



**INSTRUCTION MANUAL**  
**REMOTE CONTROL SOFTWARE**  
**for ISS-7600 SERIES**  
**MODEL ISS-7601-G915**

**Noise Laboratory Co., Ltd.**

Edition 1.00  
AEJ00639-00E-0A

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## **1. IMPORTANT SAFETY PRECAUTIONS**

This product is the remote control software for ISS-7600 series, our EMC testing system for in-vehicle electronic devices. The following instructions are very important for safe handling of ISS-7600 series using this control software. Read them carefully before use.

In addition, read this instruction manual and the manual of ISS-7600 series thoroughly before using this product.

- 1. Do not use the ISS-7600 system near flammable materials or fire sources. When used, there is a risk of fire due to pulses, etc**
- 2. Any person with medical electronics such as a heart pacemaker is not to operate the ISS-7600 system. And, do not enter the test area while the ISS-7600 system is operating.**
- 3. To avoid electric shock, be sure that the power of the ISS-7600 system, the power source, and the device under test ("DUT") are all turned OFF, and make sure there is no residual voltage before making any connections.**
- 4. A number of safety recommendations are listed in the later chapter "BASIC SAFETY PRECAUTIONS". Be sure to read them before test environment settings, connecting and testing.**
- 5. Do not turn the power of the ISS-7600 system OFF, and do not unplug any connecting cable while the control software is running. PC may become unstable or the operating system may malfunction. Be sure to close the control software before turning the ISS-7600 system power OFF.**



## 2. APPLICATION FORM FOR INSTRUCTION MANUAL

We place an order for an instruction manual.

**Model: ISS-7601-G915**

**Serial No.:** \_\_\_\_\_

**Applicant:**

Company name: \_\_\_\_\_

Address: \_\_\_\_\_

Department: \_\_\_\_\_

Person in charge: \_\_\_\_\_

Tel No.: \_\_\_\_\_

Fax No. \_\_\_\_\_

**Cut off this page “APPLICATION FORM FOR INSTRUCTION MANUAL” from this volume and keep it for future use with care.**

When an INSTRUCTION MANUAL is required, fill in the above Application Form and mail or fax it to the following sales department of our company.

**To: Noise Laboratory Co., Ltd.**

**1-4-4 Chiyoda, Chuo-ku, Sagamiara City,**

**Kanagawa Pref., 252-0237 Japan**

**Tel: +81-(0)42-712-2051**

**Fax: +81-(0)42-712-2050**

Cut  
line



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## 4. PREFACE

### 4-1. Preface

---

Thank you very much for purchasing the remote control software for automotive transient simulator, ISS-7601-G915 (the "Software"). Please read this instruction manual (the "Manual") thoroughly prior to use of the Software in order to attain the maximum and safe use of the simulators.

In the Manual, each button name and other identifiers or messages on the screen are presented in different parentheses like <Button Name>, [Other Identifiers or Messages on the Screen]

ISS-7600 series referred to in the Manual means ISS-7610, ISS-7630, BP4610, ISS-7650-H2388 and ISS-7690.

- **The Manual will let you operate the ISS-7600 series and the Software safely and make the most use of them if you strictly follow the operational procedures and the safety instructions**
- **Keep the Manual and the instruction manual of The ISS-7600 system handy whenever you operate the test systems.**

### 4-2. Features

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This product is the remote control software to control, run and assist the operation of the ISS-7600 series with wider variety.

- ISS-7601-G915 lets you control ISS-7600 series by a PC.
- ISS-7601-G915 lets you allow easy settings of testing conditions in compliance with ISO/DIS7637-2.2.
- ISS -7601-G915 is compatible with USB interface.
- ISS-7601-G915's sequential function lets you set free testing conditions and perform the test without restriction of the Standards.
- ISS-7601-G915's saving function lets you retrieve the past testing conditions to run the same test again.
- ISS-7601-G915's report function lets you preview or print out testing conditions in the form of a report.



## 5. BASIC SAFETY PRECAUTIONS

### 5-1. Symbols of Hazard

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This sign indicates the presence of "dangerous voltage/current" that may endanger persons.



This sign indicates "handle with care".  
Refer to the Manual to protect human bodies and devices.

### 5-2. Basic Safety Precautions

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The following are safety instructions to control ISS-7600 series using ISS-7601-G915. In addition, the respective instruction manual of ISS-7600 series contains safety instructions. Observe the instructions of the related manuals.

1. **The Company and its sales agent assume no responsibility for any bodily injury, loss, damage or resultant damage arising from derelict misuse of ISS-7601-G915/ISS-7600 on the part of the user.**  
【Precautions regarding bodily injury, use, environment, and connection】
2. **Incorrect or careless operations may lead to fatal injuries.**  
【Precautions regarding bodily injury, use, environment, and connection】
3. **Any person with medical electronics such as a heart pacemaker is not to operate ISS-7601-G915. And, do not enter the test area while the ISS-7601-G915/ISS-7600 is operating.**  
【Precautions regarding bodily injury and use】
4. **Do not use ISS-7601-G915/ISS-7600 under high humidity or dusty conditions.**  
【Precautions regarding environment】
5. **Should the necessity of services such as repair, maintenance, or internal calibration arise, leave them to qualified service personnel only.**  
【Precautions regarding use and safety】

## 6. SETTING UP AND STARTING UP

### 6-1. Setting Up

#### 6-1-1. Before Starting Up

The internal power source of ISS-7600 series is centrally controlled by the SYSTEM power switch right underneath the red emergency button. All the power supply is shut off by switching the SYSTEM power switch OFF even if respective switches are ON.

**Note: PC works unstable when the SYSTEM power switch is turned OFF while the control software is running. Be sure to shut down the control software before turning the SYSTEM power OFF.**

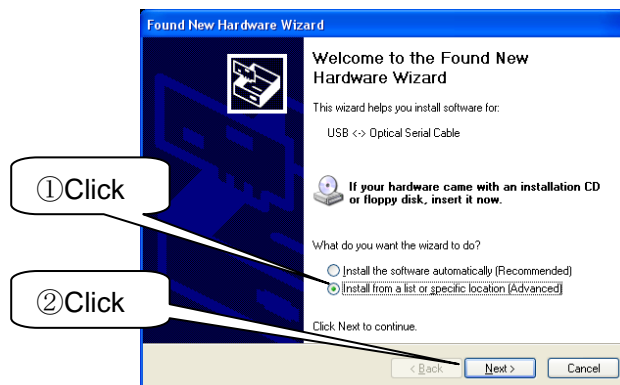
#### 6-1-2. Setting Up Control Software

- ① Log on Windows with Administrator's ID.
  - ② Insert the Set UP CD-ROM into a CD-ROM drive. Choose [Japanese] in the ISS-7601-G915 folder if your operating system is Japanese or [English] if it is English.
  - ③ Execute (Setup.exe) in the folder.
  - ④ The installation program boots. Follow the instructions on the screen to install the control software. After installation, [ISS-7601-G915] and [Uninstall] are registered in the [Noiseken]-[ISS-7601-G915] in the [Start]-[All Programs (P)] of the task bar.
- Now, the set up of the control software is properly completed.

#### 6-1-3. Installation of Driver (Windows XP)

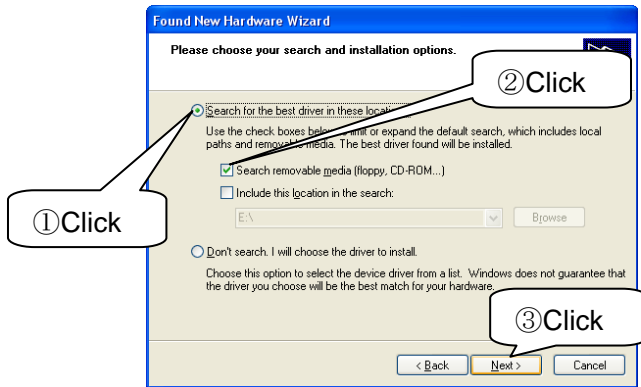
It is necessary to install the driver to run the control software.

- ① Log on Windows with Administrator's ID. Insert the Set UP CD-ROM into a CD-ROM drive.
- ② Turn the SYSTEM power switch ON. If the built-in amplifier (BP4610) is used, turn the power OFF.
- ③ Connect the remote control connector on the front panel and the PC using a USB cable.
- ④ Windows finds a new hardware and the screen displays as follows.  
Select [Install from a list or specific location [Advanced]] and click<Next>button.

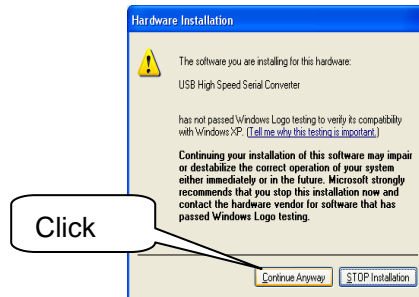


When the display above does not appear, check the connection between the PC and the connector. It may take several minutes until the display above appears when a large capacity drive is connected to the network drive.

Click [Search for the best driver in those locations], check [Search removable media [floppy, CD-ROM...]], and click [Next] button.

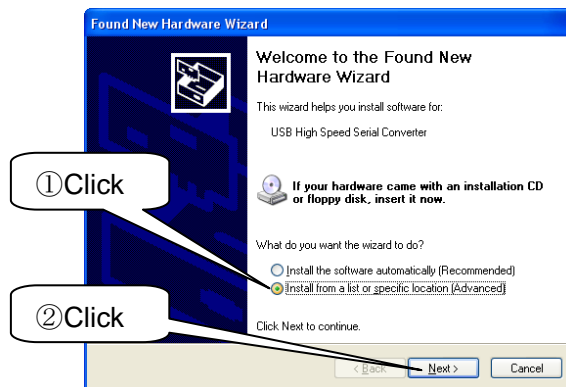


⑤ When the screen below is displayed, click <Continue>.

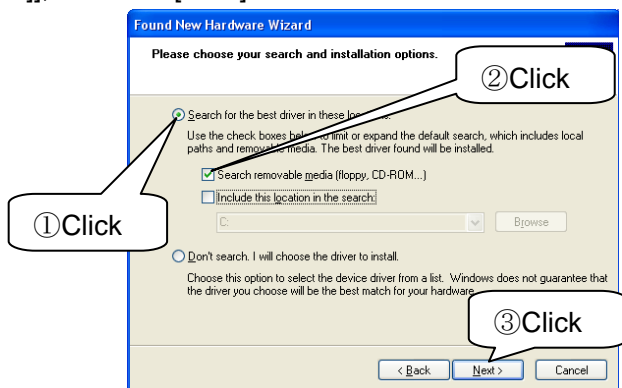


⑥ [Completing the Found New Hardware Wizard] appears on the screen. Then, click <Finish>.

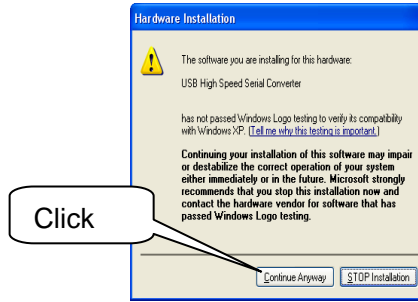
⑦ Then, a new hardware detection wizard is displayed. Select [Install from a list or specific location [Advanced]] and click <Next>.



⑧ Click [Search for the best driver in those locations], check [Search removable media [floppy, CD-ROM...]], and click [Next] button.



⑨ When the screen below is displayed, click <Continue>.



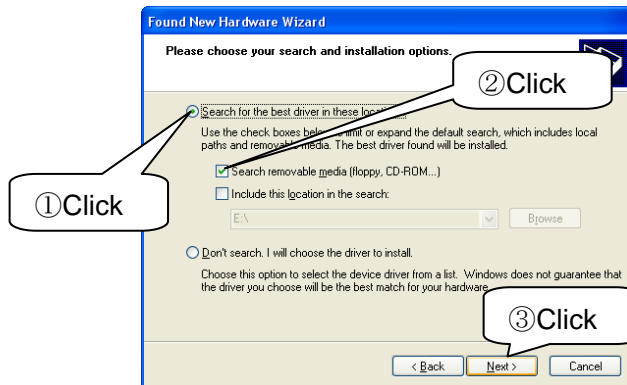
⑩ [Completing the Found New Hardware Wizard] appears on the screen. Then, click <Finish>.

⑪ When the built-in amplifier (BP4610) is not used, the installation is completed here. When your system uses the amplifier, turn the power of the amplifier ON.

⑫ Windows finds a new hardware and the screen below is displayed. Select [Install from a list or specific location [Advanced]] and click <Next>.



⑬ Click [Search for the best driver in those locations], check [Search removable media [floppy, CD-ROM...]], and click [Next] button.



⑭ [Completing the Found New Hardware Wizard] appears on the screen. Then, click <Finish>.

#### 6-1-4. Driver Installation (At the time of Stand-alone Use)

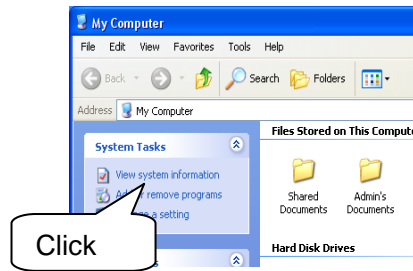
Connect the attached optical interface unit to a PC's USB port.

Install the driver referring to the manual of the optical interface unit. The basic installation procedure is the same as ④ to ⑪ of 6-1-3. above.

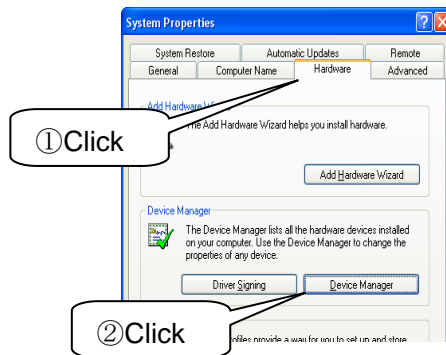
**When the connected USB port is changed, PC might require the driver installation again.**

### 6-1-5. Confirming Installation (Windows XP)

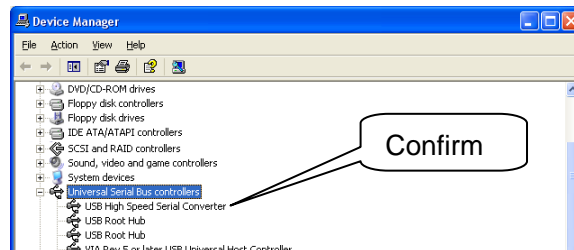
- ① Select [Start]-[My Computer], and click [View system information].



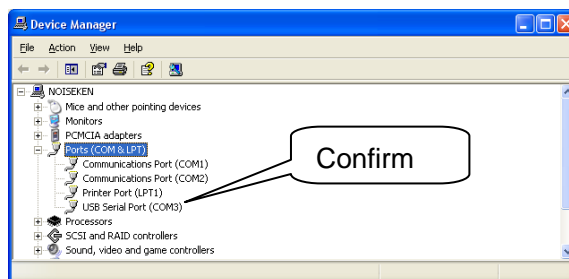
- ② The system property appears on the screen. Select [Hardware] and then click [Device Manager].



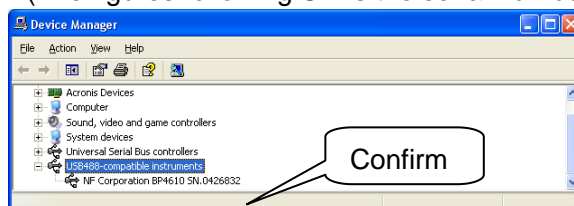
- ③ In [USB Controller], there should be USB High Speed Serial Converter. Confirm that there are no " ! " or " × " are assigned to the USB controllers. (Only one at the time of stand-alone use)



- ④ In [Port], there should be USB Serial Ports without " ! " or " × ". (Only one at the time of stand-alone use)

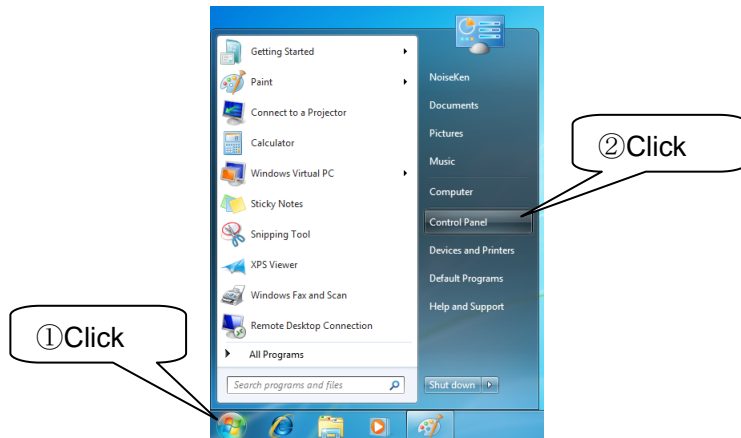


- ⑤ In [USB488-compatible instruments], confirm [NF Corporation BP4610 SN.xxxxxxxx] is displayed without " ! " or " × ". (The figures following SN is the serial number of the product)

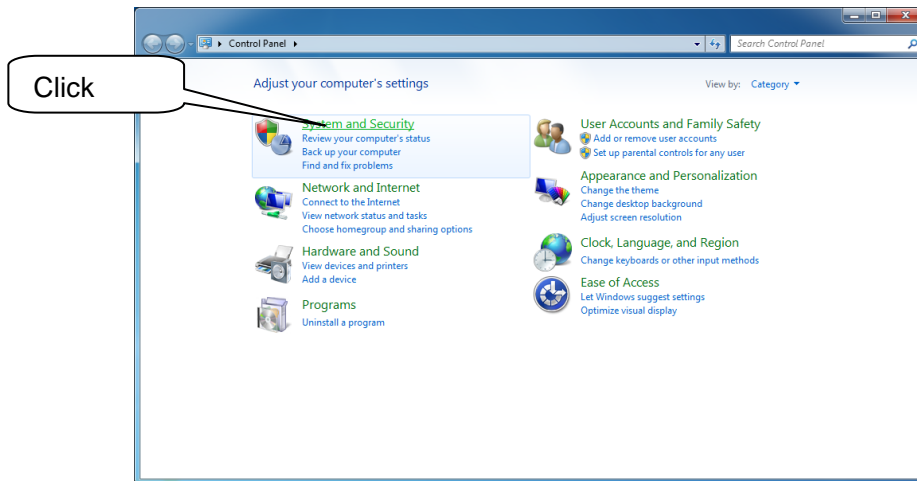


## 6-1-6. Installation of Driver(Windows 7)

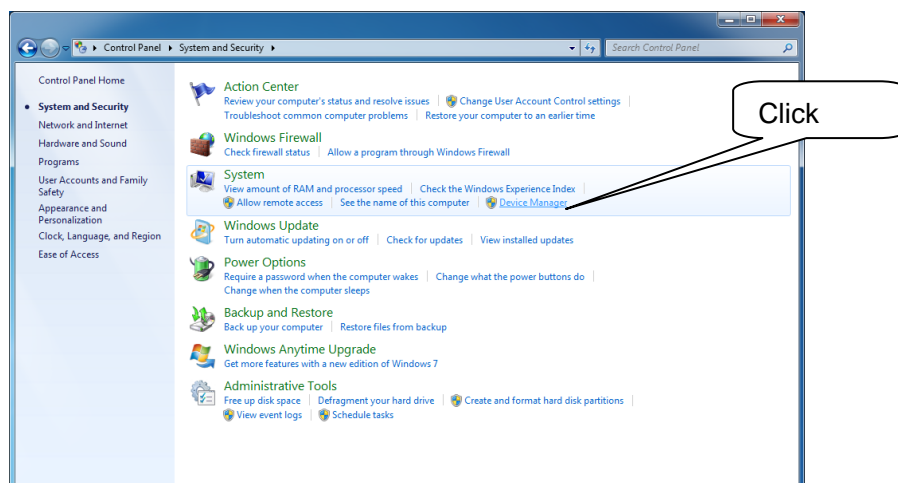
① Select [Start]-[Control Panel]



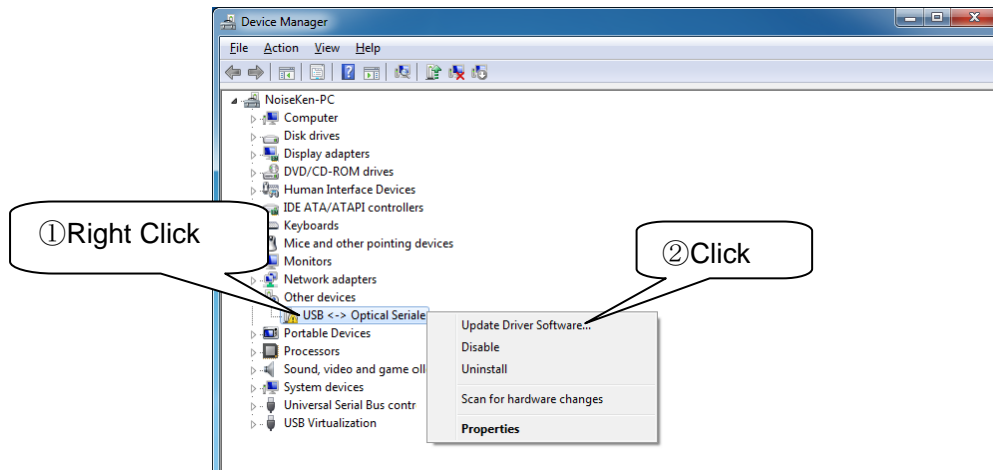
② Click [System and Security]



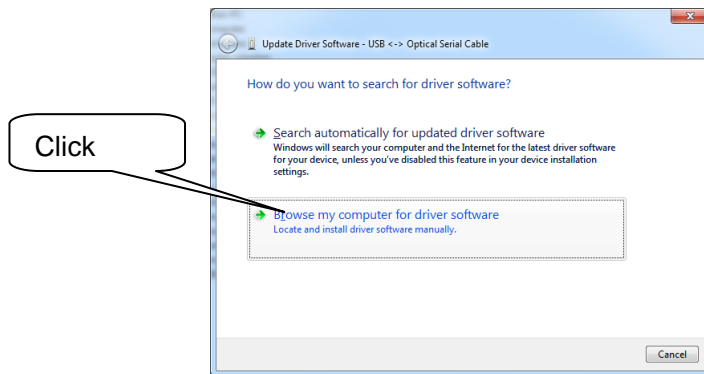
③ Click [Device Manager]



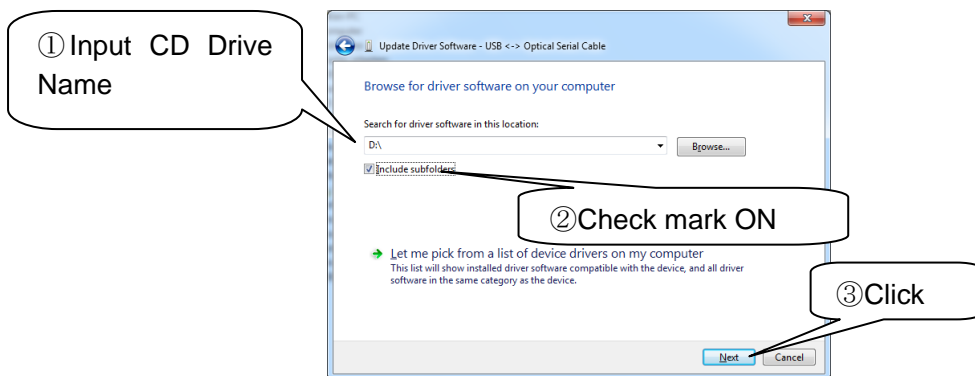
④ Right Button Click [USB<->Optical Serial], and Click [Update Driver Software]



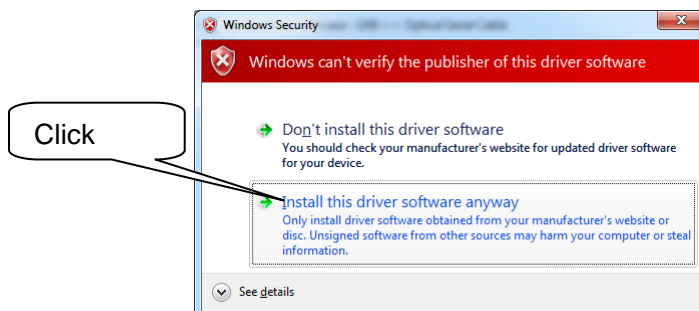
⑤ Click [Browse my computer for driver software]



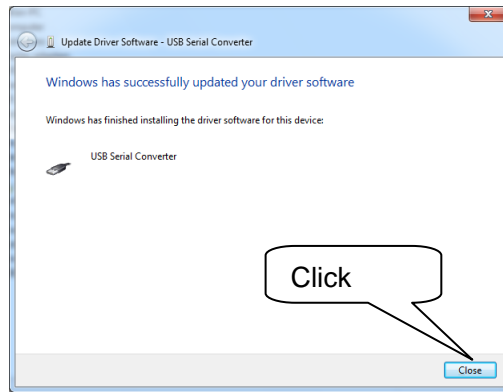
⑥ Input CD Drive name and Check [Include subfolders]



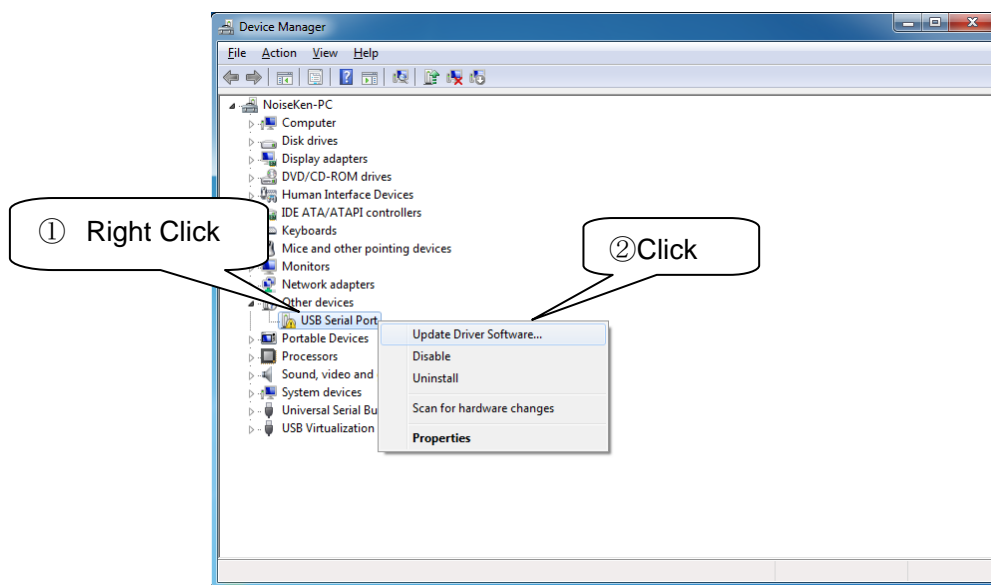
⑦ Select [Install this driver software anyway]



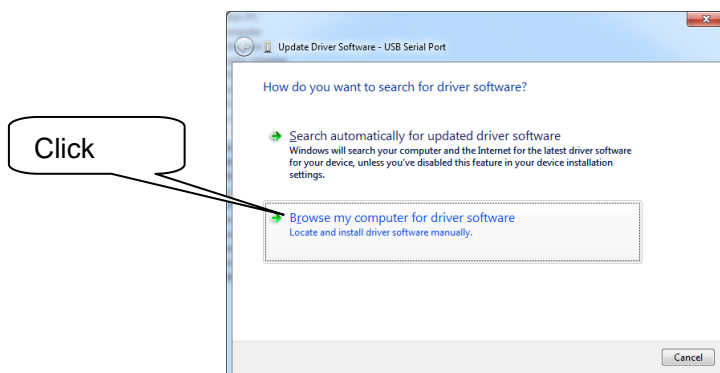
⑧ Click [Close] button



⑨ Right button click [USB Serial Port] , and click [Update Driver Software]

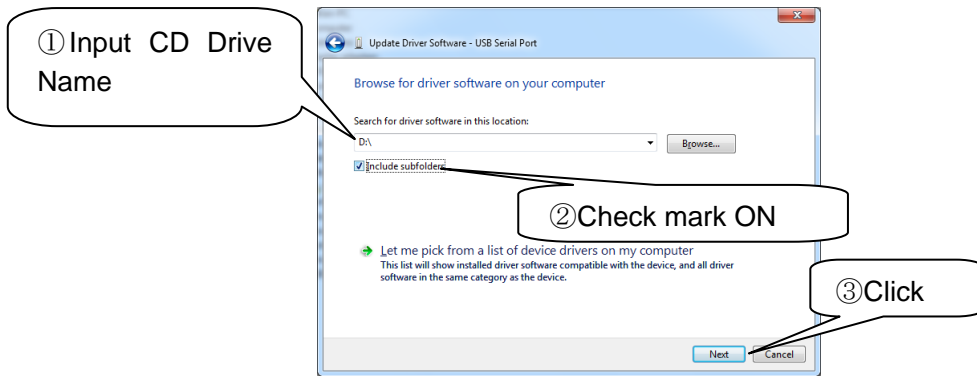


⑩ Click [Browse my computer for driver software]

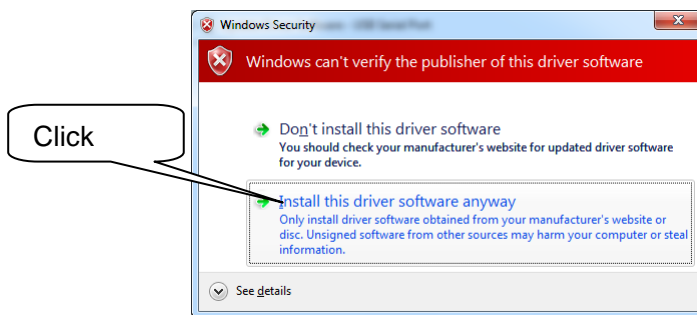




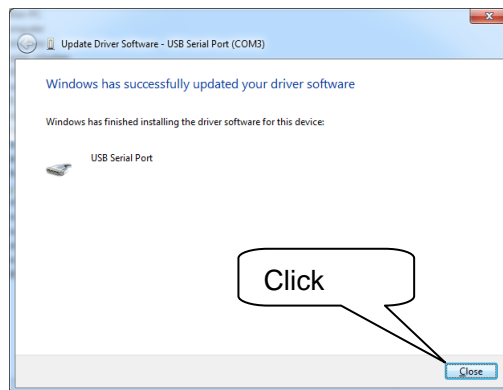
11 Input CD Drive name and Check [Include subfolders]



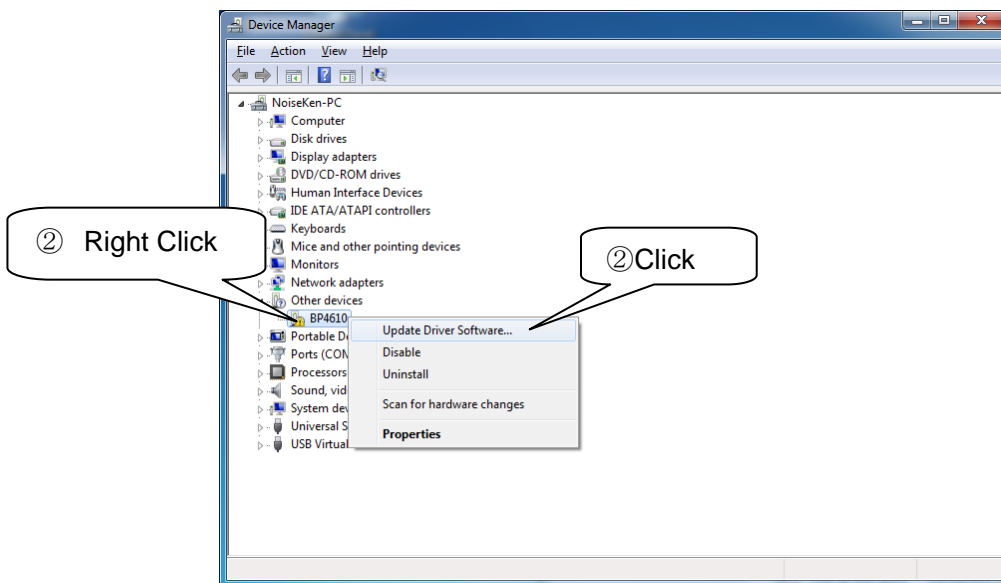
12 Select [Install this driver software anyway]



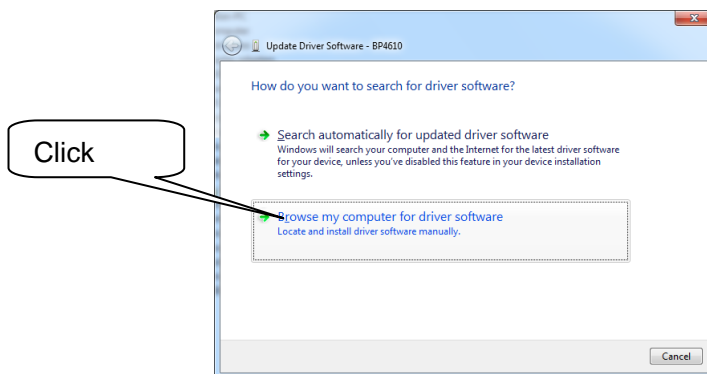
13 Click [Close] button



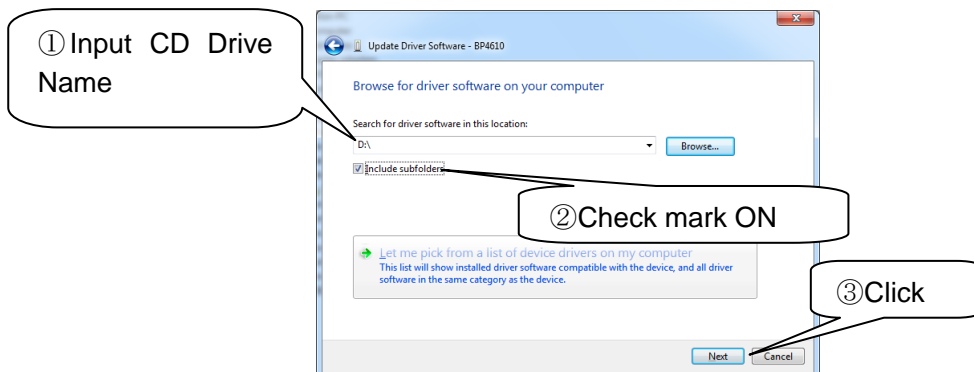
- ⑭ When the built-in amplifier (BP4610) is not used, the installation is completed here. When your system uses the amplifier, turn the power of the amplifier ON.
- ⑮ Right Button Click [Other devices] - [BP4610], and Click [Update Driver Software]



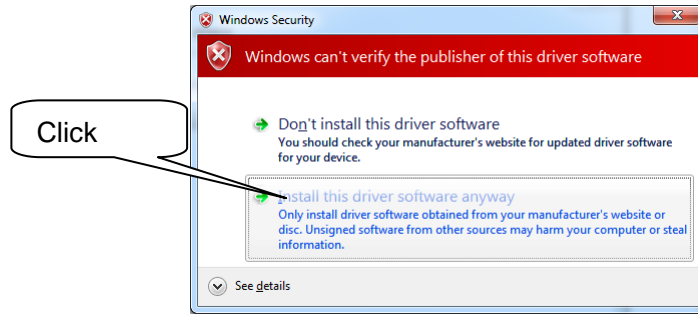
- ⑯ Click [Browse my computer for driver software]



- ⑰ Input CD Drive name and Check [Include subfolders]

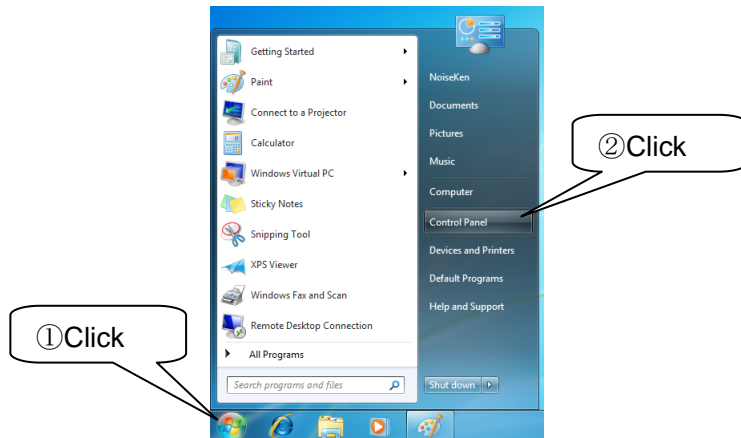


18 Select [Install this driver software anyway]

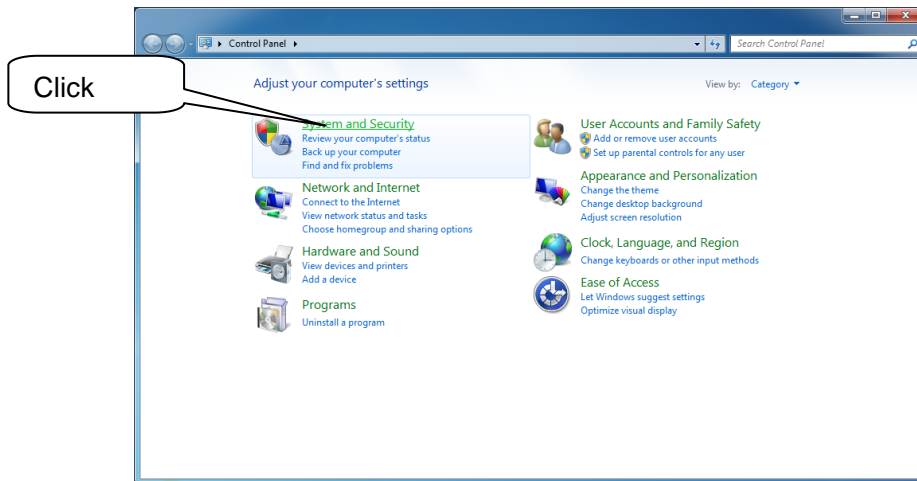


## 6-1-7. Confirming Installation (Windows 7)

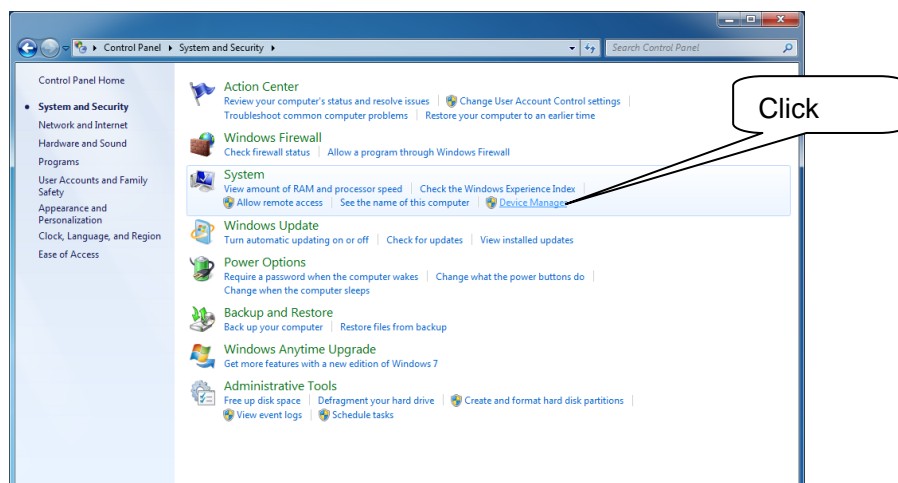
① Select [Start]-[Control Panel]



② Click [System and Security]



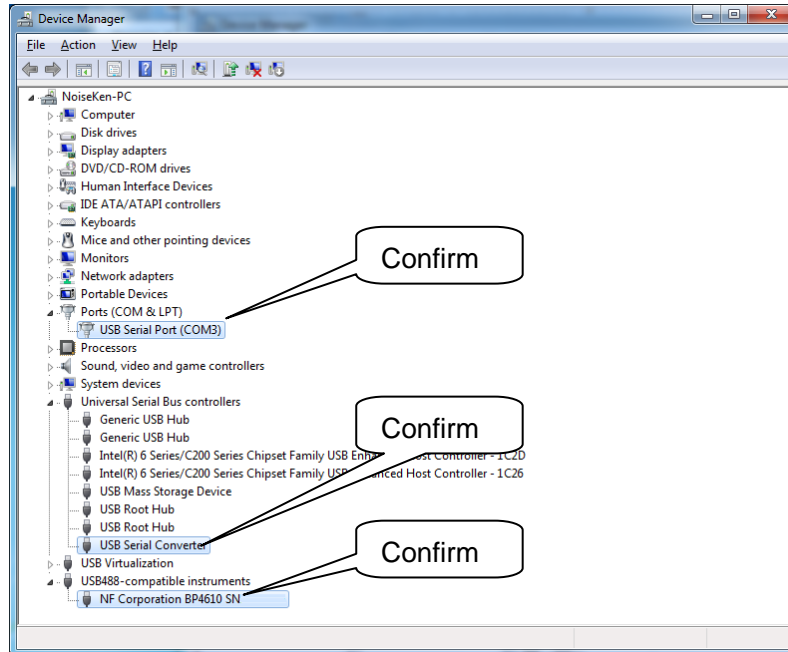
③ Click [Device Manager]



- ④ In [USB Controller], there should be USB High Speed Serial Converter. Confirm that there are no " !" or " ×" are assigned to the USB controllers. (Only one at the time of stand-alone use)

In [Port], there should be USB Serial Ports without " !" or " ×". (Only one at the time of stand-alone use)

In [USB488-compatible instruments], confirm [NF Corporation BP4610 SN. ] is displayed without " !" or " ×". (The figures following SN is the serial number of the product)



### **6-1-8. Uninstalling**

To uninstall the control software, click [Start] on the taskbar, choose [All Programs (P)], and execute [Uninstall] from [Noiseken]-[ISS-7601-G915].

### **6-1-9. Connection to ISS-7600Series**

When used by SYSTEM;

- ① Connect a USB cable and the PC.
- ② Turn the SYSTEM power of ISS-7600 ON. Confirm all other related powers are ON.
- ③ Connect the USB cable and the remote control connector that is located on the front panel of ISS-7600 series.
- ④ Start up the control software.

At the time of stand-alone use;

- ① Connect the USB cable from the optical interface unit to the PC.
- ② Connect REMOTE control port located on the rear panel of ISS-7600 and the optical interface unit with the optical cable that comes with the interface unit.
- ③ Start up the control software.

Now, connection is successfully completed.

### **6-1-10. Quitting Software and Shutting Down**

- ① Quit the control software.
- ② Disconnect the USB cable from the device.
- ③ Turn OFF the power of the device (SYSTEM power of ISS-7600 when used by SYSTEM).

Be sure to quit the control software before turning OFF the power of the device.

And also be sure to quit the software before disconnecting the cable.

Turning the Unit OFF and disconnecting the cable without quitting the software may cause unstable performance of the PC or freeze of the operating system.

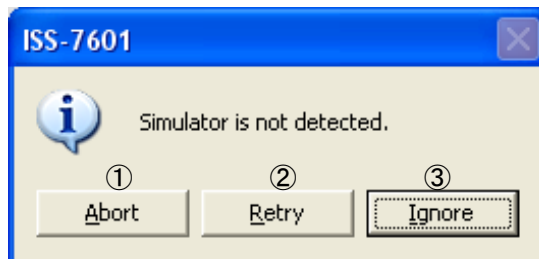
**The steps and the screen images above are the examples of Windows XP category display. The screen image and the operation may not be the same depending on the version or the setting of the OS that you are using.**

## 6-2. Starting Up

Click [Start] on the taskbar, choose [All programs (P)], and click [ISS-7601-G915] via [Noiseken]-[ISS-7601-G915] to start up the control software.

After finding the connection to ISS-7600 series, the main menu screen is displayed.

When the software fails to find the connection, the following dialogue box is displayed.



① <Abort (A)> button

The "<Abort (A)> button" lets you abort the starting up.

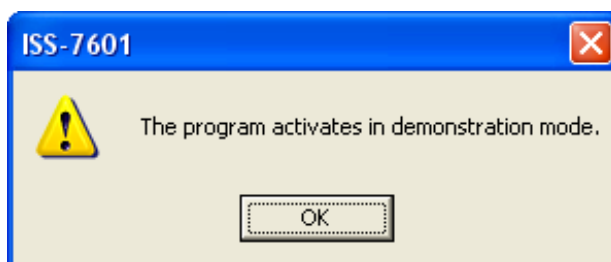
② <Retry (R)> Button

The "<Retry (R)> Button" lets you retry to find the connection to ISS-7600series.

③ <Ignore(I)> button

The "<Ignore(I)> button" lets you start up the software under the demonstration mode ignoring the connection status.

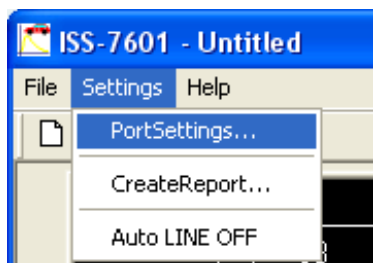
The following dialogue box is displayed when the software is run under the demonstration mode.



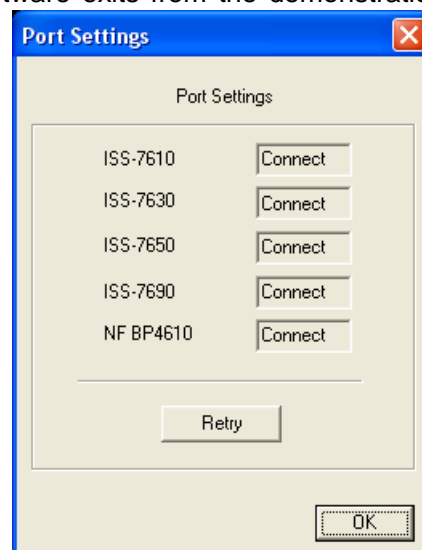
※No communication with ISS-7600 series is established in the demonstration mode. This mode can be utilized only when setting up the testing conditions or confirming them.

To exit from the demonstration mode, confirm the SYSTEM power of ISS-7600 series is ON, choose [Realign (R)]-[Port Realign (P)] and click <Reconnect> button in the communication port dialogue.

When at least one connection to the Unit is confirmed, the software exits from the demonstration mode. (Refer to [7.3 Communication Setting])



※[DEMO] is displayed on the screen while the software runs in the demonstration mode.

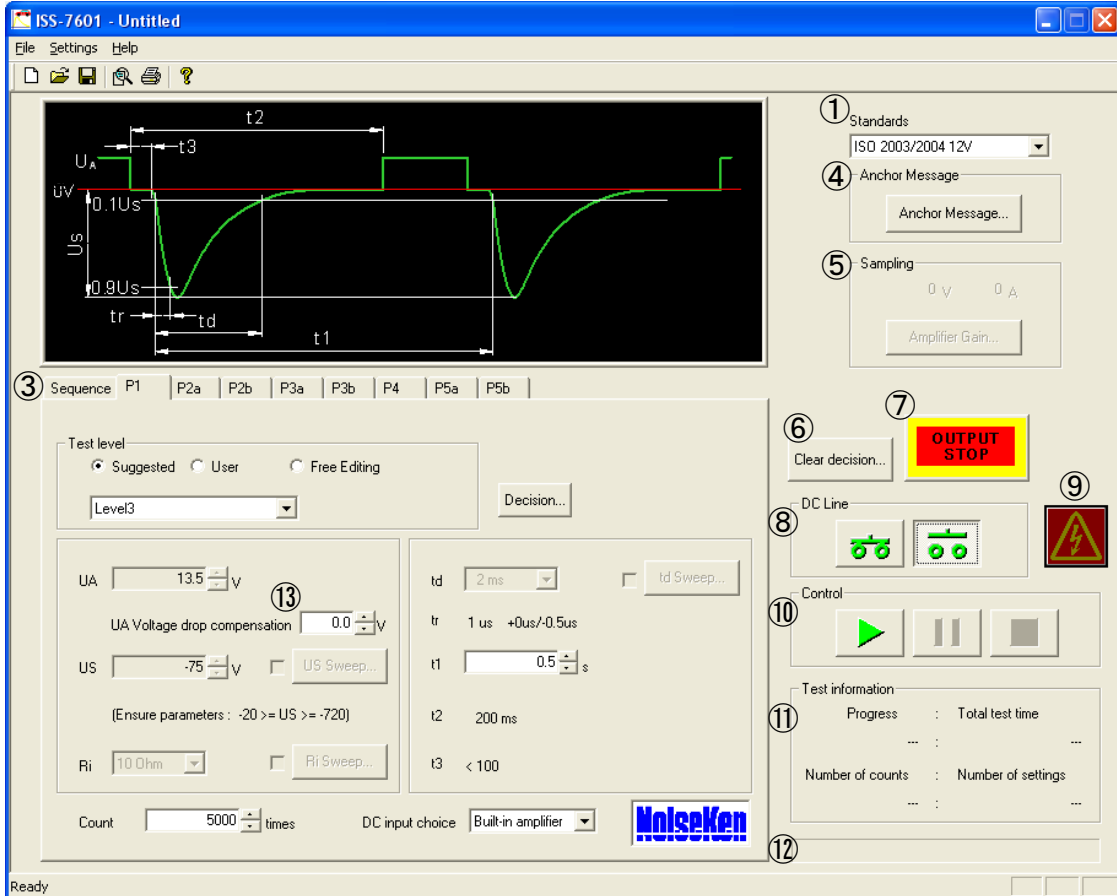


# 7. USING SOFTWARE

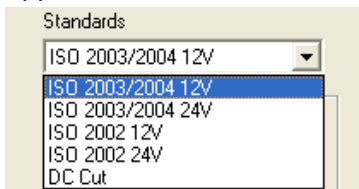
## 7-1. Screen Display for Testing

The minimum unit of testing is named a “unit” and a group of the units make up a “sequence” under this software. The term “sweep” means the testing method by which the setting values are automatically incremented to a given value.

Setting and execution of testing is operated on the screen below.



### ① Applicable Standards



Choose “Applicable Standards” for your testing. The setting values and the input range of each waveform vary by standards.

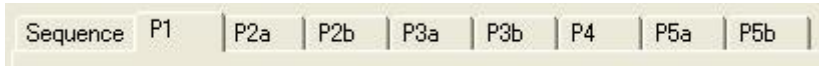
“DC Cut” is a mode to cut off DC with 1μs fall time and keep 0V status.

### ② Waveform Chart Window

“Waveform Chart Window” displays the selected waveform tab or the waveform of the on-going test (standard waveform).



③ Waveform Selection Tab

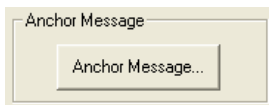


The “Waveform Selection Tab” lets you select the waveform that you are testing or a sequence.

Tab	Description
Sequence	Run, confirm or set a sequence.
P1	Output, confirm or set Pulse1.
P2a	Output, confirm or set Pulse2a.
P2b	Output, confirm or set Pulse2b.
P3a	Output, confirm or set Pulse3a.
P3b	Output, confirm or set Pulse3b.
P4	Output, confirm or set Pulse4.
P5a	Output, confirm or set Pulse5a.
P5b	Output, confirm or set Pulse5b.

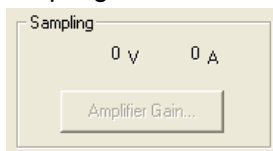
④ <Anchor Message> Button

The “<Anchor Message> Button displays the dialogue that indicates execution of critical commands such as “starting up”, “switching EUT power” and “changing waveforms”.



Click <Anchor Message>. Check checkboxes of the items you intend to display when a dialog box to set anchor messages is displayed. Moreover, you can edit the messages as you like.

⑤ Sampling



Voltage : Monitors the DC voltage value output from DC LINE OUT of ISS-7690.

The display is 0V when ISS-7690 is not connected.

Current : Monitors the current value of BP4610.

The display is 0A when BP4610 is not connected.

0V and 0A are displayed in the demonstration mode.

<Amplifier Gain> Button

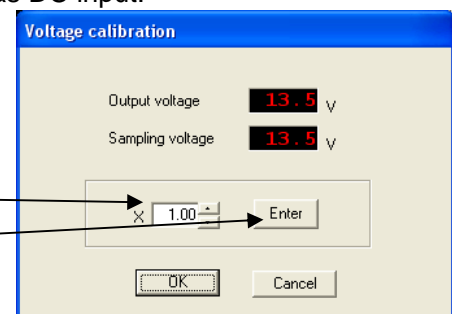
BP4610 can be utilized as an amplified signal generator when external power supply is used.

The following are requirements for the use of <Amplifier Gain>.

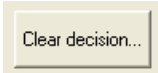
- 1) BP4610 and ISS-7690 are connected.
- 2) DC LINE INPUT2 or DC LINE INPUT3 is selected as DC input.
- 3) DC output (LINE ON) is ON.

The output signal can be adjusted from 0.01 time to 1.50 times

Clicking <Enter> makes changes effective.



⑥ <Clear Decision > Button



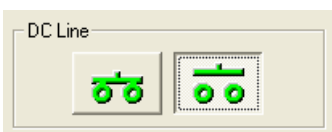
The “<Clear Decision > Button” initializes all the decision data back to the default (Untested, Comments Cleared).

⑦ <Emergency Stop> Button



The “<Emergency Stop> Button” is to execute LINE OFF and stop testing.

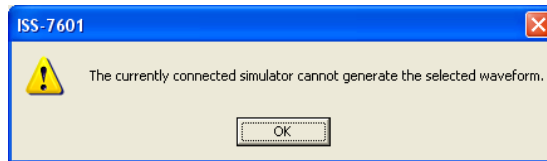
⑧ DC Output



The “DC Output “ lets you switch LINE ON and LINE OFF.

During LINE ON, only <LINE OFF>, <Emergency Stop>, <Feedback>, <Decision>, <START>, <PAUSE>, and <STOP> buttons are working, and the rest are disabled.

When there is no selected waveform generator or the communication is not established, DC output is disabled and the following message appears on the screen.



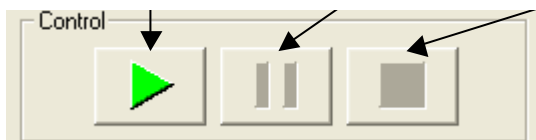
⑨ Warning Lamp



The “Warning Lamp” lights when LINE ON is switched on, and the lamp flashes during testing as an attention-getter.

⑩ Executing

<START> Button      <PAUSE> Button      <STOP> Button



<START> Button : Starts testing or awakes from a temporary suspension.

<PAUSE> Button : Temporarily suspends testing.

<STOP> Button : Ends testing.

## ⑪ Testing Information

Test information	
Progress	: Total test time
5s	: 41m 40s
Number of counts	: Number of settings
8times	: 5000times

Estimated Total testing Time : Approximate remaining time for testing is indicated during testing.

"Overflow" is displayed when the time is more than 24 hours.

Elapsed Time : Elapsed time of the testing

No. of Setting/Time Set (Pulse3a/3b) : When LINE ON is on or testing is started, no. of test setting/time are displayed. (Number/time per unit are displayed)

No. of Execution/Run Time (Pulse3a/3b): Displays number of test execution/time. (Number/Time per unit)

## ⑫ Progress Bar



The "Progress Bar" indicates the progress of each testing unit. When the bar reaches the right end, testing of the displayed unit is completed.

## ⑬ Voltage Drop Correction



The "Voltage Drop Correction" lets you increase the output voltage from the built-in amplifier by the value designated by this voltage drop correction.

The voltage drop due to CDN passage is corrected here. The correction can be designated from 0V (No correction) to 3.0V in 0.1V steps.

The designated value is null and not reflected when the power source is separate from the built-in amplifier by choosing [DC LINE IN 2] or [DC LINE IN 3] from [DC Input Choice] drop down menu.

## 7-1-1. Waveform Setting

Set up the format of the standard level test or the user defined tests. The changeable items vary depending on the severity level.

The screenshot shows the 'Waveform Setting' window with the following elements:

- Sequence:** P1, P2a, P2b, P3a, P3b, P4, P5a, P5b
- Test level:** Radio buttons for Suggested (selected), User, and Free Editing. A dropdown menu shows 'Level3'. A 'Decision...' button is to the right.
- Parameter Setting (Left Column):**
  - UA: 13.5 V
  - UA Voltage drop compensation: 0.0 V (with a circled 5 next to it)
  - US: -75 V (with a 'US Sweep...' button)
  - (Ensure parameters : -20 >= US >= -720)
  - Ri: 10 Ohm (with a 'Ri Sweep...' button)
- Parameter Setting (Right Column):**
  - td: 2 ms (with a 'td Sweep...' button)
  - tr: 1 us +0us/-0.5us
  - t1: 0.5 s
  - t2: 200 ms
  - t3: < 100
- Count:** 5000 times (with a circled 6 next to it)
- DC input choice:** Built-in amplifier (with a circled 7 next to it)
- Logo:** NolseKen

### ① Severity Level

The "Severity Level" lets you select a test type. A specified test by the standards or an optional test can be selected.

### ② <Decision > Button

The "<Decision > Button" displays the "Decision" dialog. The data entered are output in the printed report.

### ③ Parameter Setting

Refer to the waveform chart displayed on the main screen regarding the data of each parameter. Set up the voltage and Ri here.

### ④ Parameter Setting

Refer to the waveform chart displayed on the main screen regarding the data of each parameter. Set up the time axis of waveform here.

### ⑤ UA Voltage Drop Calibration

The built-in amplifier outputs the voltage that adds up UA voltage drop calibration to UA (normal operating voltage). In case the actual output value is lower than UA value e.g. voltage drops due to DUT current consumption, DUT power supply voltage can be adjusted to the specified voltage by using the voltage drop calibration.

### ⑥ Number of Injections (or Injection Time)

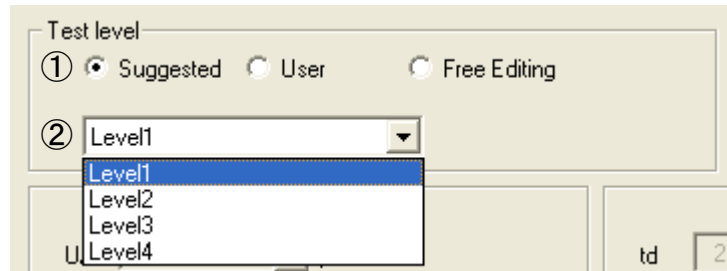
The "Number of Injections (or Injection Time)" lets you set up the number of pulse injections or injection time.

### ⑦ DC Input Choice

The "DC Input Choice" lets you choose the input of DC power supply. The built-in amplifier (BP4610), DC LINE IN 2 and DC LINE IN 3 are provided as DC input choice. LINE 2 and 3 are an external amplifier, DC power supply or a battery, depending on your testing configurations.

### 7-1-1-1. Severity Level - ISO Standards

Select the severity level when you run a test specified by the ISO Standards.



① <ISO Standards> Radio Button

Checking “<ISO Standards> Radio Button” lets you run ISO Standards’ level test. The fixed values under the Standards cannot be changed. The values of which limits are set by the Standards are variable within the limited range.

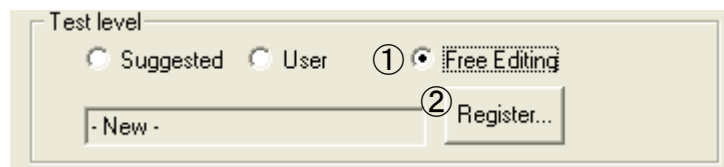
② Test Name Selection Drop Down List

Select the standard level to be tested from the “Test Name Selection Drop Down List”.

You may not find Level 1 or level 2 in the Standards in some years. And all tests may not be listed in the order from Level 1.

### 7-1-1-2. Severity Level - Free Edit

Check the “Free Edit” when you run an optional level test. The settings can be saved.



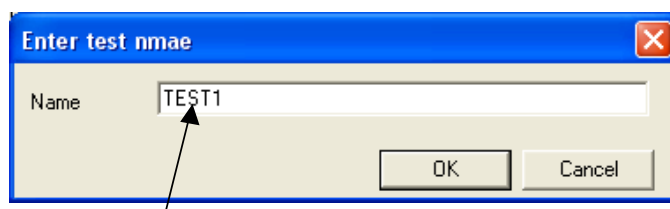
① <Free Edit>Radio Button

The “<Free Edit>Radio Button” lets you set parameters to any optional values and run a test.

The setting range is the same as ISS-7600 series’ hardware limits. When switching ISO Standards or Users’ Definition to Free Edit, the parameters displayed at the time of switching are copied to the Free Edit. When switching the free edit to ISO standards or the Users’ Definition, all the modified data by the Free Edit are deleted. Click <Registration> button and register as the users’ definition when you save the content of the Free Edit. You cannot switch the waveform (for example, from Pulse 1 to Pulse 2a) while Free Edit is selected. If you want to switch the waveform, you may register it as the users’ definition or switch to ISO standards or users’ definition closing the free edit.

② <Registration>Button

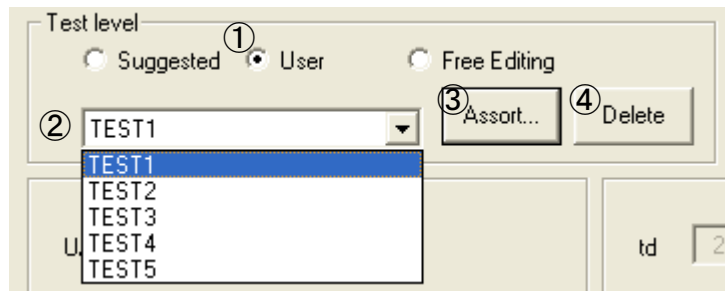
Pushing the “<Registration>Button” displays Test Name Registration dialog and register the data of free edit as the users’ definition.



Enter a name given to the testing data. This name will be displayed in the user defined test name selection dropdown list.

**Names of test data are case-insensitive. The names of level 1~4 used by ISO code cannot be registered.**

### 7-1-1-3. Severity Level - User Definition



#### ① < User definition> Radio button

Checking the “< User definition> Radio button” lets you run User Definition Test registered by Free Edit Setting. The parameters are unchangeable except DC input choice while User Definition is chosen. Choose Free Edit when you modify the parameters.

**Free Edit cannot be chosen when User Definition is not registered.**

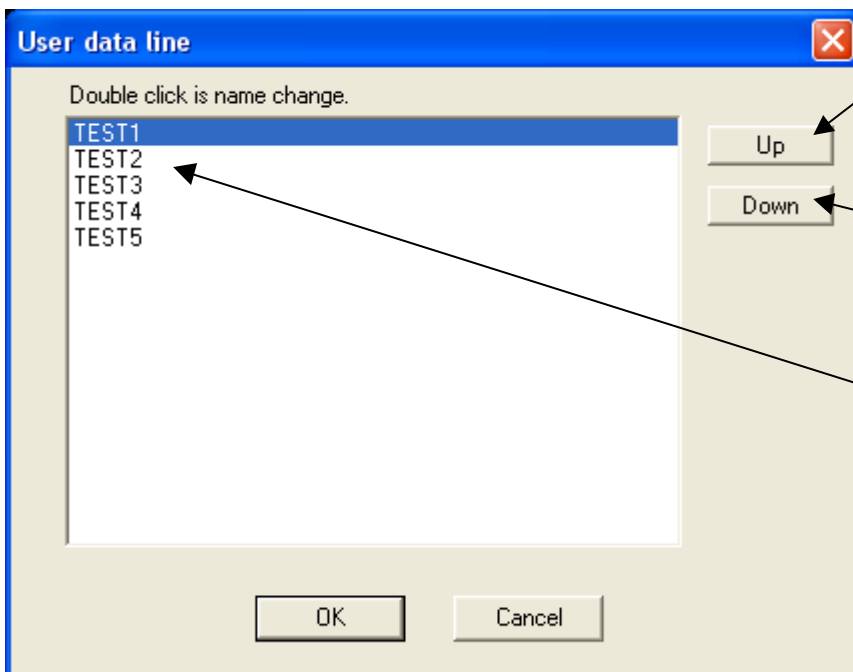
#### ② Test Name Selection Drop Down List

The “Test Name Selection Drop Down List” menu lists the test names registered in the User Definition. Select any optional test name in the list. The parameters are unchangeable except DC input choice.

#### ③ <Sorting>Button

The “<Sorting>Button” displays User Definition Sorting Dialog.

You can sort the user definitions displayed on the level selection drop down list. And you can customize it as you like by sorting by the descending order, the frequency or the execution sequence. The sequence registration list can be sorted, too. You can rename the user definition name in User Definition Sorting Dialog.



A click moves up the cursor position.

A click moves down the cursor position.

Test names are listed here. Double-clicking lets you rename the user definition test name.

#### ④ <Delete>Button

The “<Delete>Button” lets you delete the user definition test items selected (displayed) under.

#### 7-1-1-4. Test Result Decision

Enter the test results to reflect them in the printed test report.

The test result decision dialog appears when you PAUSE during testing or click <Decision> button.

The screenshot shows a dialog box titled "Decision". It contains the following fields and controls:

- Test Pulse: P1
- Test Name: Level3
- Decision: Radio buttons for OK (selected), NG, and N. A.
- Comment: A text area with a scroll bar and a "Limit 2 lines." label.
- Buttons: OK and Cancel.

#### ① Decision

Select the test result by one of the radio buttons.

OK : Normal

NG : Abnormal

N.A. : Not Applicable

#### ② Comment

Enter additional information about the test result to "Comments" column.

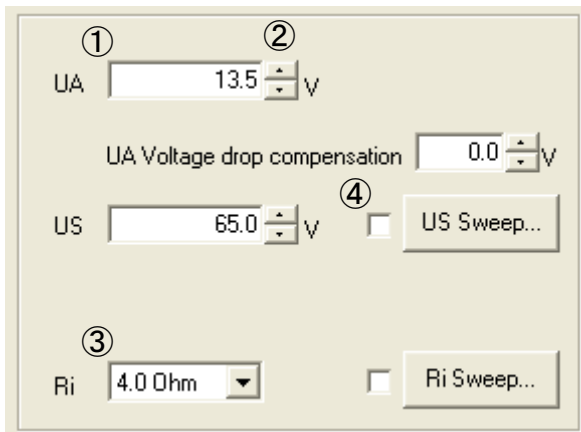
The comment printable in the report is up to 200 letters in one line, or 100 letters in two lines.

All the decision data will be initialized by clicking <Decision Clear> button.

**Follow the setting <Display Decision Dialog When Switching the Sequence> while running the sequence.**

**Decision Dialog is displayed by double clicking the parameter list after completing the sequence.**

### 7-1-1-5. Parameter Setting



#### ① Input Numbers

Input numbers directly from the keyboard.

The input box of this type accepts two input methods. One is the direct input and the other is the modification by Spin Button described below. You may omit to input the numbers after the decimal point in case the decimal numbers are 0.

#### ② Spin Button

Use the "Spin Button" to increase or decrease the value.

You can change the value by the direction keys or by the wheel of the mouse when properly focused (the cursor must be on the number).

#### ③ Dropdown List

Select a value from the "Dropdown List".

Just like Spin Buttons, you can change the value by the direction keys or by the wheel of the mouse when properly focused

#### ④ Sweep Check Box

By checking the "Sweep Check Box", parameters automatically sweep.

One parameter usually sweeps one step every time the predetermined numbers of discharge is completed or the test time is over.

For some parameters, Linear Sweep item can be selected in the sweep dialog. When Linear Sweep is selected, it sweeps [Beginning Value] -> [Ending Value], or [Beginning Value] -> [Ending Value] -> [Beginning Value] during the time set.

※Sweep Dialog will appear by pushing <Sweep> button.

Some numbers in the cell are gray indication in certain severity level and cannot be modified.

This is because these numbers are fixed by ISO Standards when tested under ISO selection.

When you select Free Edit, all the numbers are editable.



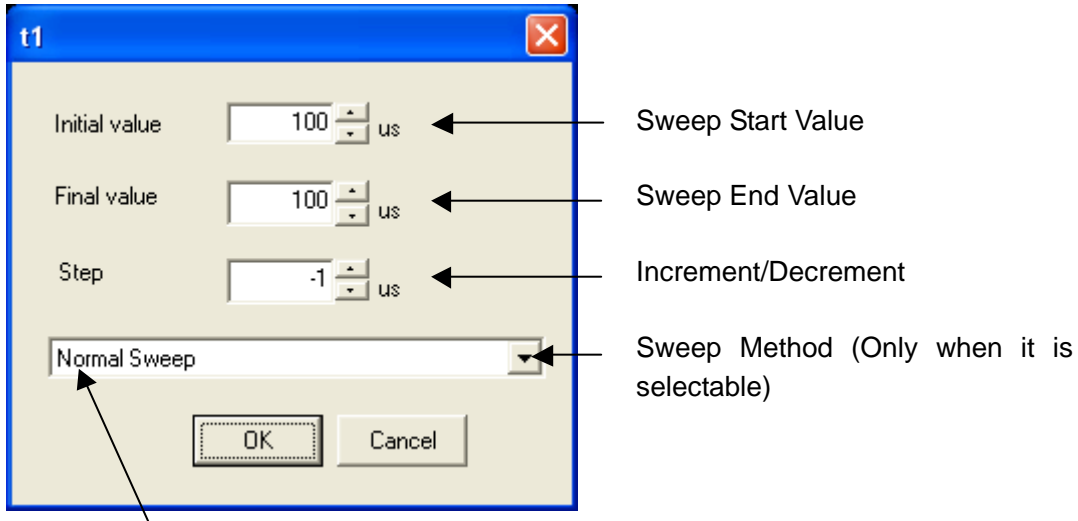
### 7-1-1-6. Sweep Setup

The sweep has two main patterns.

One is to run a test specifying the step (by voltage or by injection time) from the beginning to the end. The other is to specify the items to run.

#### ① Pattern to specify the beginning and the end

The sweep dialog below is displayed. Input each value.



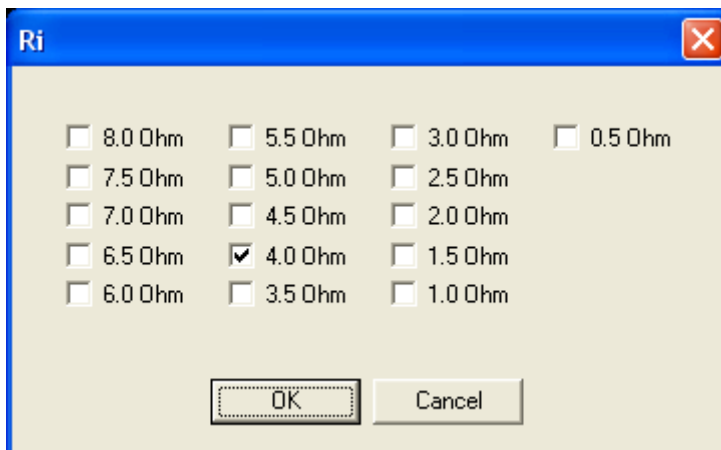
Normal Sweep: The sweep is one step increment/decrement.

Linear Sweep ([Beginning Value] -> [Ending Value]): The sweep is [Beginning Value] to [Ending Value] during testing.

Linear Sweep ([Beginning Value] -> [Ending Value] -> [Beginning Value]): The sweep is [Beginning Value] -> [Ending Value] -> [Beginning Value].

#### ② Pattern to specify items to run

Indicate the sweep dialog below. Check the value you want to run.



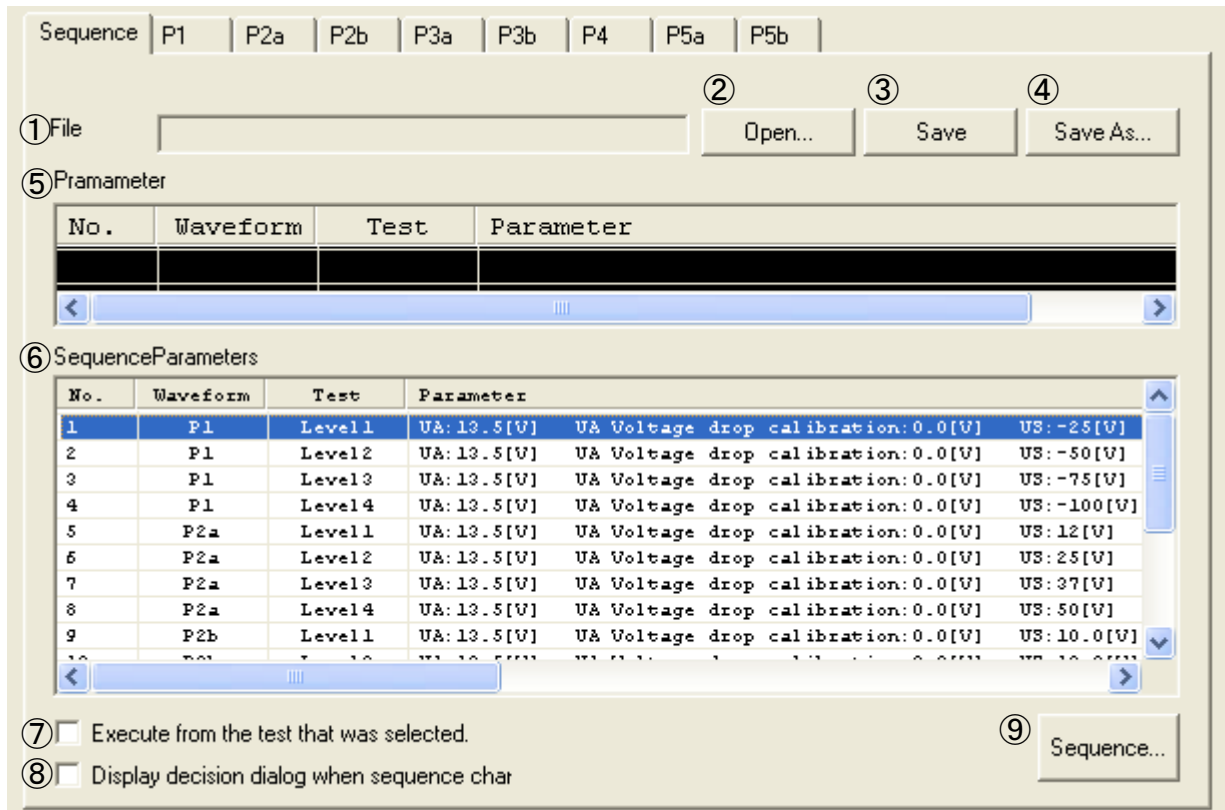
### 7-1-1-7. Sweep Running Sequence

The sweep runs the following sequence when multiple sweeps are specified.

Pulse1    td → US → Ri  
Pulse2a   td → US → Ri  
Pulse2b   td → t12 → tr → t6 → US  
Pulse3a   t1 → t4 → t5 → US  
Pulse3b   t1 → t4 → t5 → US  
Pulse4    t7 → t8 → t9 → t10 → t11 → Ua → US  
Pulse5a   td → US → Ri  
Pulse5b   td → US → USS → Ri

## 7-1-2. Sequence Setting

Apart from the testing data setting, the sequence setting can be saved and opened as sequential data. Multiple waveforms of different types can be combined for testing.



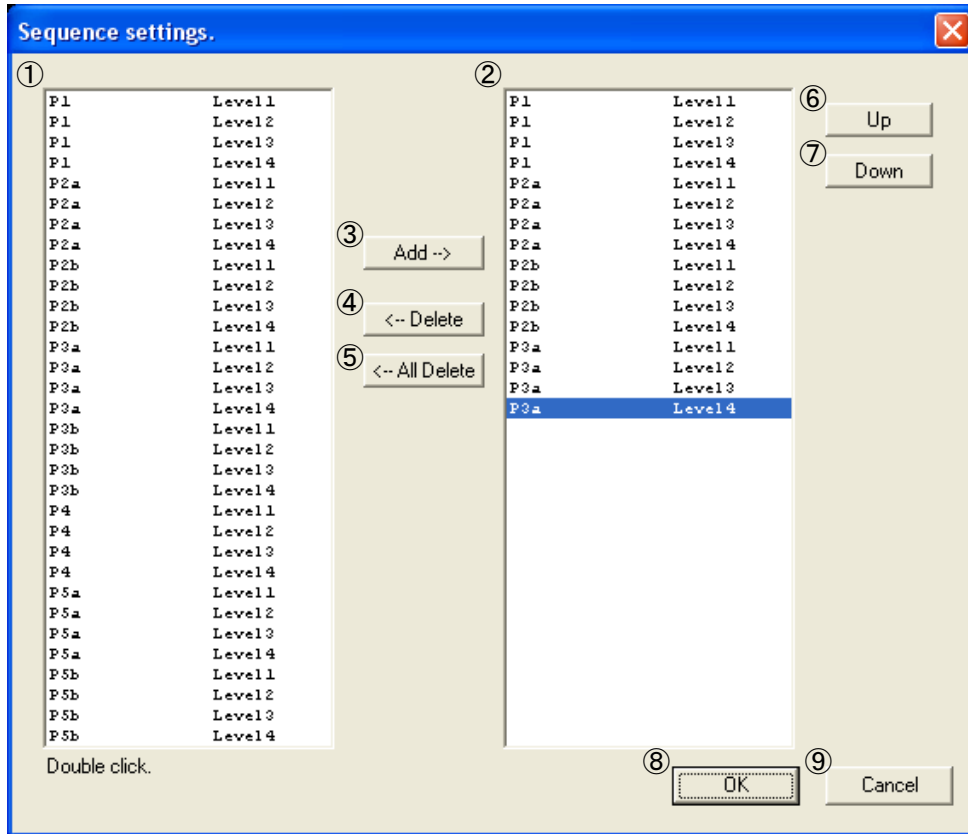
- ① File Path  
The file name is displayed when a sequential file is read into the memory.
- ② <OPEN> Button  
Pushing <OPEN> Button reads and opens the named file.
- ③ <SAVE> button  
The sequential file is saved under the same name. When the file is new, it prompts a name.
- ④ <SAVE AS> Button  
The file is saved as a newly given name.
- ⑤ Parameters in Execution  
The “Parameters in Execution” are displayed.
- ⑥ Sequence Parameters  
The “Sequence Parameters” are listed in the table. The test unit in execution is highlighted. The decision dialog of the unit will appear by double clicking the unit (the listed item) when the test is in pause.
- ⑦ Executing from Selection  
When you check this box, the test begins with the selected item (highlighted) in the sequence parameter list.
- ⑧ Display Decision Dialog when the sequence is switched.  
When a testing unit is completed, the [DECISION] dialog is displayed before moving to the next test.
- ⑨ <Sequence Setting> Button  
By pressing the “<Sequence Setting> Button”, [Sequence Setting] dialog box is opened to register, sort or delete the sequence.

\* Notes on sequence execution

The testing equipment that can output the waveform set by the sequence must be connected.

### 7-1-2-1. Sequence Setting

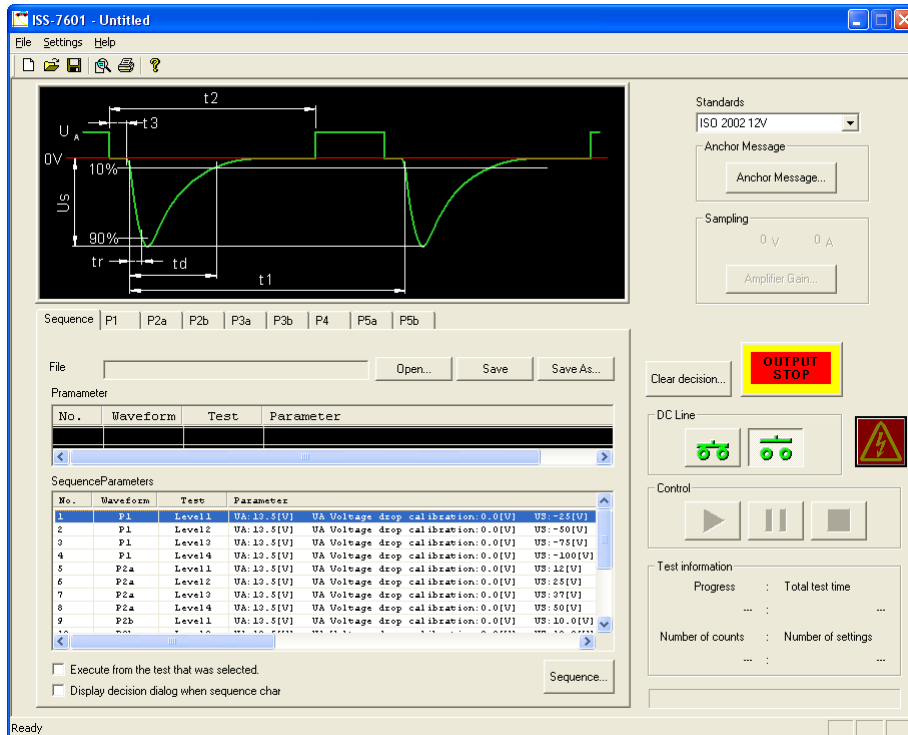
This section presents how to edit units to execute the sequence.



- ① List of Registered Unit  
The registered units are listed. The list includes ISO Standard units and user defined settings.
- ② Execution Unit List  
The sequence execution units are displayed here. The maximum 100 units can be specified.
- ③ <ADD> Button  
The highlighted unit in “List of Registered Unit” is added to “Execution Unit List” for sequence execution. The newly added unit goes to the last unit in the list. The unit in “list of Registered Unit” can be double clicked instead of pressing <ADD>
- ④ <DELETE> Button  
The highlighted unit in “Execution Unit List” is deleted by pressing this button. The deleted unit will not be executed any more.
- ⑤ <DELETE ALL> Button  
All units in [Execution Unit List] are deleted and the sequence setting is cleared by this button.
- ⑥ <UPWARD> Button  
The highlighted unit in [Execution Unit List] is moved upward by this button. This makes the sequence execution order earlier.
- ⑦ <DOWNWARD> Button  
The highlighted unit in [Execution Unit List] is moved downward by this button. This latens the sequence execution order.
- ⑧ <OK> Button  
Pressing <OK> button saves the current settings and exits.
- ⑨ <CANCEL> Button  
By pressing <CANCEL> Button, the program exits without saving the current settings.

## 7-1-2-2. Sequence Execution

The tests set by sequence are executed in order.



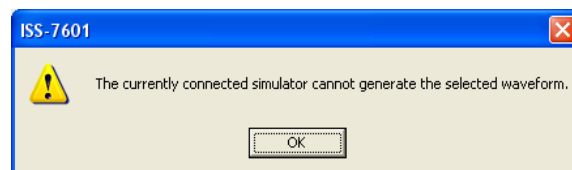
### ① Set sequence referring to “7.1.2.1. Sequence Setting”.

Test items covered by sequence are limited depending on the connected device types.

The types and the corresponding generated pulses are as follows;

Unit Type	Generated Pulse
ISS-7610	Pulse1 Pulse2a
ISS-7630	Pulse3a Pulse3b
BP4610	Pulse2b Pulse4
ISS-7650	Pulse5a Pulse5b

The following message will appear at the time of DC OUTPUT when a pulse that the system cannot generate is specified or the connection is not recognized due to power shut-off or other reasons.



If the connection is not recognized, choose [Settings]-[Port Setting (P)], and click [Re-Connection] button to recognize the connection. (Refer to [7.3 Communication Setting])

### ② Turn ON DC OUTPUT.

DC OUTPUT is a requisite for sequence execution.

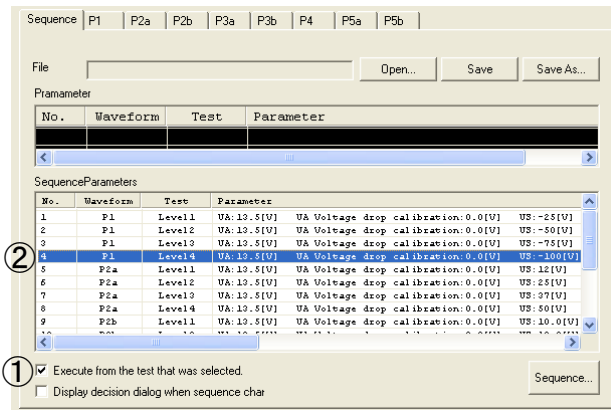
### ③ Click <START> button and start sequence tests.

Tests will be executed from the first line in the sequence.

Click <PAUSE> button for temporary pause, and press <STOP> button to end the test.

## Resuming a test

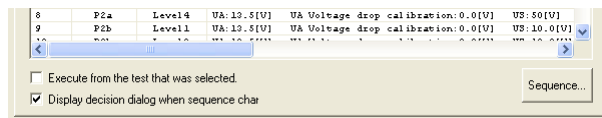
Even if tests are suspended, the tests can be resumed from that point of the sequence.



- ① Check [Execute from Selected Point] check box.  
The check box can be checked only when DC OUTPUT is OFF.
- ② Click the sequence item that you want to resume.  
The selected sequence item will be highlighted.  
This selection is possible while DC OUTPUT is ON.

The decision result can be entered for every sequence item.

The decision dialog may be displayed after every unit test completion.



Check [Display Decision Dialog Box When Sequence Is Switched] check box.

The check box can be checked only when DC OUTPUT is OFF.

Regarding the decision dialog input, refer to [0 Decision Dialog].

## 7-2. Reporting Functions

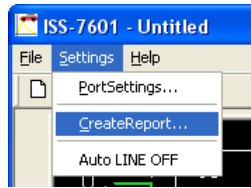
This software allows you to print out contents of test execution and test decisions as a report. The following is an example of the report that can be printed out or previewed on the screen.

ISS-7601	
	sign _____
Engineer in charge	: <u>NoiseKen</u>
Test site	: <u>Shield room</u>
Date and time	: <u>Fri, Jan 11, 2008 14:57:15</u> — <u>Fri, Jan 11, 2008 14:57:15</u>
DUT	: <u>Car navigation</u>
Model	: <u>CNS-2008</u>
Serial No.	: <u>0000001</u>
Test environment.	
*Temperature	: <u>23degC</u> — <u>24degC</u>
*Humidity	: <u>55%</u> — <u>57%</u>
*Barometric pressure	: <u>1023hPa</u> — <u>1015hPa</u>
Test equipment	: <u>PULSE SIMULATOR (TEST PULSE 1/2a)</u>
Model	: <u>ISS-7610</u>
Serial No.	: <u>7610-0001</u>
Comment	: <u>P1/P2a Generator</u>
Test equipment	: <u>PULSE SIMULATOR (TEST PULSE 3a/3b)</u>
Model	: <u>ISS-7630</u>
Serial No.	: <u>7630-0001</u>
Comment	: <u>P3a/P3b Generator</u>
Test equipment	: <u>BIPOLAR DC POWER SUPPLY (TEST PULSE 2b/4)</u>
Model	: <u>BP4610/4620</u>
Serial No.	: <u>4610-0001</u>
Comment	: <u>DC fluctuated/variable/transient Waveform Generator</u>
Test equipment	: <u>PULSE SIMULATOR (CDM/DC CUT)</u>
Model	: <u>ISS-7690</u>
Serial No.	: <u>7690-0001</u>
Comment	: <u>CDM (Injection part)/DC CUT</u>
Test equipment	: <u>PULSE SIMULATOR (TEST PULSE 5a/5b)</u>
Model	: <u>ISS-7650</u>
Serial No.	: _____
Comment	: <u>P5a/P5b Generator</u>
Device	: _____
Model	: _____
Serial No.	: _____
Comment	: _____
Device	: _____
Model	: _____
Serial No.	: _____
Comment	: _____

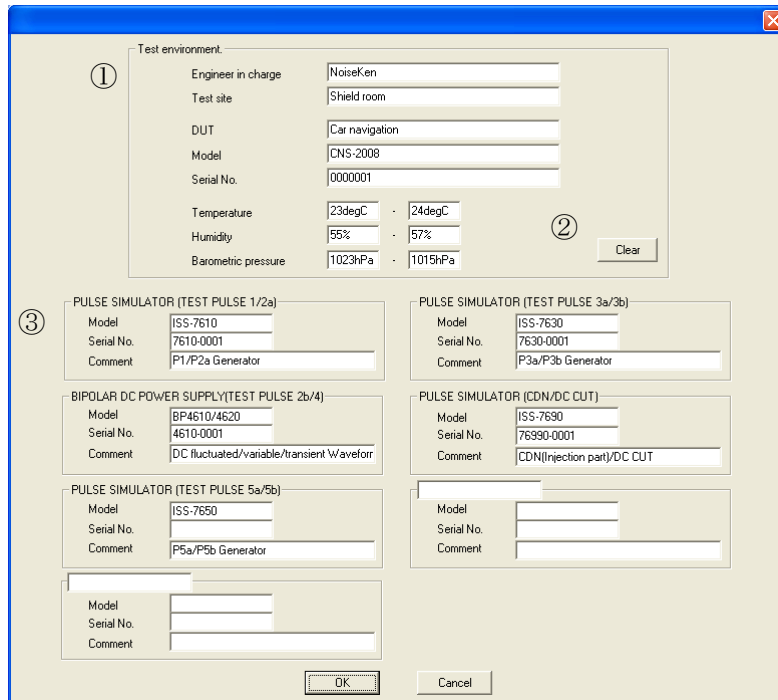
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## 7-2-1. Inputting Basic Information for Printing

[Choose [Settings]-[Port Setting (P)] to display an information input dialog box.



Input basic information such as DUT, testing environment and unit type for the printing purpose.

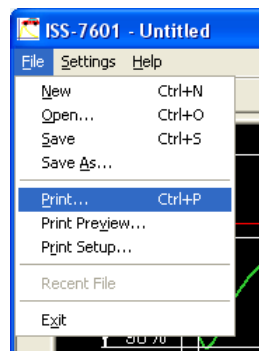
A screenshot of the 'Test environment' dialog box. It contains several input fields and buttons. A 'Clear' button is located next to the temperature, humidity, and barometric pressure fields. There are also several sections for testing units, each with fields for Model, Serial No., and Comment. The dialog box has a blue title bar and a standard Windows-style border.

- ① Input information on the testing environment.  
Input items are DUT name, Model name, Serial Number, temperature, humidity and barometric pressure.  
Input the unit of measurement when necessary.  
The input information is kept preserved after the software is closed.
- ② Erase information on testing environment.  
Press the "<Clear> Button" to erase the input data for Model name, Serial Number, temperature, humidity and barometric pressure.
- ③ Input information on testing unit  
Input the testing unit's model name, serial number, generated waveform type as commentary information. This information is not erased by ② <Clear> operation.

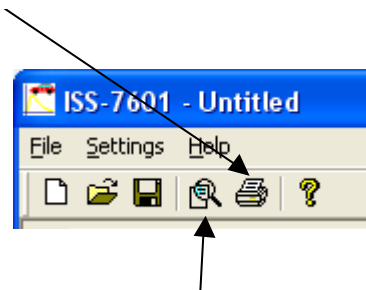


## 7-2-2. Reporting

Choose [File (E)]-[Print (P)] to display the information input dialog box.

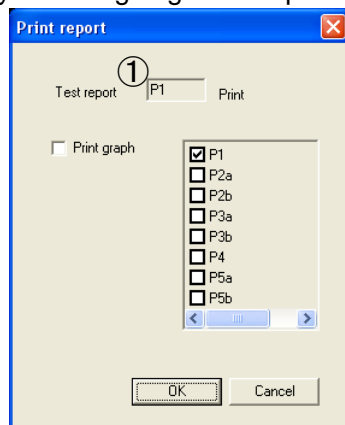


This icon will do the same.



Choose Print Preview for the screen display. This icon will do the same.

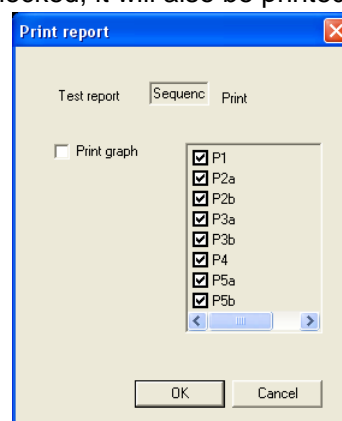
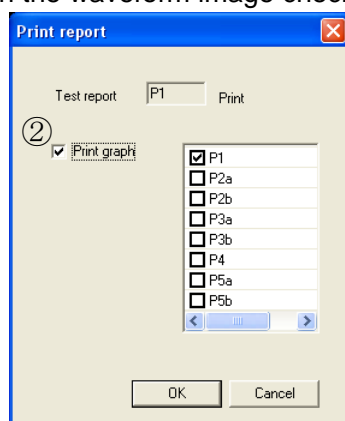
- ① Verify what is going to be reported.



Checked tests will be reported. Waveform image is not checked for reporting here.

- ② Printing Waveform Image

When the waveform image check box is checked, it will also be printed out.



The default is to print out checked tabs only, but other waveforms can be also printed. At the time of sequence printing, the waveforms included in the sequence setting will be printed.

### 7-2-3. Report Contents

- ① The testing environment information is reported as follows;

ISS-7601	
	sign _____
Engineer in charge	: NoiseKen _____
Test site	: Shield room _____
Date and time	: Fri, Jan 11, 2008 14:57:15 _____ — Fri, Jan 11, 2008 14:57:15 _____
DUT	: Car navigation _____
Model	: CMS-2008 _____
Serial No.	: 0000001 _____
Test environment.	
*Temperature	: 23degC _____ — 24degC _____
*Humidity	: 55% _____ — 57% _____
*Barometric pressure	: 1023hPa _____ — 1015hPa _____
Test equipment	: PULSE SIMULATOR (TEST PULSE 1/2a) _____
Model	: ISS-7610 _____
Serial No.	: 7610-0001 _____
Comment	: P1/P2a Generator _____
Test equipment	: PULSE SIMULATOR (TEST PULSE 3a/3b) _____
Model	: ISS-7630 _____
Serial No.	: 7630-0001 _____
Comment	: P3a/P3b Generator _____
Test equipment	: BIPOLAR DC POWER SUPPLY (TEST PULSE 2b/4) _____
Model	: BP4610/4620 _____
Serial No.	: 4610-0001 _____
Comment	: DC fluctuated/variable/transient Waveform Generator _____
Test equipment	: PULSE SIMULATOR (CDN/DC CUT) _____
Model	: ISS-7690 _____
Serial No.	: 7690-0001 _____
Comment	: CDN (Injection part)/DC CUT _____
Test equipment	: PULSE SIMULATOR (TEST PULSE 5a/5b) _____
Model	: ISS-7650 _____
Serial No.	: _____
Comment	: P5a/P5b Generator _____
Device	: _____
Model	: _____
Serial No.	: _____
Comment	: _____
Device	: _____
Model	: _____
Serial No.	: _____
Comment	: _____

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Inputted information by the information input dialog box will be reported. (Refer to 7.2.1.)

② Testing description and test results are printed out as follows;

**ISS-7601**

1 Standards : ISO 2003/2004 12V  
Pulse : P1  
Test : Level3  
DC Line in : Built-in amplifier  
Voltage drop calibration : 0.0V  
Comment :

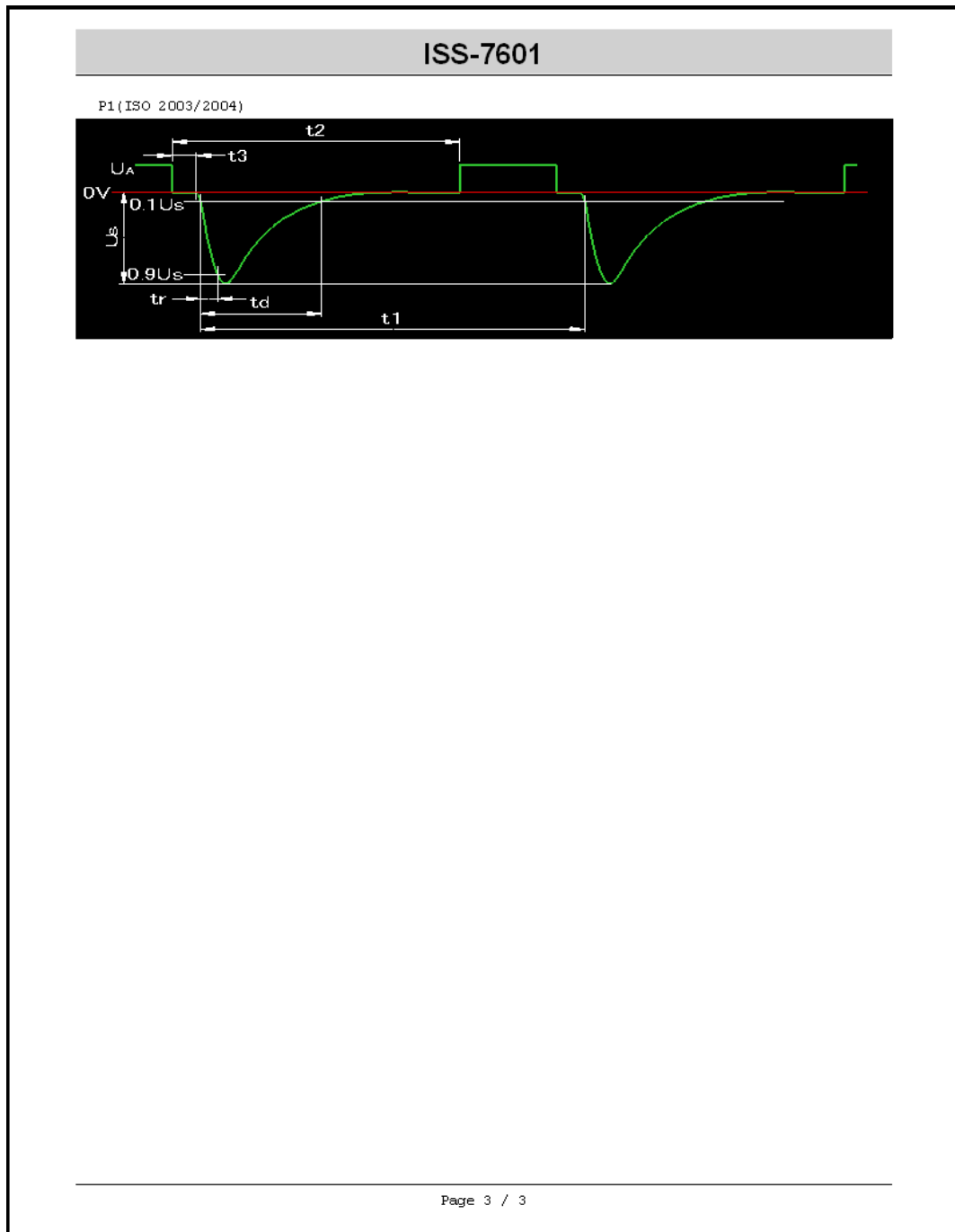
V&[V]	US[V]	Ri[Ohm]	td[us]	tr[us]	t1[s]	t2[ms]	t3[us]	Coures	Decision
12.5	-75	10	2000	1	0.5	200	<100	5000	

---

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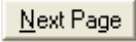
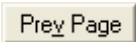
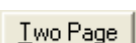

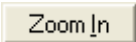
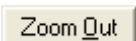
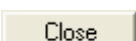
The testing results reflect information inputted by the test result decision dialog box. In case sequence is set, all the tests specified by the sequence execution will be printed out.

③ The following is the waveform image report.



The specified waveform image will be printed when you designate to print the waveform at the time of verifying the reporting contents.

- Icons of Print Preview Screen

	Print
	Next Page
	Previous Page
	Display 2 pages This is effective when a page is displayed for a multiple page report.
	Display 1 page. This is effective when 2 pages are displayed.
	Zoom in
	Zoom out
	Close Preview

※When a printer driver is not installed, [Print Preview Screen] will not appear.

Refer to Windows manual, your system administrator or network administrator regarding installation of the printer driver.

※Some printer driver may cause displacement of your display.

### 7-3. Communication Setting

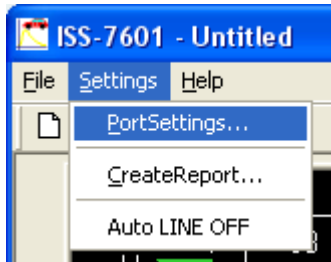
---

Confirm connection with the testing device or do re-connection.

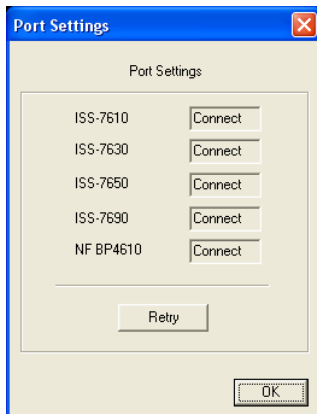
When ISS-7601 is booted before turning ON the testing device pulse tests with the device cannot be run since the software interprets that the unit is disconnected.

When you turn your device ON after the software booting, it is necessary to follow the operations below for recognition of the unit connection.

- ① Display Communication Port Dialog Box.  
Choose [Settings]-[Port Setting (P)].



- ② verify connection with the testing device  
Click <Re-Connection> button in Communication Port Dialog Box.  
When a device is recognized, "Connect" will be displayed. When nothing is recognized, "None" will appear on the screen.



When all the connected devices are not recognized, the program will go into [DEMO] mode.

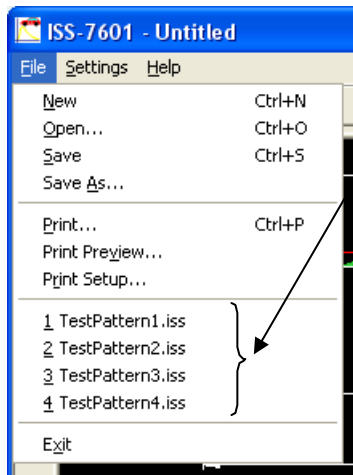
## 7-4. Others

---

Menu bar functions are demonstrated below;

- Read recently used files.

The file menu lists the latest four files. You can choose a file from the list as a shortcut.

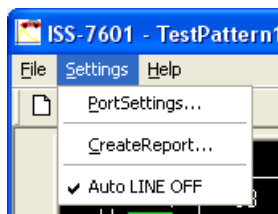


- Version Information

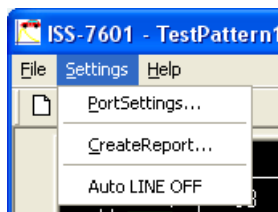
Version Information gives the version of this software.



When [Settings]-[LINE OFF when testing is over] is checked, DC LINE is turned OFF after testing is over.



Automatically turned OFF.



DC status is preserved after testing.

The settings are preserved after the program is closed.

## 8. SYSTEM REQUIREMENTS

Computer	:	PC/AT Compatible
CPU	:	Clock frequency 2GHz or more
Main Memory	:	2GB or more
HDD	:	Available Disk Space 32MB or more
OS	:	Microsoft® Windows® XP Operating System (English Version) Microsoft® Windows® 7 (x86) 32bit Operating System (English Version)
Graphic	:	SXGA(1280 * 1024 * 32767colors) or higher

In addition to the above, the system must have the following;

- A Pointing Device (Mouse)
- CD-ROM or DVD Drive
- A USB Port (1 port is exclusively occupied.)
- Connection with testing equipment must be established before ISS-7601 software is booted.  
(If not connected, the program will go into “DEMO” mode)



## 9. SUPPORT

The warranty period for this product is one year from the date of delivery.

However, actual cost may be born by the user in case of the following;

1 : Malfunction or breakdown due to the user's careless use (Incl. Software and Media)

2 : Malfunction or breakdown due to earthquake, fire or other force majeure

The Company may not undertake services in the following event.

- Products which were changed, repaired, or remodeled without authorization by the Company
- Products which have been out of production for more than 5 years
- Products which was purchased more than 8 years ago

## **10. NOISE LABORATORY SUPPORT NETWORK**

- If a symptom that seems a trouble is found, inform the model name and serial Number of the product together with the symptom to Noise Laboratory or our nearest sales agent in your area.
- When the product is returned to Noise Laboratory, write the state of the trouble, contents of your request, model name and serial number in a repair order, pack the product and repair order sheet in the former package or equivalent suitable for transit, and send them back.



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**NOISE LABORATORY CO., LTD.**

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