INSTRUCTION MANUAL

IMPULSE NOISE SIMULATOR
INS-AX2
REMOTE CONTROL SOFTWARE

NOISE LABORATORY CO., LTD.

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   (4) Storing the Software, or the information, documentation, and the like provided by NoiseKen for the Software, on a network in a state wherein it may be conveyed to a third party

10. Handling of USB and other protection keys
   The software provided by NoiseKen may require USB or other protection keys.
   (1) If a protection key is included in the accessories, the protection key must be mounted in the computer where the software is used.
   (2) As a general rule, the protection key is not reissued. In the event that the protection key is damaged or lost, please contact the NoiseKen Sales (or Repair) Division.

2. IMPORTANT SAFETY PRECAUTIONS

This product is a program to remote control the INS-AX2 Simulator.
As the following matters are important safety precautions for handling this product and the INS-AX2, thoroughly read them before use.
Also, thoroughly read this book and "INS-AX2series" Instruction Manual before using this product.

1. **Incorrect or careless operation could result in a fatal injury.**

2. **Use of this unit in an explosive area such as "No fire" area etc. is prohibited. If used in such an area, it is liable to cause combustion or ignition due to discharge**

3. **A person who has a pacemaker on should not operate this unit and also should not enter the area where it is operating.**

4. **Avoid use in locations exposed to high humidity and large amounts of dust.**

5. **Before connecting cables, interrupt power supply to the simulator, tester and equipment under test (hereinafter called EUT) being connected and make sure that power to each unit is turned off.**

6. **Be sure to go through "BASIC SAFETY PRECAUTIONS" mentioned later before use for test set-up, connection and execution of test.**

7. **Starting this program can be done only after terminating of other running applications.**

3. TABLE OF CONTENTS

4. PREFACE

4.1. Preface

We thank you for your purchase of Remote Control Software for Impulse Noise Simulator INS-AX2. Thoroughly understand the contents of this manual and use as ready reference for operation. In this manual, two marks are distinctively used, < > means button names and [ ] means other names and messages shown on screens.

- **This Instruction Manual will help operators handle and utilize safe and efficiently the Impulse Noise Simulator INS-AX2 and INS-AX2 Remote Control Software.**
- **Keep this Instruction Manual in a place where it is readily available.**

4.2. About this product

This product is a software program specifically designed to operate, control and support the INS-AX2 Noise Simulator more functionally.

4.3. Feature of this Product

- Controls INS-AX2 via personal computer.
- Compatible with the standard interface RS-232 for personal computer.
- Test condition programming function makes it possible to create free test conditions and run tests under these conditions.
- Capable of saving test conditions so that any test can be executed under the same condition as necessary.
- Report creating function to prepare report on test conditions. (Preview and report printing are available.)

5. SETUP AND START

5.1. Setup

(1) Setup of software

① Log on with the ID that has Administrator privileges for Windows.
② Download the INS-AX2 remote control software from the NoiseKen website (http://www.noiseken.co.jp/).
③ Extract the downloaded file, and select the [Japanese] folder in INS-AX2 folder when Japanese version of OS is used, the [English] folder in INS-AX2 folder when English version of OS is used, or the [Korean] folder in INS-AX2 folder when Korean version of OS is used
④ Double click on Setup.exe in the folder.
⑤ The software should automatically start installing. Follow the set-up instructions given on the screen.
⑥ Checking the installation
[Windows 7]
After the installation process is complete, the [INS-AX2RS] program is registered to [NoiseKen] > [INS-AX2RS] under [Start] > [All Programs] in the taskbar.

[Windows 10]
After the installation process is complete, the [INS-AX2RS] program is registered to [NoiseKen] in the All Apps list under [Start] in the taskbar.


This completes the setup of the software.

(2) Installing the driver

The driver must be installed to run this software.

① Log on with the ID that has Administrator privileges for Windows, and insert the setup CD of the optical interface unit into the CD-ROM drive.
② Connect the optical interface unit to a USB port of the PC.
③ Open Device Manager.
[Windows 7]
Click the <Start> button, and click [Control Panel].
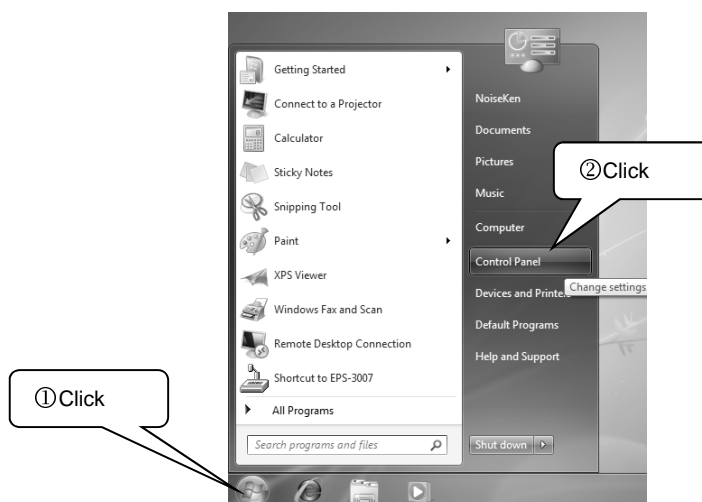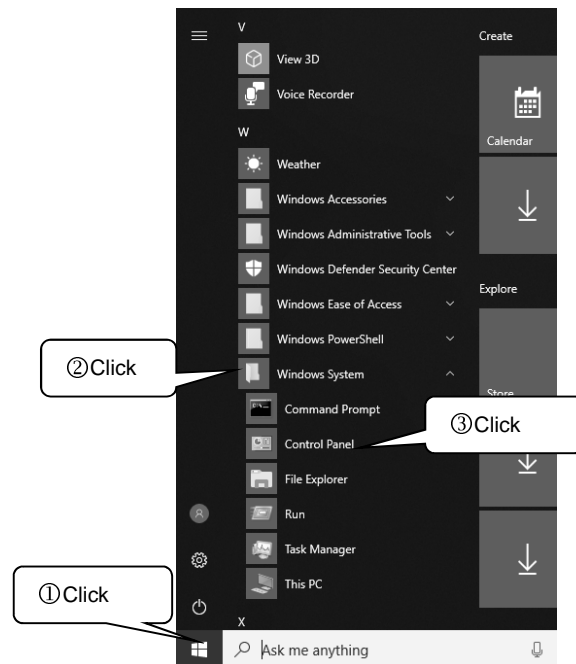
In [Control Panel], click [System and Security].
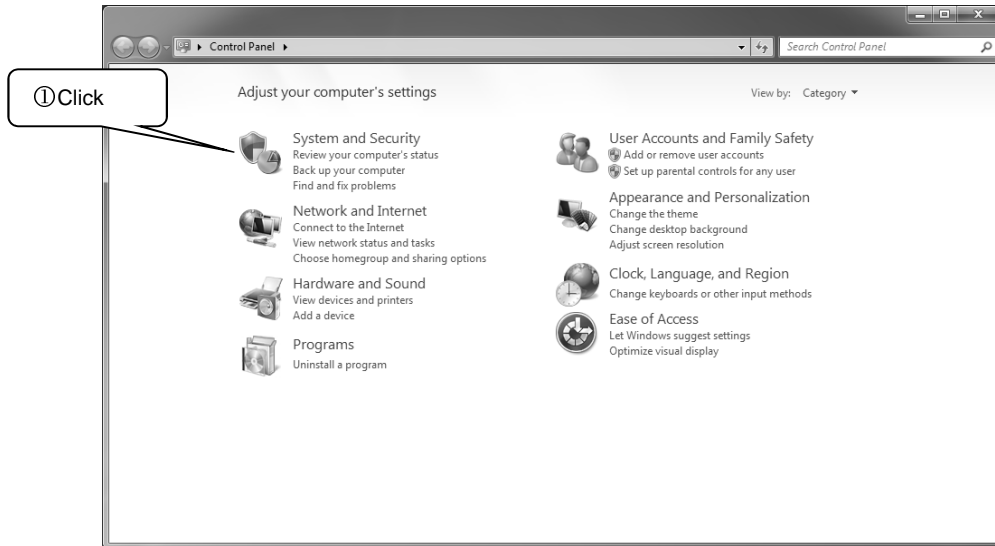
①Click

In [System], click [Device Manager].
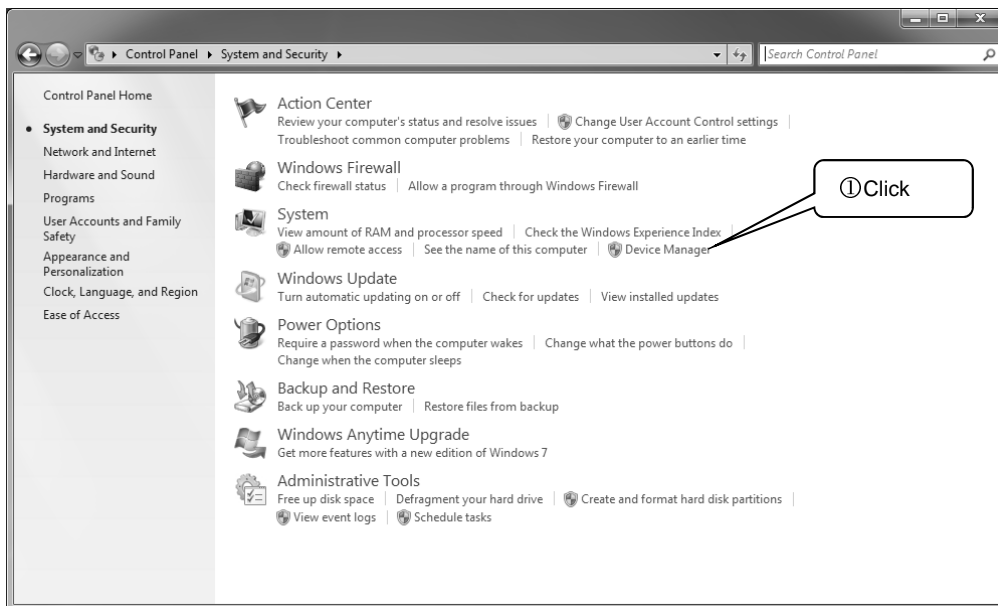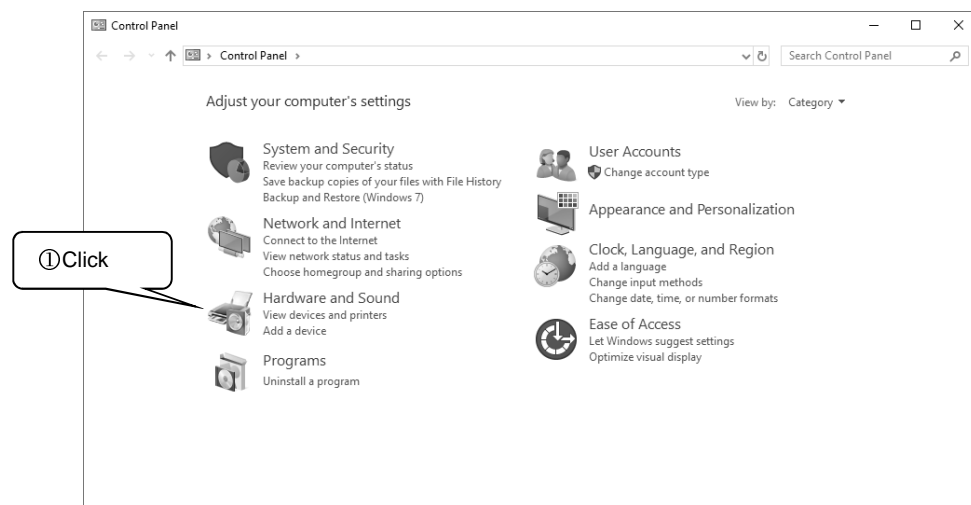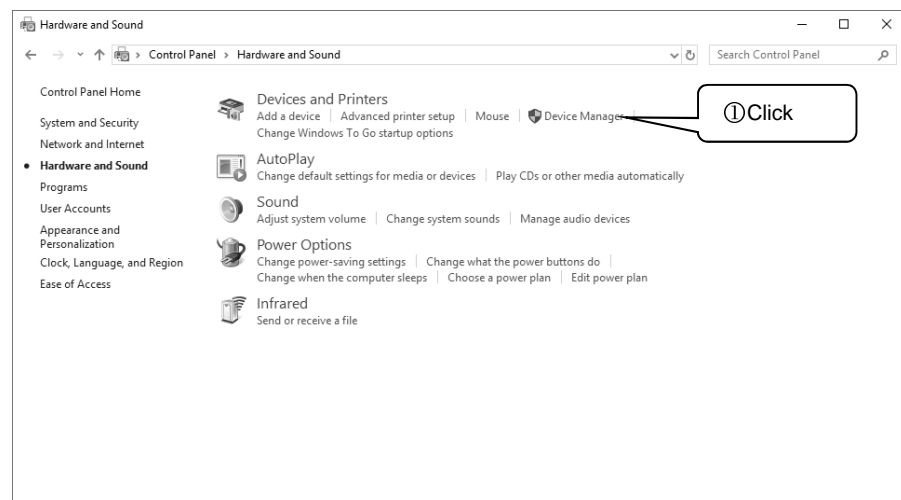
①Click

[Windows 10]

Click the <Start> button. In the All Apps list, and scroll down to the [Windows System] folder and open it. Click [Control Panel].
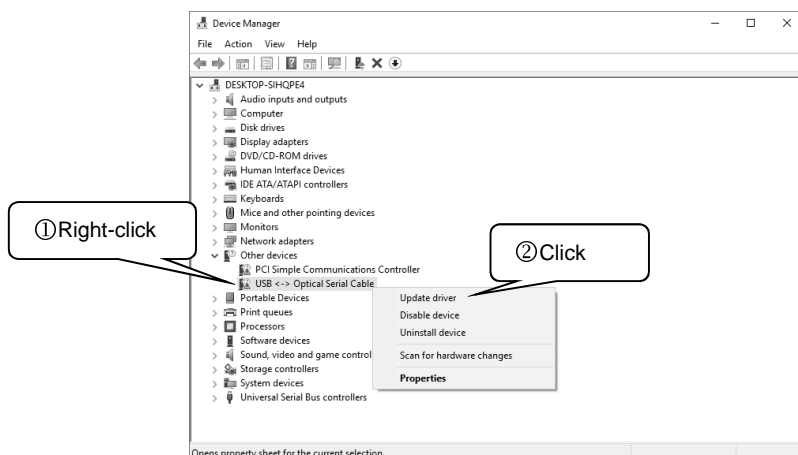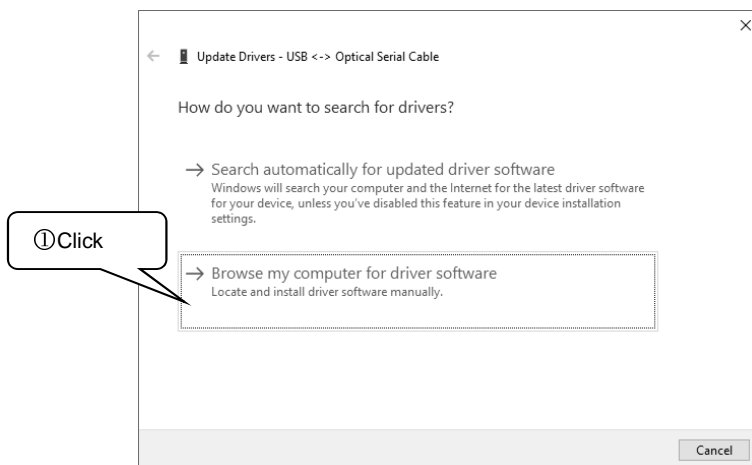

In [Control Panel], click [Hardware and Sound].

In [Devices and Printers], click [Device Manager].

④ If [Other devices] shows [USB <-> Optical Serial Cable] marked with "!", right-click [USB <-> Optical Serial Cable] and click [Update driver] with the mouse.
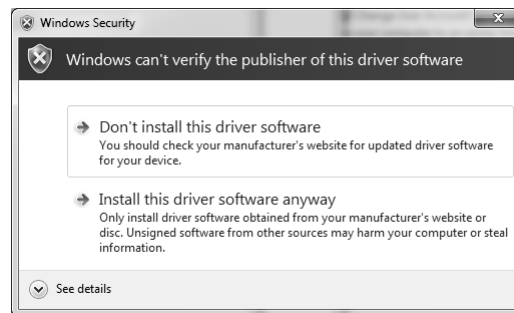

⑤ When the [Update Drivers - USB <-> Optical Serial Cable] screen appears, click [Browse my computer for driver software].
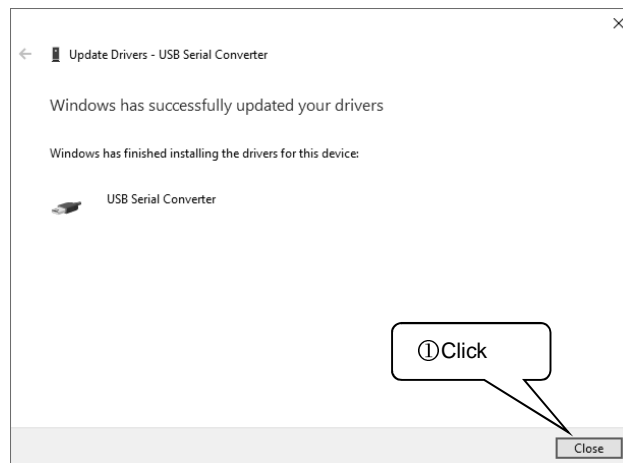
⑥   Specify the name of the drive into which you inserted the driver CD, and select the checkbox for [Include subfolders].

① Enter CD drive name or click <Browse...> to select the drive
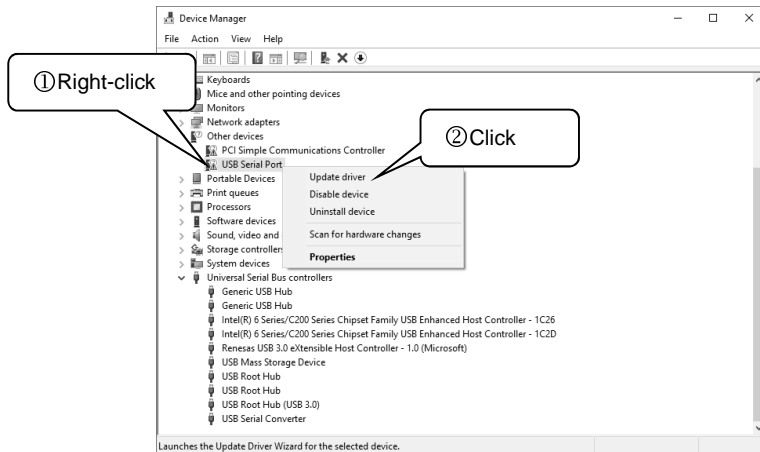
② Select the box
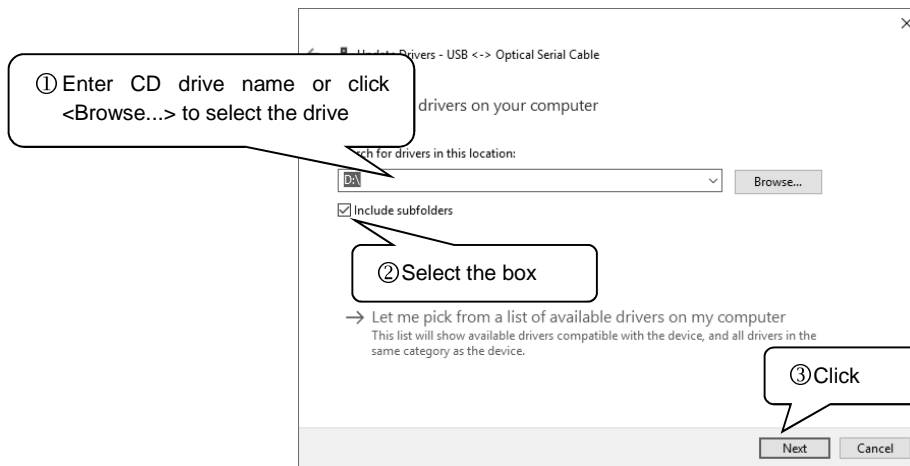
③ Click

⑦   When the [Windows Security] screen appears, click [Install this driver software anyway].

⑧   Once the USB Serial Converter is installed successfully, the completion screen appears.

① Click

⑨ Install the driver software for the USB Serial Port.
If [Other devices] shows [USB Serial Port] marked with "!", right-click [USB Serial Port] and click [Update driver] with the mouse.

⑩ When the [Update Driver Software - USB Serial Port] screen appears, click [Browse my computer for driver software].

⑪ Specify the name of the drive into which you inserted the driver CD, and select the checkbox for [Include subfolders].

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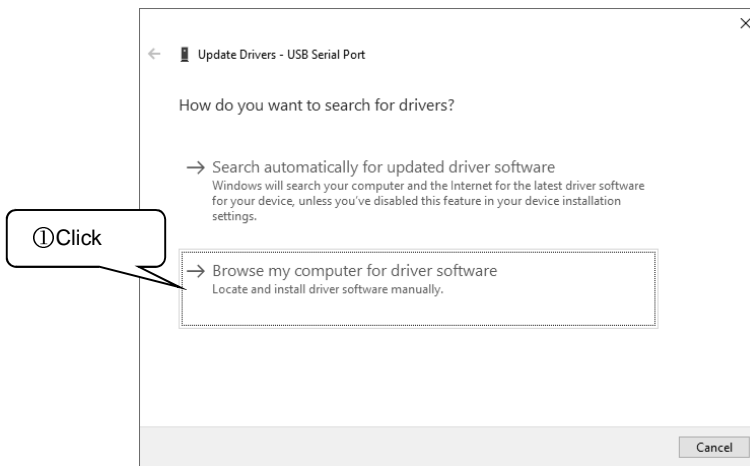⑭ When the [Windows Security] screen appears, click [Install this driver software anyway].

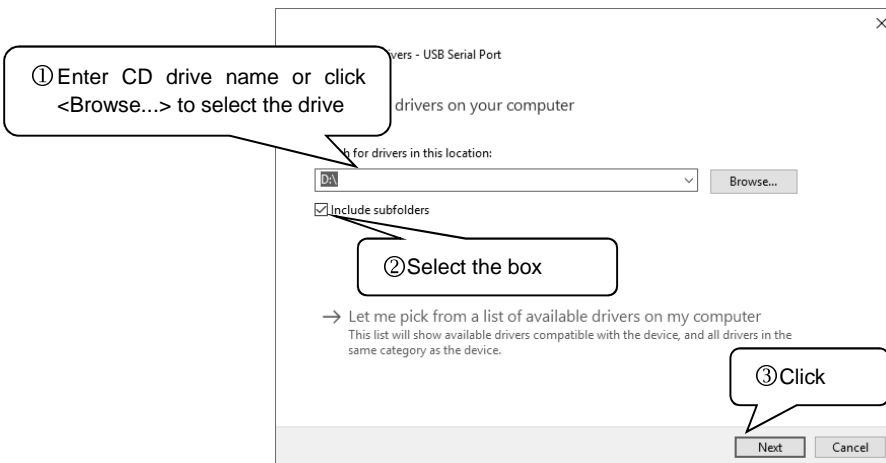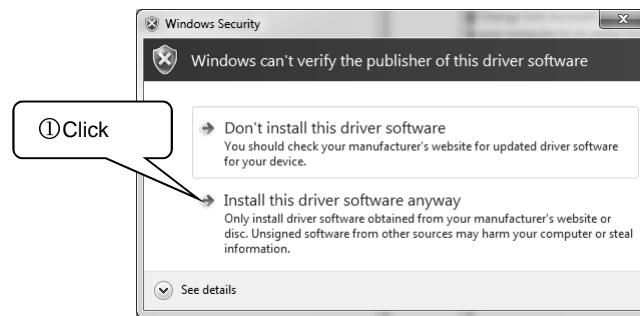⑮ Once the USB Serial Port is installed successfully, the completion screen appears.
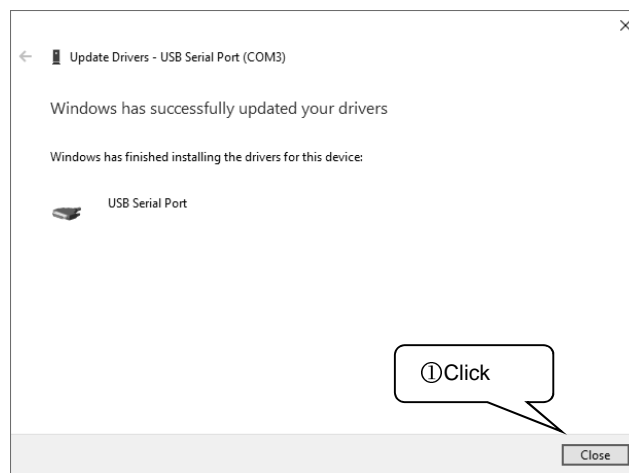
(3) Checking the installation

[Windows 7]

① Click the <start> button, and click [Control Panel] in [start menu].
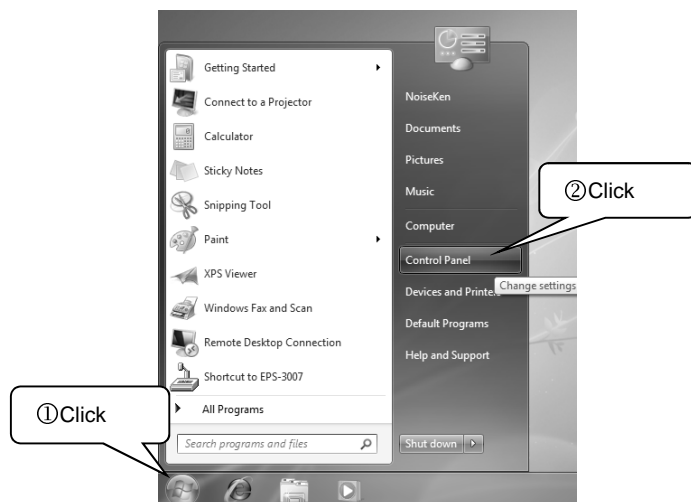
② In [Control panel], click [System and Security].
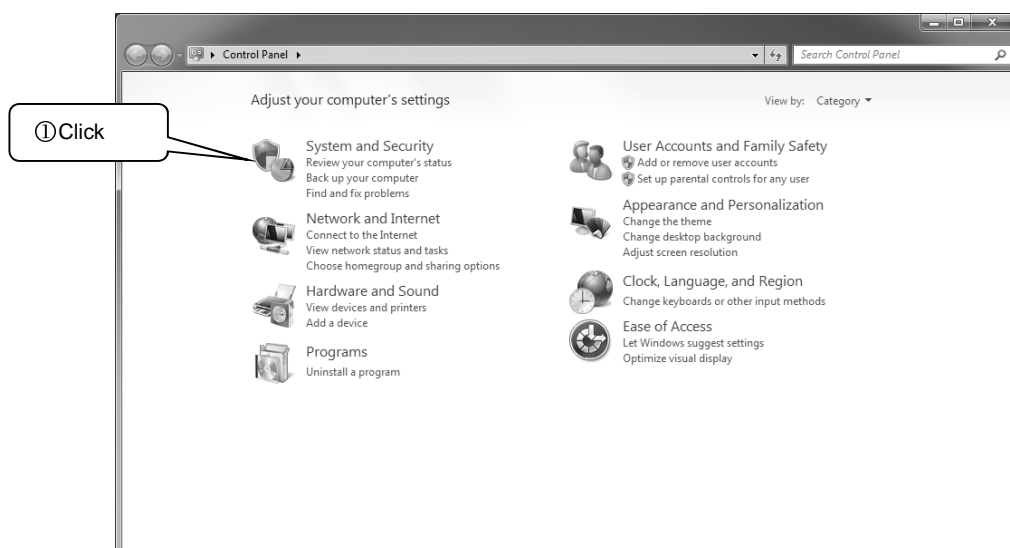
③ In [System], click [Device Manager].
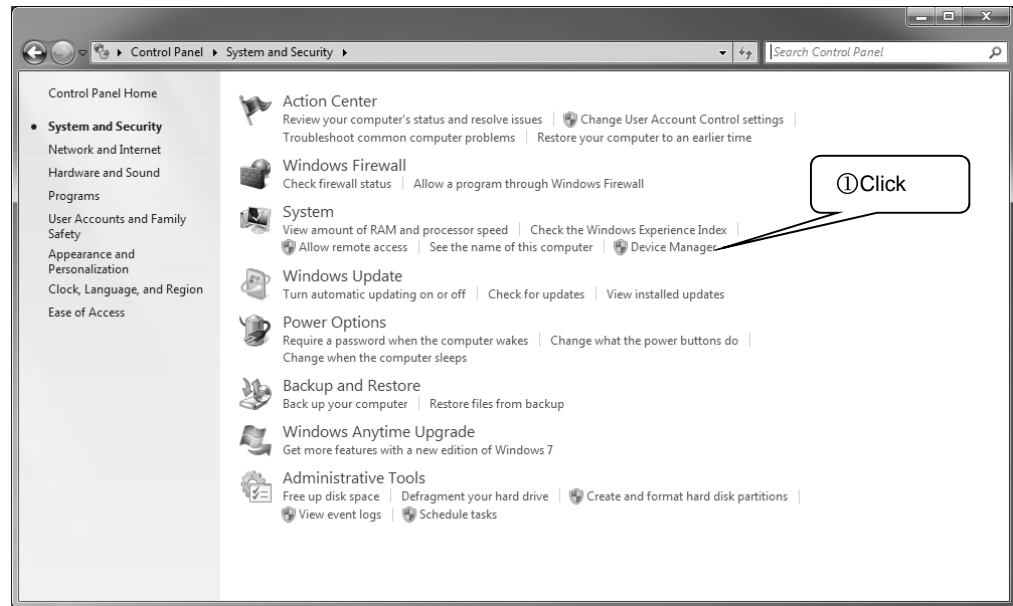
④ In [Device Manager], expand [Ports] and check to make sure that [USB Serial Port(COMx)] is not marked with "!" or "×".
(The number following COM varies depending on the PC environment.)
Also expand [Universal Serial Bus controllers] and check to make sure that [USB Serial Converter] is not marked with "!" or "×".

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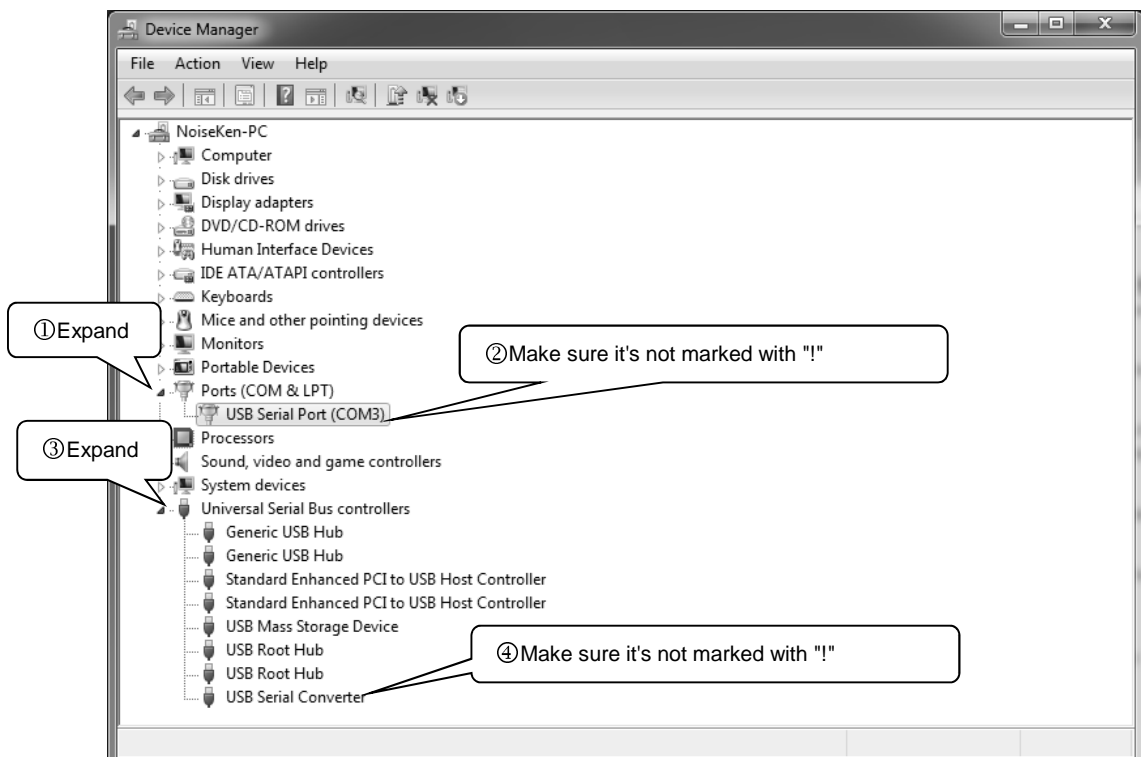
[Windows 10]

① Click the <Start> button. In the All Apps list, and scroll down to the [Windows System] folder and open it. Click [Control Panel].

② In [Control Panel], click [Hardware and Sound].

③ In [Devices and Printers], click [Device Manager].

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④ In [Device Manager], expand [Ports] and check to make sure that [USB Serial Port(COMx)] is not marked with "!" or "×".
(The number following COM varies depending on the PC environment.)
Also expand [Universal Serial Bus controllers] and check to make sure that [USB Serial Converter] is not marked with "!" or "×".
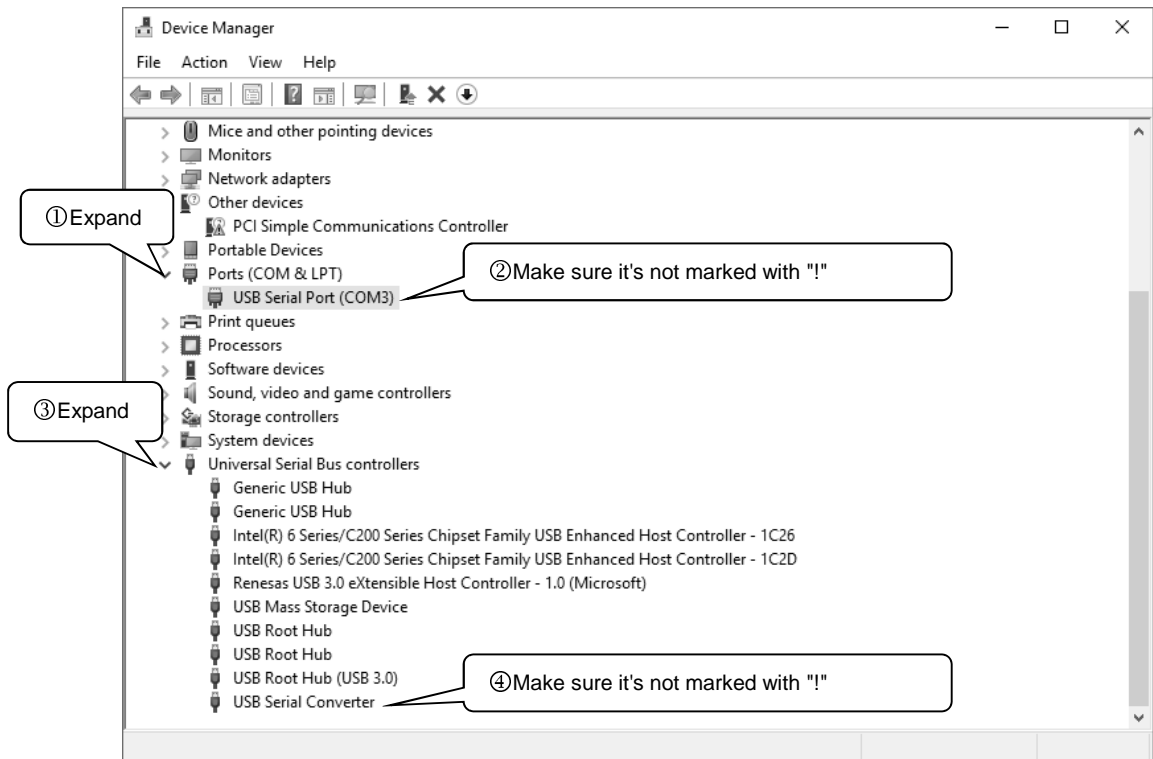
(4) Uninstallation
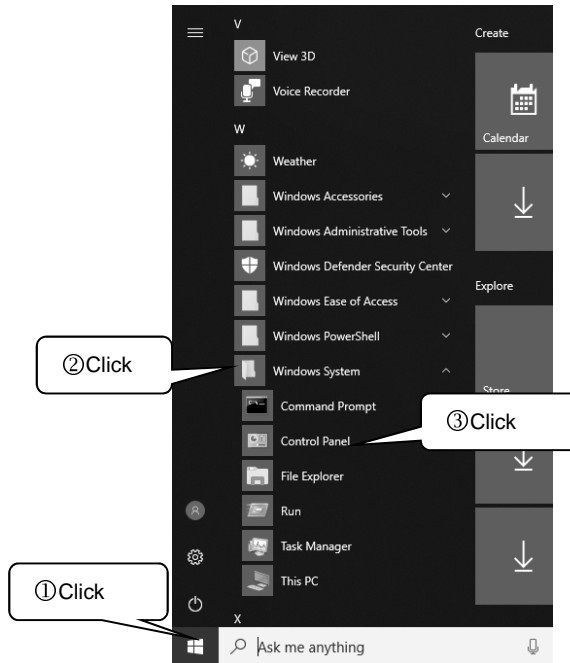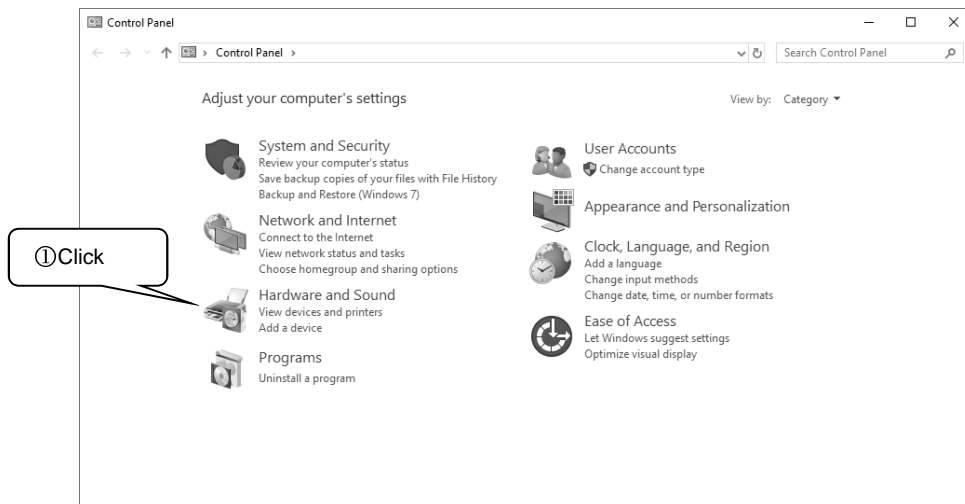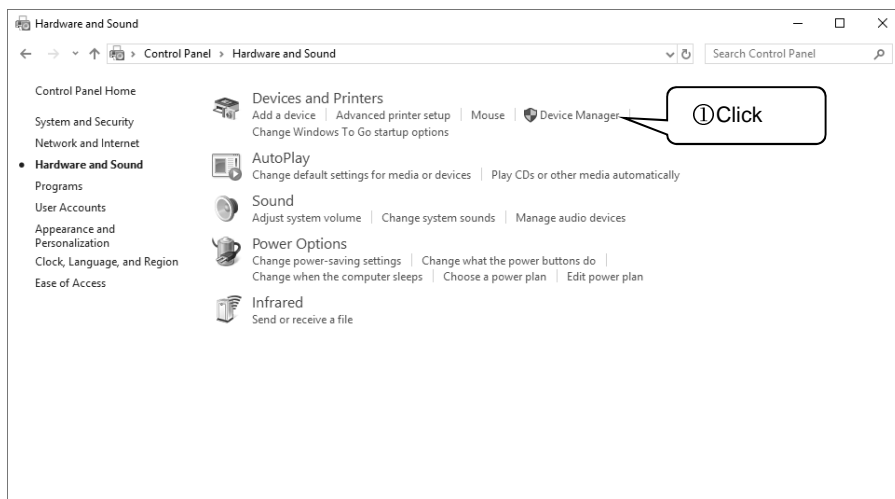
[Windows 7]

Select [start]-[Control Panel] on the taskbar, and click [Uninstall a program]. Double-click [INS-AX2RS] from the displayed list. When the user account control appears, click <YES>. Follow the instructions on the screen to continue the uninstallation.

[Windows 10]

Click the <Start> button on the taskbar. In the All Apps list, and scroll down to the [Windows System] folder and open it. Click [Control Panel], and click [Uninstall a program]. Double-click [INS-AX2RS] from the displayed list. When the user account control appears, click <YES>. Follow the instructions on the screen to continue the uninstallation.

(5) Connection to INS-AX2
① Check to see the instrument POWER switched off.
② Connect the USB cable of the optical interface unit to the PC.
③ Connect the optical cable that comes with the optical interface unit to the REMOTE control port at the front of the device and the optical interface unit.
④ Turn on the power to the device.
⑤ Start the software.

This completes the connection procedure.
When starting it, **always** turn on the power to the simulator before starting the software.

Depending on your OS version and settings, the screens and operating methods may differ.

5.2. Start

Select [INS-AX2RS] on [Start] - [Program (P)]-[Noiseken]-[INS-AX2] on the task bar and start the remote control software.
After starting it, the system checks for connection to the INS-AX2, and displays the main screen.
When communication with the INS-AX2 fails, a dialog box shown in the following figure is displayed.

① <Abort (A)> button
   Aborts the start of software.

② <Retry (R)> button
   Retries communication with INS-AX2.

③ <Ignore (I)> button
   Ignores the communication state and starts the software as a demonstration mode.
   When running in the demonstration mode, a dialog box in the following figure is displayed.
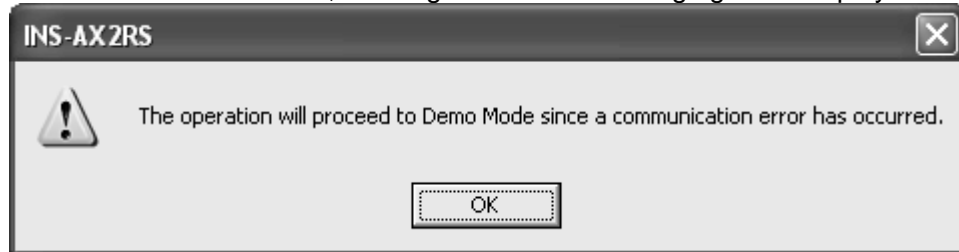
  * No transmission/reception to/from the INS-AX2 are performed in Demo Mode. Use Demo Mode only when checking and setting test conditions.

  * Although there are some errors such as no opening of COM port in addition to communication error, the same procedure is to be used.

To cancel Demo Mode, check that power to the INS-AX2 is turned on, and set up the communication port on [Communication (C)]-[RS-232 Setup (S)...].
When normal communication is confirmed, Demo Mode will be cancelled.
(Refer to [7.4 Communication Setup])

* [DEMO] is displayed at the upper right of the screen during Demo Mode.

* For communication port, refer to the instructions manual for your personal computer.
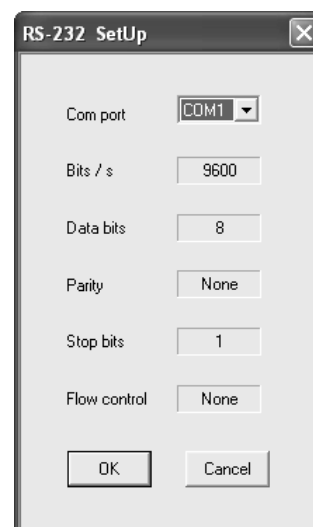
6. OPERATION

6.1. Outline of Test Procedure

This software can execute the program tests of manual tests, sweep tests and combined manual and sweep tests.
The minimum unit of a test is called a unit and a set of units is called a program. Set up and execute the test on the following screen:
Sweep means a test method used to change the set value automatically to the intended value.
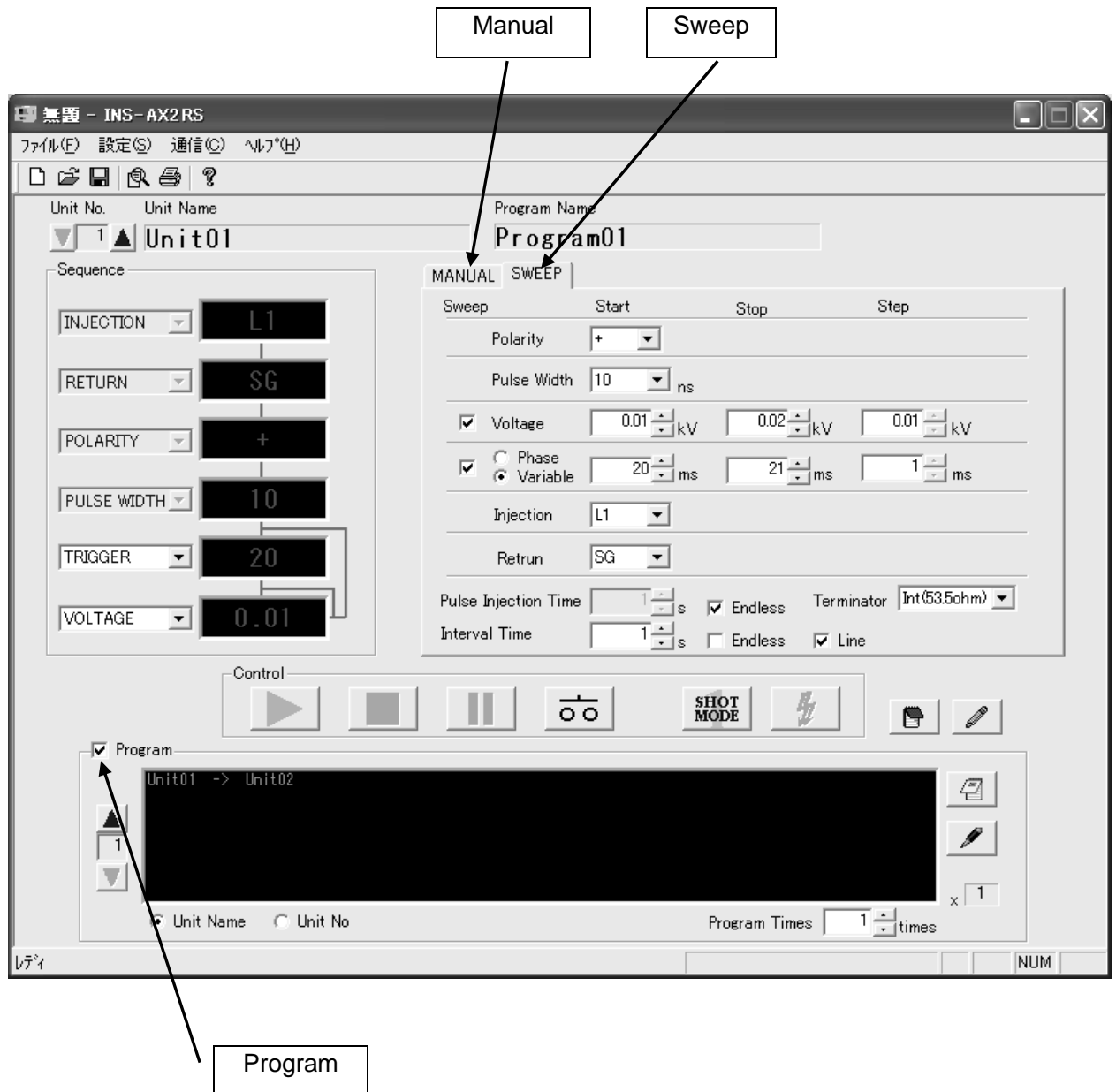
6.2. Test Execute Screen
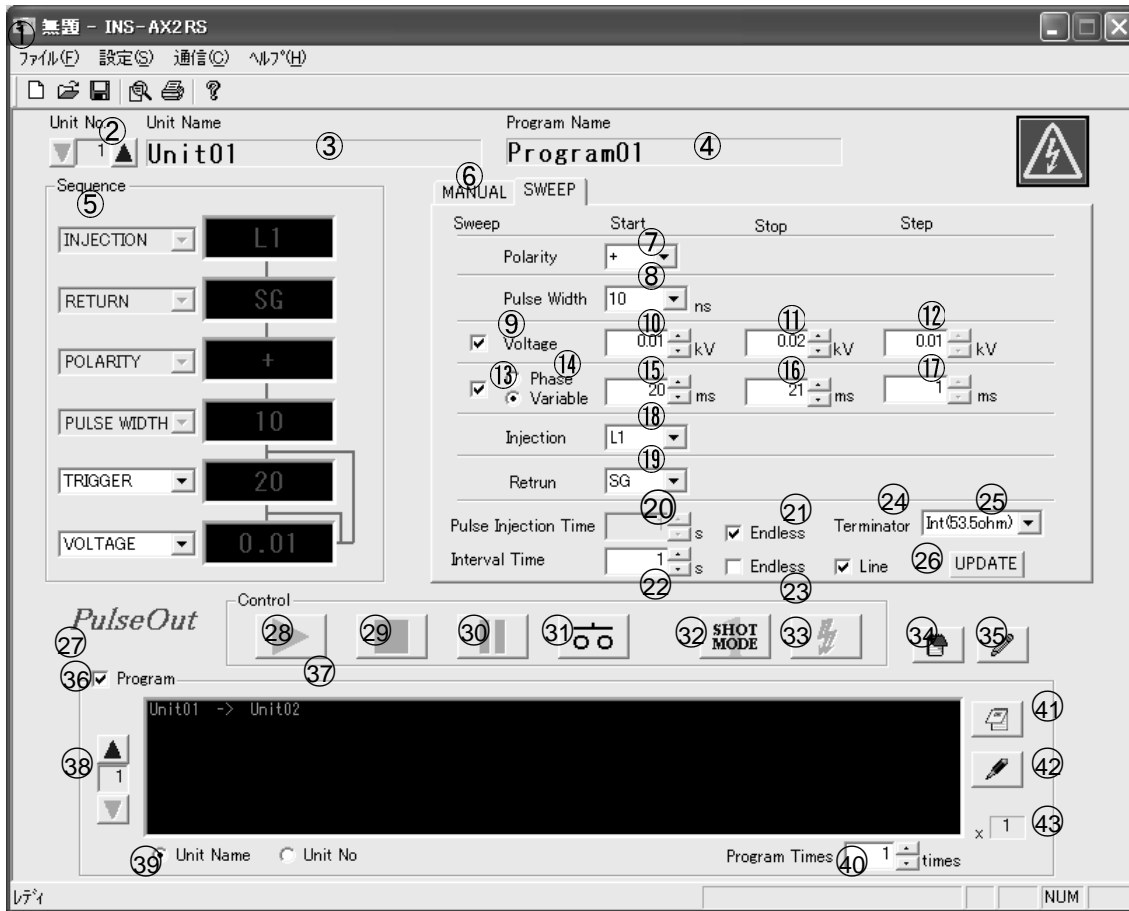
① Test setting file name
   Displays the present test setting file name.
② \<Unit No.\> button
   Changes the unit to be edited/executed. (Refer to [6.2.1 Detailed Setting Procedures　Selecting a Unit].)
③ Unit Name
   Displays the name of a unit that is currently selected or for which a test is being executed.
   (Refer to [6.2.1 Detailed Setting Procedures　Selecting a Unit].)
④ Program Name
   Displays the name of a program that is currently selected or for which a test is being executed.
   It will be active when setting up a program.
   (Refer to [6.2.1 Detailed Setting Procedures　Selecting a Program].)
⑤ Sequence Frame
   Displays the contents of settings or the contents of a test being executed.
   For the method of setting the priority sequence of sweep, refer to [6.2.1 Detailed Setting Procedures　Setting the priority sequence of sweep].)
⑥ Test Type Select Tab
   Select a test method between MANUAL/SWEEP.
   Clicking on the right mouse button in the tab copies data setting and opens a popup menu for pasting. (Refer to [6.2.1 Detailed Setting Procedures　Right-clicking menu].)
⑦ Polarity
   Select the polarity of output pulse.

⑧ Pulse Width

Set output pulse width.

<Setting range>　10, 50, 100, 200, 400, 500, 800, 1000, triangular wave (option)

⑨ Voltage Sweep Check Box

Set the existence of voltage sweep when SWEEP tab is set. When this check box has been check-marked, the setting of Stop and Step fields is enabled. It is not displayed when MANUAL is selected. (Refer to [6.2.1 Detailed Setting Procedures　Voltage Selection].)

⑩ Start Voltage

Set starting output voltage. (Refer to [6.2.1 Detailed Setting Procedures　Voltage Setting].)

<Setting range>　　2 kV model: 0.01 kV～** at 0.01 kV step

　　　　　　　　　4 kV model: 0.01 kV ～** at 0.01 kV step

**Maximum value of output voltage is dependent on resistance value of terminator (Refer to ㉕).

⑪ Stop Voltage

Set ending output voltage at the time of SWEEP tab setting. When it is the same set value as Start Voltage, no sweep is performed. It is not displayed when MANUAL is selected.

(Refer to [6.2.1 Detailed Setting Procedures　Voltage Setting].)

<Setting range>　　2 kV model: 0.01 kV～** at 0.01 kV step

　　　　　　　　　4 kV model: 0.01 kV～ ** at 0.01 kV step

**Maximum value of output voltage is dependent on resistance value of terminator (Refer to ㉕).

⑫ Step Voltage

Set the step value of Start Voltage and Stop Voltage at the time of SWEEP tab setting. It is not displayed when MANUAL is selected. (Refer to [6.2.1 Detailed Setting Procedures　Voltage Setting].)

<Setting range>　2 kV model: 0.01 kV～2.05 kV (within range of Start and Stop) at 0.01 kV step

　　　　　　　　4 kV model: 0.01 kV～4.10 kV (within Start and Stop) at 0.01 kV step

⑬ Trigger Sweep Check Box

Set the existence of trigger sweep at the time of SWEEP tab setting. When this check box has been check-marked, the setting of Stop and Step fields is enabled. (Refer to [6.2.1 Detailed Setting Procedures　Trigger Setting].)

⑭ Choose Trigger Type

Choose trigger type between Phase and Variable.

* Phase is selected on condition that AC is supplied to EUT LINE INPUT of INS-AX2, and ㉔ [Unit Line] is automatically check-marked. (Refer to 6.2.1 Detailed Setting Procedures　Trigger Setting].)

⑮ Start Trigger

Set Start Phase value or Start Variable value.

<Setting range>　　　Phase:　0 deg～360 deg at 1 deg step

　　　　　　　　　　Variable:　16 ms～999 ms at 1 ms step (4 kV model)

　　　　　　　　　　　　　　　10 ms～999 ms at 1 ms step (2 kV model)

(Refer to [6.2.1 Detailed Setting Procedures　Trigger Setting].)

⑯ Stop Trigger

Set Stop Phase value or Stop Variable value at the time of a SWEEP tab setting. When it is the same set value as Start Trigger, no sweep is performed. It is not displayed when MANUAL is selected.

<Setting range>　　　Phase:　0 deg～360 deg at 1 deg step

　　　　　　　　　　Variable:　16 ms～999 ms at 1 ms step (4 kV model)

　　　　　　　　　　　　　　　10 ms～999 ms at 1 ms step (2 kV model)

(Refer to [6.2.1 Detailed Setting Procedures　Trigger Setting].)

⑰ Step Trigger

Set the step value of Step Phase or Stop Variable at the time of a SWEEP tab setting.

It is not displayed when MANUAL is selected.

<Setting range> Phase: 0 deg～360 deg (within range of Start and Stop) at 1 deg step

Variable: 1 ms～983 ms (within range of Start and Stop) at 1 ms step (4 kV model)

1 ms～989 ms (within range of Start and Stop) at 1 ms step (2 kV model)

(Refer to [6.2.1 Detailed Setting Procedures　Trigger Setting].)

⑱ Injection

Select an injection phase. When it overlaps with the return phase or when PLUG is selected, the return phase is changed into SG.

<Setting range>　　Single phase: L1, L2, PE, PLUG

3-phase : L1, L2, L3, N, PLUG

⑲ Return

Select the return phase. The same phase as the injection phase cannot be selected.

<Setting range>　　Single phase: L1, L2, PE, SG

3-phase : L1, L2, L3, N, SG

⑳ Pulse Injection Time

Set injection time.

<Setting range>　　1 s～9999 s at 1 s step

㉑ Pulse Injection Time Endless

Set ON/OFF of injection time Endless.

When this check box has been check-marked, inputting to [Pulse Injection Time] is disabled.

(Refer to [6.2.2 Executing a test　(5) Cancel Endless])

㉒ Interval Time

Set unit interval time or sweep interval time.

<Setting range>　　0 s～99999 s at 1 s step

㉓ Interval Endless

Set ON/OFF of interval time Endless.

When this check box has been check-marked, input to [Interval Time] is disabled.

(Refer to [6.2.2 Executing a test　(5) Cancel Endless])

㉔ Unit Line Check Box

Set Line ON/OFF for a unit.

When Phase is selected at ⑭ Choose Trigger Type, it is fixed to Line On.

After ending the test, change to the value (ON/OFF) of ㉛ <LINE> button.

㉕ Terminator Check Box

Select the resistance value of terminator. The items to be displayed are dependent on the setting of injection phase and whether 50 Ω external terminator available version or not. The display is;

Internal terminator (resistance value 53.5 Ω) is displayed as "Int (53.5ohm)"

Internal terminator (resistance value 60 Ω): "Int (60ohm)"

External terminator (resistance value 50 Ω): "Ext (50ohm)"

External terminator (resistance value 60 Ω): "Ext (60ohm)"

<Selectable items in case of 50 Ω external terminator unavailable version>

Injection phase LINE output: Open, Int (53.5ohm)

Injection phase PLUG output: Open, Int (60ohm), Ext (60ohm)

<Selectable items in case of 50 Ω external terminator available version>

Injection phase LINE output: Open, Int (53.5ohm), Ext (50ohm)

Injection phase PLUG output: Open, Int (60ohm), Ext (50ohm), Ext (60ohm)

Maximum value of output voltage is dependent on resistance value of terminator.

Terminator	Maximum output voltage
Open	8.00 kV (4 kV model), 4.00 kV (2 kV model)
Int (53.5ohm, 60ohm)	4.10 kV (4 kV model), 2.05 kV (2 kV model)
Ext (50ohm)	3.96 kV (4 kV model), 1.98 kV (2 kV model)
Ext (60ohm)	4.10 kV (4 kV model), 2.05 kV (2 kV model)

㉖ <UPDATE> button

Change Voltage and Trigger values while executing a test.

It is enabled when either Voltage Sweep Check Box or Trigger Switch Check Box is not check-marked, even if MANUAL is selected or SWEEP is selected.

It is not displayed when the program is run, the test is stopped or the test is paused.

(Refer to [6.2.2 Executing a test　(8) Update]).

㉗ Injection Label

Represents that pulse is being injected.

㉘ <START> button

Starts a test or cancel the injection time and interval time Endless.

(Refer to [6.2.2 Executing a test　(2) Start])

㉙ <STOP> button

Stops the test.

㉚ <PAUSE> button

Turns ON/OFF the pause of the test. (Refer to [6.2.2 Executing a test　(4) PAUSE])

㉛ <LINE> button

Turns on/off LINE. Turning on LINE starts power supply to EUT.

Turning off LINE while the test is being executed with LINE turned on stops voltage supply, when the test is stopped.

(Refer to [6.2.2 Executing a test　(1) LINE ON])

㉜ <1 Shot mode> button

Turns on/off the single pulse injection mode.

(Refer to [6.2.2 Executing a test　(6) 1 Shot Mode])

㉝ <1 Shot> button

Injects a single shot during the 1 Shot mode. (Refer to [6.2.2 Executing a test　(7) 1 Shot])

When Phase is selected　: Injects to the phase which follow the settings of phase angle.

When Variable is selected : Injects at the timing when the button is pressed.

㉞ <Test Memorandum> button

Opens the memorandum input screen. Comments on test contents and test results can be recorded.

Up to 512 full size characters or up to 1024 half size characters can be entered.

㉟ <Unit Name Edit> button

Opens the unit name edit screen, making it possible to edit the unit name.

It is possible to enter a unit name with up to 10 full size characters or 20 half size characters.

㊱ Program Check Box

Set the existence of a program.

When this box is check-marked, ㊲ Program Execute List is active.

㊲ Program Execute List

Clicking on the list opens the unit selection dialog screen, making it possible to edit the unit to be executed by the program. Displays the unit for which a test is being executed by blinking.

* It cannot be operated except when setting a program.

㊳ <Program No. Change> button

Changes the program to be edited/executed when setting the program.

* It cannot be operated except when setting a program.

㊴ Program Execute List View Setting

Set the method of viewing the program execute list by either Unit Name or Unit No.

* It cannot be operated except when setting a program.

㊵ Program Times

Set the number of times of a program.

<Setting range>　　　1times〜999times at 1time step

* It cannot be operated except when setting a program.

㊶ <Program Memorandum> button

Opens the memorandum input screen. Comments on the contents of a program can be recorded here. Up to 512 full size characters or up to 1024 half size characters can be entered.

* It cannot be operated except when setting a program.

㊷ <Program Name Edit> button

Opens the program name edit screen, making it possible to edit the program name.

It is possible to enter a program name with up to 10 full size characters or 20 half size characters.

* It cannot be operated except when setting a program.

㊸ Program Times display
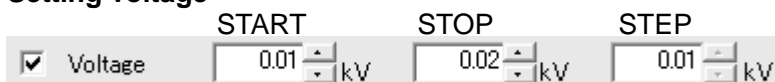
Displays the number of times of the present program.

6.2.1. Detailed Setting Procedures

● **Selecting a unit**

Select a unit to be set. There are 50 kinds of units, all of which can be saved altogether. The selected unit name is displayed on the screen.

Unit No. selected now   Unit name (initial value)

<Unit No. Change> button
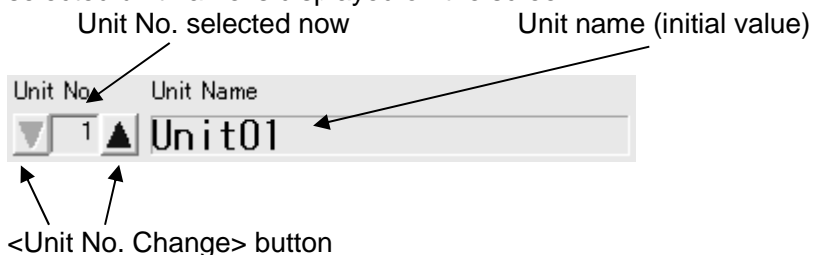
● **Setting voltage**

                 START   STOP   STEP

Start Voltage ：Starting voltage. Voltage can be increased and decreased automatically by inputting Stop Voltage and Step Voltage.

Stop Voltage ：Ending voltage. Changes the value from the starting voltage value to the ending voltage value at each Step Voltage. When the stop voltage is the same value as the starting voltage, no sweep is performed.

Step Voltage ：Set a rate at which to change the value from the starting voltage value to the ending voltage value.

● **Setting a trigger**

                 START   STOP   STEP

Trigger Type   : Switches between Phase/Variable. Phase is set at a unit of deg and Variable is set at a unit of ms.

Start Trigger   : Starting Trigger. Trigger value can be increased and decreased automatically by inputting Stop Trigger and Step Trigger.

Stop Trigger   : Ending Trigger value. Changes the value from the starting trigger value to the ending trigger value at each Step voltage. When it is the same value as the Trigger value, sweep is not performed.
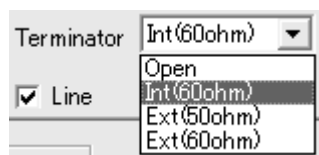
Step Trigger   : Step Trigger. Set a rate at which to change the value from the starting Trigger value to the ending Trigger value.

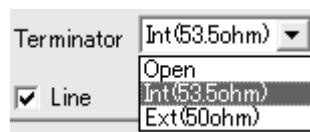● **Selecting a terminator**

Select resistance value of the terminator.

**In some cases (depending on the version of main unit), "Ext (50ohm)" will not be displayed.

**Do not select "Int (53.5ohm)" or "Int (60ohm)" in case of outputting triangular waveform.

In case PLUG selected   In case LINE selected

- ● **Setting the priority sequence of sweep**

    The priority sequence of sweep can be set up by changing the combo box in the Sequence frame. When both Voltage sweep and Trigger sweep are check-marked, the sequence can be changed at the combo box in the Sequence frame. Change the sequence at the combo box. When two or more sweeps overlap, first change the lowest item. Upon completion of changing, change the next item in order.
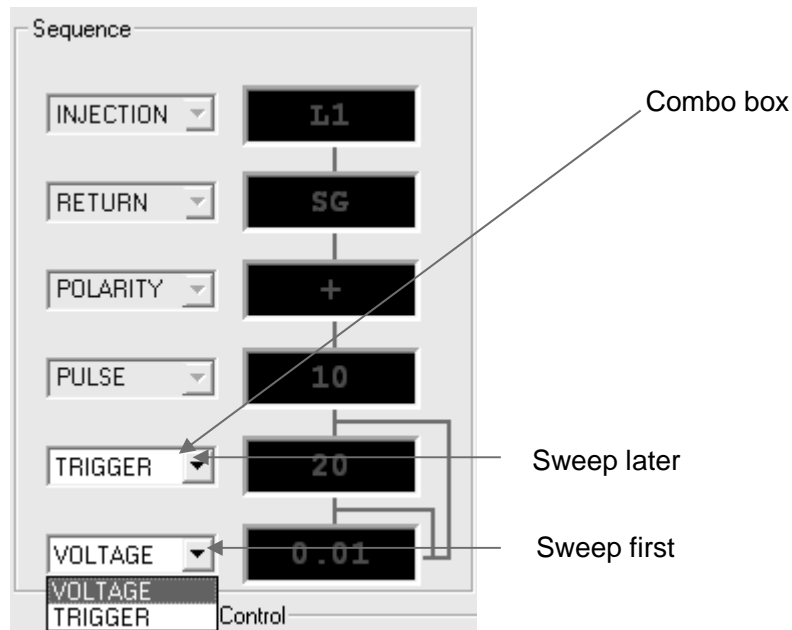
Example :
  Setting

Item	Start	Stop	Step	Order
Trigger (Variable)	20	21	1	Top
Voltage	0.01	0.02	0.01	Bottom

  Test Execute

Sequence	Item	Value
1	Trigger	20
	Voltage	0.01
2	Trigger	20
	Voltage	0.02
3	Trigger	21
	Voltage	0.01
4	Trigger	21
	Voltage	0.02

- **Editing a Unit Name**
  Edit a Unit Name. A Unit Name reflecting the settings can be set up. Up to 50 kinds of units are available. Click on the Unit Name to be edited and set the intended name. It is possible to set a Unit Name with up to 20 half size characters.
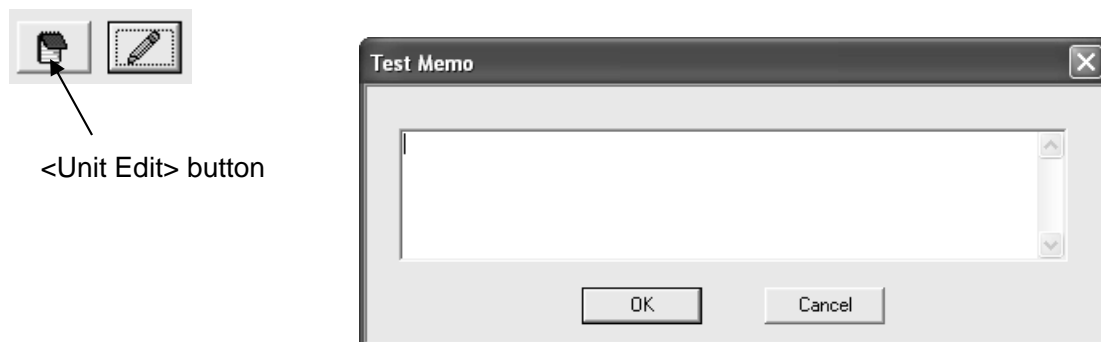 After changing the name, finalize with <OK> button, and cancel the change with <Cancel> button to finish editing.

<Unit Edit> button

Click to set name.

Unit Name Edit

UnitName	No.
1KTest	1
Unit02	2
Unit03	3
Unit04	4
Unit05	5
Unit06	6
Unit07	7
Unit08	8
Unit09	9
Unit10	10
Unit11	11
Unit12	12
Unit13	13
Unit14	14
Unit15	15
Unit16	16
Unit17	17
Unit18	18
Unit19	19
Unit20	20
Unit21	21
Unit22	22
Unit23	23
Unit24	24
Unit25	25

OK   Cancel

Unit Name
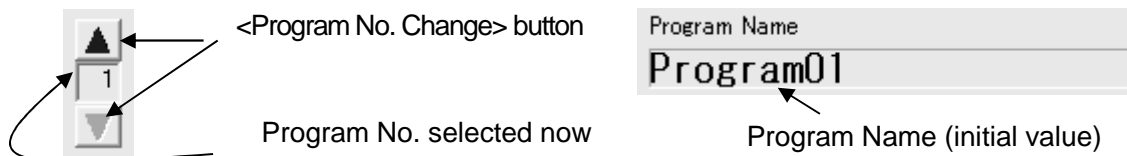
1KTest

Edited name
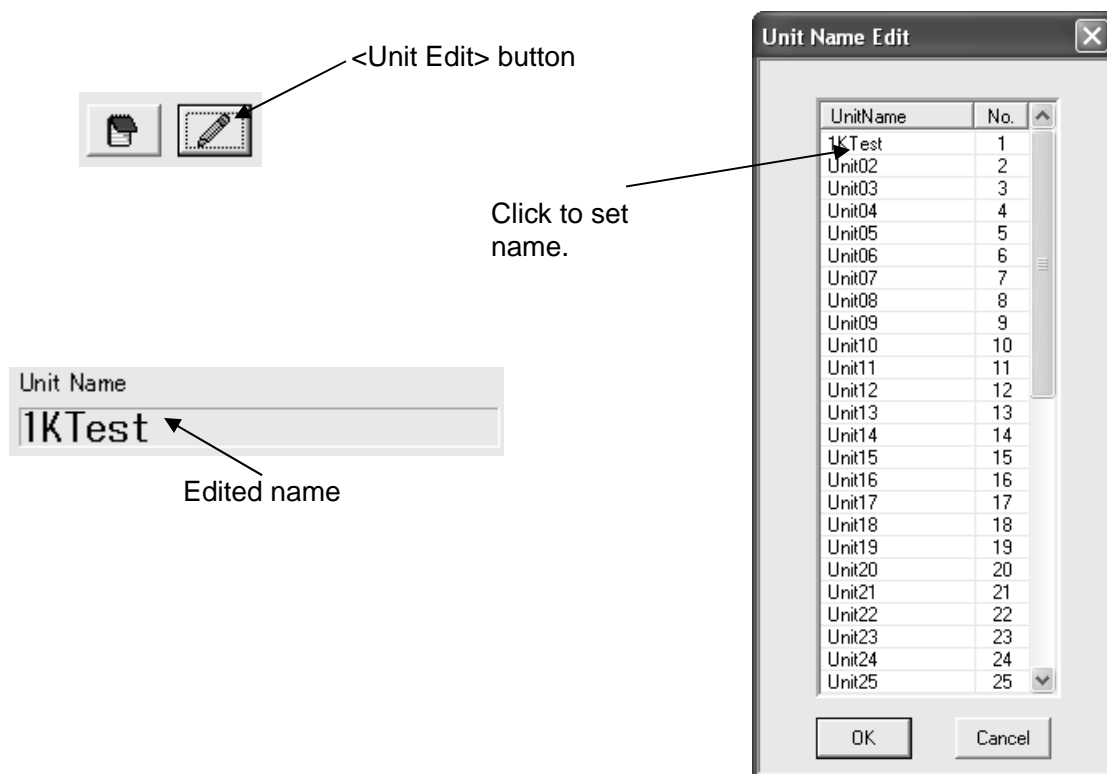
- **Editing memorandum**
  Comments on the contents of a test can be recorded here. Up to 512 full size characters or up to 1024 half size characters can be entered. After entering a comment, finalize with <OK> button, and cancel the change with <Cancel> button to finish editing.

  * Up to 12 lines of the contents of the memorandum are displayed during printing.

<Unit Edit> button
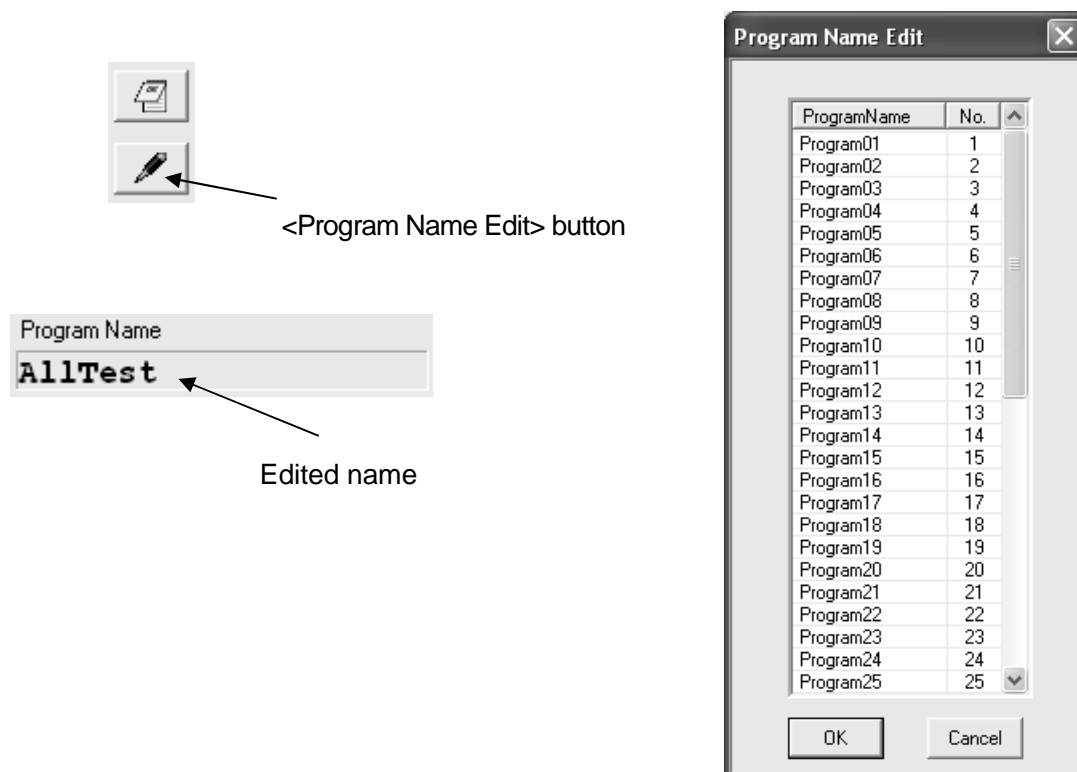
Test Memo

OK   Cancel

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● **Selecting a program**

Selecting a Program. There are 50 kinds of Programs, all of which can be saved altogether. The selected Program Name is displayed on the screen.

<Program No. Change> button

Program No. selected now

Program Name
Program01

Program Name (initial value)

● **Editing a program name**

Edit a Program Name. A Program Name reflecting the settings can be set up. Click on the Program Name to be edited and set the intended name. It is possible to set a Program Name with up to 20 half size characters.

After changing the name, finalize with <OK> button, and cancel the change with <Cancel> button to finish editing.

<Program Name Edit> button

Program Name
AllTest

Edited name

Program Name Edit

ProgramName	No.
Program01	1
Program02	2
Program03	3
Program04	4
Program05	5
Program06	6
Program07	7
Program08	8
Program09	9
Program10	10
Program11	11
Program12	12
Program13	13
Program14	14
Program15	15
Program16	16
Program17	17
Program18	18
Program19	19
Program20	20
Program21	21
Program22	22
Program23	23
Program24	24
Program25	25

OK   Cancel

● **Program Memorandum**

Comments on the contents of a program can be recorded here. Up to 512 full size characters or up to 1024 half size characters can be entered. After entering a comment, finalize with <OK> button, and cancel the change with <Cancel> button to finish editing.

*Up to 12 lines of the contents of the memorandum are displayed during printing.

<Program Memo> button

Program Memo
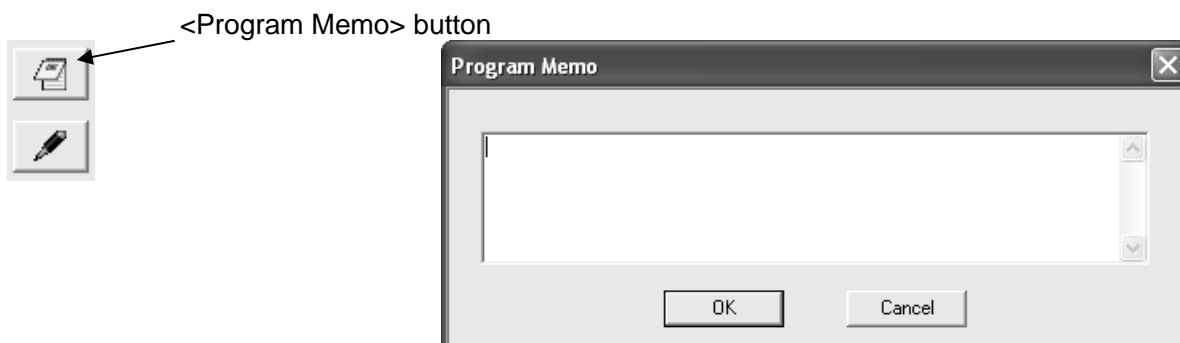
OK   Cancel

● **Selecting a unit**
Double-clicking on the program execute list on Test Execute Screen opens this screen, making it possible to edit the program.
After completion of setting, finalize with <OK> button, and cancel the change with <Cancel> button to finish editing.
The initial value of the program list has been set to [None].

1, 2, and 3 of the unit list header represent START, STOP and STEP respectively.
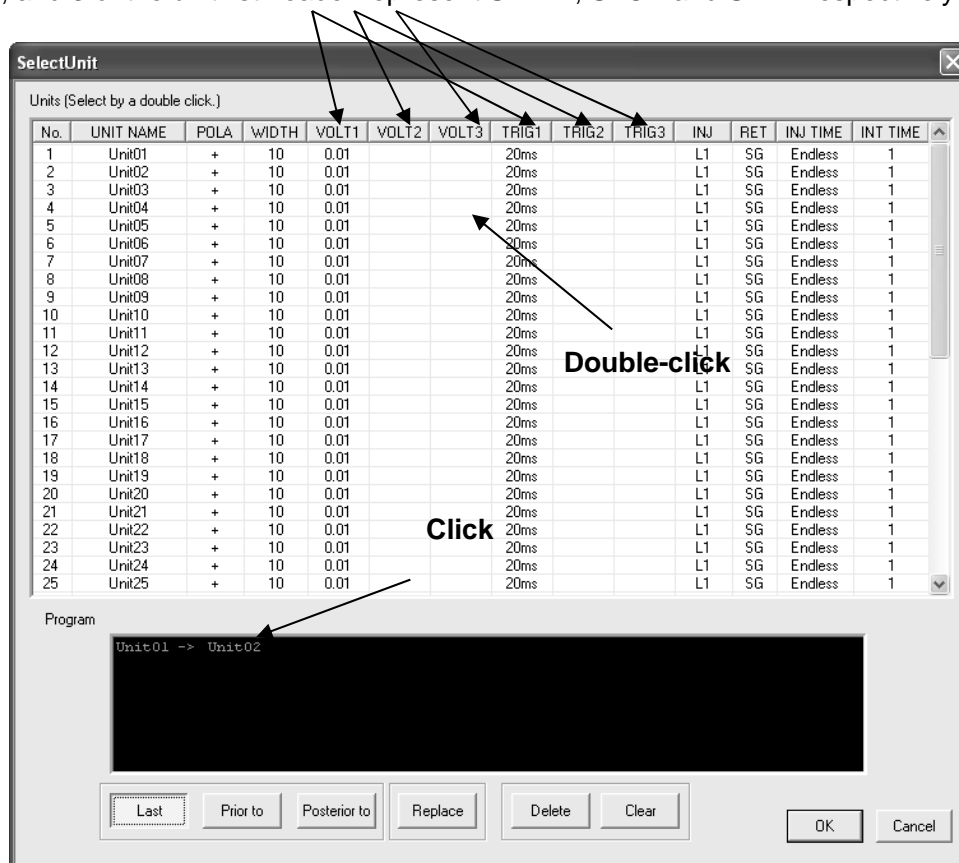
Last : Double-clicking on "Unit" in the unit list with this button pressed inserts "Unit" into the last position of the units that have been set.

Prior to : Double-clicking on "Unit" in the unit list with this button pressed inserts "Unit" into the position prior to the selected (blinking) unit.
  * It is necessary to first select the target in Program Execute List.

Posterior to : Double-clicking on "Unit" in the unit list with this button pressed inserts "Unit" into the position posterior to the selected (blinking) unit.
  * It is necessary to first select the target in Program Execute List.

Replace : Double-clicking on "Unit" in the unit list with this button pressed rewrites the selected (blinking) unit.
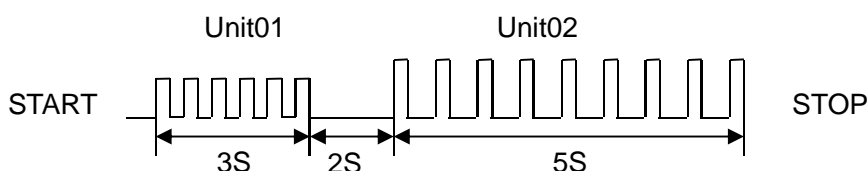 * It is necessary to first select the target unit in Program Execute List.

Delete : Deletes the selected (blinking) unit within Program Execute List.
  * It is necessary to first select the target unit in Program Execute List.

Clear : Deletes all units in Program Execute List.

Example :
Unit01 : Injection time   3S   Unit02 : Injection time   5S
         Interval time   2S   Interval time   1S
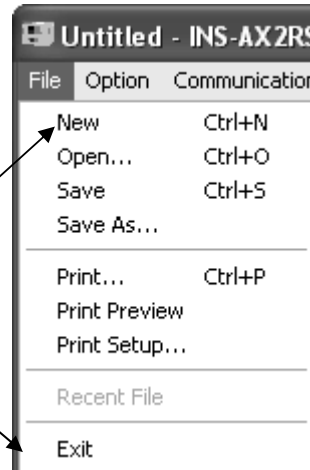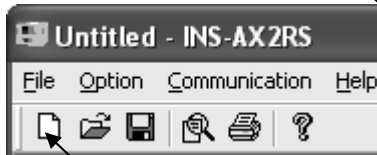
● **Toolbar buttons and menus**
   The toolbar button is used to execute functions such as file menu. The menu item on the tool bar is a graphical button represented by an image.

● **Exiting application and initializing settings**
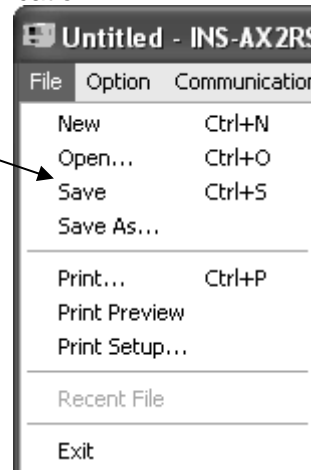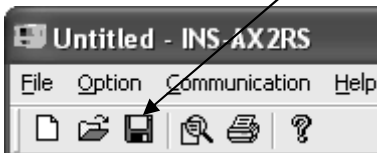   Exit the application.

   Returns the present settings to the initial value.
   When the settings are changed and not saved,
   a dialog box to check whether the settings are
   saved or not is displayed.

● **Saving the settings**
   A file created with this application is associated with this application.
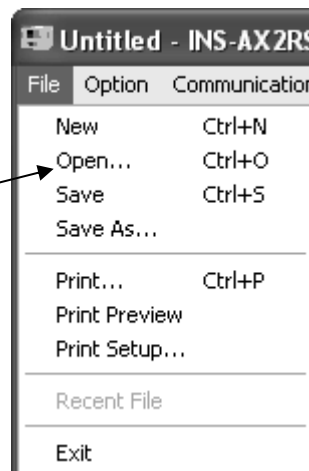   Saves the settings in a file

   [Save]
   When the setting file has been read, overwrites it.
   When it has been newly set, saves it under a new name
   (by designation).

   [Save As]
   Saves the file under a new name. When the file has been read, creates a new file.

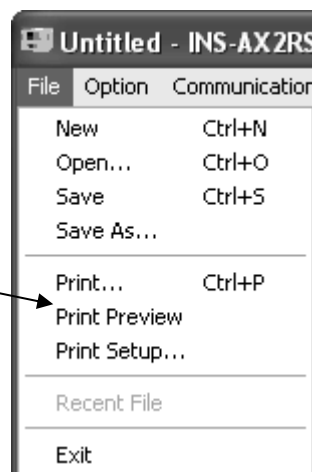● **Reading the saved file**
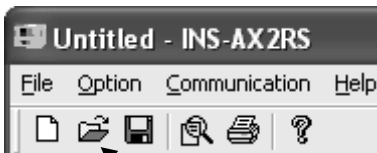
   Reads the saved file.

● **Print Preview (Report)**
Displays the test settings in a report format.
For the report screen, refer to [7.3 Print Preview Screen].
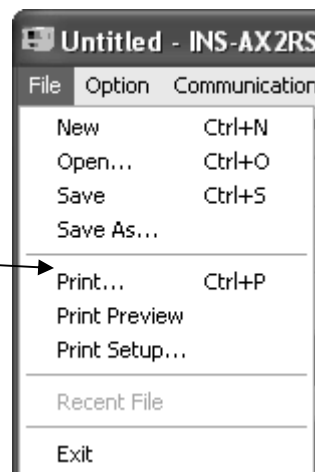

Opens Print Preview.

● **Printing the test settings**
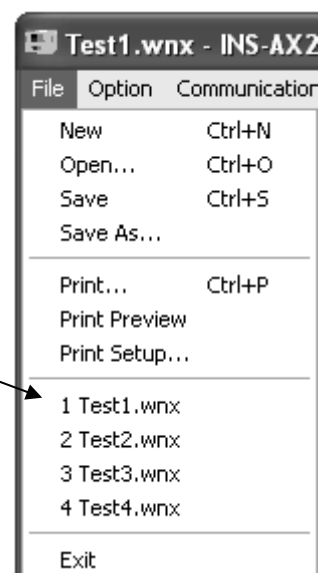Prints the contents of test settings.

Prints the test settings.

● **Reading the recently-used file**
Up to 4 recently-used file names are recorded.
It can be used as a shortcut to open a file.

List of recently-used file names

● **Equipment name setting**
   Enter model name and serial No. The entered settings are displayed in the field of equipment name on a report. As the settings are saved, it is not necessary reenter them except when equipment is changed.
   (Refer to [6.3 Print Preview Screen].)
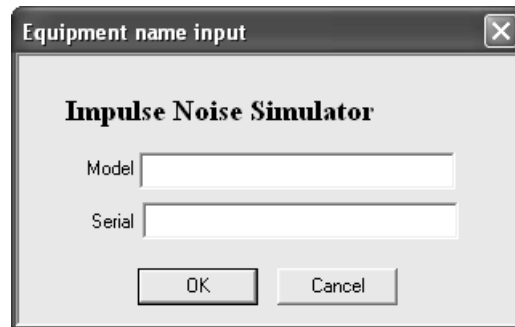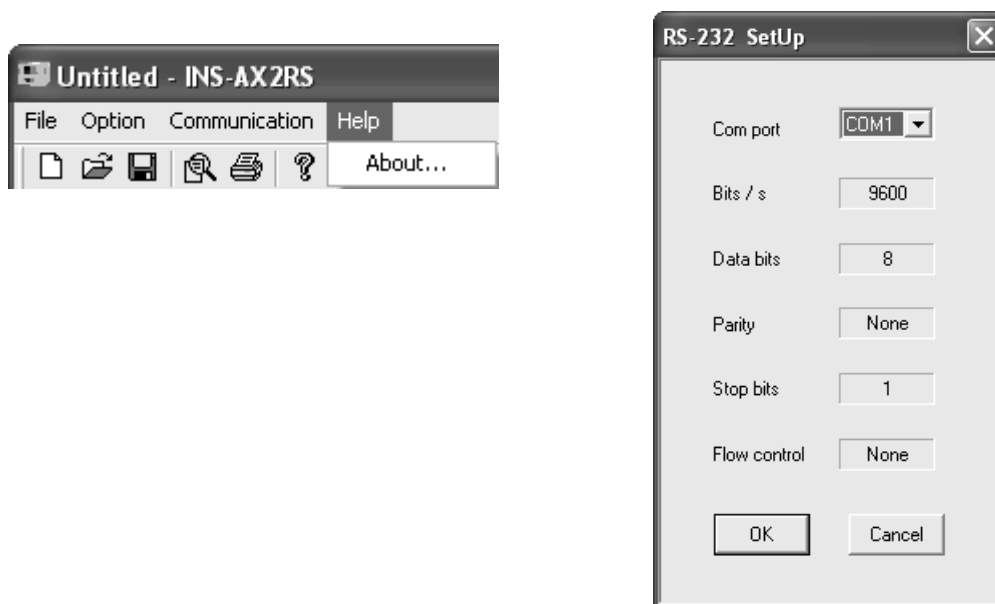
● **Test conditions**
   Enter test conditions, such as climatic conditions, information about EUT, etc.
   Information so entered is displayed in each field on a report screen.
   <Clear> button clears all settings. (Refer to [6.3 Print Preview Screen].)
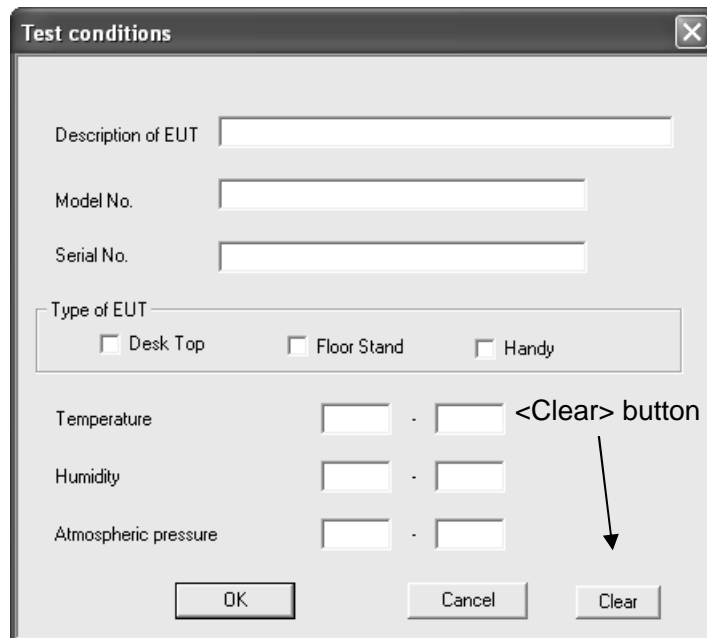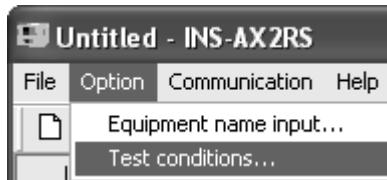
● **Setting up the communication port**
Set up the communication port. (Refer to [6.4 Communication Setting].)
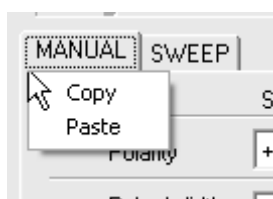

● **Version information**
Check the version of this application.

● **Right-click menu**
Right-clicking on [Test Type Select Tab] opens a popup menu to copy or paste the data setting of a unit.
* This menu is not displayed during the test.

Copy : Copies the data setting of the presently selected unit.
Data alone in [Test Type Select Tab] is copied, and [Unit Name] is not copied.

Paste : Pastes the copied data on the presently selected unit.
* Once pasted, the copied contents are not cleared even after doing "Open", "New" and "Save" operations.

6.2.2. Executing a test

(1) LINE ON

Turn on <LINE> button, and "Warning Lamp" <u>lights up</u> at the upper right of Test Execute Screen, indicating that the line is on.
[Exit Application] and [RS-232 Setting] operations are disabled during LINE ON.

(2) START

When the test is executed, "Warning Lamp" <u>blinks</u> at the upper right of Test Execute Screen to indicate that the test is being executed.
All menus and tool bars are disabled while the test is being executed.

(3) INJECT

PulseOut [Pulse Out] is displayed on the left side of <Start> button, indicating that pulse is being injected.

(4) PAUSE

Clicking on this button during injection pauses the test. This button blinks during pausing, indicating that indication is paused. To cancel pause, click on this button again.
* No injection can be performed during pausing.

(5) Cancel Endless

When injection time and interval time are set to Endless, this button blinks.
Clicking on this button cancels the Endless setting.

(6) 1 Shot Mode

When a test is executed with this button pressed, the test is executed in the 1 Shot mode. A single pulse can be output by means of (7) <1Shot> buttons during the test.

(7) 1 Shot

This button is enabled during the test in the 1Shot mode. Each time this button is pressed, a single pulse is injected. While [Pulse Out] label on the left side of <Start> button is displayed (during injection), this button is enabled. However, it is disabled during the interval and preparation (while the switching unit is operating).

(8) UPDATE

UPDATE   Start Edit Control (Start Line) of Voltage and Trigger in case of manual setting or no sweep setting (with Sweep Check Box not check-marked) can be changed even if a test is being executed.
Enter an update value and click this button, so that Voltage value and Trigger value are updated.
* This button is not displayed in the program mode and when the test is stopped and paused.
* Start Trigger Edit Control cannot be changed when Variable is selected in the 1 Shot mode.

(9) Test Progress
Displays the progress of a test by percentage, remaining time and progress bar on the status bar under the screen while the test is being executed.
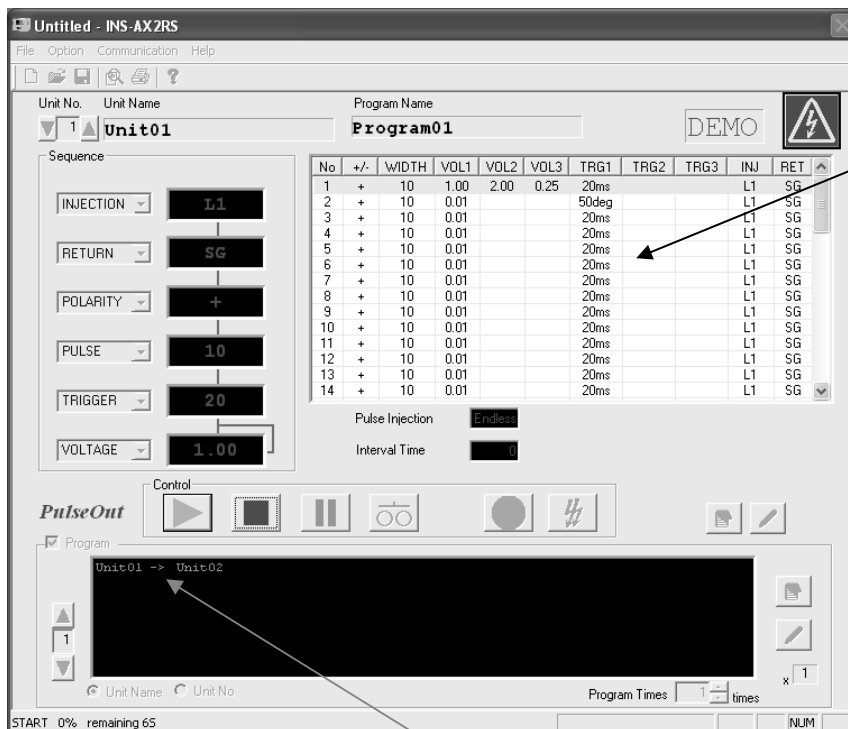
* Time: Does not include the time required for switching the unit, and it should be used as a guide value.

| START 71% remaining 2s | ▓▓▓▓▓▓▓ | | NUM | |
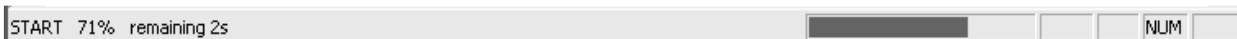
(10) Program Test Execute
Displays a unit list and highlights the unit that is being executed during the program test execution.
After the test is finished, the unit list disappears.
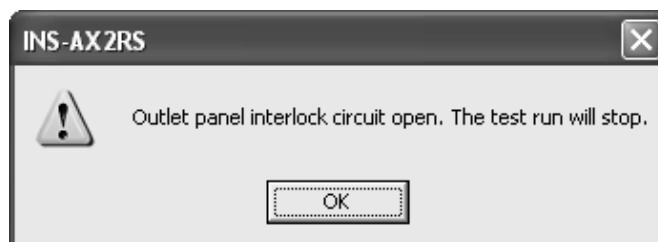

Unit List   Blink

Header name	Description
No.	Unit No.
＋／－	Polarity
VOL1、2、3	Start Voltage、Stop Voltage、Step Voltage
TRG1、2、3	Start Trigger、Stop Trigger、Step Trigger
INJ	Injection
RET	Return
TERM	Terminator

(11) Error
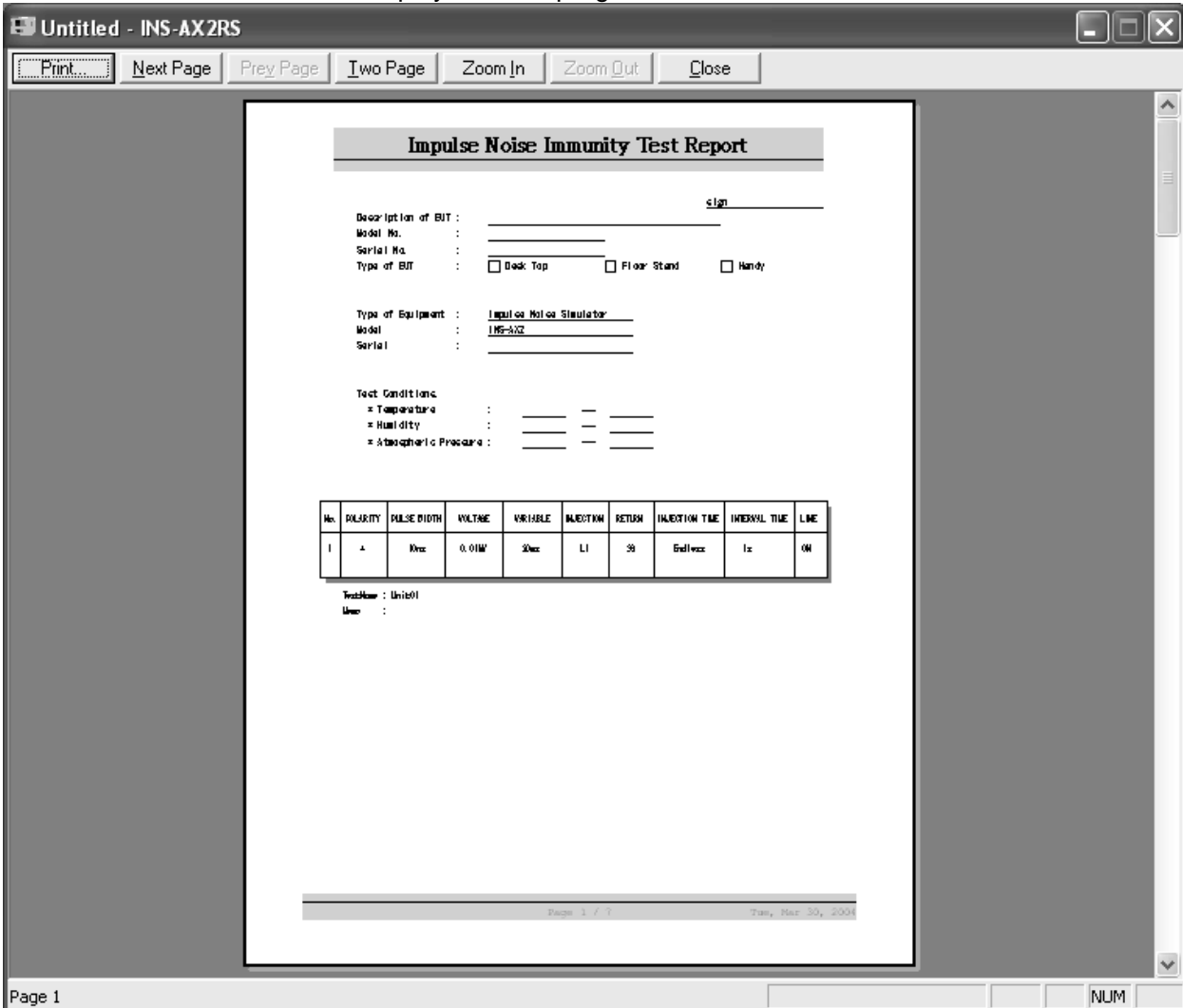When an error occurs during test execution, displays a message and stops the test.
(Example)

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6.3. Print Preview Screen

Features : ・Displays test settings for printing.
・Reads the past saved file, and displays and prints it.
・Test contents are displayed in the programmed order.

● Function of each menu button

[Print...]
    Prints.

[Next Page]
    Displays the next page.

[Prev Page]
    Displays the previous page.

[Two Page]
    Displays 2 pages. It is available when there are 2 pages or more and one page is displayed.

[One Page]
    Displays one page. It is available when 2 pages are displayed.

Zoom In

Expands the display.

Zoom Out

Reduces the display.

Close

Closes the print preview.

* **When the printer driver is not set, [Print Preview Screen] is not displayed.**
  For installation of the printer driver, refer to Windows® Manual or contact the customer's system manager or network administrator.

* Use of some driver may cause a phenomenon that the displayed position sometimes shifts

6.4. Communication Setting

Features： ・Available communication port can be selected.
　　　　　・Displays a list of RS-232 parameter settings.
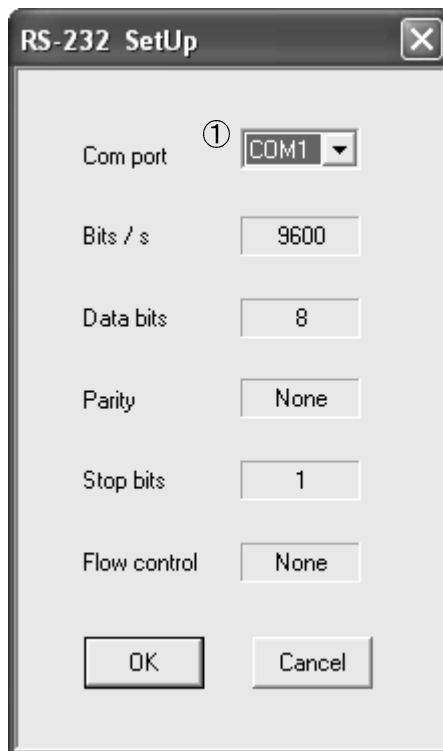
① Set the port No. connected to the INS-AX2.
　The currently available port No. is displayed.
　As these settings are saved, no resetting is required unless the connecting port is changed.
　Items other than ① are the fixed values of this software. Therefore, they cannot be changed on
　the user side.

7. OPERATING ENVIRONMENTS

Personal computer ： PC/AT compatible

CPU ： Clock speed 300 MHz or higher recommended

Main memory ： 128 M byte or more

HDD ： 32 M byte or more space required

OS ： Microsoft® Windows® 7 Operating System

(English/Japanese/ Korean version)

Microsoft® Windows® 10 Operating System

(English/Japanese/ Korean version)

Graphic ： SVGA resolution (800*600*256 colors) shall be supported

(Scroll bar is provided in case of SVGA.)

The following additional requirements also shall be met ：

● Pointing device such as a mouse is provided.
● CD-ROM or a DVD drive is to be provided.
● Vacant serial port is to be available. (One port shall be occupied.)
● The PC shall be connected to the INS-AX2 simulator before this program gets started. (The program gets started in demo mode when the PC is not connected to the instrument)

8. WARRANTY

Warranty

A warranty is provided for the software produced by NoiseKen and its update files under the following terms and conditions. This warranty is valid in Japan only.

1. Scope of Warranty
   This warranty applies to the software produced by NoiseKen and its update files.

2. Free Support
   Generally, no free support is provided.

3. Total Maximum Liability
   NoiseKen assumes no liability for any losses or damages incurred by the customer due to faults arising from this software by NoiseKen, including but not limited to, direct or indirect potential lost earnings and direct or indirect damages due to third party claims for compensation against the customer.

9. NOISE LABORATORY SUPPORT NETWORK

- If a symptom which seems a trouble is found, check the symptom, software version, model name of connected device, and serial number, and inform this information to Noise Laboratory or your nearest sales agent of Noise Laboratory.