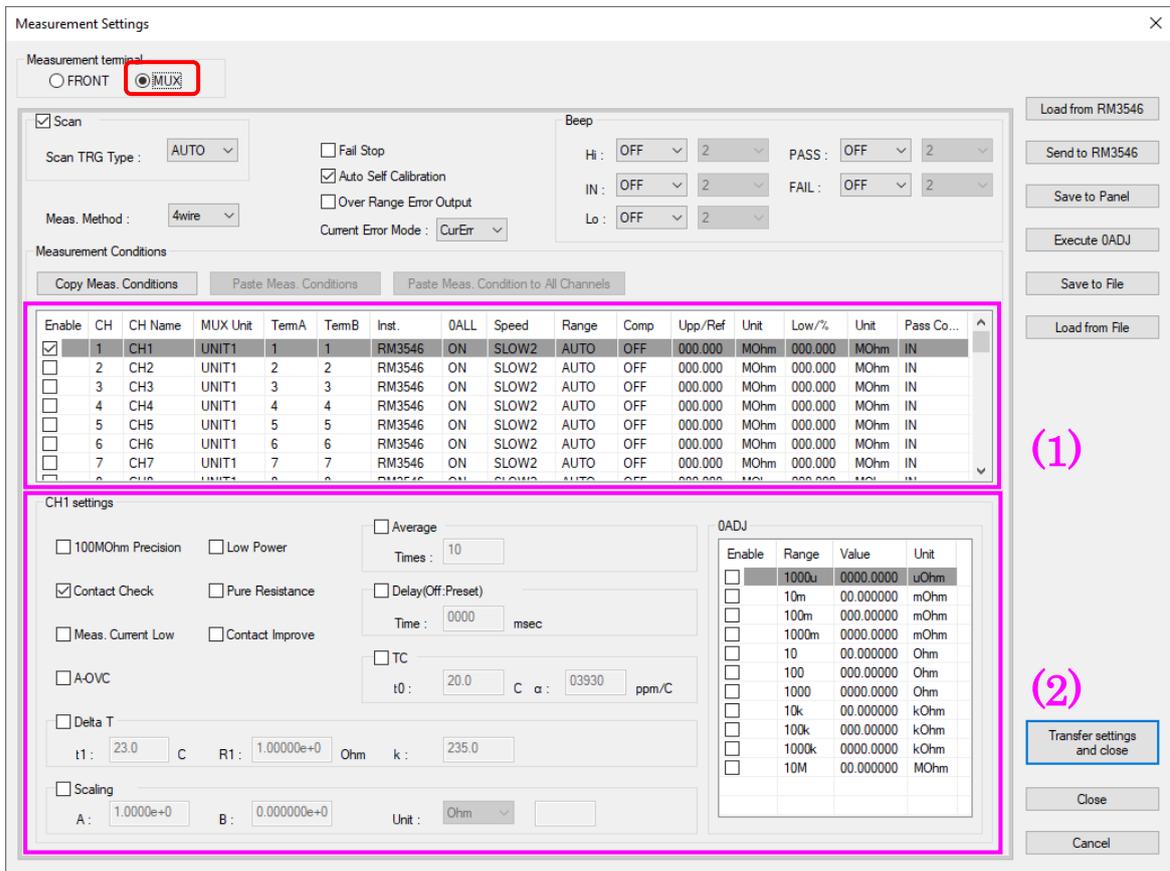
Figure 2-14

Select the checkboxes for the functions you wish to enable and configure the associated parameters where necessary. The measurement conditions corresponding to the channel that is selected in the list in area (1) will be applied to the settings in area (2).

As with the "FRONT" setting, the list in area (1) and the 0ADJ list can be edited.

*Channel names are used in the software only and do not affect the RM354x series.

- **Procedure for copying measurement conditions**

    The following example procedure can be used to copy all measurement conditions from channel 1 to channel 2:

    1. Select the channel you wish to copy and click the "Copy Meas.Condition" button. (See Figure 2-15.)

        *Changing the measurement method will cause the copied information to be cleared.
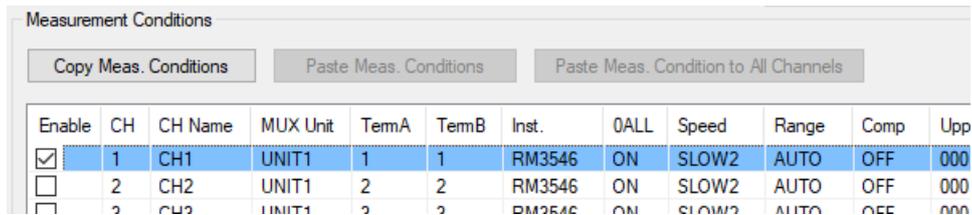
図 2-15

    2. A dialog box listing the settings to be copied will be displayed as shown in Figure 2-16. Select the items you wish to copy and click the "OK" button.
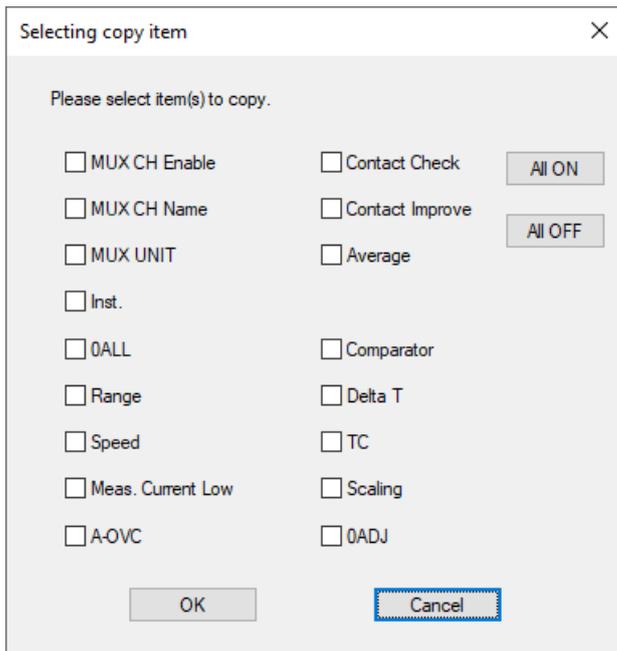
*"Range" includes the following settings:

- 100 MΩ range high-precision
- Low-power
- Pure resistance

*"Comparator" includes the following information:

- Comparator mode
- Threshold
- PASS conditions

Figure 2-16

3. Select the channel to which you wish to paste the measurement conditions and click the "Paste Meas. Conditions" button. (See Figure 2-17.)

Clicking the "Paste Meas. Conditions to All Channels" button here will paste the copied information to all channels.

If the 100 MΩ range high-precision, OVC, measurement current, or low-power setting is changed for the channel to which settings are being pasted, its zero-adjustment value will be cleared.
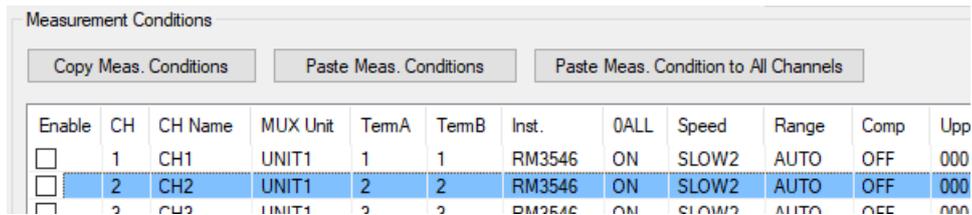
Figure 2-17

- **Using the channel 1 measurement result as a reference comparator setting**

  Select CH1 as the comparator setting and set the range (Low%). (See Figure 2-18.) In the example shown in Figure 2-12, ±10% of the CH1 measurement result has been set as PASS.

  *It is possible to set a reference value, but that value will be disabled. Instead, the CH1 measurement result will be used as the reference.

Figure 2-18

2.2.6.3 Other Functions

This section describes other functions available on the "Measurement Settings" dialog box. (See Figure 2-19.)
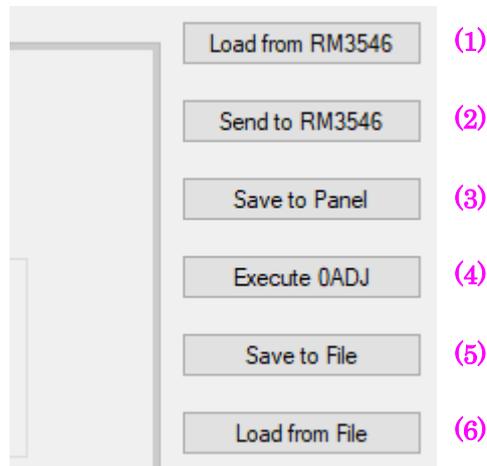
Figure 2-19

No.	Function	Overview
1	Load from RM354x	Loads settings from the RM354x.[1]
2	Send to RM354x	Transfers settings to the RM354x.[1]
3	Save to Panel	Transfers the current settings to the RM354x[1] and saves them as the specified panel number with the specified panel name. (See Figure 2-20.) Figure 2-20
4	Execute 0ADJ	Transfers the current settings to the RM3545[1], performs zero-adjustment, and loads the results. The zero-adjustment results are applied to the zero-adjustment setting values.
5	Save to File	Saves the settings to an rmf file.
6	Load from File	Applies the settings from the selected rmf file.[2]

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[1] Indicates the RM354x series that is connected to the configured interface.
[2] Setting files saved in Ver 1.0.0.4 or earlier can be loaded only when the model setting is RM3545.

3. Other

3.1.1. Self-check

Performs a self-check and displays the results.

*For more information about what do to if an error occurs, please see the RM354x series User Manual.

3.1.2. Specifying a Settings File When Launching Rm3545App

The following procedure can be used to specify a settings file when launching Rm3545App:

1. Create a shortcut to Rm3545App.
2. Right-click the shortcut and select "Properties."
3. After the link, insert a space, enter the full path to the settings file, and click the "OK" button. (See Figure 3-1.)

   In the example shown in Figure 3-1, the file "Setting.rmf" on drive D: has been specified.
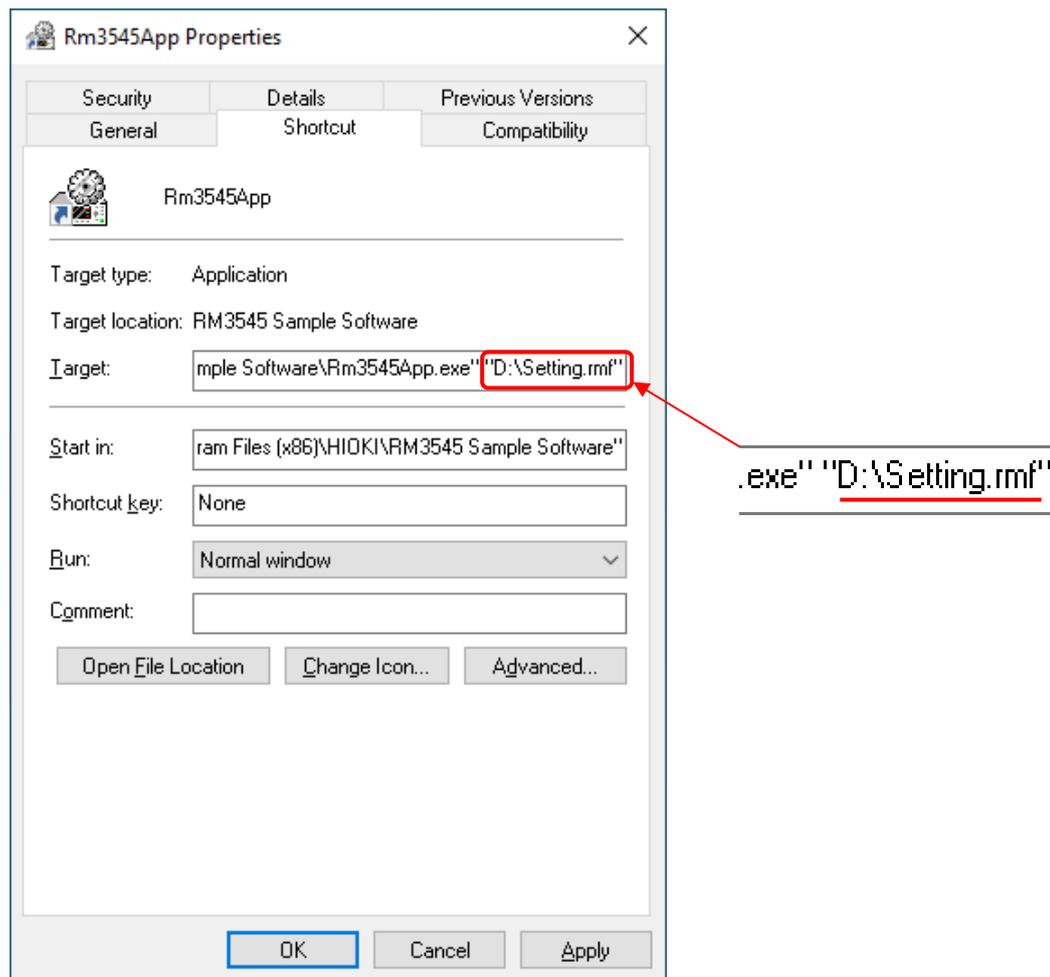
Figure 3-1

3.1.3. Help

Displays version information. (See Figure 3-2.)

Figure 3-2

4. Precautions

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