



***P MEC/A MEC***

**MEC PC Software**

**Operation Manual  
Seventh edition**

***IAI America, Inc.***



## Please Read Before Use

Thank you for purchasing our product.

This Operation Manual explains the handling methods, structure and maintenance of this product, among others, providing the information you need to know to use the product safely.

Before using the product, be sure to read this manual and fully understand the contents explained herein to ensure safe use of the product.

The DVD that comes with the product contains operation manuals for IAI products.

When using the product, refer to the necessary portions of the applicable operation manual by printing them out or displaying them on a PC.

After reading the Operation Manual, keep it in a convenient place so that whoever is handling this product can reference it quickly when necessary.

### [Important]

- This Operation Manual is original.
- The product cannot be operated in any way unless expressly specified in this Operation Manual. IAI shall assume no responsibility for the outcome of any operation not specified herein.
- Information contained in this Operation Manual is subject to change without notice for the purpose of product improvement.
- If you have any question or comment regarding the content of this manual, please contact the IAI sales office near you.
- Using or copying all or part of this Operation Manual without permission is prohibited.
- The company names, names of products and trademarks of each company shown in the sentences are registered trademarks.



## Software License Agreement

Before opening this product, read the software license agreement (hereinafter referred to as "Agreement"). This Agreement applies to the PC software that comes with this product (hereinafter referred to as "Software"). By using this software, you are deemed to have agreed to the terms of this Agreement. You may not use this software if you do not agree to the terms of this Agreement.

If you do not agree to the terms of this Agreement, please return your product in the original, unused condition, and IAI will refund the price you paid for the product.

IAI Corporation (hereinafter referred to as "IAI") shall grant to the user (hereinafter referred to as "the User"), and the User shall accept, a non-transferable, non-exclusive right to use the software program supplied with this Agreement (hereinafter referred to as "the Licensed Software"), based on the following terms and conditions.

### Witnesseth

#### 1. Term of Agreement

This Agreement shall take effect when the User opens this software and remain effective and in force until this Agreement is terminated upon a written request made by the User to IAI or pursuant to the provision of Section 3.

#### 2. Right of Use

The User may use this software on a computer on the condition that an external equipment communication cable manufactured and sold by IAI (hereinafter referred to as "Dedicated Connection Cable") is used. The User or a third party may use this software on multiple computers on the condition of using dedicated connection cables.

#### 3. Termination of Agreement

If the User violates any of the provisions specified in this Agreement or any material reason arises that makes continuation of this Agreement difficult, IAI may terminate this Agreement immediately without serving any notice.

If this Agreement is terminated, the User shall destroy this software, dedicated connection cable or cables, and all copies of this software, within ten (10) days from the date of termination of this Agreement.

#### 4. Scope of Protection

IAI may change any and all specifications regarding this software without prior notice. IAI shall also provide no warranty in connection with this software.

Neither the User nor any third party may demand compensation for any loss suffered by the User or third party as a result of use of this software by the User or third party.

# ***PMEC/AMEC***=====

## **Supported Models**

The table below lists the supported models.

List of Supported Models	
Controller model	
	PMEC
	AMEC
	ERC3 <sup>*1</sup>

\* 1 ERC3 is available only in MEC mode.  
It cannot be used in CON mode.  
ERC3 is applicable for version V2.00.00.00 and later.





## Notes

- [1] All copyrights to or in this software belong to IAI Corporation.
- [2] The software and the manual can only be used upon the software license agreement.
- [3] IAI shall assume no responsibility whatsoever for any outcome of using this software and manual.
- [4] The version number or edition specified on the cover of this manual has no correlation at all with the version number of the software.
- [5] Contents of this software are subject to change without prior notice.
- [6] This software runs on the Windows operating systems listed in the table below. Accordingly, one precondition for users of this software is that they can perform basic Windows operations. (Note that this software does not come with any Windows operating system.)

Port used	Compatible Windows operating systems
USB	Windows 2000 <sup>*1</sup> , Windows XP <sup>*2</sup> Windows Vista <sup>*3</sup> , Windows 7 <sup>*3</sup>

\*1 SP4 or higher

\*2 SP2 or higher

\*3 Supported on version V1.01.00.00 or later.

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***PMEC/A MEC***=====

## Safety Guide

“Safety Guide” has been written to use the machine safely and so prevent personal injury or property damage beforehand. Make sure to read it before the operation of this product.

### Safety Precautions for Our Products

The common safety precautions for the use of any of our robots in each operation.

No.	Operation Description	Description
1	Model Selection	<ul style="list-style-type: none"><li>• This product has not been planned and designed for the application where high level of safety is required, so the guarantee of the protection of human life is impossible. Accordingly, do not use it in any of the following applications.<ol style="list-style-type: none"><li>1) Medical equipment used to maintain, control or otherwise affect human life or physical health.</li><li>2) Mechanisms and machinery designed for the purpose of moving or transporting people (For vehicle, railway facility or air navigation facility)</li><li>3) Important safety parts of machinery (Safety device, etc.)</li></ol></li><li>• Do not use the product outside the specifications. Failure to do so may considerably shorten the life of the product.</li><li>• Do not use it in any of the following environments.<ol style="list-style-type: none"><li>1) Location where there is any inflammable gas, inflammable object or explosive</li><li>2) Place with potential exposure to radiation</li><li>3) Location with the ambient temperature or relative humidity exceeding the specification range</li><li>4) Location where radiant heat is added from direct sunlight or other large heat source</li><li>5) Location where condensation occurs due to abrupt temperature changes</li><li>6) Location where there is any corrosive gas (sulfuric acid or hydrochloric acid)</li><li>7) Location exposed to significant amount of dust, salt or iron powder</li><li>8) Location subject to direct vibration or impact</li></ol></li><li>• For an actuator used in vertical orientation, select a model which is equipped with a brake. If selecting a model with no brake, the moving part may drop when the power is turned OFF and may cause an accident such as an injury or damage on the work piece.</li></ul>

No.	Operation Description	Description
2	Transportation	<ul style="list-style-type: none"> <li>• When carrying a heavy object, do the work with two or more persons or utilize equipment such as crane.</li> <li>• When the work is carried out with 2 or more persons, make it clear who is to be the leader and who to be the follower(s) and communicate well with each other to ensure the safety of the workers.</li> <li>• When in transportation, consider well about the positions to hold, weight and weight balance and pay special attention to the carried object so it would not get hit or dropped.</li> <li>• Transport it using an appropriate transportation measure. The actuators available for transportation with a crane have eyebolts attached or there are tapped holes to attach bolts. Follow the instructions in the instruction manual for each model.</li> <li>• Do not step or sit on the package.</li> <li>• Do not put any heavy thing that can deform the package, on it.</li> <li>• When using a crane capable of 1t or more of weight, have an operator who has qualifications for crane operation and sling work.</li> <li>• When using a crane or equivalent equipments, make sure not to hang a load that weighs more than the equipment's capability limit.</li> <li>• Use a hook that is suitable for the load. Consider the safety factor of the hook in such factors as shear strength.</li> <li>• Do not get on the load that is hung on a crane.</li> <li>• Do not leave a load hung up with a crane.</li> <li>• Do not stand under the load that is hung up with a crane.</li> </ul>
3	Storage and Preservation	<ul style="list-style-type: none"> <li>• The storage and preservation environment conforms to the installation environment. However, especially give consideration to the prevention of condensation.</li> <li>• Store the products with a consideration not to fall them over or drop due to an act of God such as earthquake.</li> </ul>
4	Installation and Start	<p>(1) Installation of Robot Main Body and Controller, etc.</p> <ul style="list-style-type: none"> <li>• Make sure to securely hold and fix the product (including the work part). A fall, drop or abnormal motion of the product may cause a damage or injury. Also, be equipped for a fall-over or drop due to an act of God such as earthquake.</li> <li>• Do not get on or put anything on the product. Failure to do so may cause an accidental fall, injury or damage to the product due to a drop of anything, malfunction of the product, performance degradation, or shortening of its life.</li> <li>• When using the product in any of the places specified below, provide a sufficient shield.             <ol style="list-style-type: none"> <li>1) Location where electric noise is generated</li> <li>2) Location where high electrical or magnetic field is present</li> <li>3) Location with the mains or power lines passing nearby</li> <li>4) Location where the product may come in contact with water, oil or chemical droplets</li> </ol> </li> </ul>

No.	Operation Description	Description
4	Installation and Start	<p>(2) Cable Wiring</p> <ul style="list-style-type: none"> <li>• Use our company's genuine cables for connecting between the actuator and controller, and for the teaching tool.</li> <li>• Do not scratch on the cable. Do not bend it forcibly. Do not pull it. Do not coil it around. Do not insert it. Do not put any heavy thing on it. Failure to do so may cause a fire, electric shock or malfunction due to leakage or continuity error.</li> <li>• Perform the wiring for the product, after turning OFF the power to the unit, so that there is no wiring error.</li> <li>• When the direct current power (+24V) is connected, take the great care of the directions of positive and negative poles. If the connection direction is not correct, it might cause a fire, product breakdown or malfunction.</li> <li>• Connect the cable connector securely so that there is no disconnection or looseness. Failure to do so may cause a fire, electric shock or malfunction of the product.</li> <li>• Never cut and/or reconnect the cables supplied with the product for the purpose of extending or shortening the cable length. Failure to do so may cause the product to malfunction or cause fire.</li> </ul> <p>(3) Grounding</p> <ul style="list-style-type: none"> <li>• The grounding operation should be performed to prevent an electric shock or electrostatic charge, enhance the noise-resistance ability and control the unnecessary electromagnetic radiation.</li> <li>• For the ground terminal on the AC power cable of the controller and the grounding plate in the control panel, make sure to use a twisted pair cable with wire thickness 0.5mm<sup>2</sup> (AWG20 or equivalent) or more for grounding work. For security grounding, it is necessary to select an appropriate wire thickness suitable for the load. Perform wiring that satisfies the specifications (electrical equipment technical standards).</li> <li>• Perform Class D Grounding (former Class 3 Grounding with ground resistance 100Ω or below).</li> </ul>

No.	Operation Description	Description
4	Installation and Start	<p>(4) Safety Measures</p> <ul style="list-style-type: none"> <li>• When the work is carried out with 2 or more persons, make it clear who is to be the leader and who to be the follower(s) and communicate well with each other to ensure the safety of the workers.</li> <li>• When the product is under operation or in the ready mode, take the safety measures (such as the installation of safety and protection fence) so that nobody can enter the area within the robot's movable range. When the robot under operation is touched, it may result in death or serious injury.</li> <li>• Make sure to install the emergency stop circuit so that the unit can be stopped immediately in an emergency during the unit operation.</li> <li>• Take the safety measure not to start up the unit only with the power turning ON. Failure to do so may start up the machine suddenly and cause an injury or damage to the product.</li> <li>• Take the safety measure not to start up the machine only with the emergency stop cancellation or recovery after the power failure. Failure to do so may result in an electric shock or injury due to unexpected power input.</li> <li>• When the installation or adjustment operation is to be performed, give clear warnings such as "Under Operation; Do not turn ON the power!" etc. Sudden power input may cause an electric shock or injury.</li> <li>• Take the measure so that the work part is not dropped in power failure or emergency stop.</li> <li>• Wear protection gloves, goggle or safety shoes, as necessary, to secure safety.</li> <li>• Do not insert a finger or object in the openings in the product. Failure to do so may cause an injury, electric shock, damage to the product or fire.</li> <li>• When releasing the brake on a vertically oriented actuator, exercise precaution not to pinch your hand or damage the work parts with the actuator dropped by gravity.</li> </ul>
5	Teaching	<ul style="list-style-type: none"> <li>• When the work is carried out with 2 or more persons, make it clear who is to be the leader and who to be the follower(s) and communicate well with each other to ensure the safety of the workers.</li> <li>• Perform the teaching operation from outside the safety protection fence, if possible. In the case that the operation is to be performed unavoidably inside the safety protection fence, prepare the "Stipulations for the Operation" and make sure that all the workers acknowledge and understand them well.</li> <li>• When the operation is to be performed inside the safety protection fence, the worker should have an emergency stop switch at hand with him so that the unit can be stopped any time in an emergency.</li> <li>• When the operation is to be performed inside the safety protection fence, in addition to the workers, arrange a watchman so that the machine can be stopped any time in an emergency. Also, keep watch on the operation so that any third person can not operate the switches carelessly.</li> <li>• Place a sign "Under Operation" at the position easy to see.</li> <li>• When releasing the brake on a vertically oriented actuator, exercise precaution not to pinch your hand or damage the work parts with the actuator dropped by gravity.</li> </ul> <p>* Safety protection Fence : In the case that there is no safety protection fence, the movable range should be indicated.</p>







No.	Operation Description	Description
6	Trial Operation	<ul style="list-style-type: none"> <li>• When the work is carried out with 2 or more persons, make it clear who is to be the leader and who to be the follower(s) and communicate well with each other to ensure the safety of the workers.</li> <li>• After the teaching or programming operation, perform the check operation one step by one step and then shift to the automatic operation.</li> <li>• When the check operation is to be performed inside the safety protection fence, perform the check operation using the previously specified work procedure like the teaching operation.</li> <li>• Make sure to perform the programmed operation check at the safety speed. Failure to do so may result in an accident due to unexpected motion caused by a program error, etc.</li> <li>• Do not touch the terminal block or any of the various setting switches in the power ON mode. Failure to do so may result in an electric shock or malfunction.</li> </ul>
7	Automatic Operation	<ul style="list-style-type: none"> <li>• Check before starting the automatic operation or rebooting after operation stop that there is nobody in the safety protection fence.</li> <li>• Before starting automatic operation, make sure that all peripheral equipment is in an automatic-operation-ready state and there is no alarm indication.</li> <li>• Make sure to operate automatic operation start from outside of the safety protection fence.</li> <li>• In the case that there is any abnormal heating, smoke, offensive smell, or abnormal noise in the product, immediately stop the machine and turn OFF the power switch. Failure to do so may result in a fire or damage to the product.</li> <li>• When a power failure occurs, turn OFF the power switch. Failure to do so may cause an injury or damage to the product, due to a sudden motion of the product in the recovery operation from the power failure.</li> </ul>

No.	Operation Description	Description
8	Maintenance and Inspection	<ul style="list-style-type: none"> <li>• When the work is carried out with 2 or more persons, make it clear who is to be the leader and who to be the follower(s) and communicate well with each other to ensure the safety of the workers.</li> <li>• Perform the work out of the safety protection fence, if possible. In the case that the operation is to be performed unavoidably inside the safety protection fence, prepare the "Stipulations for the Operation" and make sure that all the workers acknowledge and understand them well.</li> <li>• When the work is to be performed inside the safety protection fence, basically turn OFF the power switch.</li> <li>• When the operation is to be performed inside the safety protection fence, the worker should have an emergency stop switch at hand with him so that the unit can be stopped any time in an emergency.</li> <li>• When the operation is to be performed inside the safety protection fence, in addition to the workers, arrange a watchman so that the machine can be stopped any time in an emergency. Also, keep watch on the operation so that any third person can not operate the switches carelessly.</li> <li>• Place a sign "Under Operation" at the position easy to see.</li> <li>• For the grease for the guide or ball screw, use appropriate grease according to the Instruction Manual for each model.</li> <li>• Do not perform the dielectric strength test. Failure to do so may result in a damage to the product.</li> <li>• When releasing the brake on a vertically oriented actuator, exercise precaution not to pinch your hand or damage the work parts with the actuator dropped by gravity.</li> <li>• The slider or rod may get misaligned OFF the stop position if the servo is turned OFF. Be careful not to get injured or damaged due to an unnecessary operation.</li> <li>• Pay attention not to lose the cover or untightened screws, and make sure to put the product back to the original condition after maintenance and inspection works.</li> </ul> <p>Use in incomplete condition may cause damage to the product or an injury.</p> <p>* Safety protection Fence : In the case that there is no safety protection fence, the movable range should be indicated.</p>
9	Modification and Dismantle	<ul style="list-style-type: none"> <li>• Do not modify, disassemble, assemble or use of maintenance parts not specified based at your own discretion.</li> </ul>
10	Disposal	<ul style="list-style-type: none"> <li>• When the product becomes no longer usable or necessary, dispose of it properly as an industrial waste.</li> <li>• When removing the actuator for disposal, pay attention to drop of components when detaching screws.</li> <li>• Do not put the product in a fire when disposing of it. The product may burst or generate toxic gases.</li> </ul>
11	Other	<ul style="list-style-type: none"> <li>• Do not come close to the product or the harnesses if you are a person who requires a support of medical devices such as a pacemaker. Doing so may affect the performance of your medical device.</li> <li>• See Overseas Specifications Compliance Manual to check whether complies if necessary.</li> <li>• For the handling of actuators and controllers, follow the dedicated instruction manual of each unit to ensure the safety.</li> </ul>

## **Alert Indication**

The safety precautions are divided into “Danger”, “Warning”, “Caution” and “Notice” according to the warning level, as follows, and described in the Instruction Manual for each model.

Level	Degree of Danger and Damage	Symbol
Danger	This indicates an imminently hazardous situation which, if the product is not handled correctly, will result in death or serious injury.	 Danger
Warning	This indicates a potentially hazardous situation which, if the product is not handled correctly, could result in death or serious injury.	 Warning
Caution	This indicates a potentially hazardous situation which, if the product is not handled correctly, may result in minor injury or property damage.	 Caution
Notice	This indicates lower possibility for the injury, but should be kept to use this product properly.	 Notice



## Handling Precautions

- What to do in case of emergency  
If this product is found in a dangerous condition, promptly turn off the power switch on the product as well as power switches of all devices, etc., connected to the product, or unplug all power cables from the power outlets. ("Dangerous condition" refers to a condition where fire or bodily injury may occur due to abnormal generation of heat or smoke, ignition, and so on.)

## 1. Preparation Before Use

### 1.1 Operating Environment

The following environment is required to operate this software.

Applicable operating systems	Windows 2000 SP4 or higher, Windows XP SP2 or higher, Windows Vista <sup>*1</sup> , Windows 7 <sup>*1</sup> (It is recommended that .NET Framework 2.0 or higher is installed.) Note, however, 64-bit version is not supported.
Computer	Personal computer running an applicable operating system (Windows) (A processor of 500 MHz or faster is recommended.)
Keyboard	Keyboard compatible with the personal computer running an applicable operating system (Windows)
Memory	Memory of the size needed to run an applicable operating system (Windows)
Display	XGA (1024x768) or higher
Pointing device	Mouse, etc., and compatible driver
Hard disk	Hard disk of at least 300 MB of free disk space (To use this software, it must be installed on the hard disk.)
COM port	USB port

\*1 Supported on version V1.01.00.00 or later.

## 1.2 Installing This Software

To use this software, it must be installed in the hard disk of a PC. The following explains how to install this software.


### 1.2.1 How to Install the Software/Uninstall the USB Driver on a PC Running Windows XP

#### [1] How to install the MEC PC software

##### (1) When installing from the CD-ROM

Set the CD-ROM containing this software in the CD-ROM drive.

The MEC setup tool will launch automatically.

\* If the MEC setup tool does not launch automatically, click  in the CD-ROM. The MEC setup tool will launch.


##### (2) When you have downloaded the ZIP file

[1] Download the file containing this software “mec\_v\*\_\*\_\*\_\*\_.zip” from IAI’s website.

[2] Unzip the file using an appropriate tool.

[3] Among the extracted files, find the “MECSetupTool.exe” icon.



[4] Double-clicking  will launch the MEC setup tool.


##### (3) When you have downloaded the self-extracting file

[1] Download the file containing this software “mec\_v\*\_\*\_\*\_\*\_.exe” from IAI’s website.

[2] Move the downloaded file to the desktop or other location of the PC in which the software will be installed.



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- [3] Double-click , and the files needed to set up the MEC PC software will be extracted.

Note: This self-extracting file is only available in the Japanese language and can be downloaded from the IAI Japan website. An English version is NOT available.

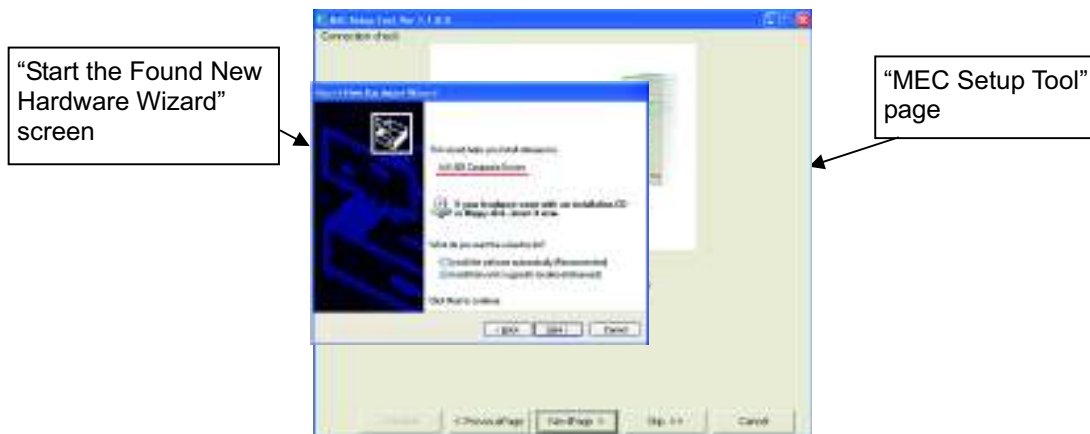


Progress Screen during File Extraction

- [4] When all files have been extracted, the MEC setup tool launches automatically.  
 [5] Once you have extracted the files and set up the MEC PC software, the “MEC” folder created in the extraction process is no longer necessary. Delete this folder if you won’t be using it in the future.


\* “\*\*\*” in the file name indicates the version number.

- (4) How to use the MEC setup tool  
 In addition to installing the “MEC PC Software,” the MEC setup tool also provides the operating procedure to install the software.  
 When installing the “USB driver,” for example, the “Start the Found New Hardware Wizard” screen opens a new window, as shown below.  
 While checking the “MEC Setup Tool” page, follow the instructions provided on the “Start the Found New Hardware Wizard” screen.  
 (Note) If the “MEC Setup Tool” page you must check is overlapping with the “Start the Found New Hardware Wizard” screen, as shown below, click whichever screen you want check or operate on to bring it to the front and then check a desired item or perform a desired operation.



## (5) Notes on installing the USB driver

When connecting the PC to multiple MEC controllers, all of the applicable MEC controllers must be connected one by one and the USB driver for each controller installed separately.

To install the USB driver for the second or subsequent MEC controller, click  to launch the "MEC Setup Tool."

As you have done for the first MEC controller, install the USB driver according to the onscreen instructions provided by the "MEC Setup Tool."

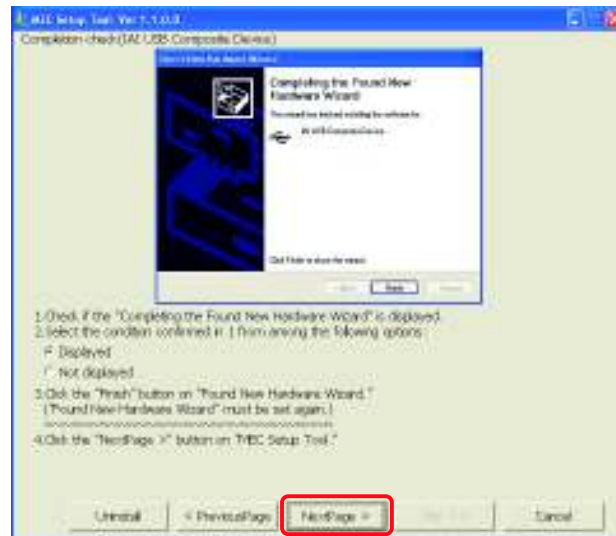
[Refer to (6), "Starting a MEC setup."]

Note, however, that installation of the following software was completed with the first controller and they need not be installed again:

- Microsoft Windows Installer 3.0
- Microsoft .NET Framework 2.0
- MEC PC software

When all USB drivers have been installed, close the setup tool by following the procedure below:

- [1] On the page to "Completion check (IAI USB to UART Bridge Controller)," click the [NextPage >] button.

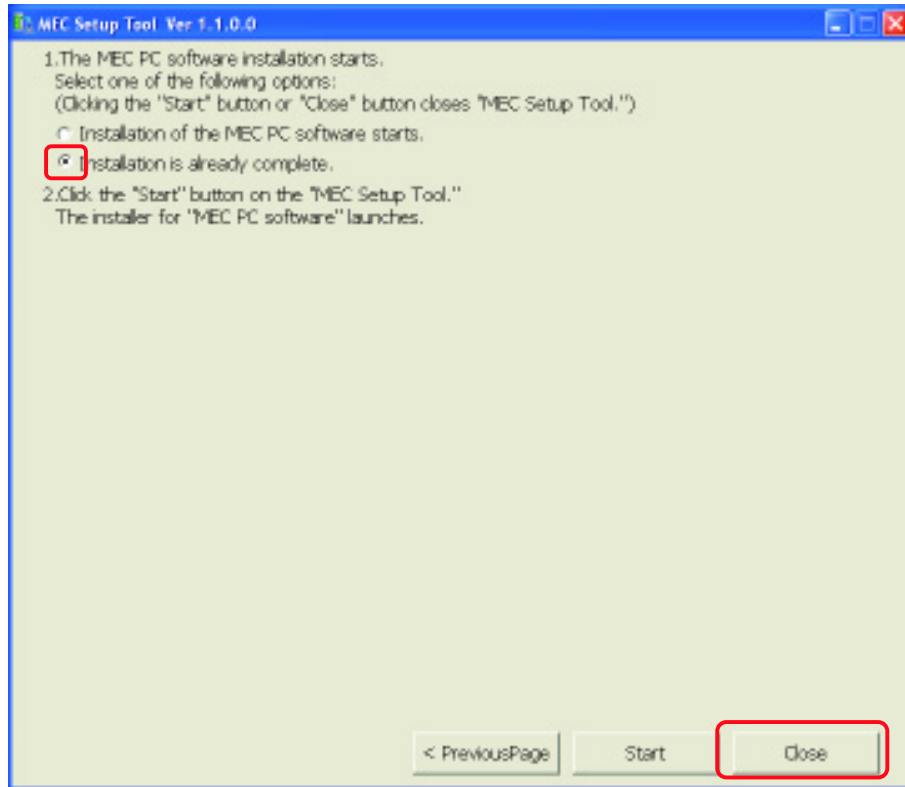


"Completion check (IAI USB to UART Bridge Controller)" Page



# PMEC/A MEC

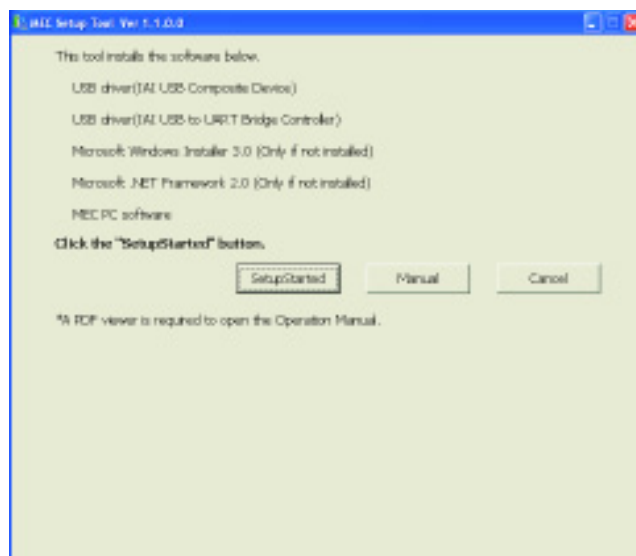
- [2] The “MEC PC Software Installation” page appears.  
Select the “Installation is already complete” check box, and then click the [Close] button.  
The “MEC Setup Tool” is closed.



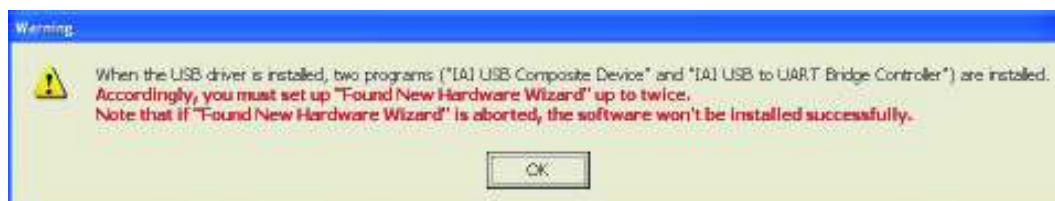
“MEC PC Software Installation” Page

## (6) Starting a MEC setup

- [1] The “Start MEC Setup Tool” page appears. Click the [Setup started] button. When the [Setup started] button is clicked, the “Found New Hardware Wizard” up to twice” warning screen appears. Click the [OK] button, and the IAI USBv2 will be copied.
  - \* If the copying fails, the “Error” screen appears. If this screen appears, copy the IAI USBv2 folder in the Data folder to the PC. Write down the location to which this folder was copied and keep this memo with you, because you will need it on the “Found New Hardware Wizard” screen.



“Start MEC Setup Tool” Page



“Found New Hardware Wizard” up to twice” Warning Screen



“Error” Screen

- [2] The “Checking of display of “Wizard”” page appears. Select an appropriate option on “MEC Setup Tool”, and then click the [NextPage >] button.
- \* If you don't need an explanation of the “Found New Hardware Wizard” screen, click the [Skip >>] button. A screen showing the “Display of IAI USB storage location” page will appear. On this page, click the [NextPage >] button. The page you will be switched to varies depending on the status of installation.
- If the "Microsoft Windows Installer 3.0 installer" page is currently displayed, proceed to [14].
  - If the "Microsoft .NET Framework 2.0 installer" page is currently displayed, proceed to [20].
  - If the “MEC PC Software Installation” page is currently displayed, proceed to [26].



“Checking of display of “Wizard”” Page



“Display of IAI USB storage location” Page

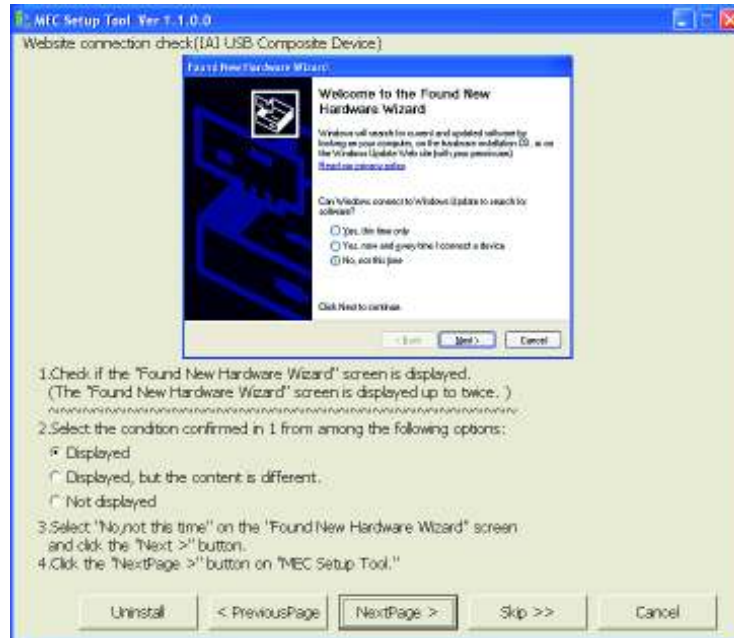
# PMEC/A MEC

- [3] The "Connection check" page appears. Connect the MEC controller. If the MEC controller is already connected, unplug the USB connector and then plug it again. When the above operation is complete, click the [Nextpage >] button.



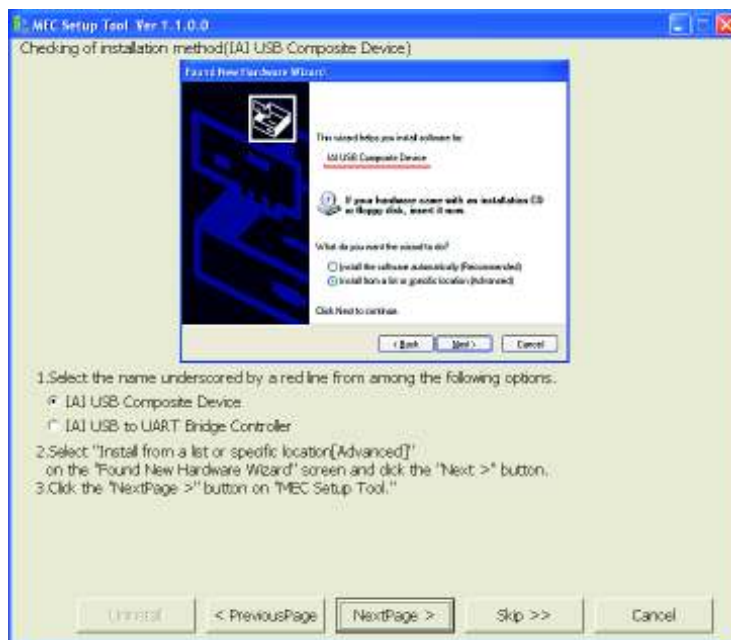
"Connection check" Screen

- [4] The “Website Connection check (IAI USB Composite Device)” page appears. Select “No, not this time” on this “Found New Hardware Wizard” screen, and then click the [Next >>] button. Next, select an appropriate option on “MEC Setup Tool”, and then click the [NextPage >] button.
- \* Depending on the settings, this “Found New Hardware Wizard” screen for confirming website connection may not be displayed. If this screen does not appear, proceed to [5].



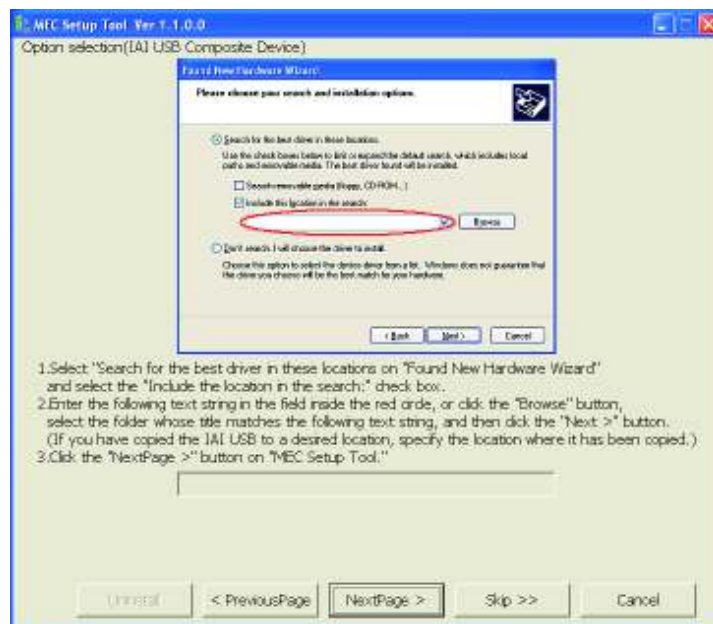
“Website Connection check (IAI USB Composite Device)” Page

- [5] The “Checking of installation method (IAI USB Composite Device)” page appears. Select “Install from a list or a specific location” on this “Found New Hardware Wizard” screen, and then click the [Next >>] button. Next, select an appropriate option on “MEC Setup Tool” by referring to the red underlined text below, and then click the [NextPage >] button.
- If you have selected “IAI USB Composite Device,” proceed to [6].
  - If you have selected “IAI USB to UART Bridge Controller,” proceed to [11].



“Checking of installation method (IAI USB Composite Device)” Page

- [6] The “Option selection (IAI USB Composite Device)” page appears. Select “Search for the best driver in these locations” on this “Found New Hardware Wizard” screen and select the “Include this location in the search” check box. Enter in the field circled in red on the “Found New Hardware Wizard” screen the file location shown on “MEC Setup Tool”, and then click the [Next >>] button. Next, click the [NextPage >] button on “MEC Setup Tool”.
- \* If the entered path is wrong, you cannot proceed to the next step.



“Option selection (IAI USB Composite Device)” Page

# PMEC/A MEC

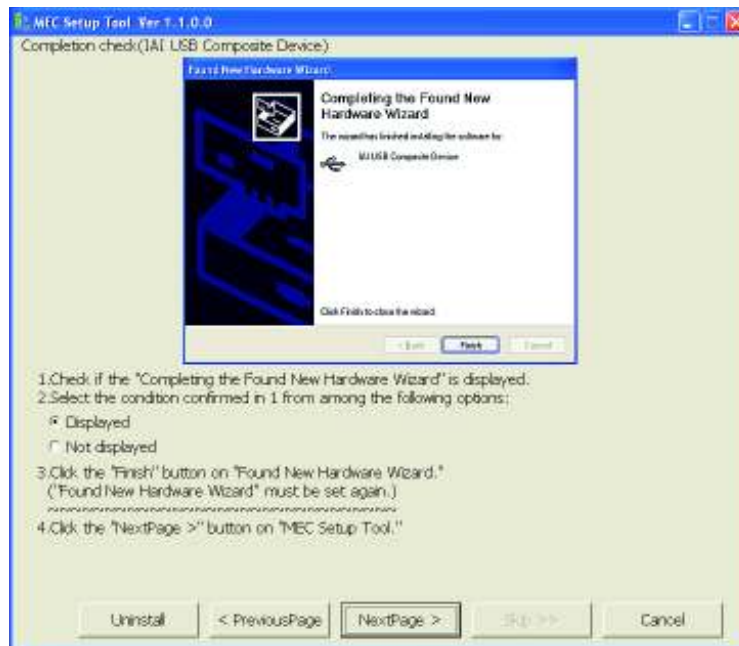
- [7] The “Hardware installation (IAI USB Composite Device)” page appears. Click the [Continue Anyway] button on this “Hardware installation” screen. Next, set an appropriate option on “MEC Setup Tool”, and then click the [NextPage >] button.



“Hardware installation (IAI USB Composite Device)” Page

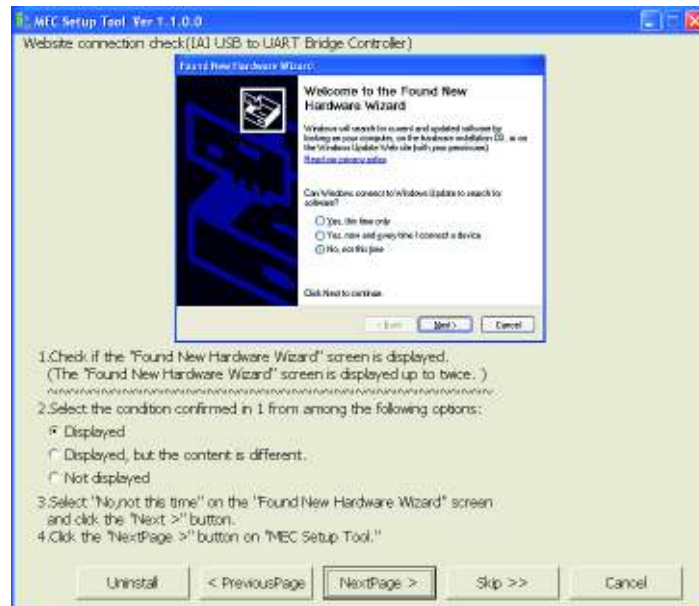


- [8] The “Completion check (IAI USB Composite Device)” page appears. Click the [Finish] button on this “Found New Hardware Wizard” screen. Next, click the [NextPage >] button on “MEC Setup Tool”.



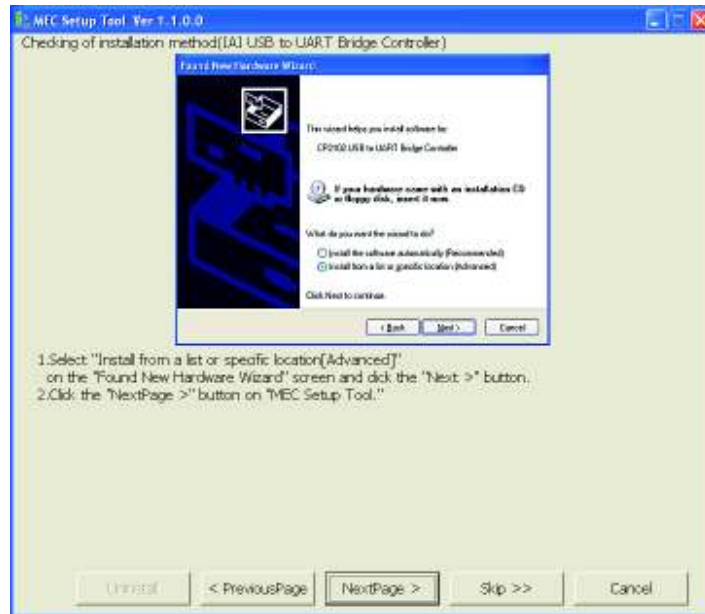
“Completion check (IAI USB Composite Device)” Page

- [9] The “Website Connection check (IAI USB to UART Bridge Controller)” page appears. Select “No, not this time” on this “Found New Hardware Wizard” screen, and then click the [Next >] button. Next, select an appropriate option on “MEC Setup Tool”, and then click the [NextPage >] button.
- \* Depending on the settings, this “Found New Hardware Wizard” screen for checkin website connection may not be displayed. If this screen does not appear, proceed to [10].



“Website connection check (IAI USB to UART Bridge Controller)” Page

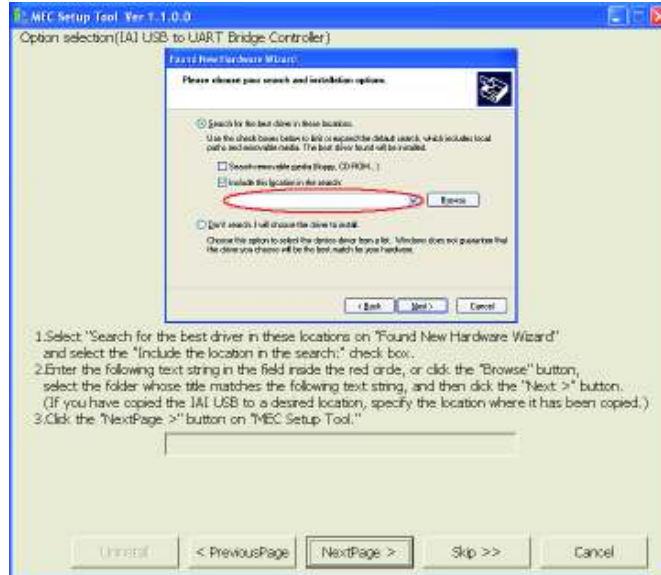
- [10] The “Checking of installation method (IAI USB to UART Bridge Controller)” page appears. Select “Install from a list or a specific location” on this “Found New Hardware Wizard” screen, and then click the [Next >>] button. Next, click the [NextPage >] button on “MEC Setup Tool”.



“Checking of installation method (IAI USB to UART Bridge Controller)” Page

- [11] The “Option selection (IAI USB to UART Bridge Controller)” page appears. Select “Search for the best driver in these locations” on this “Found New Hardware Wizard” screen and select the “Include this location in the search” check box. Enter in the field circled in red on the “Found New Hardware Wizard” screen the file location shown on “MEC Setup Tool”, and then click the [Next >>] button. Next, click the [NextPage >] button on “MEC Setup Tool”.

\* If the entered path is wrong, you cannot proceed to the next step.



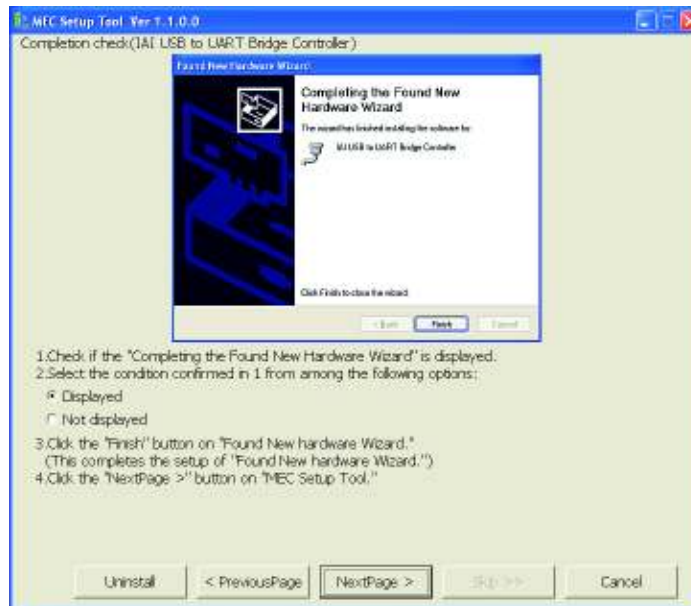
“Option selection (IAI USB to UART Bridge Controller)” Page

- [12] The “Hardware installation (IAI USB to UART Bridge Controller)” page appears. Click the [Continue Anyway] button on this “Hardware installation” screen. Next, set an appropriate option on “MEC Setup Tool”, and then click the [NextPage >] button.



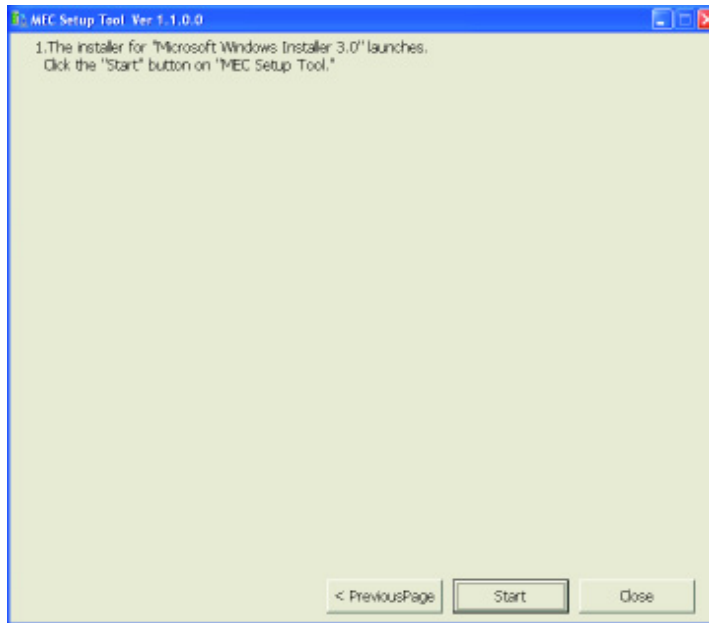
“Hardware installation (IAI USB to UART Bridge Controller)” Page

- [13] The "Completion check (IAI USB to UART Bridge Controller)" page appears. Click the [Finish] button on this "Found New Hardware Wizard" screen. Next, click the [NextPage .] button on "MEC Setup Tool".
- If the "Microsoft Windows Installer 3.0 installer" page is currently displayed, proceed to [14].
  - If the "Microsoft .NET Framework 2.0 installer" page is currently displayed, proceed to [20].
  - If the "MEC PC Software Installation" page is currently displayed, proceed to [26].



"Completion check (IAI USB to UART Bridge Controller)" Page

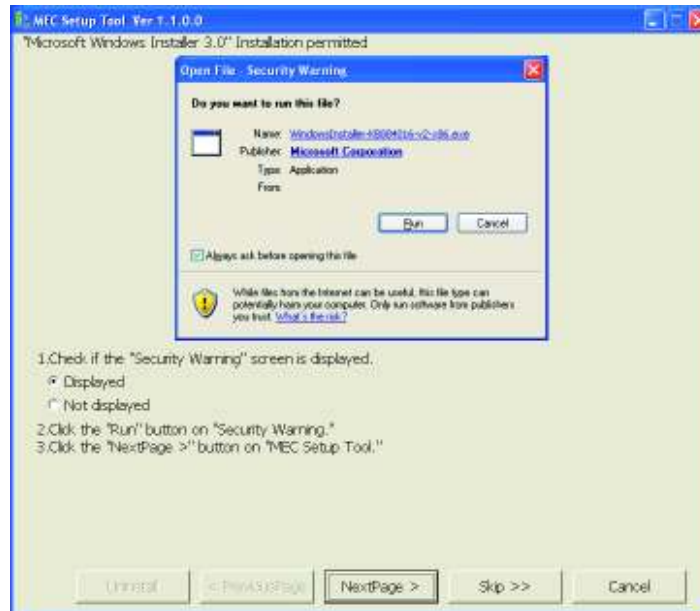
- [14] If Microsoft .NET Framework 2.0 required by the MEC PC software is not yet installed, the display changes to the “Microsoft Windows Installer 3.0 Installer Launch” page where you can start installing Microsoft Windows Installer 3.0 needed to install Microsoft .NET Framework 2.0. Click the [Start] button on “MEC Setup Tool”.



“Microsoft Windows Installer 3.0 Installer Launch” Page

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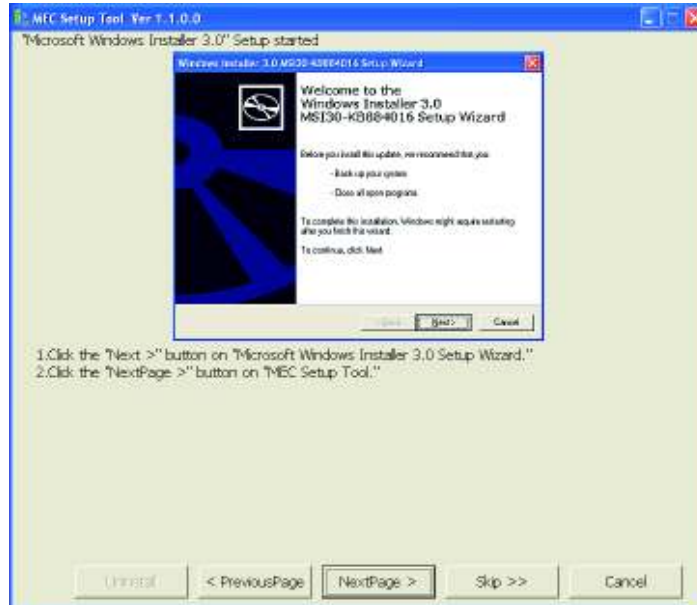
- [15] The “Microsoft Windows Installer 3.0” Installation permitted” page appears. If a “Security Warning” screen is displayed, click the [Run] button and then click the [NextPage >] button on “MEC Setup Tool”. If no security warning is displayed, directly click the [NextPage >] button on “MEC Setup Tool”.



“Microsoft Windows Installer 3.0” Installation permitted” Page

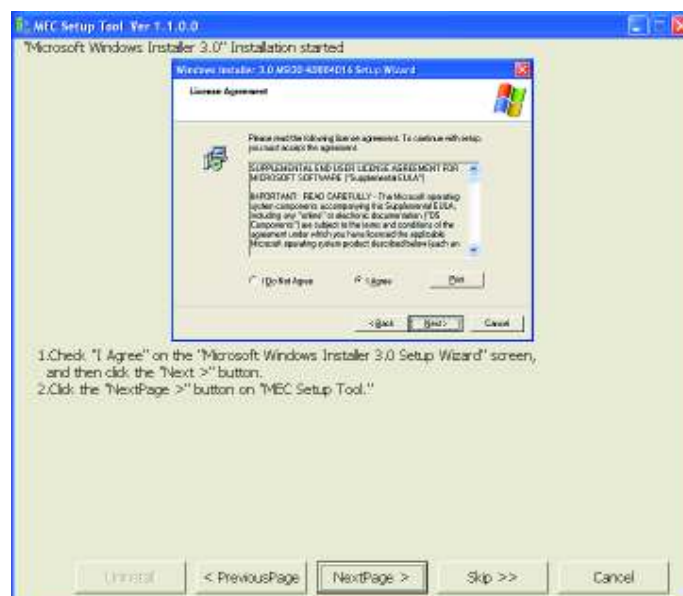


- [16] The “Microsoft Windows Installer 3.0” Setup started” page appears and “Microsoft Windows Installer 3.0 Setup” screen is started. Click the [Next >>] button on this “Microsoft Windows Installer 3.0 Setup” screen. Next, click the [NextPage >] button on “MEC Setup Tool”.



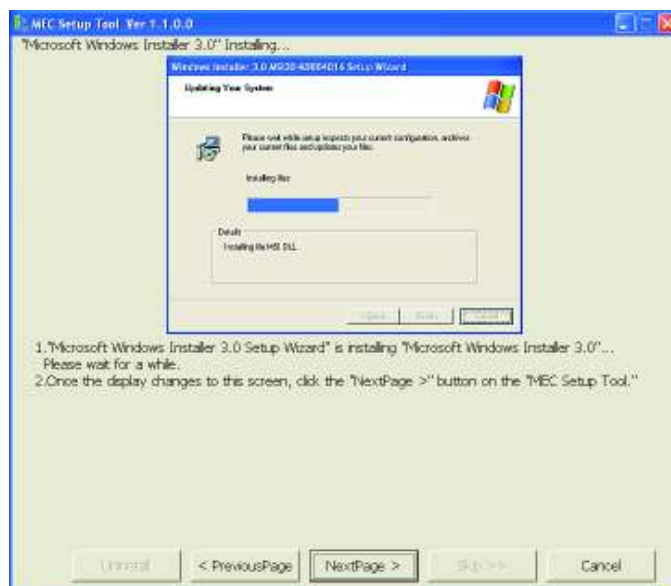
“Microsoft Windows Installer 3.0” Setup started” Page

- [17] The “Microsoft Windows Installer 3.0” Installation started” page appears. Select the “I agree (A)” check box on this “Microsoft Windows Installer 3.0 Setup” screen, and then click the [Next >>] button. Next, click the [NextPage >] button on “MEC Setup Tool”.



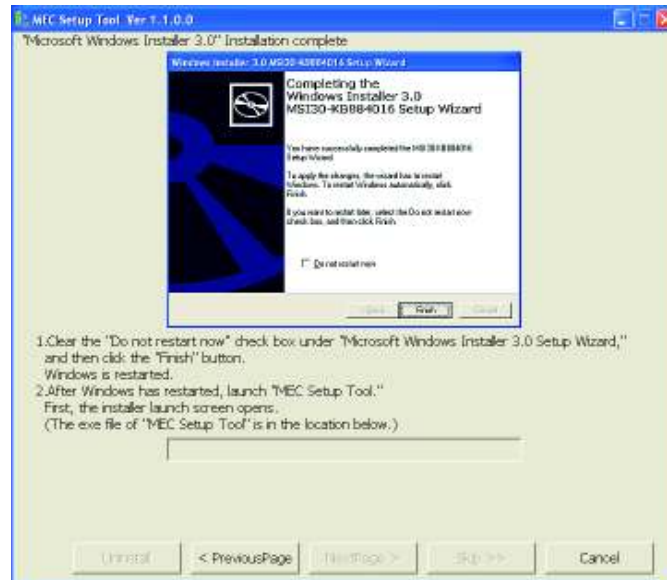
“Microsoft Windows Installer 3.0” Installation started” Page

- [18] The “Microsoft Windows Installer 3.0” Installing...” page appears. Wait for a while until this “Microsoft Windows Installer 3.0 Setup” screen indicating that the system is being updated changes to a different screen. Once the screen has changed, click the [NextPage >] button on “MEC Setup Tool”.



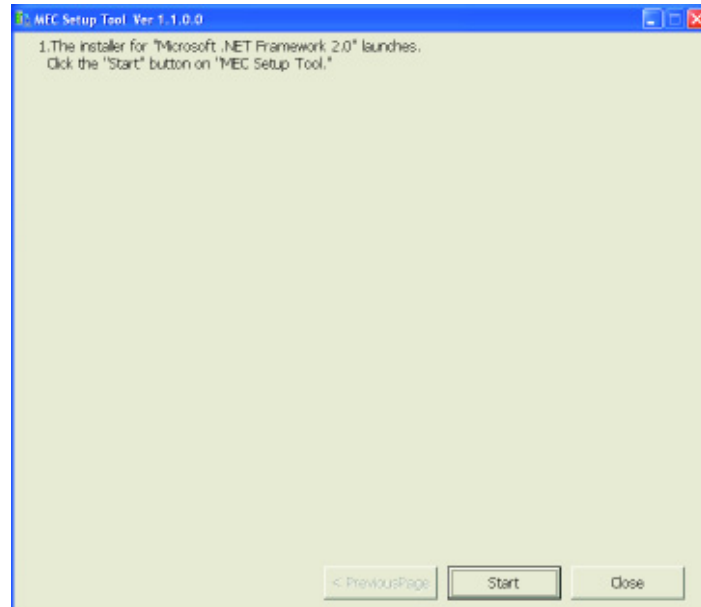
“Microsoft Windows Installer 3.0” Installing...” Page

- [19] The “Microsoft Windows Installer 3.0” Installation complete” page appears. Clear the “Do not restart now” check box on this “Microsoft Windows Installer 3.0 Setup” screen and click the “Finish” button. Microsoft Windows will restart. After Microsoft Windows has restarted, start the MEC setup tool.
- \* The location of the executable file of the MEC setup tool is shown in the MEC setup tool, so check this location before launching the MEC setup tool.



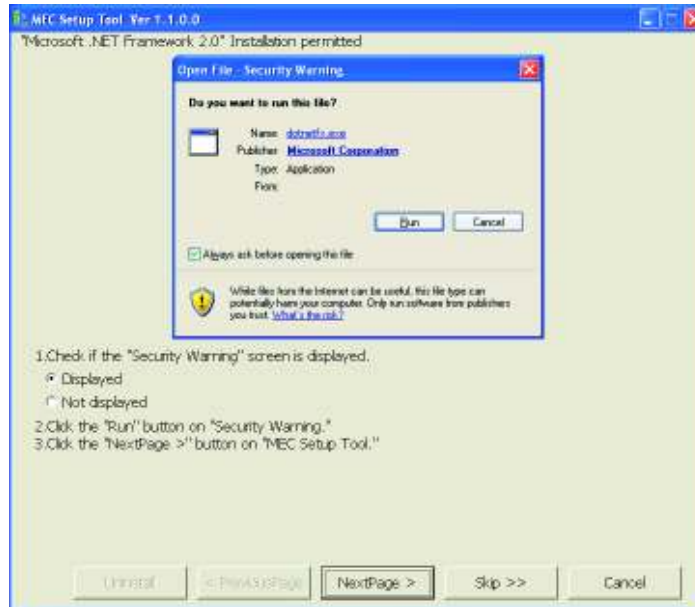
“Microsoft Windows Installer 3.0” Installation complete” Page

- [20] Once the MEC setup tool starts, the “Microsoft .NET Framework 2.0 Installer Launch” page appears. Click the [Start] button on “MEC Setup Tool”.



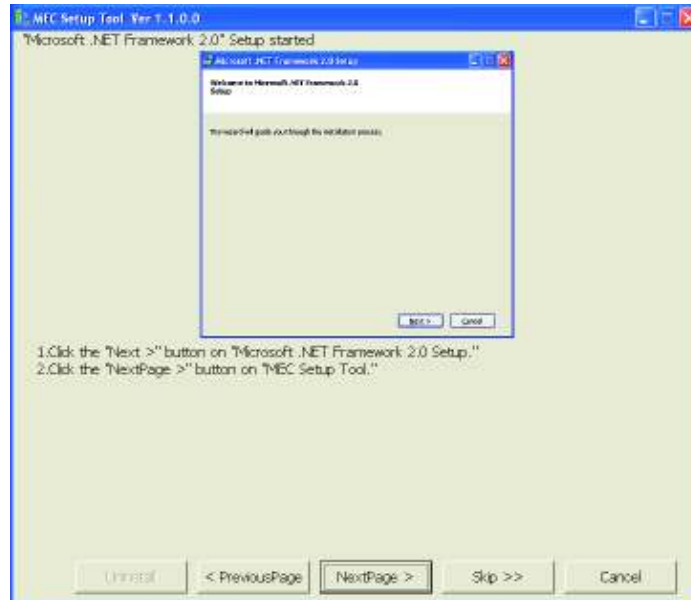
“Microsoft .NET Framework 2.0 Installer Launch” Page

- [21] The “Microsoft .NET Framework 2.0” Installation permitted” page appears. If a “Security Warning” screen is displayed, click the [Run] button and then click the [NextPage >] button on “MEC Setup Tool”. If no security warning is displayed, directly click the [NextPage >] button on “MEC Setup Tool”.



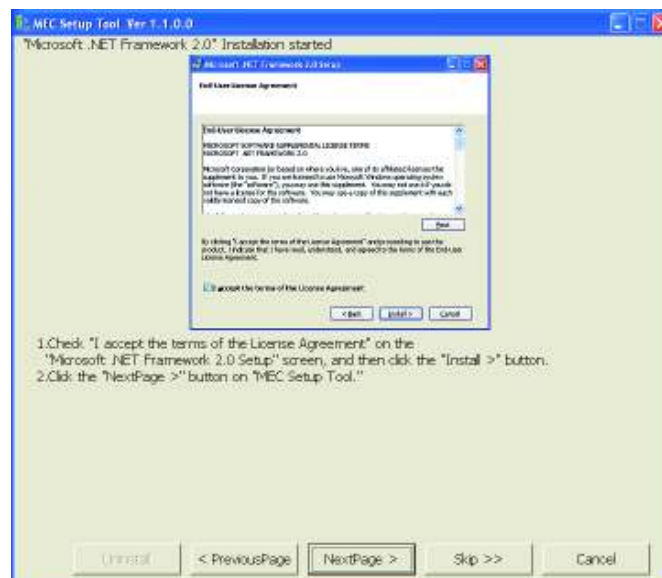
“Microsoft .NET Framework 2.0” Installation permitted” Page

- [22] The “Microsoft .NET Framework 2.0” Setup started” page appears. Click the [Next > >] button on this “Microsoft .NET Framework 2.0 Setup” screen, and then click the [NextPage >] button on “MEC Setup Tool”.



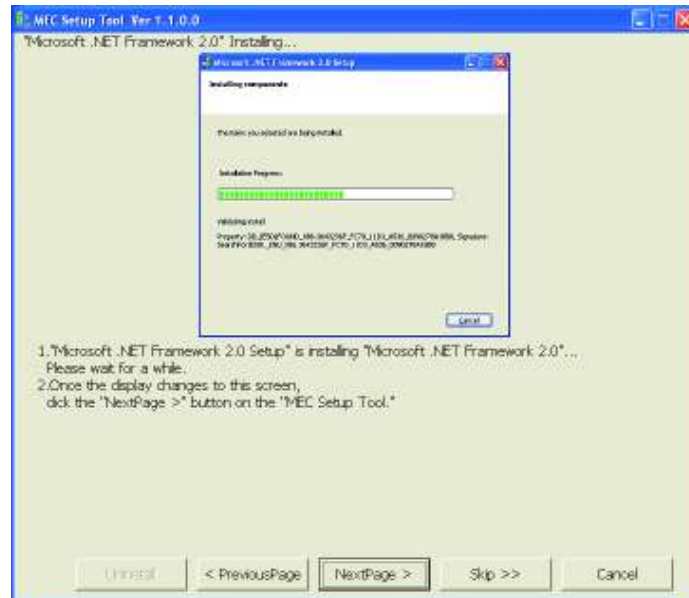
“Microsoft .NET Framework 2.0” Setup started” Page

- [23] The “Microsoft .NET Framework 2.0” Installation started” page appears. Select the “I accept the terms and the License Agreement” check box on this “Microsoft .NET Framework 2.0 Setup” screen, and then click the [Install >] button. Next, click the [NextPage >] button on “MEC Setup Tool”.



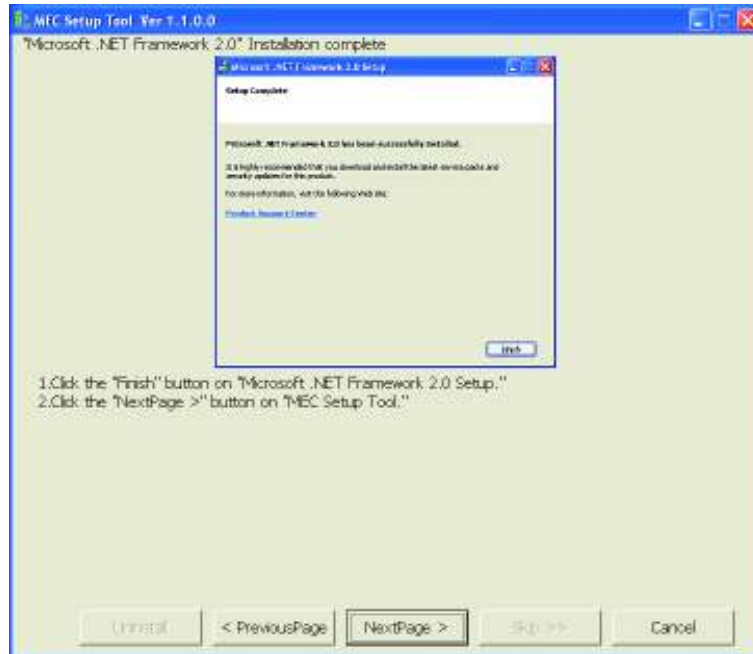
“Microsoft .NET Framework 2.0” Installation started” Page

- [24] The “Microsoft .NET Framework 2.0” Installing...” page appears. Wait for a while until this “Microsoft .NET Framework 2.0 Setup” screen indicating that this software component is being installed changes to a different screen. Once the screen has changed, click the [NextPage>] button on “MEC Setup Tool”.



“Microsoft .NET Framework 2.0” Installing...” Page

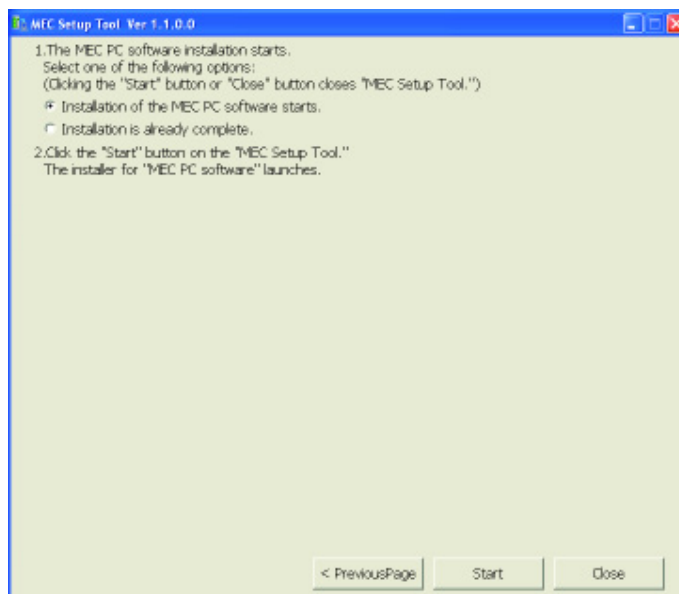
- [25] The “Microsoft .NET Framework 2.0” Installation complete” page appears. Click the [Finish] button on this “Microsoft .NET Framework 2.0 Setup” screen. Next, click the [NextPage >] button on “MEC Setup Tool”.



“Microsoft .NET Framework 2.0” Installation complete” Page



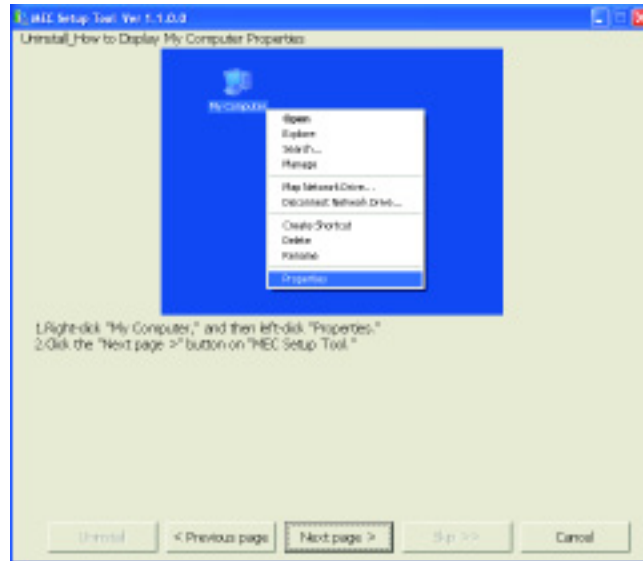
- [26] The “MEC PC Software Installation” page appears. Select an appropriate option on “MEC Setup Tool”, and then click the [Start] button.



“MEC PC Software Installation” Page

## [2] How to uninstall the USB driver

- [1] While the MEC controller is connected, click the [Uninstall] button on “MEC Setup Tool”. The Device Manager will launch. If the Device Manager could not be launched, the “Uninstall\_How to display My Computer Properties” page appears first. Display the My Computer Properties screen by following the onscreen instructions. Next, the “Uninstall\_How to Display Device Manager” page appears. Select the “Hardware” tab on the “System Properties” screen, and then click the [Device Manager] button.

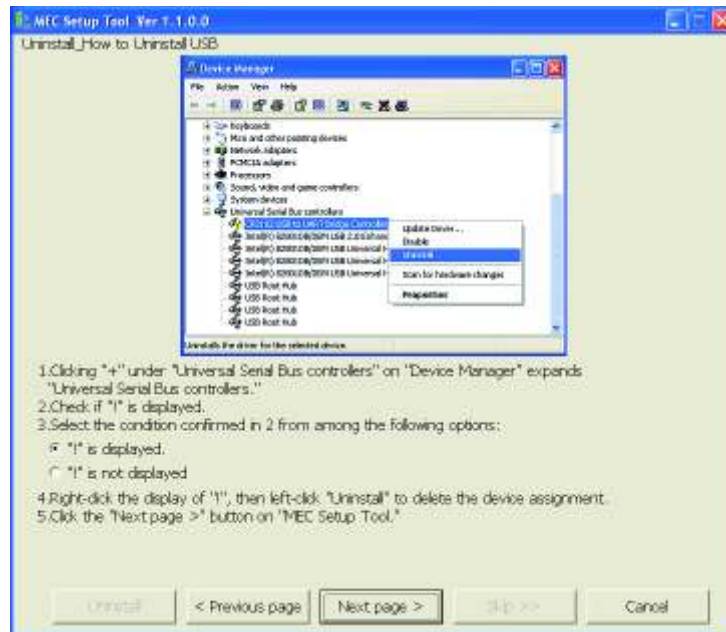


“Uninstall\_How to display My Computer Properties” Page



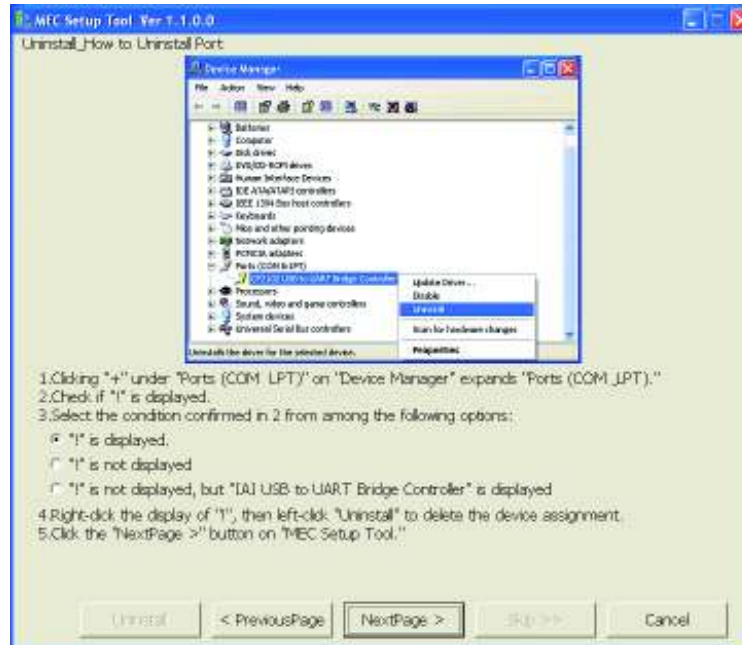
“Uninstall\_How to Display Device Manager” Page

- [2] The “Uninstall\_How to Uninstall USB” page appears. Click “+” on the left side of “USB Controllers” to expand the USB controllers. Check if any of the devices has a “!” icon shown next to it.
- If any device has a “!” icon, right-click the device and select [Uninstall] to delete the device.
- Next, select an appropriate option on “MEC Setup Tool”, and then click the [Next page >] button.



“Uninstall\_How to Uninstall USB” Page

- [3] The “Uninstall\_How to Uninstall Port” Page appears. Click “+” on the left side of “Ports” to expand the ports. Check if any of the devices has a “!” icon shown next to it.
- If any device has a “!” icon, right-click the device and select [Uninstall] to delete the device. Next, select an appropriate option on “MEC Setup Tool”, and then click the [NextPage > ] button.
  - \* Once a device with “!” is deleted in step [2], that device will no longer be displayed. Click the [NextPage >] button on “MEC Setup Tool”.



“Uninstall\_How to Uninstall Port” Page

- [4] The “Checking of display of “Wizard”” page appears and you go back to the start of installation.

# PMEC/A MEC


## 1.2.2 How to Install the Software/Uninstall the USB Driver on a PC Running Windows 2000

### [1] How to install the MEC PC software

#### (1) When installing from the CD-ROM

Set the CD-ROM containing this software in the CD-ROM drive.

The MEC setup tool will launch automatically.

\* If the MEC setup tool does not launch automatically, click  in the CD-ROM. The MEC setup tool will launch.

#### (2) When you have downloaded the ZIP file

[1] Download the file containing this software “mec\_v\* \_\* \_\* \_\*.zip” from IAI’s website.

[2] Unzip the file using an appropriate tool.


[3] Among the extracted files, find the “MECSetupTool.exe” icon.

[4] Double-clicking  will launch the MEC setup tool.

#### (3) When you have downloaded the self-extracting file

[1] Download the file containing this software “mec\_v\* \_\* \_\* \_\*.exe” from IAI’s website.

[2] Move the downloaded file to the desktop or other location of the PC in which the software will be installed.

[3] Double-click , and the files needed to set up the MEC PC software will be extracted.

Note: This self-extracting file is only available in the Japanese language and can be downloaded from the IAI Japan website. An English version is NOT available.



Extracting screen

# ***PMEC/A MEC***=====

- [4] When all files have been extracted, the MEC setup tool launches automatically.
- [5] Once you have extracted the files and set up the MEC PC software, the “MEC” folder created in the extraction process is no longer necessary. Delete this folder if you won’t be using it in the future.

\* “\*\*\*” in the file name indicates the version number.

(4) How to use the MEC setup tool

In addition to installing the “MEC PC Software,” the MEC setup tool also provides the operating procedure to install the software.

When installing the “USB driver,” for example, the “Start the Found New Hardware Wizard” screen opens a new window, as shown below.


While checking the “MEC Setup Tool” page, follow the instructions provided on the “Start the Found New Hardware Wizard” screen.

(Note) If the “MEC Setup Tool” page you must check is overlapping with the “Start the Found New Hardware Wizard” screen, as shown below, click whichever screen you want check or operate on to bring it to the front and then check a desired item or perform a desired operation.



## (5) Notes on installing the USB driver

When connecting the PC to multiple MEC controllers, all of the applicable MEC controllers must be connected one by one and the USB driver for each controller installed separately.

To install the USB driver for the second or subsequent MEC controller, click  to launch the “MEC Setup Tool.”

As you have done for the first MEC controller, install the USB driver according to the onscreen instructions provided by the “MEC Setup Tool.”

[Refer to (6), “Starting a MEC setup.”]

Note, however, that installation of the following software was completed with the first controller and they need not be installed again:

- Microsoft Windows Installer 3.0
- Microsoft .NET Framework 2.0
- MEC PC software

When all USB drivers have been installed, close the setup tool by following the procedure below:

- [1] On the page to “Completion check (IAI USB to UART Bridge Controller),” click the [Next page >] button.

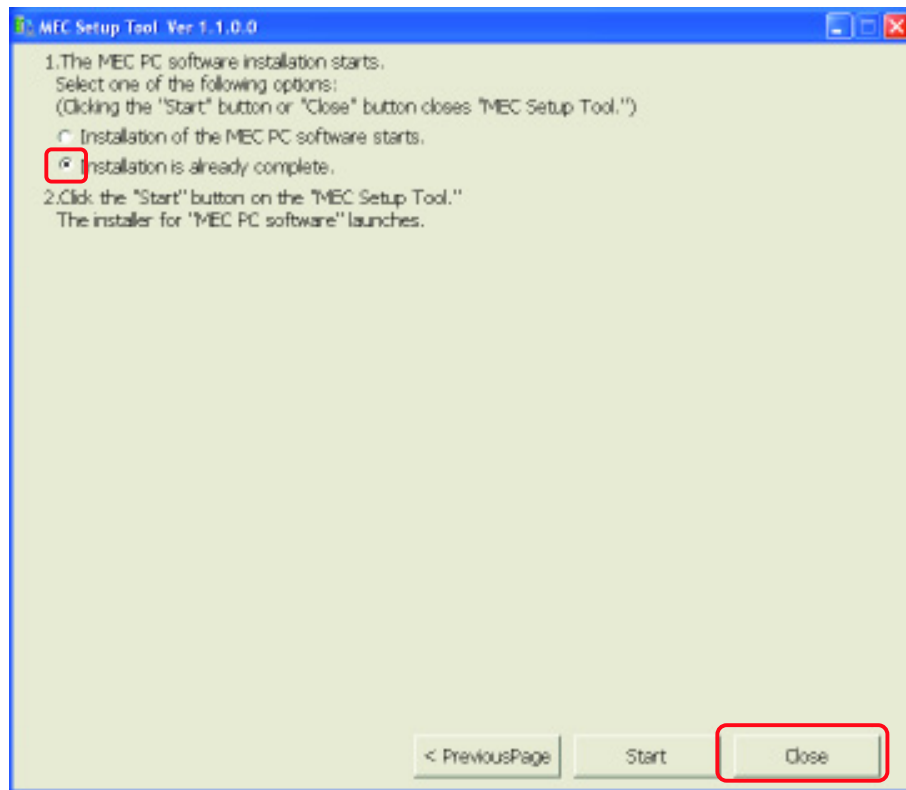


“Completion check (IAI USB to UART Bridge Controller)” Page



# PMEC/A MEC

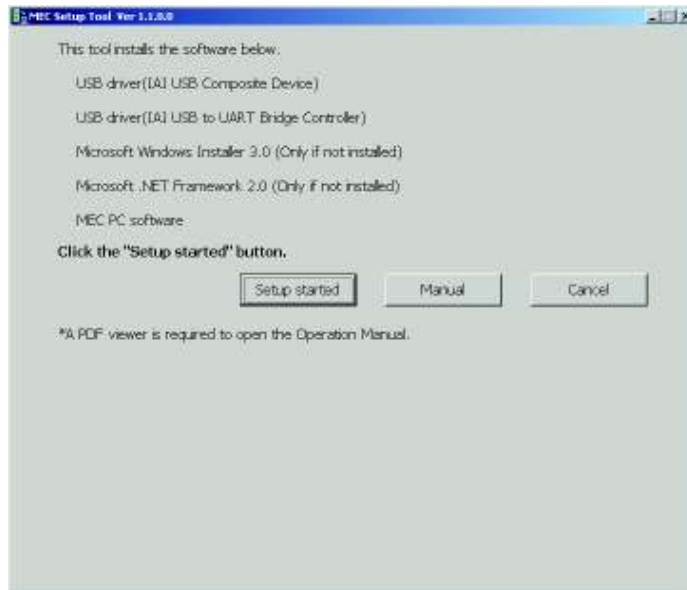
- [2] The “MEC PC Software Installation” page appears. Select the “Installation is already complete” check box, and then click the [Close] button.  
The “MEC Setup Tool” is closed.



“MEC PC Software Installation” Page

## (6) Starting a MEC setup

- [1] The “Start MEC Setup Tool” page appears. Click the [Setup started] button. When the [Setup started] button is clicked, the ““Found New Hardware” up to twice” warning screen appears. Click the [OK] button, and the IAI USBv2 will be copied.
  - \* If the copying fails, the “Error” screen appears. If this screen appears, copy the IAI USBv2 folder in the Data folder to the PC. Write down the location to which this folder was copied and keep this memo with you, because you will need it on the “Found New Hardware Wizard” screen.



“Start MEC Setup Tool” Page

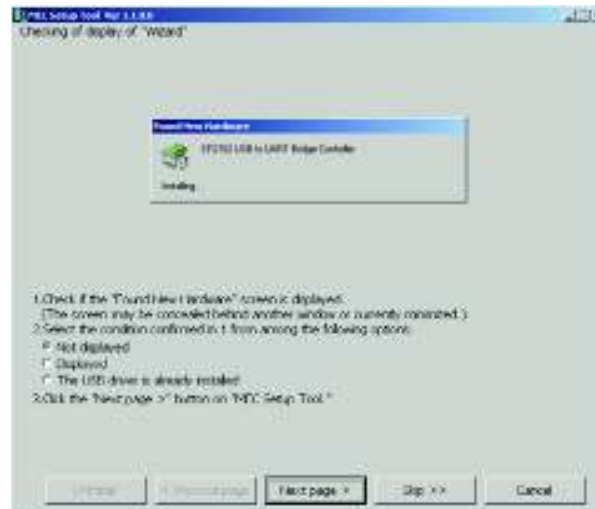


“‘Found New Hardware Wizard’ up to twice” warning Screen



“Error” Screen

- [2] The “Checking of display of “Wizard”” page appears. Select an appropriate option on “MEC Setup Tool”, and then click the [Next page >] button.
- \* If you don't need an explanation of the “Found New Hardware Wizard,” click the [Skip >>] button. A page showing the “Display of IAI USB storage location” will appear. On this page, click the [Next page >] button. The page you will be switched to varies depending on the status of installation.
  - If the “Microsoft Windows Installer 3.0 installer” page is currently displayed, proceed to [20].
  - If the “Microsoft .NET Framework 2.0 installer” page is currently displayed, proceed to [25].
  - If the “MEC PC Software Installation” page is currently displayed, proceed to [30].



“Checking of display of “Wizard”” Page



“Display of IAI USB storage location” Page

# PMEC/A MEC

- [3] The "Connection check" page appears. Connect the MEC controller. If the MEC controller is already connected, unplug the USB connector and then plug it again. When the above operation is complete, click the [Next page >] button.



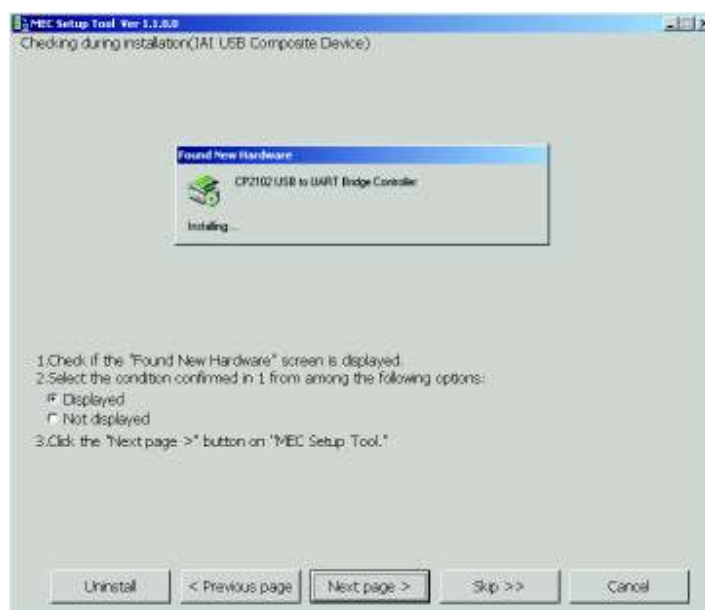
"Connection check" Page

[4] The “Checking during installation (IAI USB Composite Device)” page appears. Click the [Next page >] button on “MEC Setup Tool”.

\* Depending on the condition, all USB drivers may be installed automatically. If all USB drivers were installed automatically, click the [Skip >>] button to skip the explanation screen for “Found New Hardware.”

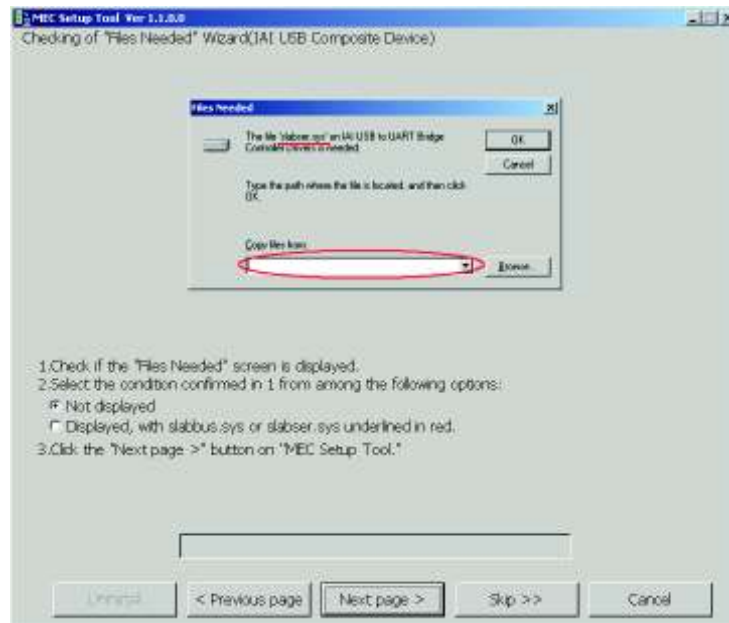
Click the [Next page >] button on the “Display of IAI USB storage location” page that opened in step [2]. The page you will be switched to varies depending on the status of installation.

- If the "Microsoft Windows Installer 3.0 installer" page is currently displayed, proceed to [20].
- If the "Microsoft .NET Framework 2.0 installer" page is currently displayed, proceed to [25].
- If the “MEC PC Software Installation” page is currently displayed, proceed to [30].



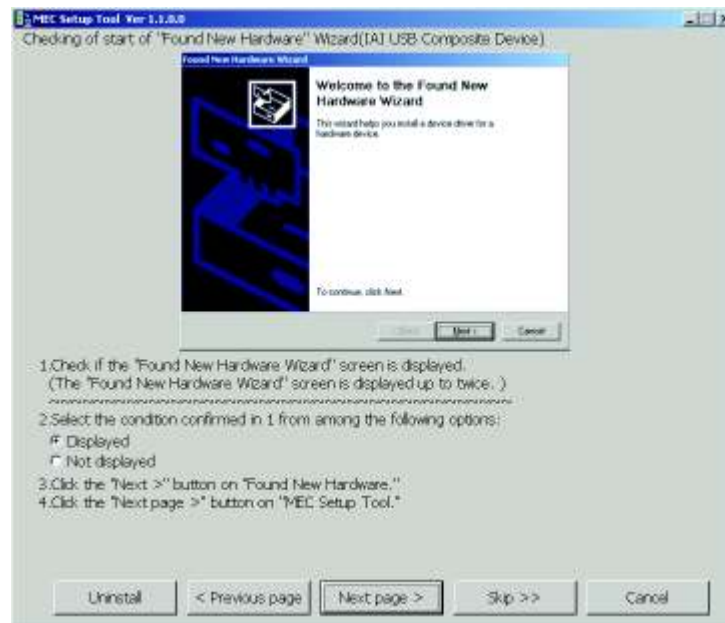
“Checking during installation (IAI USB Composite Device)” Page

- [5] The “Files NeededChecking “Files Needed” Wizard (IAI USB Composite Device)” page appears. Check if this “Files Needed” screen is displayed.
- If this screen is displayed, confirm that the file name with a red underline is slabbus.sys or slabser.sys, and then select an appropriate option on “MEC Setup Tool” and click the [Skip >>] button. On the “Display of IAI USB storage location” page to which the tool has skipped, enter the storage location of the IAI USB in the field circled in red. Click the [Next page >] button on the “Display of IAI USB storage location” page that opened in step [2]. The page you will be switched to varies depending on the status of installation.
  - If the "Microsoft Windows Installer 3.0 installer" page is currently displayed, proceed to [20].
  - If the "Microsoft .NET Framework 2.0 installer" page is currently displayed, proceed to [25].
  - If the “MEC PC Software Installation” page is currently displayed, proceed to [30].
  - If none of these screens are displayed, select an appropriate option on “MEC Setup Tool”, and then click the [Next page >] button.



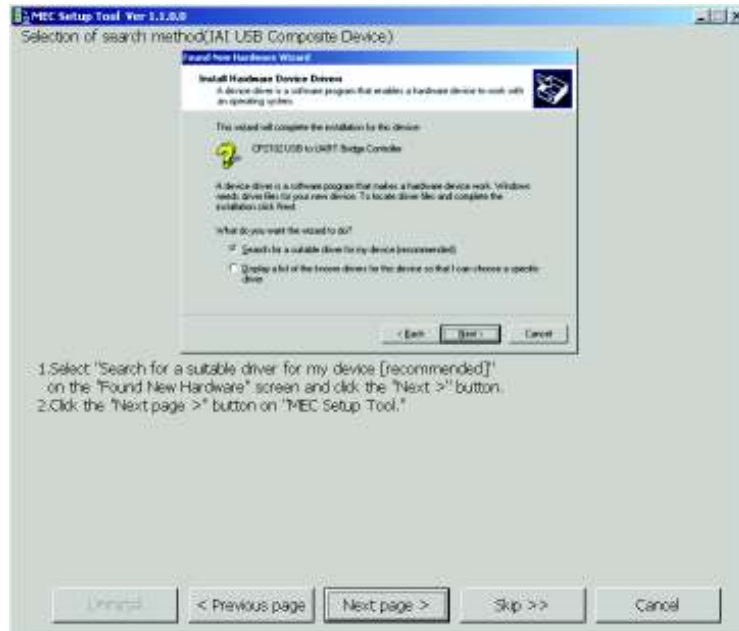
“Files Needed Wizard (IAI USB Composite Device)” Page

- [6] The “Checking of start of “Found New Hardware” Wizard (IAI USB Composite Device)” page appears. Click the [Next >] button on this “Found New Hardware Wizard” screen. Next, select an appropriate option on “MEC Setup Tool”, and then click the [Next page >] button.



“Checking of start of “Found New Hardware” Wizard (IAI USB Composite Device)” Page

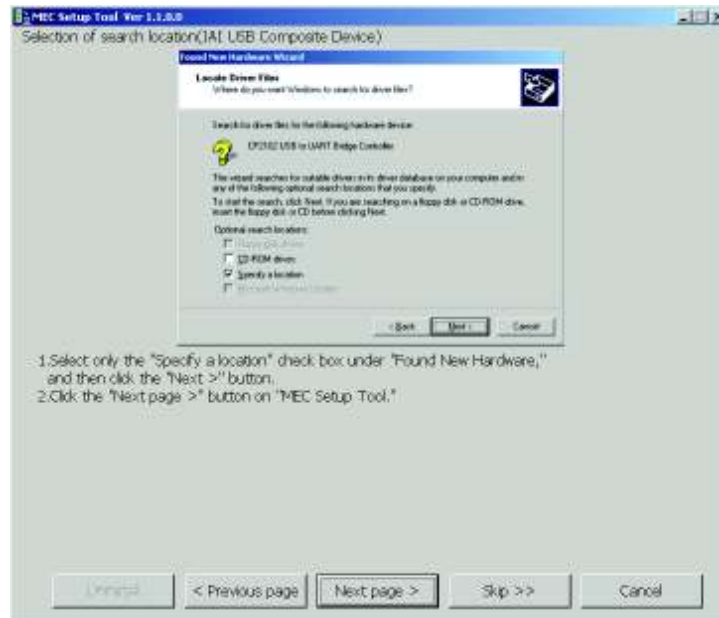
- [7] The “Selection of search method (IAI USB Composite Device)” page appears. Select “Find an optimal driver for the device” on this “Found New Hardware Wizard” screen, and then click the [Next >] button. Next, click the [Next page >] button on “MEC Setup Tool”.



“Selection of search method (IAI USB Composite Device)” Page

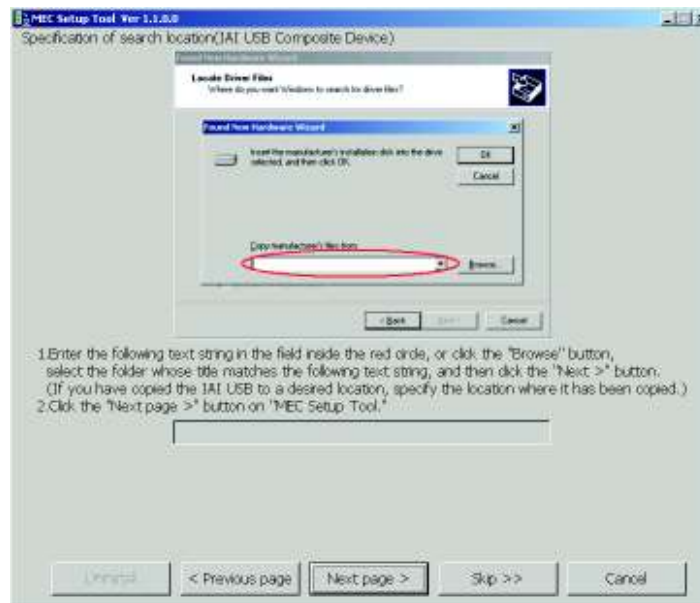


- [8] The “Selection of search location (IAI USB Composite Device)” page appears. Select the “Specify a location” check box on this “Found New Hardware Wizard” screen, and then click the [Next >] button. Next, click the [Next page >] button on “MEC Setup Tool”.



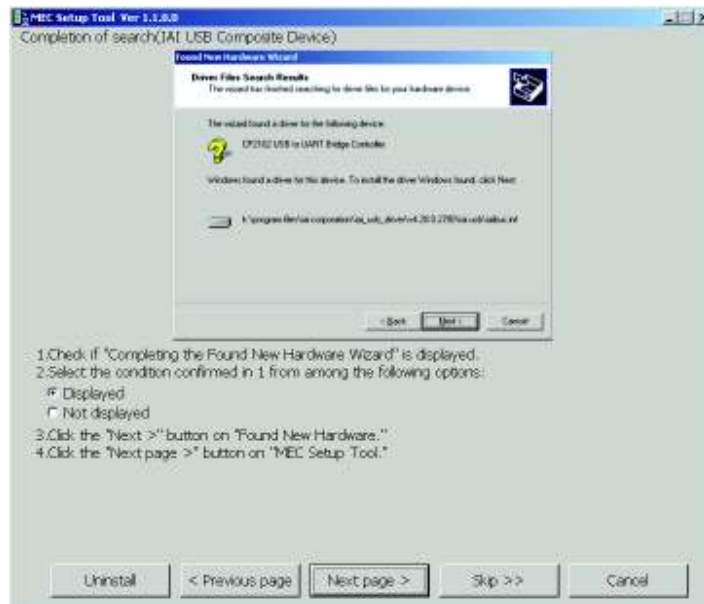
“Selection of search location (IAI USB Composite Device)” Page

- [9] The “Specification of search location (IAI USB Composite Device)” page appears. In the field circled in red on this “Found New Hardware Wizard” screen, enter the location of the IAI USB shown in the MEC setup tool. When the location has been entered, click the [Next >] button on the “Found New Hardware Wizard” screen. Next, click the [Next page >] button on “MEC Setup Tool”.



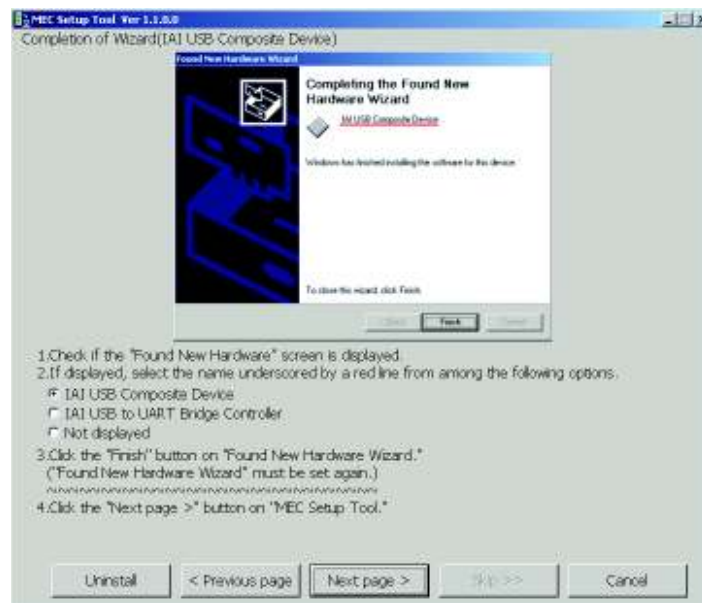
“Specification of search location (IAI USB Composite Device)” Page

- [10] The “Completion of search (IAI USB Composite Device)” page appears. Click the [Next >] button on this “Found New Hardware Wizard” screen. Next, click the [Next page >] button on “MEC Setup Tool”.



“Completion of search (IAI USB Composite Device)” Page

- [11] The "Completion of Wizard (IAI USB Composite Device)" page appears. Select the name indicated by a red underline, and then click the [Finish] button on this "Found New Hardware Wizard" screen. Next, click the [Next page >] button on "MEC Setup Tool".
- If you have selected "IAI USB Composite Device," proceed to [12].
  - If you have selected "IAI USB to UART Bridge Controller," the page you will be switched to varies depending on the status of installation of Microsoft Windows Installer 3.0 or Microsoft .NET Framework 2.0.
- If the "Microsoft Windows Installer 3.0 installer" page is currently displayed, proceed to [20].
  - If the "Microsoft .NET Framework 2.0 installer" page is currently displayed, proceed to [25].
  - If the "MEC PC Software Installation" page is currently displayed, proceed to [30].



"Completion of Wizard (IAI USB Composite Device)" Page

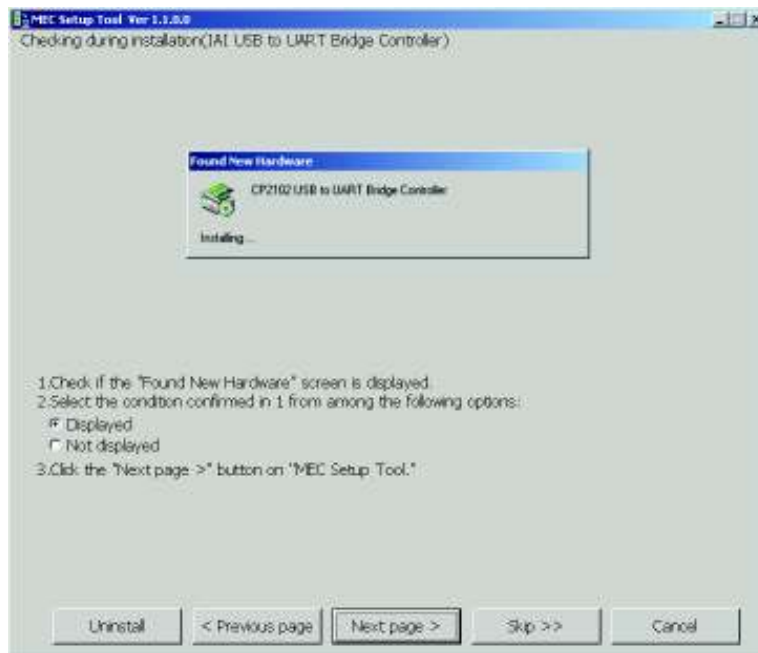
[12] The “Checking during installation (IAI USB to UART Bridge Controller)” page appears. Click the [Next page >] button on “MEC Setup Tool”.

\* Depending on the condition, all USB drivers may be installed automatically. If all USB drivers were installed automatically, click the [Skip >>] button to skip the explanation screen for “Found New Hardware.”

Click the [Next page >] button on the “Display of IAI USB storage location” page that opened in step [2].

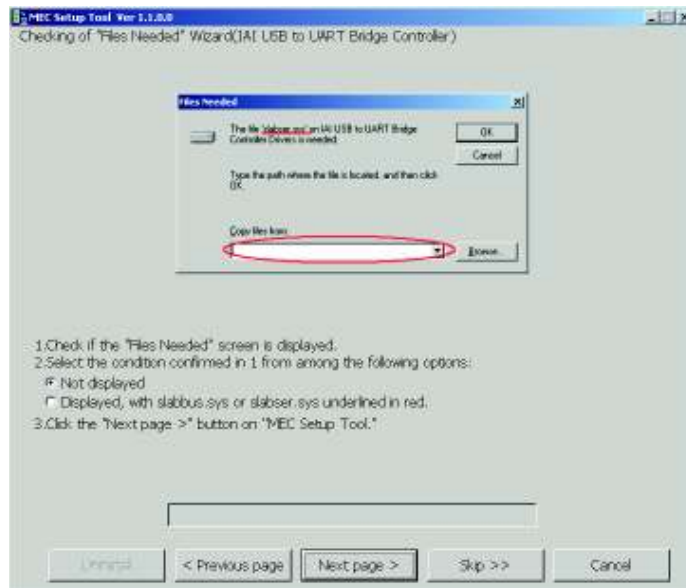
The page you will be switched to varies depending on the status of installation.

- If the "Microsoft Windows Installer 3.0 installer" page is currently displayed, proceed to [20].
- If the "Microsoft .NET Framework 2.0 installer" page is currently displayed, proceed to [25].
- If the “MEC PC Software Installation” page is currently displayed, proceed to [30].



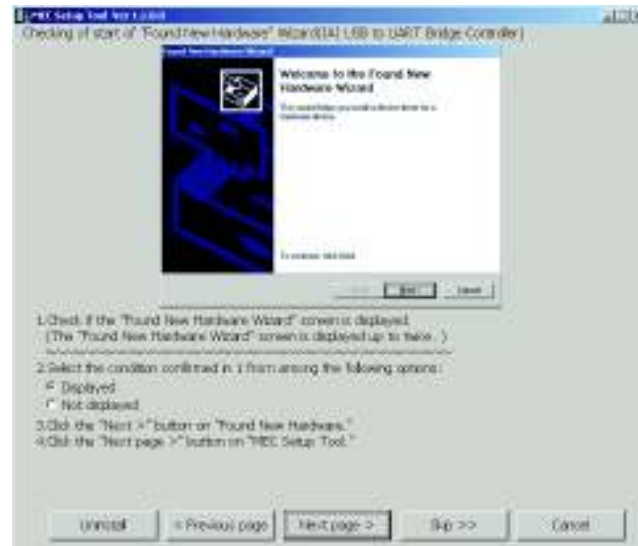
“Checking during installation (IAI USB to UART Bridge Controller)” Page

- [13] The “Files NeededChecking “Files Needed” Wizard (IAI USB to UART Bridge Controller)” page appears. Check if this “Files Needed” screen is displayed.
- If this screen is displayed, confirm that the file name with a red underline is slabbus.sys or slabser.sys, and then select an appropriate option on “MEC Setup Tool” and click the [Skip >>] button. On the “Display of IAI USB storage location” page to which the tool has skipped, enter the storage location of the IAI USB in the field circled in red. Click the [Next page >] button on the “Display of IAI USB storage location” page that opened in step [2].  
The page you will be switched to varies depending on the status of installation.
  - If the “Microsoft Windows Installer 3.0 installer” page is currently displayed, proceed to [20].
  - If the “Microsoft .NET Framework 2.0 installer” page is currently displayed, proceed to [25].
  - If the “MEC PC Software Installation” page is currently displayed, proceed to [30].
  - If none of these screens are displayed, select an appropriate option on “MEC Setup Tool”, and then click the [Next page >] button.



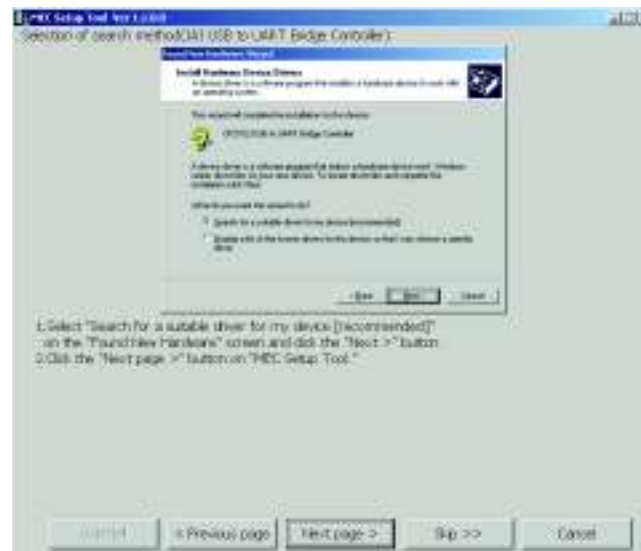
“Files Needed Wizard (IAI USB to UART Bridge Controller)” Page

- [14] The “Checking of start of “Found New Hardware” Wizard (IAI USB to UART Bridge Controller)” page appears. Click the [Next >] button on this “Found New Hardware Wizard” screen. Next, select an appropriate option on “MEC Setup Tool”, and then click the [Next page >] button.



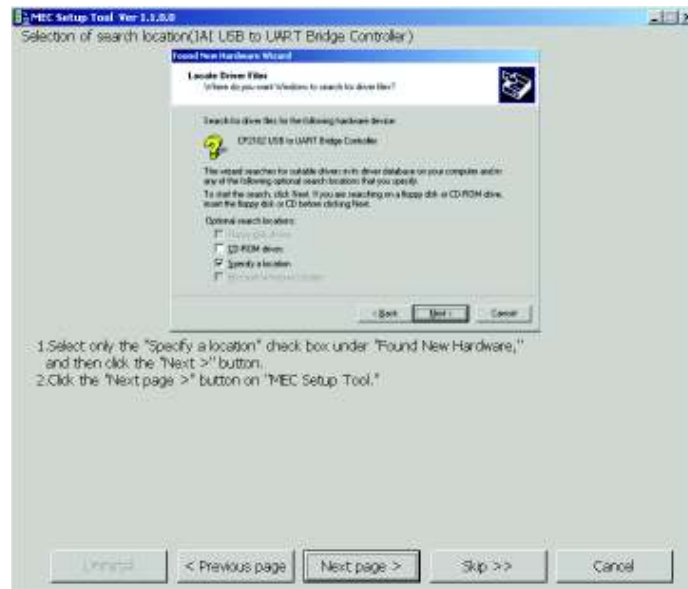
“Checking of start of “Found New Hardware” Wizard (IAI USB to UART Bridge Controller)” Page

- [15] The “Selection of search method (IAI USB to UART Bridge Controller)” page appears. Select “Find an optimal driver for the device (S)” on this “Found New Hardware Wizard” screen, and then click the [Next >] button. Next, click the [Next page >] button on “MEC Setup Tool”.



“Selection of search method (IAI USB to UART Bridge Controller)” Page

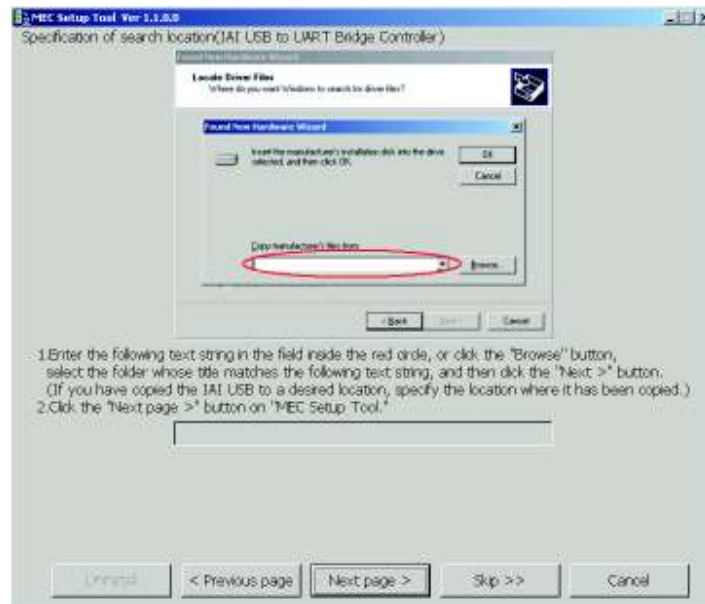
- [16] The “Selection of search location (IAI USB to UART Bridge Controller)” page appears. Select the “Specify a location” check box on this “Found New Hardware Wizard” screen, and then click the [Next >] button. Next, click the [Next page >] button on “MEC Setup Tool”.



“Selection of search location (IAI USB to UART Bridge Controller)” Page

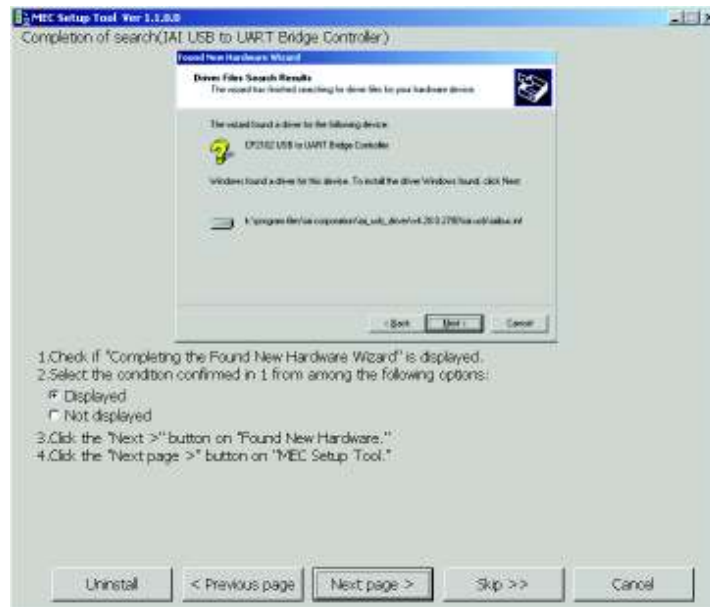


- [17] The “Specification of search location (IAI USB to UART Bridge Controller)” page appears. In the field circled in red on this “Found New Hardware Wizard” screen, enter the location of the IAI USB shown in the MEC setup tool. When the location has been entered, click the [Next >] button on the “Found New Hardware Wizard” screen. Next, click the [Next page >] button on “MEC Setup Tool”.



“Specification of search location (IAI USB to UART Bridge Controller)” Page

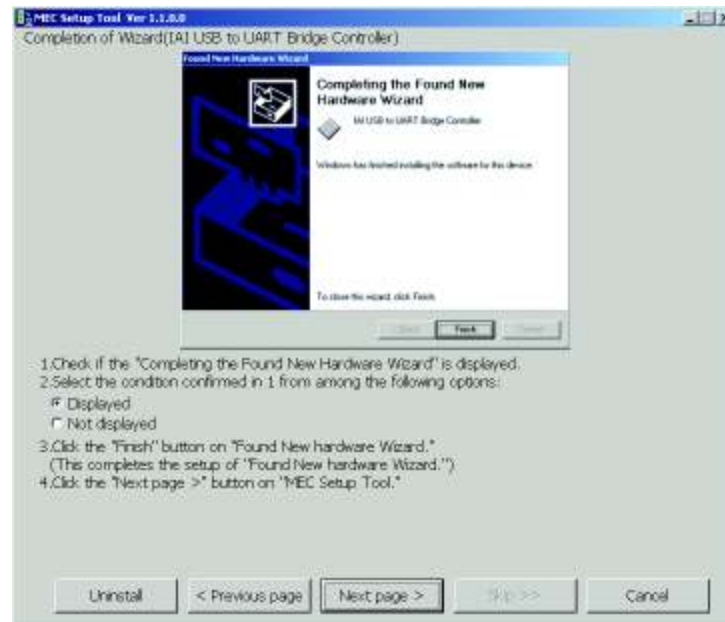
- [18] The “Completion of search (IAI USB to UART Bridge Controller)” page appears. Click the [Next >] button on this “Found New Hardware Wizard” screen. Next, click the [Next page >] button on “MEC Setup Tool”.



“Completion of search (IAI USB to UART Bridge Controller)” Page

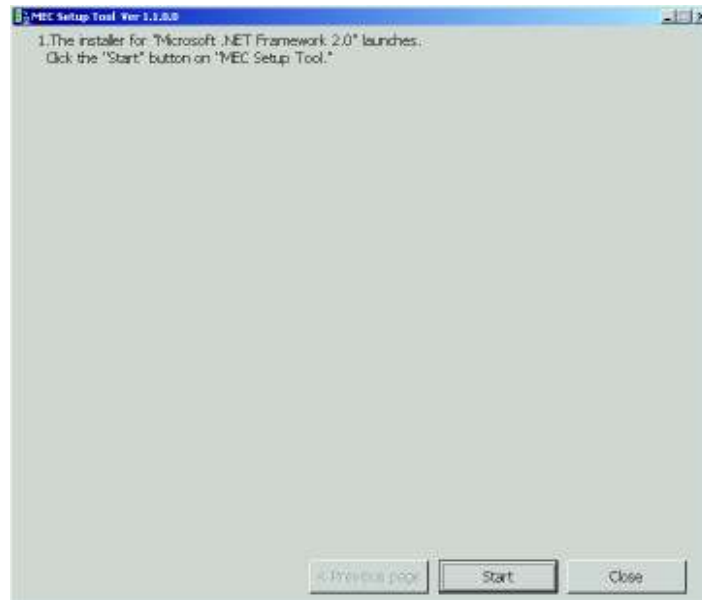
[19] The “Completion of Wizard (IAI USB to UART Bridge Controller)” page appears. Click the [Finish] button on this “Found New Hardware Wizard” screen. Next, click the [Next page >] button on “MEC Setup Tool”.

- If the "Microsoft Windows Installer 3.0 installer" page is currently displayed, proceed to [20].
- If the "Microsoft .NET Framework 2.0 installer" page is currently displayed, proceed to [25].
- If the “MEC PC Software Installation” page is currently displayed, proceed to [30].



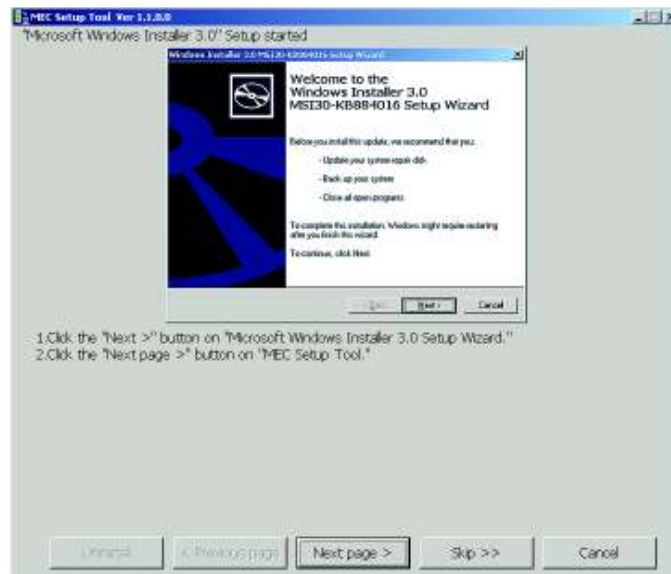
“Completion of Wizard (IAI USB to UART Bridge Controller)” Page

- [20] If Microsoft .NET Framework 2.0 required by the MEC PC software is not yet installed, the display changes to the “Microsoft Windows Installer 3.0 Installer Launch” page where you can start installing Microsoft Windows Installer 3.0 needed to install Microsoft .NET Framework 2.0. Click the [Start] button on “MEC Setup Tool”.



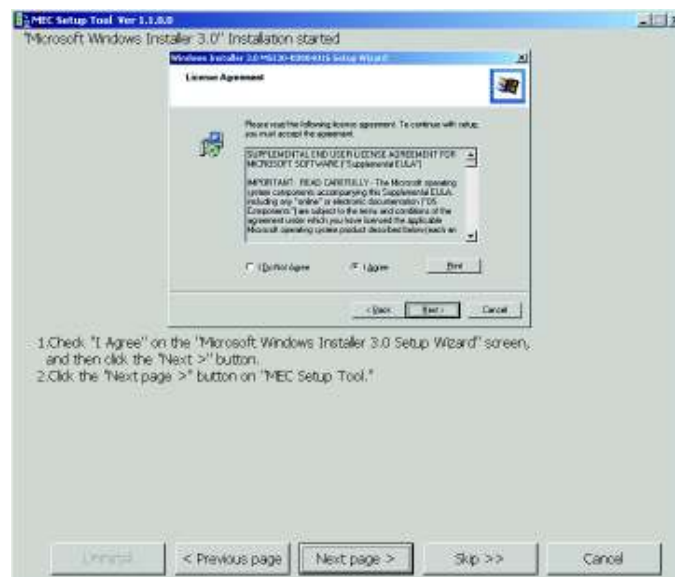
“Microsoft Windows Installer 3.0 Installer Launch” Page

- [21] The “Microsoft Windows Installer 3.0” Setup started” page appears and “Microsoft Windows Installer 3.0 Setup” is started. Click the [Next >] button on this “Microsoft Windows Installer 3.0 Setup” screen. Next, click the [Next page >] button on “MEC Setup Tool”.



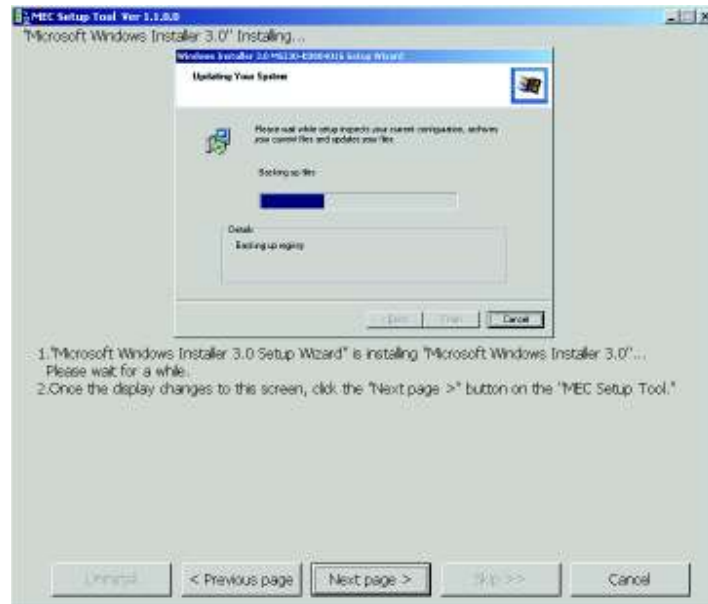
“Microsoft Windows Installer 3.0” Setup started” Page

- [22] The “Microsoft Windows Installer 3.0” Installation started” page appears. Select the “I agree” check box on this “Microsoft Windows Installer 3.0 Setup” screen, and then click the [Next >] button. Next, click the [Next page >] button on “MEC Setup Tool”.



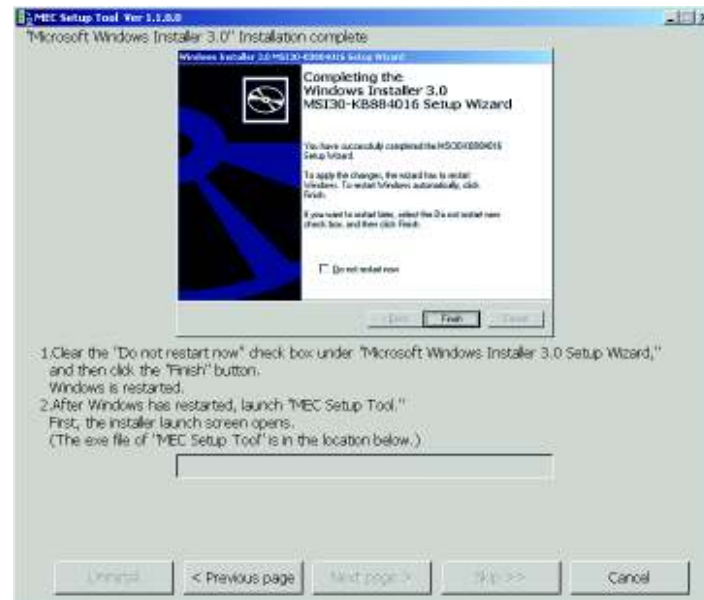
“Microsoft Windows Installer 3.0” Installation started” Page

- [23] The “Microsoft Windows Installer 3.0” Installing...” page appears. Wait for a while until this “Microsoft Windows Installer 3.0 Setup” screen indicating that the system is being updated changes to a different screen. Once the screen has changed, click the [Next page >] button on “MEC Setup Tool”.



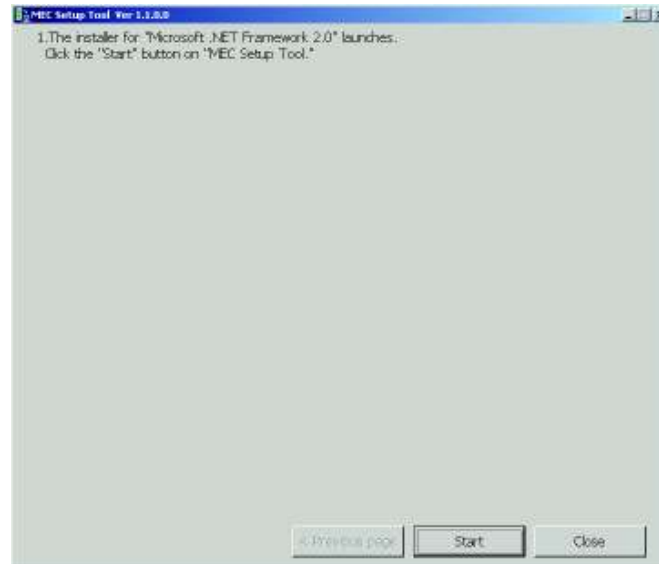
“Microsoft Windows Installer 3.0” Installing...” Page

- [24] The “Microsoft Windows Installer 3.0” Installation complete” page appears. Clear the “Do not restart now” check box on this “Microsoft Windows Installer 3.0 Setup” screen and click the [Finish] button. Microsoft Windows will restart. After Microsoft Windows has restarted, start the MEC setup tool.
- \* The location of the executable file of the MEC setup tool is shown in the MEC setup tool, so check this location before restarting the MEC setup tool.



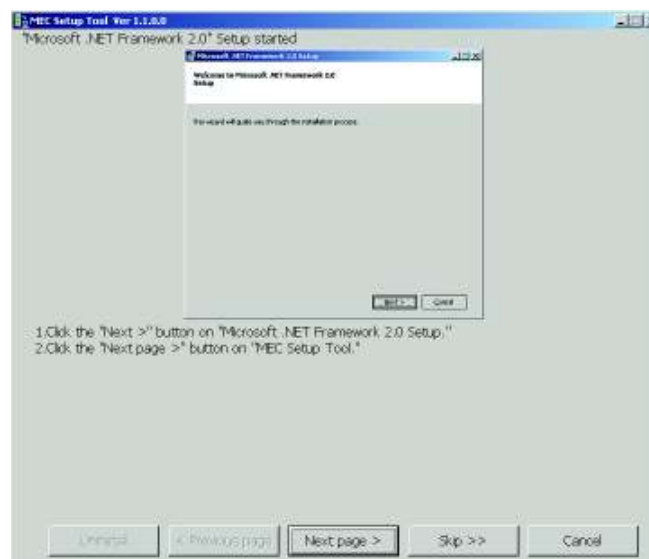
“Microsoft Windows Installer 3.0” Installation complete” Page

- [25] Once the MEC setup tool starts, the “Microsoft .NET Framework 2.0 Installer Launch” page appears. Click the [Start] button on “MEC Setup Tool”.



“Microsoft .NET Framework 2.0 Installer Launch” Page

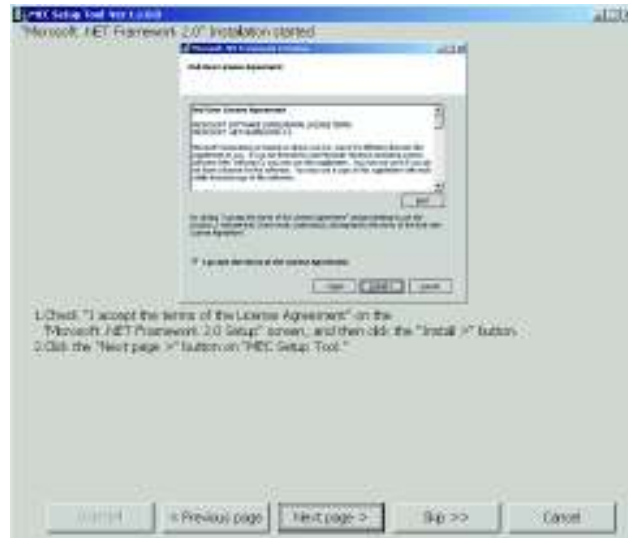
- [26] The “Microsoft .NET Framework 2.0” Setup started” page appears. Click the [Next >] button on this “Microsoft .NET Framework 2.0 Setup” screen, and then click the [Next page >] button on “MEC Setup Tool”.



“Microsoft .NET Framework 2.0” Setup started” Page

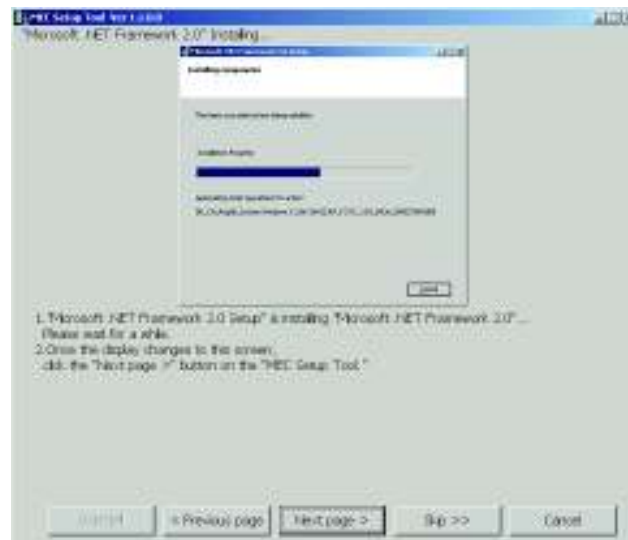


- [27] The “Microsoft .NET Framework 2.0” Installation started” page appears. Select the “I accept the terms of the License Agreement” check box on this “Microsoft .NET Framework 2.0 Setup” screen, and then click the [Install >] button. Next, click the [Next page >] button on “MEC Setup Tool”.



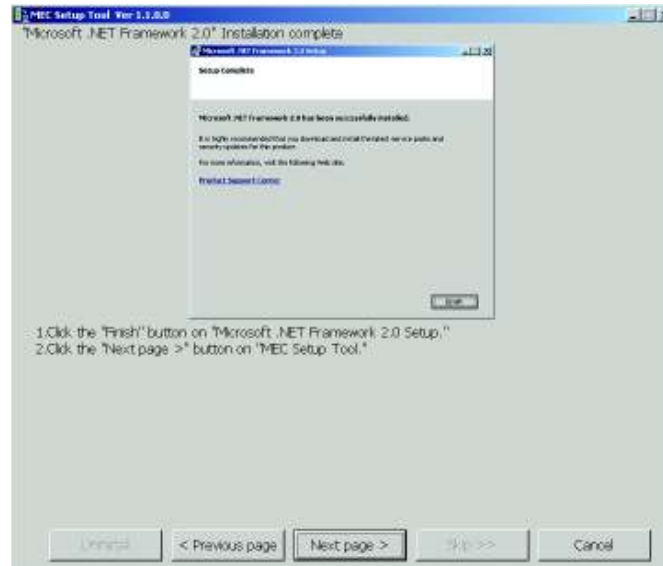
“Microsoft .NET Framework 2.0” Installation started” Page

- [28] The “Microsoft .NET Framework 2.0” Installing...” page appears. Wait for a while until this “Microsoft .NET Framework 2.0 Setup” screen indicating that this software component is being installed changes to a different screen. Once the screen has changed, click the [Next page >] button on “MEC Setup Tool”.



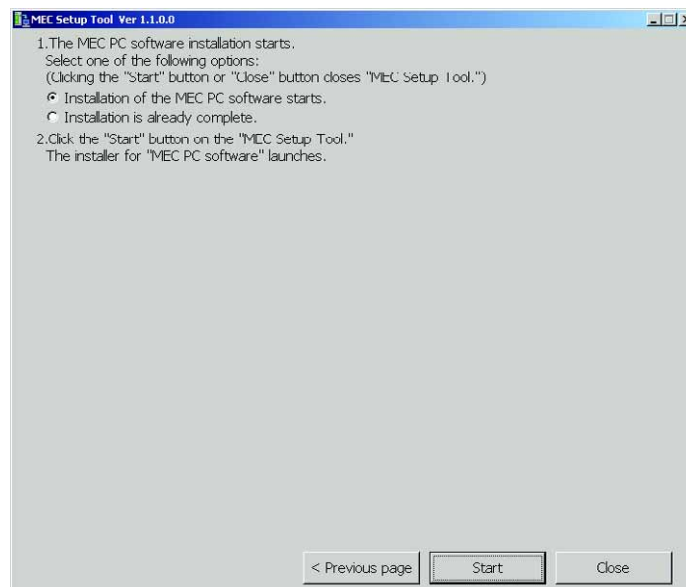
“Microsoft .NET Framework 2.0” Installing...” Page

- [29] The “Microsoft .NET Framework 2.0” Installation complete” page appears. Click the [Finish] button on this “Microsoft .NET Framework 2.0 Setup” screen. Next, click the [Next page >] button on “MEC Setup Tool”.



“Microsoft .NET Framework 2.0” Installation complete” Page

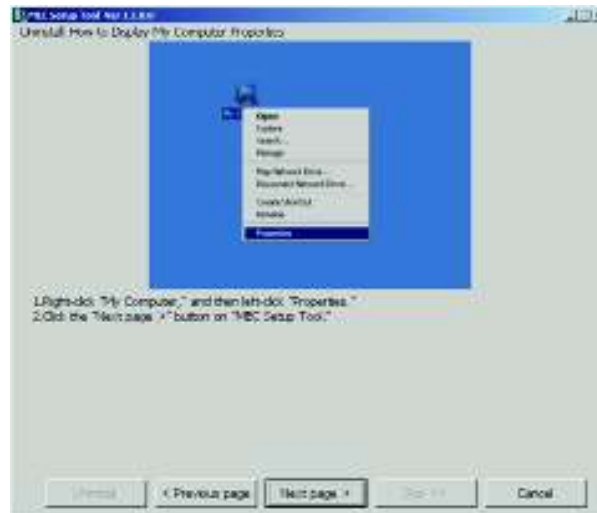
- [30] The “MEC PC Software Installation” page appears. Select an appropriate option on “MEC Setup Tool”, and then click the [Start] button.



“MEC PC Software Installation” Page

## [2] How to uninstall the USB driver

- [1] While the MEC controller is connected, click the [Uninstall] button on "MEC Setup Tool". The Device Manager will launch. If the Device Manager could not be launched, the "Uninstall\_How to display My Computer Properties" screen appears first.  
Display the "My Computer Properties" page by following the onscreen instructions.  
Next, the "Uninstall\_How to Display Device Manager" page appears. Select the "Hardware" tab on the "System Properties" screen, and then click the [Device Manager] button.

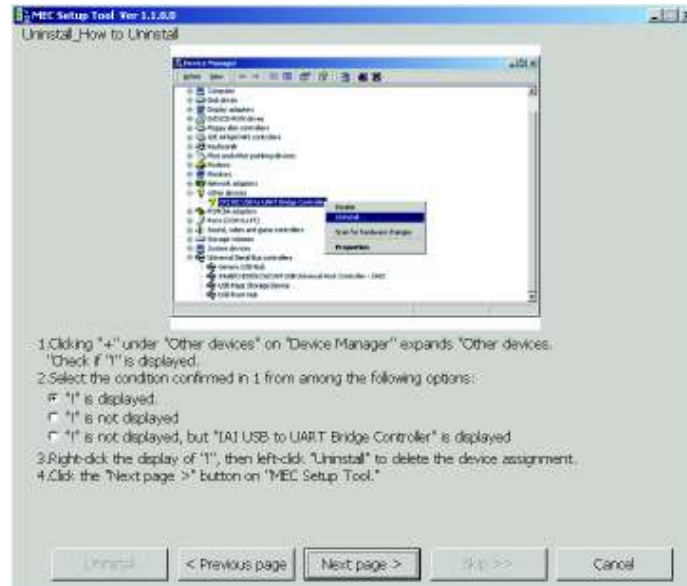


"Uninstall\_How to display My Computer Properties" Page



"Uninstall\_How to Display Device Manager" Page

- [2] "Uninstall\_How to Uninstall" page appears. Click "+" on the left side of "Other devices" to expand the other devices. Check if any of the devices has a "!" icon shown next to it.
- If any device has a "!" icon, right-click the device and select [Uninstall] to delete the device. Next, select an appropriate option on "MEC Setup Tool", and then click the [Next page >] button.



"Uninstall\_How to Uninstall" page

- [3] The "Checking of display of "Wizard"" page appears and you go back to the start of installation.

# PMEC/A MEC


## 1.2.3 How to Install the Software/Uninstall the USB Driver on a PC Running Windows Vista

### [1] How to install the MEC PC software

#### (1) When installing from the CD-ROM

Set the CD-ROM containing this software in the CD-ROM drive.

The MEC setup tool will launch automatically.

- \* If the MEC setup tool does not launch automatically, click  in the CD-ROM. The MEC setup tool will launch.


#### (2) When you have downloaded the ZIP file

[1] Download the file containing this software “mec\_v\*\_\*\*\_\*\*\_\*\*.zip” from IAI’s website.

[2] Unzip the file using an appropriate tool.

[3] Among the extracted files, find the “MECSetupTool.exe” icon.



[4] Double-clicking  will launch the MEC setup tool.

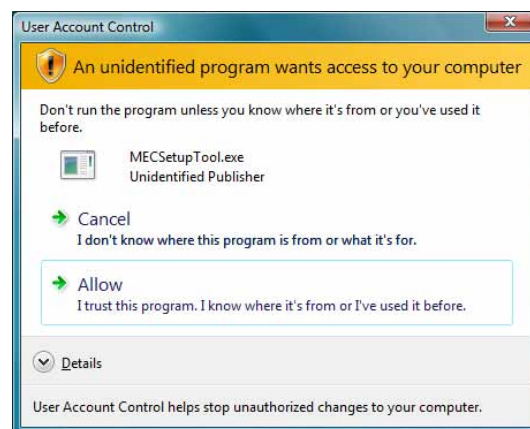
#### (3) When you have downloaded the self-extracting file

[1] Download the file containing this software “mec\_v\*\_\*\*\_\*\*\_\*\*.exe” from IAI’s website.

[2] Move the downloaded file to the desktop or other location of the PC in which the software will be installed.




- \* If the “User Account Control” screen is displayed, click [Allow].



“User Account Control” Screen

# PMEC/A MEC

- [3] Double-click , and the files needed to set up the MEC PC software will be extracted.

Note: This self-extracting file is only available in the Japanese language and can be downloaded from the IAI Japan website. An English version is NOT available.



Progress Screen during File Extraction

- [4] When all files have been extracted, the MEC setup tool launches automatically.  
 [5] Once you have extracted the files and set up the MEC PC software, the “MEC” folder created in the extraction process is no longer necessary. Delete this folder if you won’t be using it in the future.

\* “\*\*” in the file name indicates the version number.

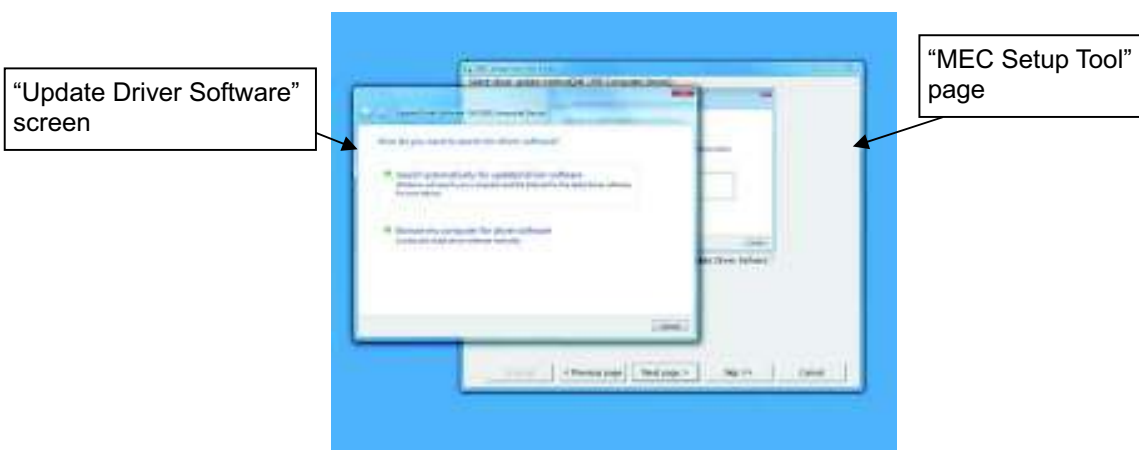
## (4) How to use the MEC setup tool

In addition to installing the “MEC PC Software,” the MEC setup tool also provides the operating procedure to install the software.

When you install an “USB driver,” for example, as shown in the figure below, the “Update Driver Software” screen is displayed in a separate window.


While checking the “MEC Setup Tool” page, perform the steps on the “Update Driver Software” screen as instructed.

(Note) If the “MEC Setup Tool” page to verify the setup and the “Update Driver Software” screen to perform an operation are overlapping each other as shown in the figure below, click the screen for verification or the screen for operation to bring it to the front, and then verify the setup or perform an operation.



(5) Notes on installing the USB driver

When connecting the PC to multiple MEC controllers, all of the applicable MEC controllers must be connected one by one and the USB driver for each controller installed separately.

To install the USB driver for the second or subsequent MEC controller, click  to launch the "MEC Setup Tool."

As you have done for the first MEC controller, install the USB driver according to the onscreen instructions provided by the "MEC Setup Tool."

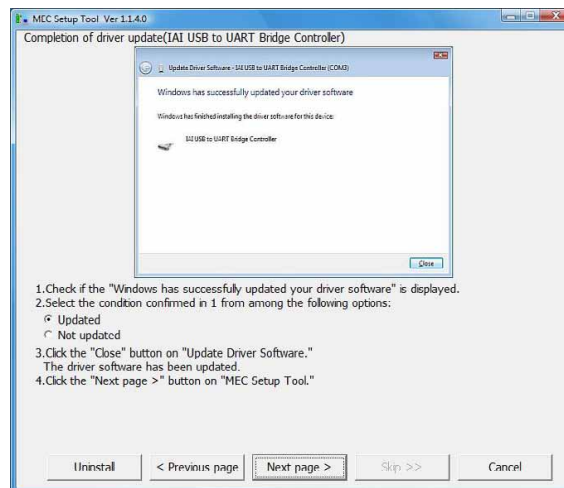
[Refer to (6), "Starting a MEC setup."]

Note, however, that installation of the following software was completed with the first controller and they need not be installed again:

- MEC PC software

When all USB drivers have been installed, close the setup tool by following the procedure below:

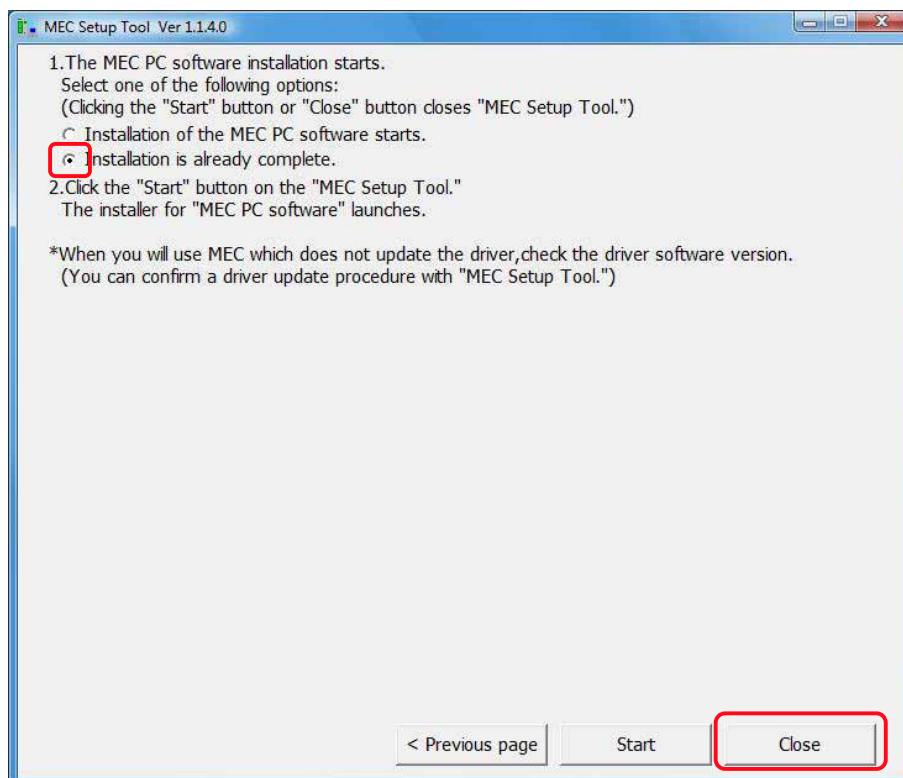
- [1] The "Completion of driver update (IAI USB to UART Bridge Controller)" page appears. Click the [Close] button on the "Update Driver Software" screen. Select an option on "MEC Setup Tool", and click the [Next page >] button.



"Completion of driver update (IAI USB to UART Bridge Controller)" Page

# PMEC/A MEC

- [2] The "MEC PC Software Installation" page appears.  
Select the "Installation is already complete" check box, and then click the [Close] button.  
The "MEC Setup Tool" is closed.

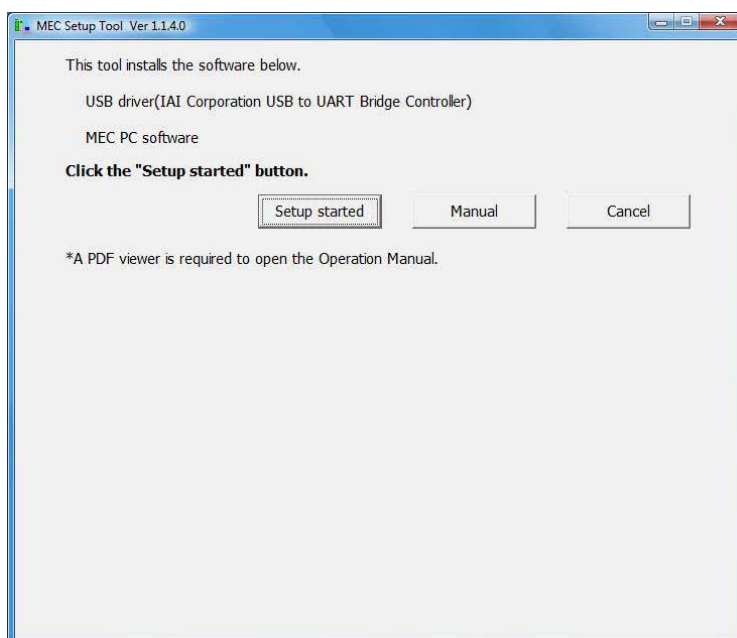


"MEC PC Software Installation" Page

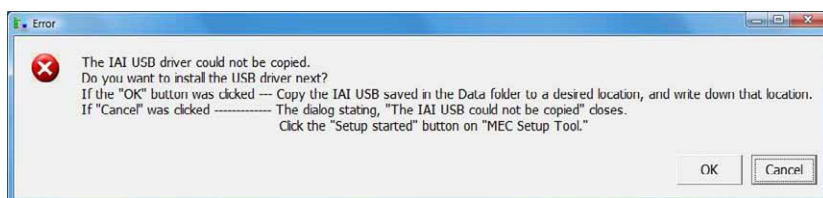


## (6) Starting a MEC setup

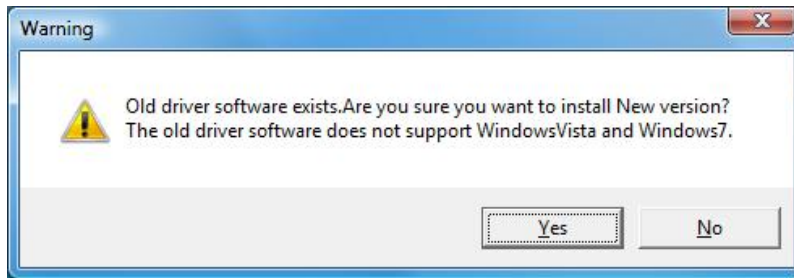
- [1] The “Start MEC Setup Tool” page appears. Click the [Setup started] button. When the [Setup started] button is clicked, the IAI USBv3 will be copied.
- \* If the copying fails, the “Error” screen appears. If this screen appears, copy the IAI USBv3 folder in the Data folder to the PC. Write down and keep the location where the folder was saved as it may be required during a driver software update.
  - \* The page you move to after clicking the [Setup started] button varies depending on the installation status.
    - If the “Warning (IAI USBv1)” page is displayed, proceed to [2].
    - If the “Warning (IAI USBv2)” page is displayed, proceed to [6].
    - If the “IAI Corporation USB to UART Bridge Controller Driver Installer” page is displayed, proceed to [12].
    - If the “Connection check” page is displayed, proceed to [15].



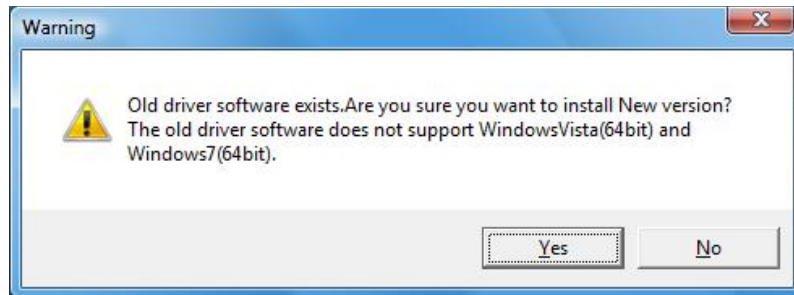
“Start MEC Setup Tool” Page



“Error” Screen

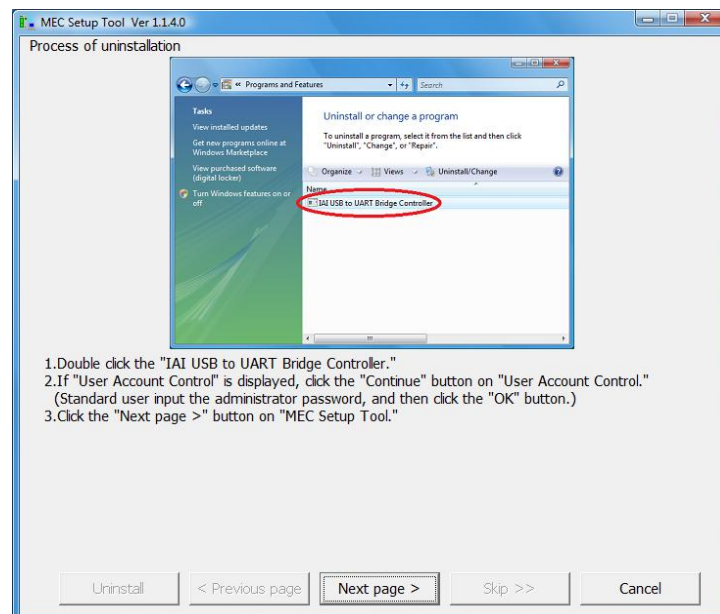


“Warning (IAI USBv1)” Screen



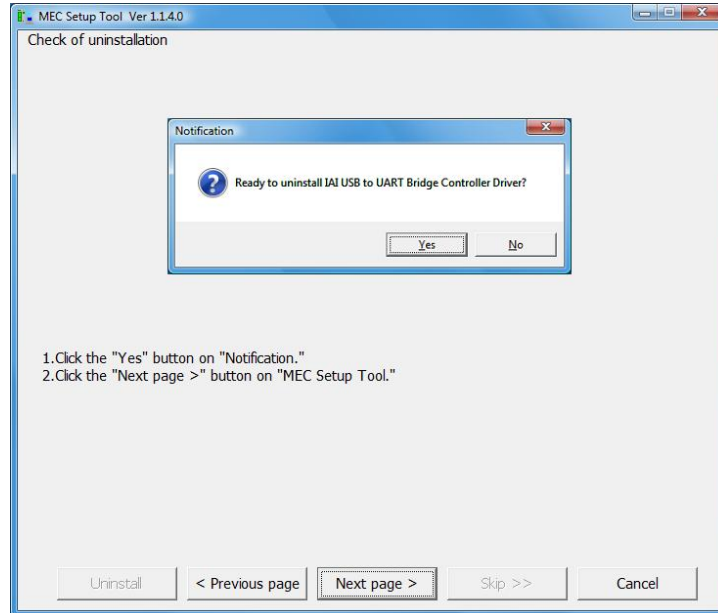
“Warning (IAI USBv2)” Screen

- [2] In case USBv1 is installed, “Warning (IAI USBv1)” screen will show up. Click on [Yes] button in “Warning (IAI USBv1)” screen.
- [3] The “Programs and Features” in the control panel starts and “Process of uninstallation” page opens. In the list of “Programs and Features”, find “IAI USB to UART Bridge Controller” and double click on it. If “User Account Control” screen is appeared at this time, click on [Continue] button. Next, click the [Next page >] button on “MEC Setup Tool”.



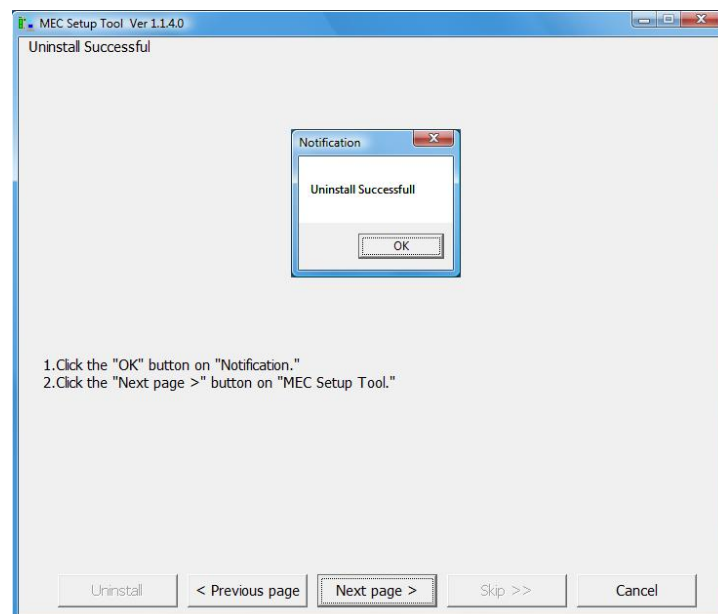
“Process of uninstallation” Page

- [4] The “Check of uninstallation” page appears. Click the [Yes] button on the “Notification” screen, and then click the [Next page >] button on “MEC Setup Tool”.



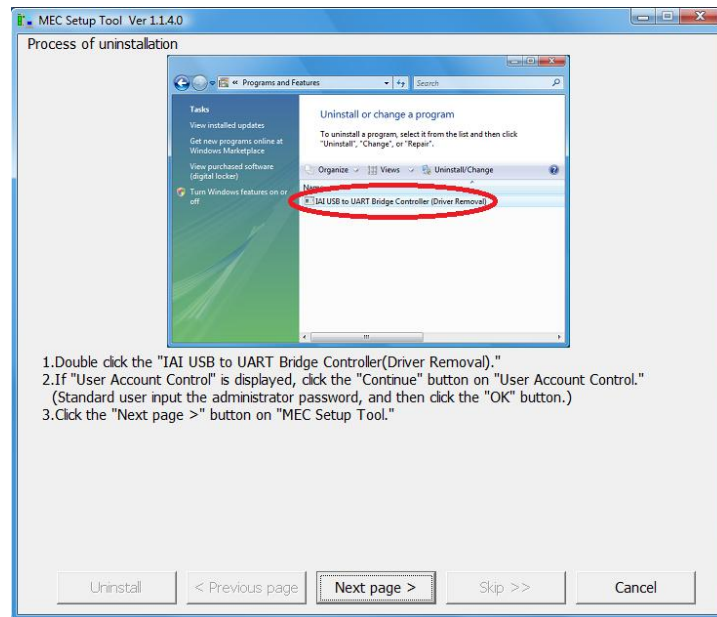
“Process of uninstallation” Page

- [5] The “Uninstall Successful” page appears. Click the [OK] button on the “Notification” screen, and then click the [Next page >] button on “MEC Setup Tool”. Proceed to [12].



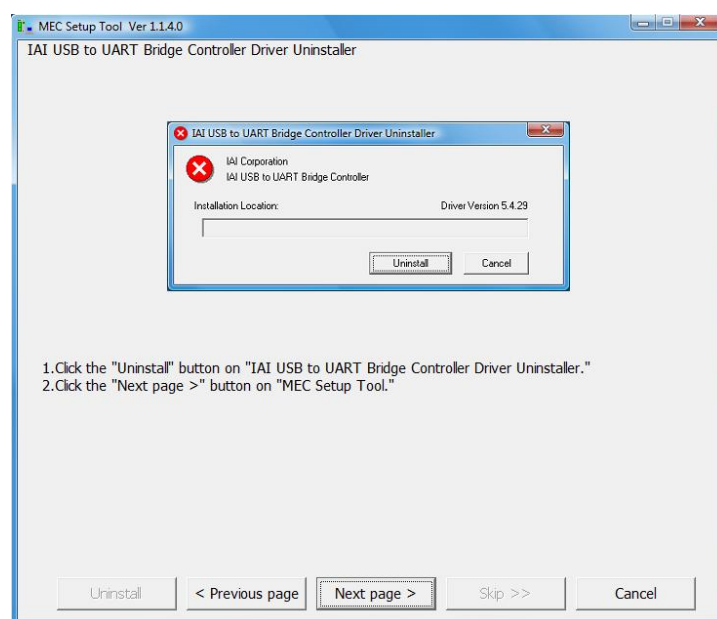
“Uninstall Successful” Page

- [6] In case USBv2 is installed, "Warning (IAI USBv2)" screen will show up. Click on [Yes] button in "Warning (IAI USBv2)" screen.
- [7] The "Program and Features" of the control panel will launch and the "Uninstall Successful" page appears.  
In the list of "Programs and Features", select "IAI USB to UART Bridge Controller (Driver Removal)" and double click on it. If "User Account Control" screen is appeared at this time, click on [Continue] button. Next, click the [Next page >] button on "MEC Setup Tool".



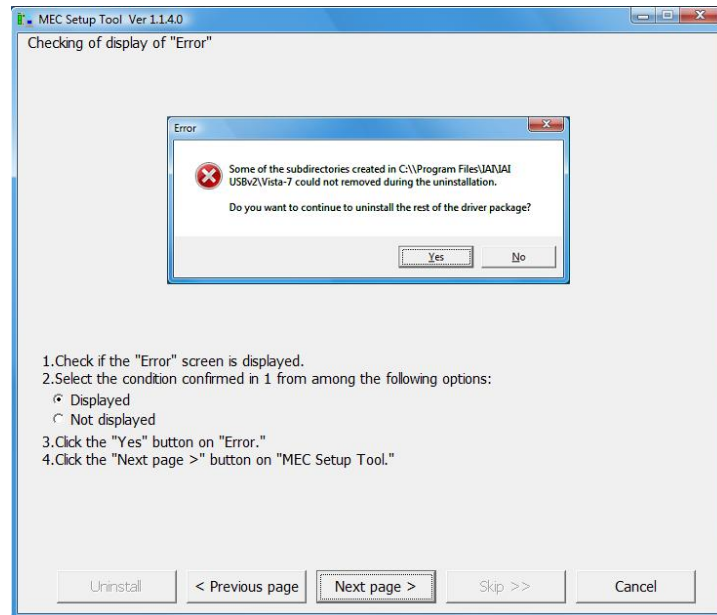
"Uninstall Successful" Page

- [8] The "IAI USB to UART Bridge Controller Driver Uninstaller" page appears.  
Click the [Uninstall] button on the "IAI USB to UART Bridge Controller Driver Uninstaller" screen, and then click the [Next page >] button on "MEC Setup Tool".



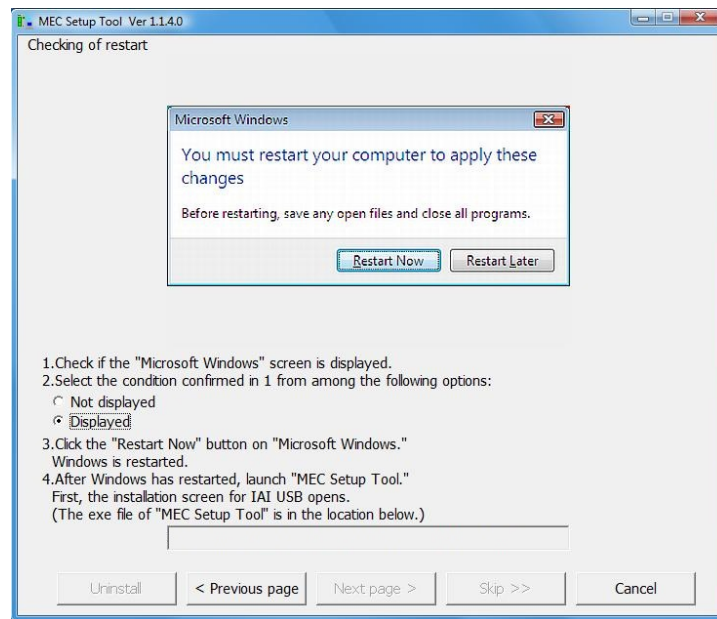
"IAI USB to UART Bridge Controller Driver Uninstaller" Page

- [9] The “Checking of display of Error” page appears. Check if this “Error” screen is displayed.
- If it is displayed, click the [Yes] button on the “Error” screen, and then click the [Next page >] button on “MEC Setup Tool”.
  - If it does not appear, click the [Next page >] button on “MEC Setup Tool”.



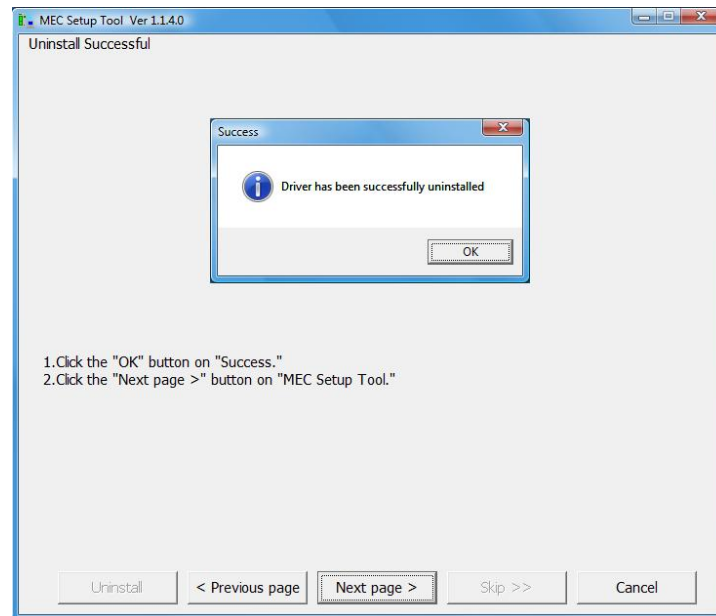
“Checking of display of Error” Page

- [10] The “Checking of restart” page appears. Check if this “Microsoft Windows” screen is displayed.
- If it does not appear, click the [Next page >] button on “MEC Setup Tool”. Proceed to [11].
  - If it is displayed, click the [Restart Now] button on the “Microsoft Windows” screen.
- After Windows is restarted, start the MEC setup tool.
- When starting up MEC Setup Tool after a reboot, “IAI Corporation USB to UART Bridge Controller Driver Installer” will appear. Proceed to [12].
- \* The location of the MEC setup tool execution file is displayed in the MEC setup tool. Check it before restarting Windows.



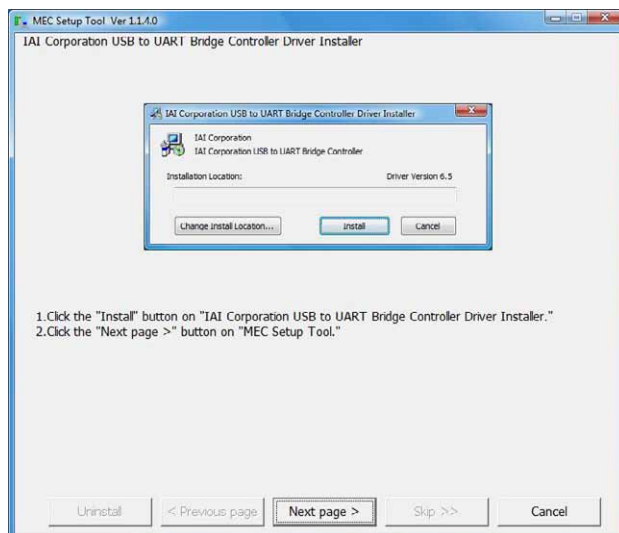
“Checking of restart” Page

- [11] The “Uninstall Successful” page appears.  
Click the [OK] button on the “Notification” screen, and then click the [Next page >] button on “MEC Setup Tool”.



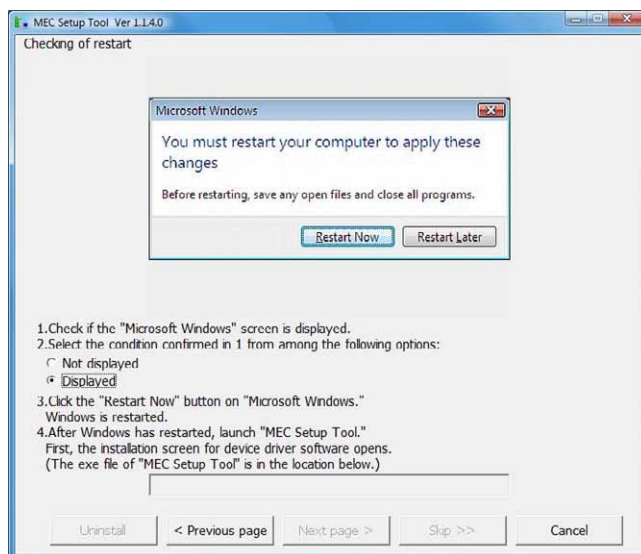
“Uninstall Successful” Page

- [12] The “IAI Corporation USB to UART Bridge Controller Driver Installer” page appears. Click the [Install] button on the “IAI Corporation USB to UART Bridge Controller Driver Installer” screen, and then click the [Next page >] button on “MEC Setup Tool”.



“IAI Corporation USB to UART Bridge Controller Driver Installer” Page

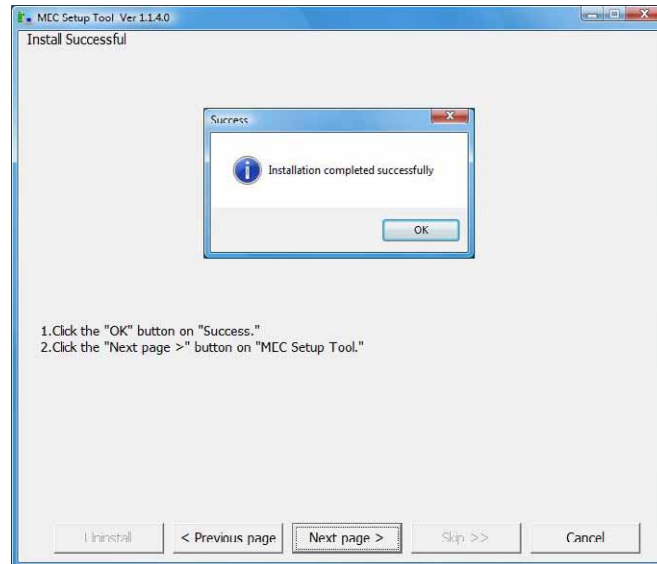
- [13] The “Checking of restart” page appears. Check if this “Microsoft Windows” screen is displayed.
- If it does not appear, click the [Next page >] button on “MEC Setup Tool”. Proceed to [14].
  - If it is displayed, click the [Restart Now] button on the “Microsoft Windows” screen. After Windows is restarted, start the “MEC Setup Tool”. When starting up “MEC Setup Tool” after a reboot, “Connection check” will appear. Proceed to [15].
- \* The location of the “MEC Setup Tool” execution file is displayed in the “MEC Setup Tool”. Check it before restarting Windows.



“Checking of restart” Page

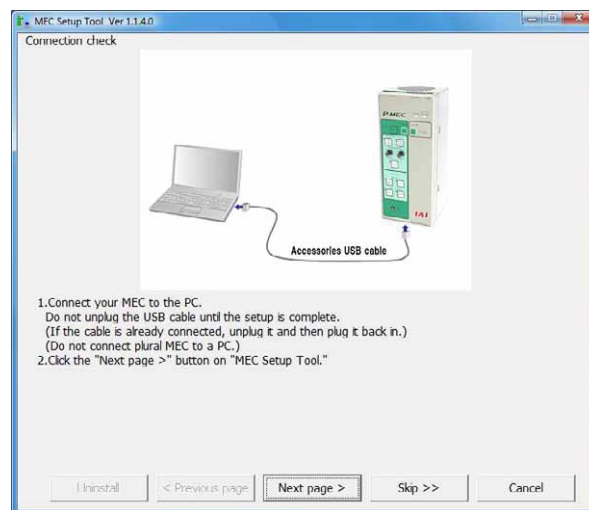


- [14] The "Install Successful" page appears. Click the [OK] button on the "Success" screen, and then click the [Next page >] button on "MEC Setup Tool".



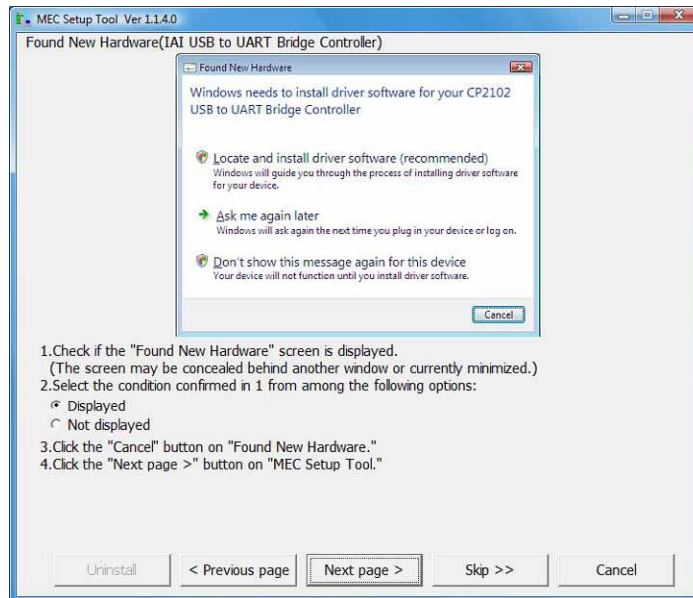
"Install Successful" Page

- [15] When the MEC setup tool is started, the "Connection check" page appears. Connect a MEC controller. If a MEC controller is already connected, remove the USB cable and insert it again. When these operations are completed, click the [Next page >] button.



"Connection check" Page

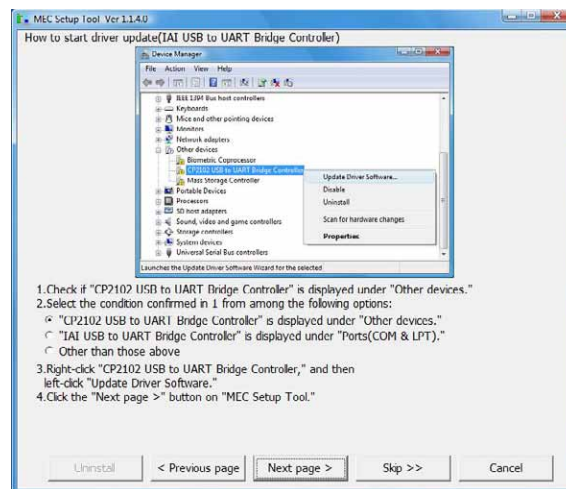
- [16] The “Found New Hardware (IAI USB to UART Bridge Controller)” page appears. Confirm that the “Found New Hardware” screen is displayed.
- If it is displayed, click the [Cancel] button on the “Found New Hardware” screen, and then click the [Next page >] button of the MEC PC software.
  - If it is not displayed, click the [Next page >] button on “MEC Setup Tool”.



“Found New Hardware (IAI USB to UART Bridge Controller)” Page

[17] The Device Manager will launch and the “How to start driver update (IAI USB to UART Bridge Controller)” page appears.

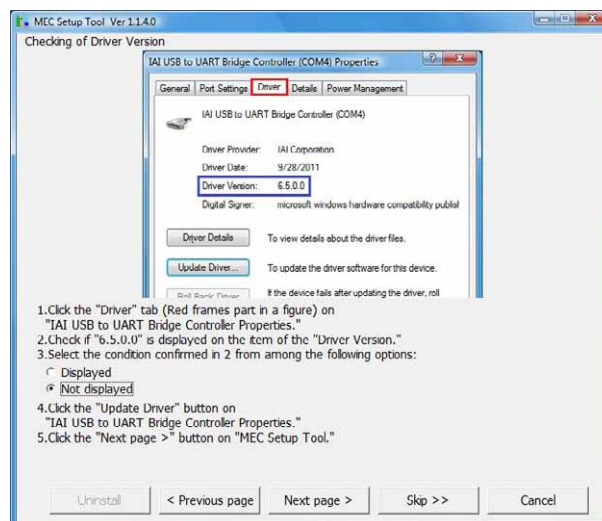
- If “CP2102 USB to UART Bridge Controller” is displayed in “Other Devices”, right-click “CP2102 USB to UART Bridge Controller” and click “Update Driver Software.” Select an option on “MEC Setup Tool”, and then click the [Next page >] button. Proceed to [19].
- If “IAI USB to UART Bridge Controller” is displayed in “Port (COM and LPT)”, right-click “IAI USB to UART Bridge Controller” and left-click “Property”. Select an option on “MEC Setup Tool”, and then click the [Next page >] button. Proceed to [18].
- In any cases other than above, there may be a concern that the connection between MEC and the PC is not properly established. Select an option on “MEC Setup Tool”, and then click the [Next page >] button. Go back to [15].



“How to start driver update (IAI USB to UART Bridge Controller)” Page

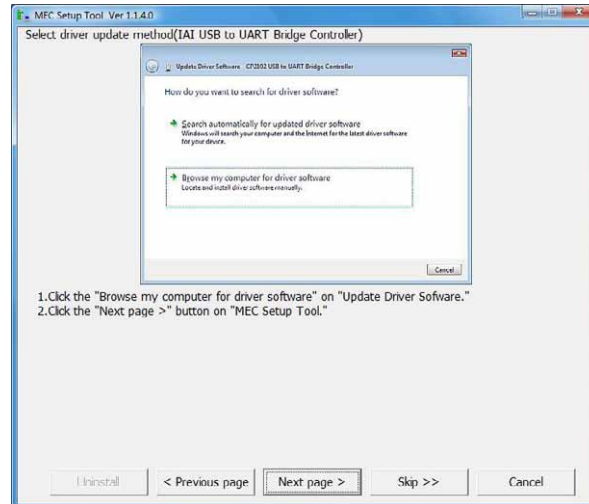
[18] The “Checking of Driver Version” page appears. Click on “Driver” tab in “Property of IAI USB to UART Bridge Controller” screen to check the version.

- If the version is 6.5.0.0 or later, select an option on “MEC Setup Tool”, and then click the [Next page >] button. Proceed to [22].
- If the version is earlier than 6.5.0.0, click on [Update Driver...] button. Select an option on “MEC Setup Tool”, and then click the [Next page >] button. Proceed to [19].



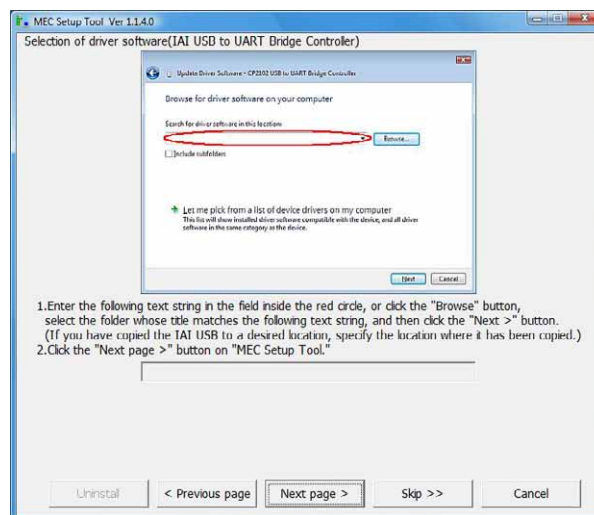
“Checking of Driver Version” Page

- [19] The “Select driver update method (IAI USB to UART Bridge Controller)” page appears. On the “Update Driver Software” screen, click the [Browse my computer for driver software] button. Click the [Next page >] button on “MEC Setup Tool”.



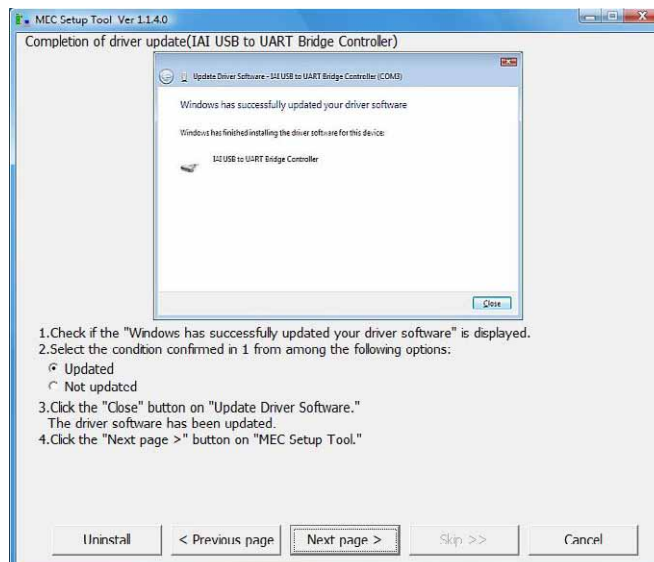
“Select driver update method (IAI USB to UART Bridge Controller)” Page

- [20] The “Selection of driver software (IAI USB to UART Bridge Controller)” page appears. Enter the file save location that is displayed in the MEC setup tool in the area circled in red on the “Update Driver Software” screen, and then click the [Next] button. Click the [Next page >] button on “MEC Setup Tool”.
- \* If incorrect characters are entered, you cannot proceed to the next step.



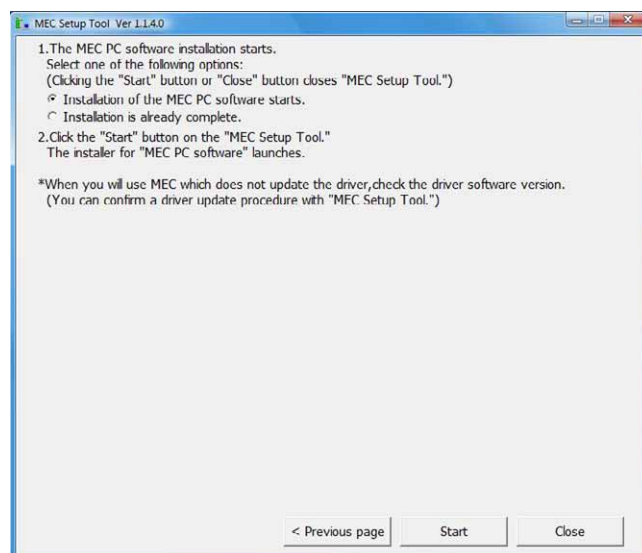
“Selection of driver software (IAI USB to UART Bridge Controller)” Page

- [21] The “Completion of driver update (IAI USB to UART Bridge Controller)” page appears. Click the [Close] button on the “Update Driver Software” screen. Select an option on “MEC Setup Tool”, and click the [Next page >] button.



“Completion of driver update (IAI USB to UART Bridge Controller)” Page

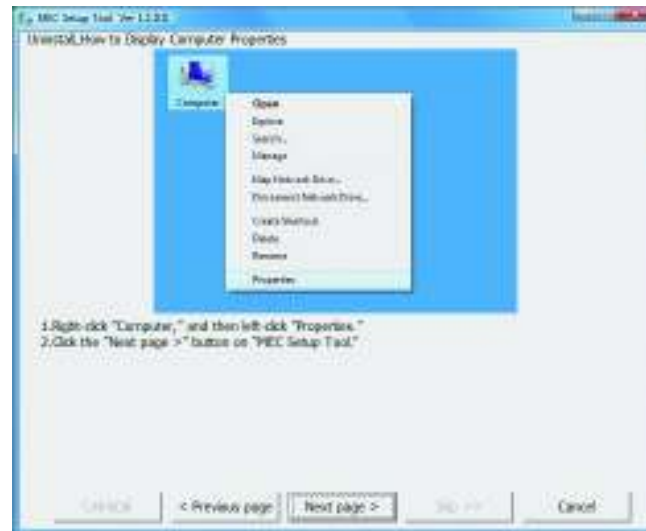
- [22] The “MEC PC Software Installation” page appears. Select an option on “MEC Setup Tool”, and then click the [Start] button. The MEC PC software installer will launch, and the “MEC Setup Tool” will be closed.



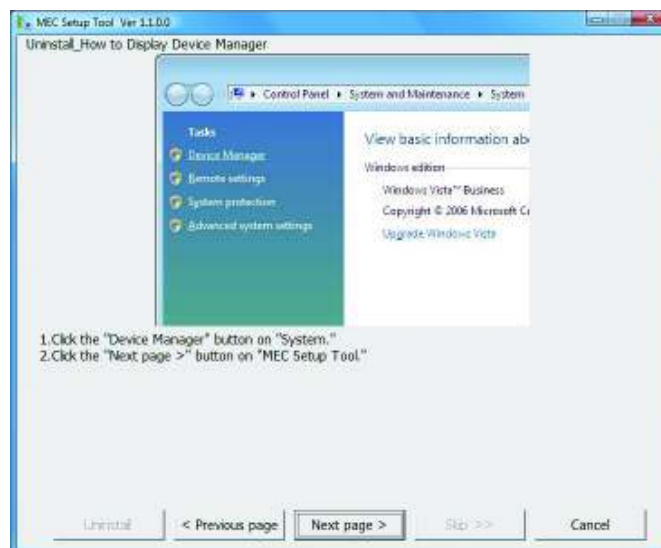
“MEC PC Software Installation” Page

## [2] How to uninstall the USB driver

- [1] While the MEC controller is connected, click the [Uninstall] button on “MEC Setup Tool”. The Device Manager will launch. If the Device Manager could not be launched, the “Uninstall\_How to display My Computer Properties” page appears first. Display the My Computer Properties screen by following the onscreen instructions. Next, the “Uninstall\_How to Display Device Manager” page appears. Click the [Device Manager] button.

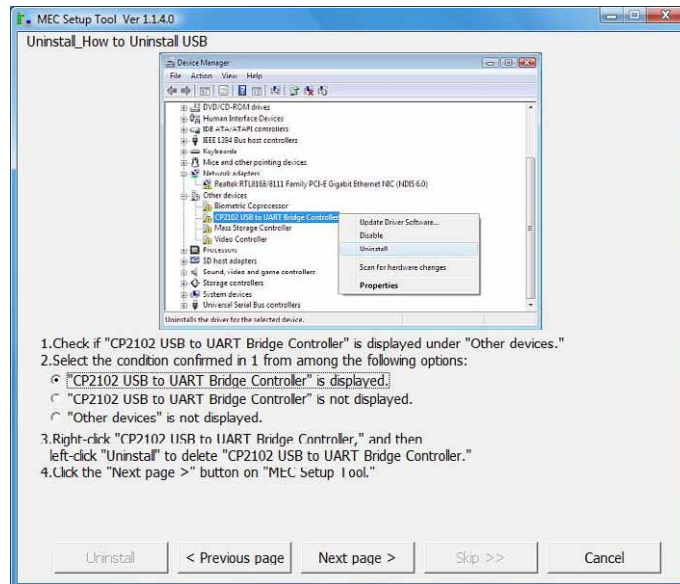


“Uninstall\_How to display My Computer Properties” Page



“Uninstall\_How to Display Device Manager” Page

- [2] The Device Manager launches, and the “Uninstall\_How to Uninstall USB” page appears. Right-click “CP2102 USB to UART Bridge Controller,” and then click “Uninstall” to delete the USB driver assignment. Click the [Next page >] button on “MEC Setup Tool”.



“Uninstall\_How to Uninstall USB” Page

- [3] The “Connection check” page appears, and you will return to the installation.

# PMEC/A MEC


## 1.2.4 How to Install the Software/Uninstall the USB Driver on a PC Running Windows 7

### [1] How to install the MEC PC software

#### (1) When installing from the CD-ROM

Set the CD-ROM containing this software in the CD-ROM drive.

The MEC setup tool will launch automatically.

\* If the MEC setup tool does not launch automatically, click  in the CD-ROM. The MEC setup tool will launch.

#### (2) When you have downloaded the ZIP file

[1] Download the file containing this software “mec\_v\*\_\*\*\_\*\*\_\*\*.zip” from IAI’s website.

[2] Unzip the file using an appropriate tool.

[3] Among the extracted files, find the “MECSetupTool.exe” icon.



[4] Double-clicking  will launch the MEC setup tool.

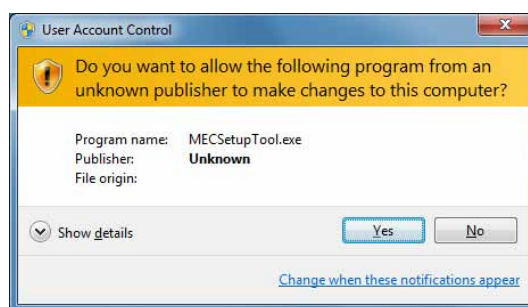
#### (3) When you have downloaded the self-extracting file

[1] Download the file containing this software “mec\_v\*\_\*\*\_\*\*\_\*\*.exe” from IAI’s website.

[2] Move the downloaded file to the desktop or other location of the PC in which the software will be installed.




\* If the “User Account Control” screen is displayed, click [Yes].



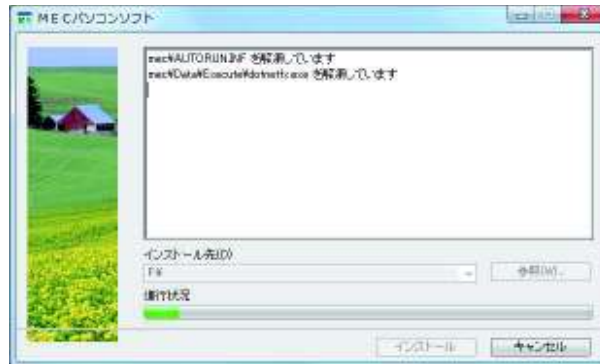
“User Account Control” Screen



# PMEC/A MEC

- [3] Double-click , and the files needed to set up the MEC PC software will be extracted.

Note: This self-extracting file is only available in the Japanese language and can be downloaded from the IAI Japan website. An English version is NOT available.



Progress Screen during File Extraction

- [4] When all files have been extracted, the MEC setup tool launches automatically.  
 [5] Once you have extracted the files and set up the MEC PC software, the “MEC” folder created in the extraction process is no longer necessary. Delete this folder if you won’t be using it in the future.

\* “\*\*” in the file name indicates the version number.

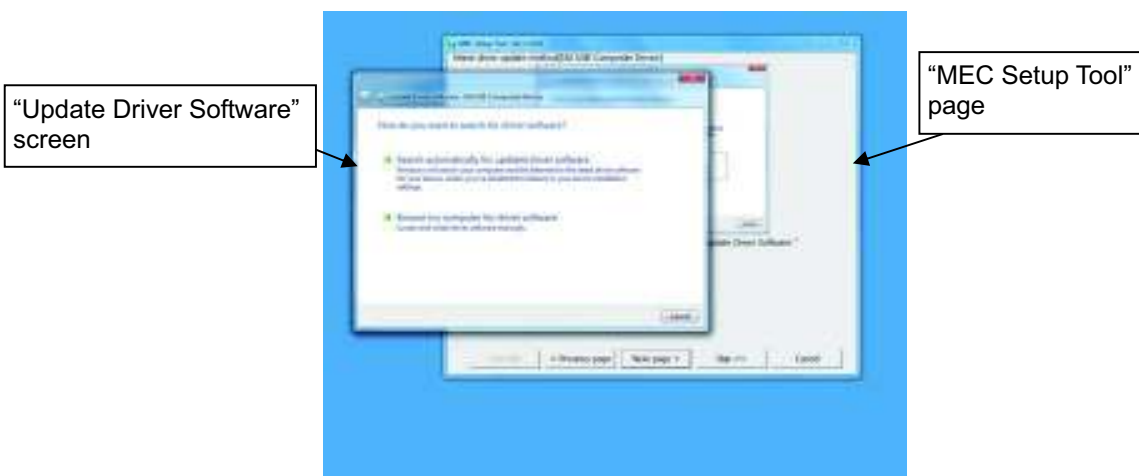
## (4) How to use the MEC setup tool

In addition to installing the “MEC PC Software,” the MEC setup tool also provides the operating procedure to install the software.

When you install an “USB driver,” for example, as shown in the figure below, the “Update Driver Software” screen is displayed in a separate window.


While checking the “MEC Setup Tool” page, perform the steps on the “Update Driver Software” screen as instructed.

(Note) If the “MEC Setup Tool” page to verify the setup and the “Update Driver Software” screen to perform an operation are overlapping each other as shown in the figure below, click the screen for verification or the screen for operation to bring it to the front, and then verify the setup or perform an operation.



## (5) Notes on installing the USB driver

When connecting the PC to multiple MEC controllers, all of the applicable MEC controllers must be connected one by one and the USB driver for each controller installed separately.

To install the USB driver for the second or subsequent MEC controller, click  to launch the "MEC Setup Tool."

As you have done for the first MEC controller, install the USB driver according to the onscreen instructions provided by the "MEC Setup Tool."

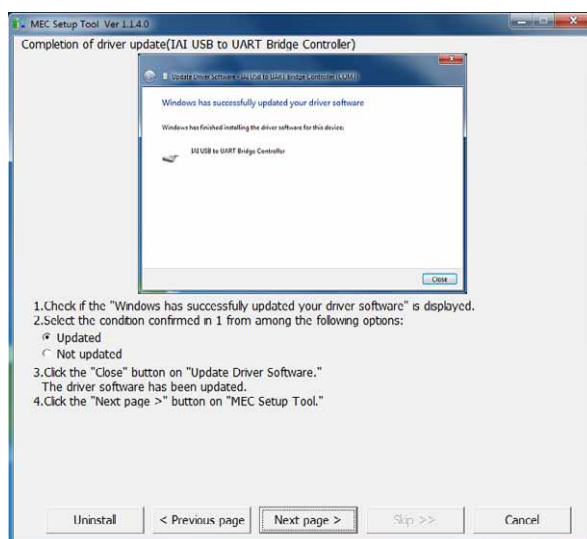
[Refer to (6), "Starting a MEC setup."]

Note, however, that installation of the following software was completed with the first controller and they need not be installed again:

- MEC PC software

When all USB drivers have been installed, close the setup tool by following the procedure below:

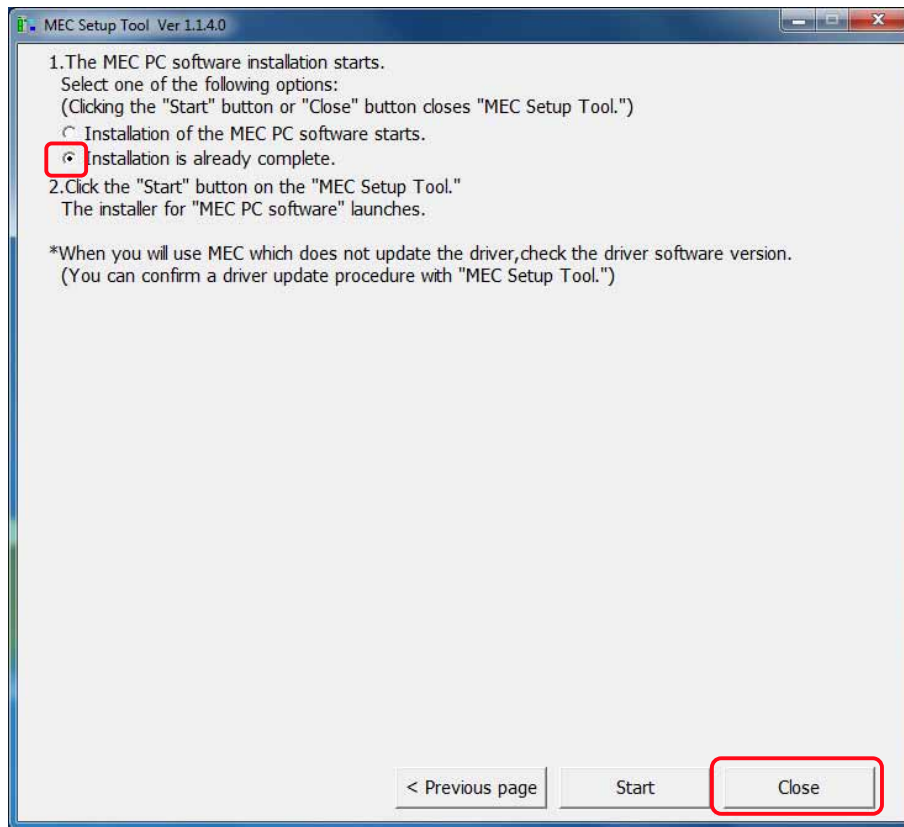
- [1] The "Completion of driver update (IAI USB to UART Bridge Controller)" page appears. Click the [Close] button on the "Update Driver Software" screen. Select an option on "MEC Setup Tool", and click the [Next page >] button.



"Completion of driver update (IAI USB to UART Bridge Controller)" Page

# PMEC/A MEC

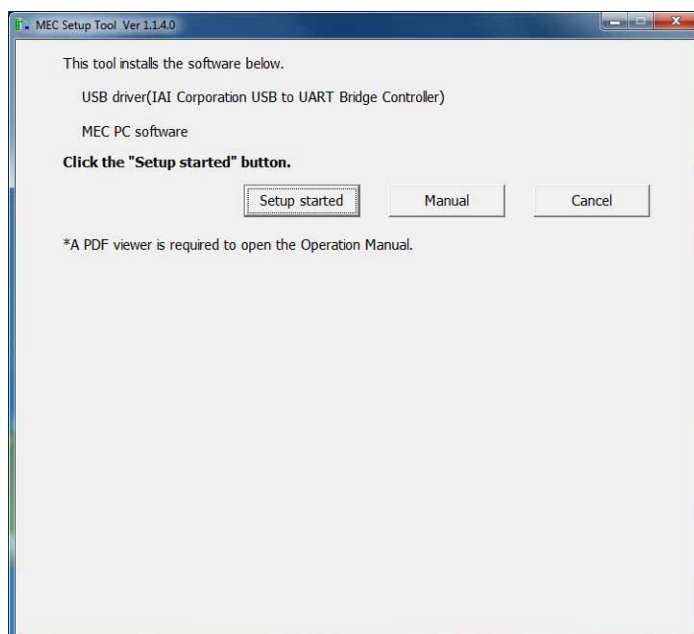
- [2] The “MEC PC Software Installation” page appears. Select the “Installation is already complete” check box, and then click the [Close] button.  
The “MEC Setup Tool” is closed.



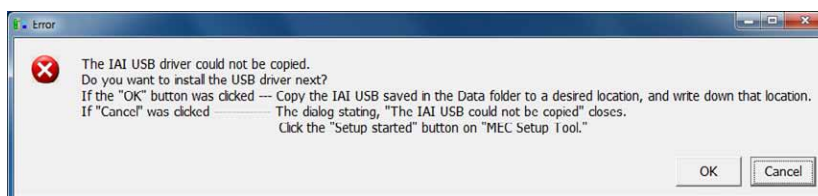
“MEC PC Software Installation” Page

## (6) Starting a MEC setup

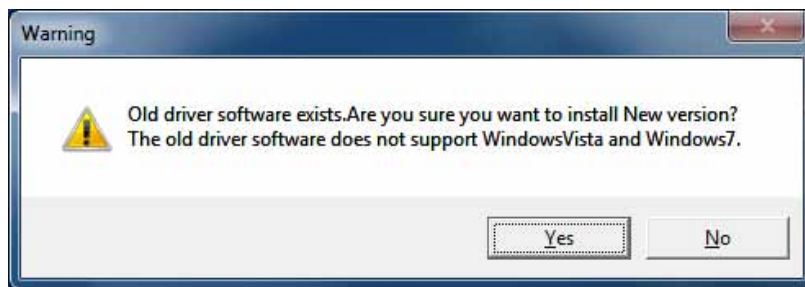
- [1] The “Start MEC Setup Tool” page appears. Click the [Setup started] button. When the [Setup started] button is clicked, the IAI USBv3 will be copied.
- \* If the copying fails, the “Error” screen appears. If this screen appears, copy the IAI USBv3 folder in the Data folder to the PC. Write down and keep the location where the folder was saved as it may be required during a driver software update.
  - \* The page you move to after clicking the [Setup started] button varies depending on the installation status.
    - If the “Warning (IAI USBv1)” page is displayed, proceed to [2].
    - If the “Warning (IAI USBv2)” page is displayed, proceed to [6].
    - If the “IAI Corporation USB to UART Bridge Controller Driver Installer” page is displayed, proceed to [12].
    - If the “Device Driver Software Installation” page is displayed, proceed to [15].



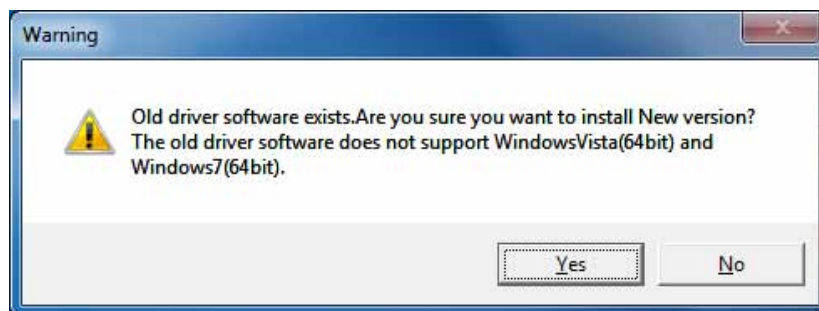
“Start MEC Setup Tool” Page



“Error” Screen

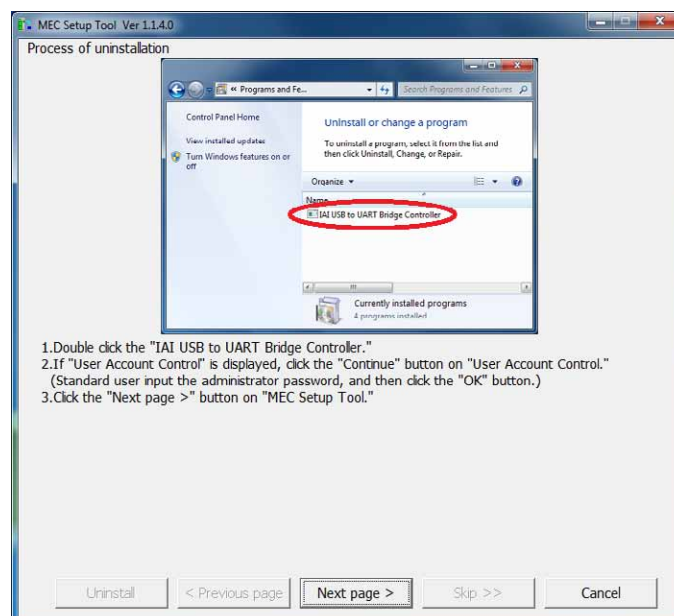


“Warning (IAI USBv1)” Screen



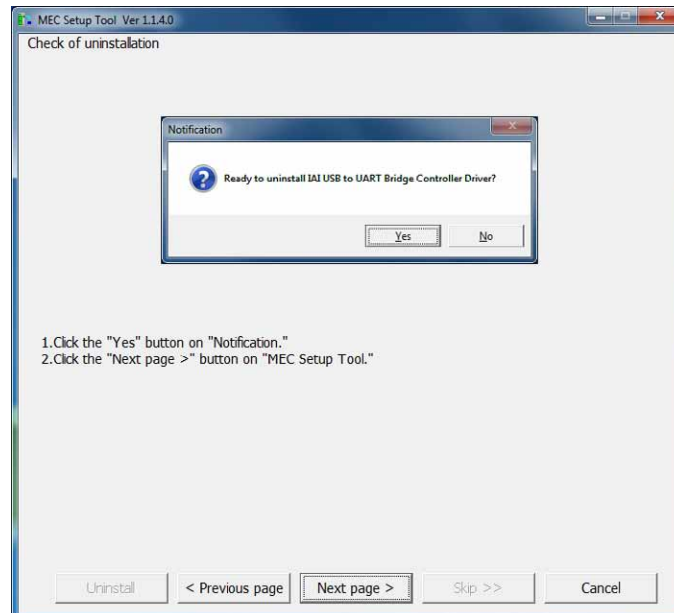
“Warning (IAI USBv2)” Screen

- [2] In case USBv1 is installed, “Warning (IAI USBv1)” screen will show up. Click on [Yes] button in “Warning (IAI USBv1)” screen.
- [3] The “Programs and Features” in the control panel starts and “Process of uninstallation” page opens. In the list of “Programs and Features”, find “IAI USB to UART Bridge Controller” and double click on it. If “User Account Control” screen is appeared at this time, click on [Continue] button. Next, click the [Next page >] button on “MEC Setup Tool”.



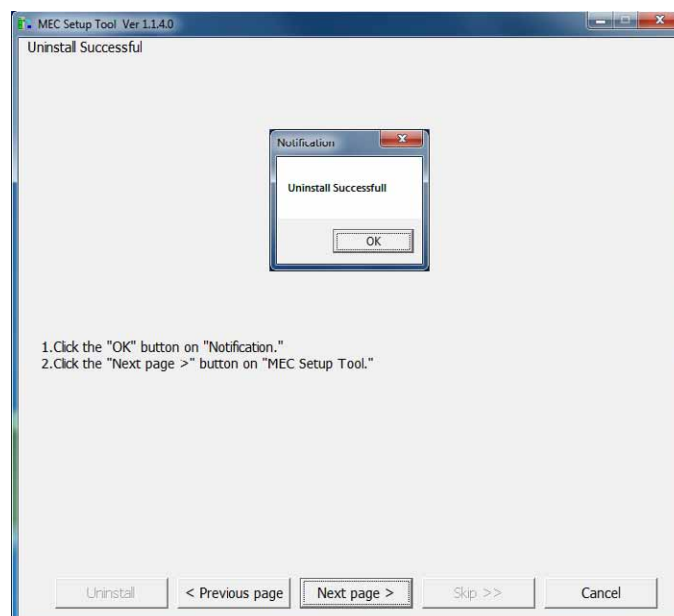
“Process of uninstallation” Page

- [4] The “Check of uninstallation” page appears. Click the [Yes] button on the “Notification” screen, and then click the [Next page >] button on “MEC Setup Tool”.



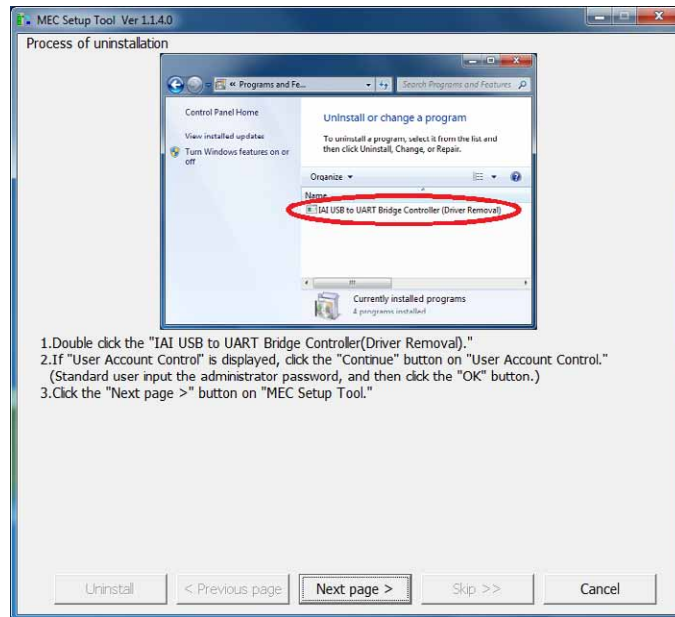
“Process of uninstallation” Page

- [5] The “Uninstall Successful” page appears. Click the [OK] button on the “Notification” screen, and then click the [Next page >] button on “MEC Setup Tool”. Proceed to [12].



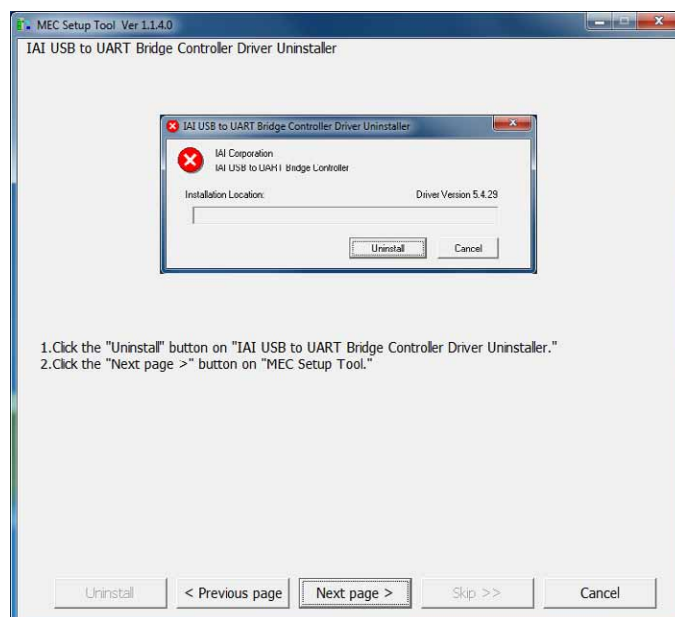
“Uninstall Successful” Page

- [6] In case USBv2 is installed, "Warning (IAI USBv2)" screen will show up. Click on [Yes] button in "Warning (IAI USBv2)" screen.
- [7] The "Program and Features" of the control panel will launch and the "Uninstall Successful" page appears.  
In the list of "Programs and Features", select "IAI USB to UART Bridge Controller (Driver Removal)" and double click on it. If "User Account Control" screen is appeared at this time, click on [Continue] button. Next, click the [Next page >] button on "MEC Setup Tool".



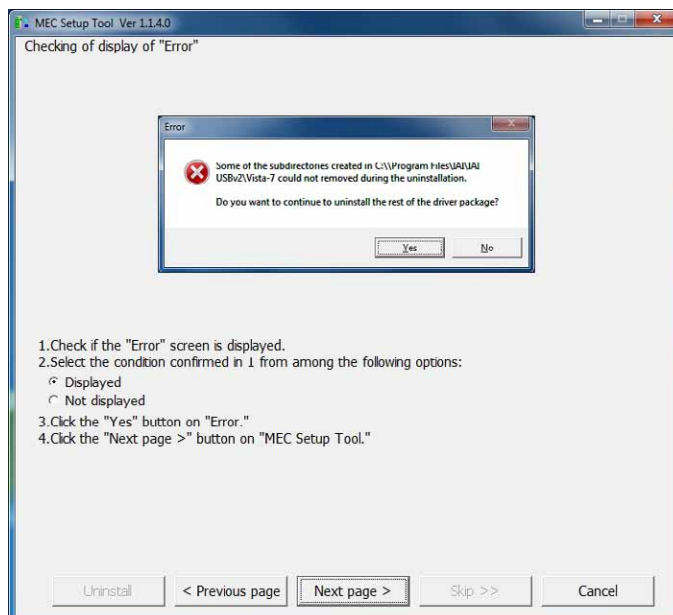
"Uninstall Successful" Page

- [8] The "IAI USB to UART Bridge Controller Driver Uninstaller" page appears.  
Click the [Uninstall] button on the "IAI USB to UART Bridge Controller Driver Uninstaller" screen, and then click the [Next page >] button on "MEC Setup Tool".



"IAI USB to UART Bridge Controller Driver Uninstaller" Page

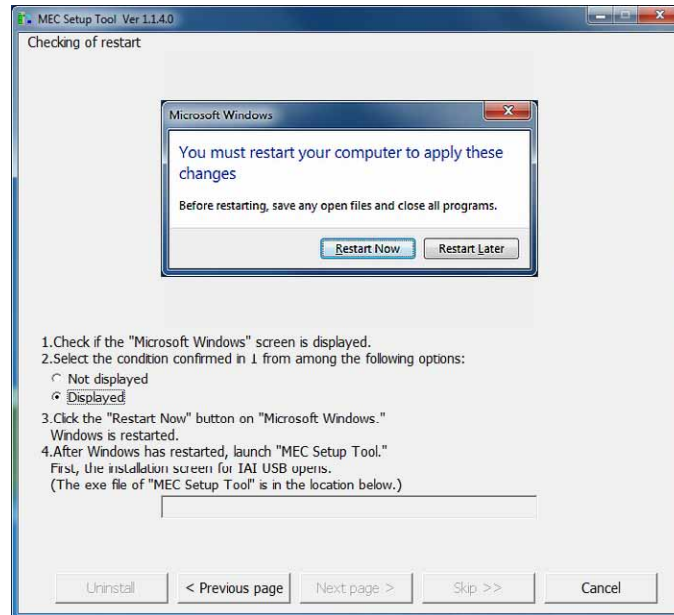
- [9] The “Checking of display of Error” page appears. Check if this “Error” screen is displayed.
- If it is displayed, click the [Yes] button on the “Error” screen, and then click the [Next page >] button on “MEC Setup Tool”.
  - If it does not appear, click the [Next page >] button on “MEC Setup Tool”.



“Checking of display of Error” Page

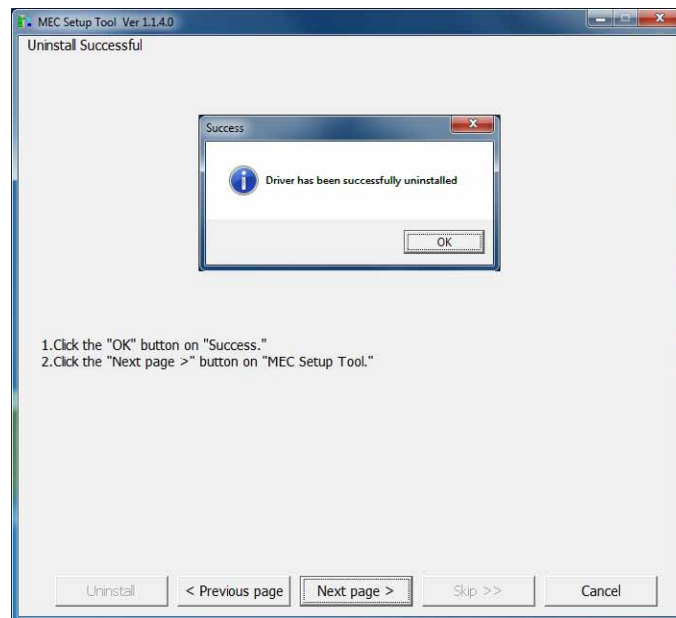


- [10] The “Checking of restart” page appears. Check if this “Microsoft Windows” screen is displayed.
- If it does not appear, click the [Next page >] button on “MEC Setup Tool”. Proceed to [11].
  - If it is displayed, click the [Restart Now] button on the “Microsoft Windows” screen.
- After Windows is restarted, start the MEC setup tool.
- When starting up “MEC Setup Tool” after a reboot, “IAI Corporation USB to UART Bridge Controller Driver Installer” will appear. Proceed to [12].
- \* The location of the “MEC Setup Tool” execution file is displayed in the “MEC Setup Tool”. Check it before restarting Windows.



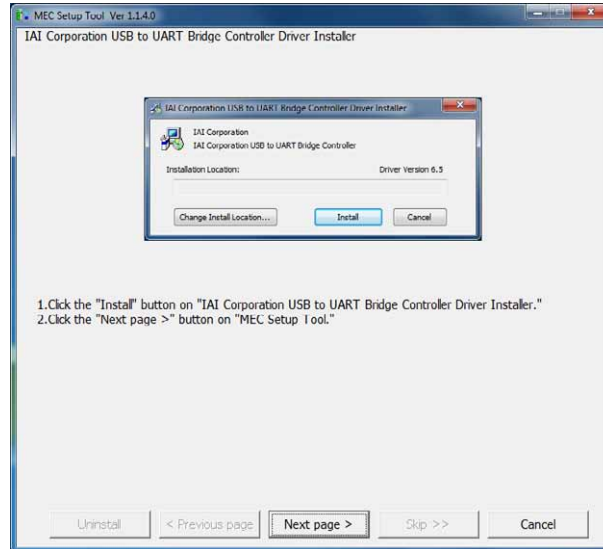
“Checking of restart” Page

- [11] The “Uninstall Successful” page appears.  
Click the [OK] button on the “Success” screen, and then click the [Next page >] button on “MEC Setup Tool”.



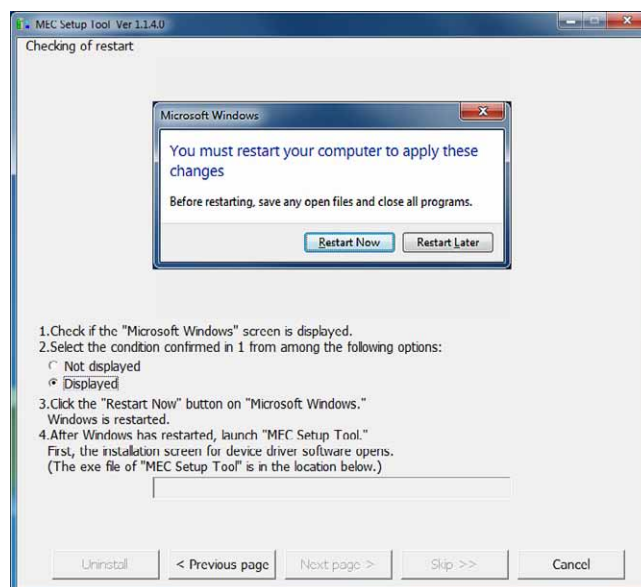
“Uninstall Successful” Page

- [12] The “IAI Corporation USB to UART Bridge Controller Driver Installer” page appears. Click the [Install] button on the “IAI Corporation USB to UART Bridge Controller Driver Installer” screen, and then click the [Next page >] button on “MEC Setup Tool”.



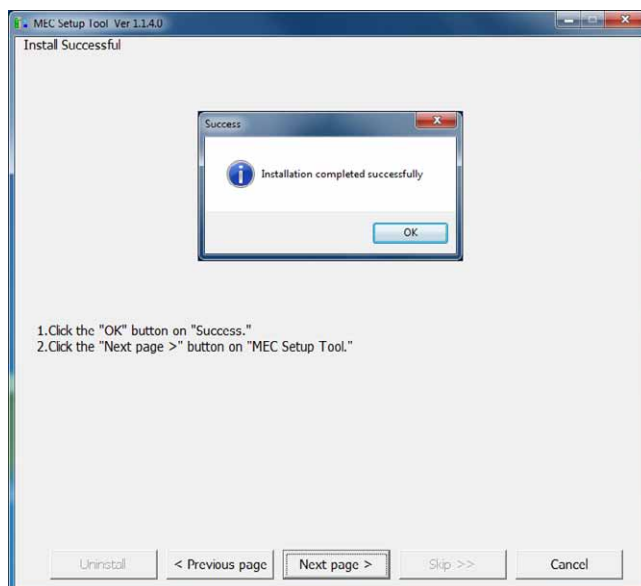
“IAI Corporation USB to UART Bridge Controller Driver Installer” Page

- [13] The “Checking of restart” page appears. Check if this “Microsoft Windows” screen is displayed.
- If it does not appear, click the [Next page >] button on “MEC Setup Tool”. Proceed to [14].
  - If it is displayed, click the [Restart Now] button on the “Microsoft Windows” screen. After Windows is restarted, start the MEC setup tool. When starting up “MEC Setup Tool” after a reboot, “Connection check” will appear. Proceed to [15].
- \* The location of the “MEC Setup Tool” execution file is displayed in the “MEC Setup Tool”. Check it before restarting Windows.



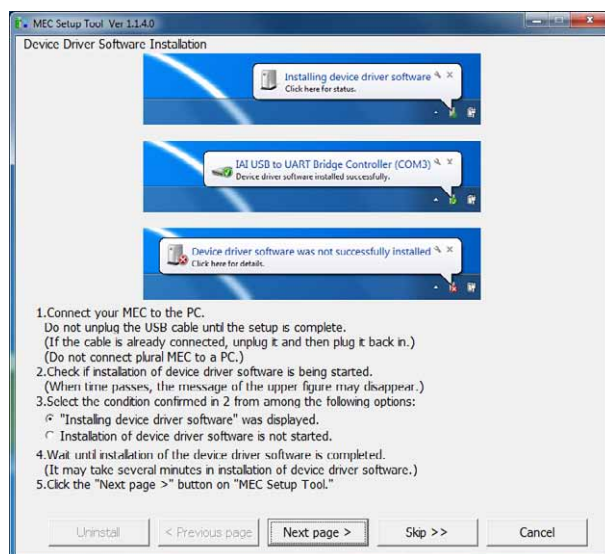
“Checking of restart” Page

- [14] The “Install Successful” page appears. Click the [OK] button on the “Success” screen, and then click the [Next page >] button on “MEC Setup Tool”.



“Install Successful” Page

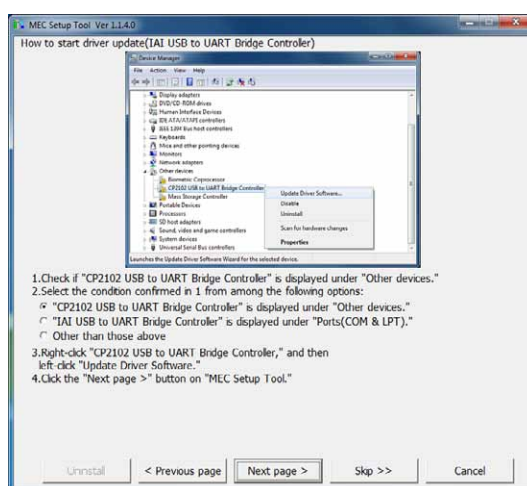
- [15] The “Device Driver Software Installation” page appears.  
Connect MEC to the PC.  
If MEC is already connected, take out the USB cable once and put it back in.  
A message shows up saying “Installing device driver software” when the connection is established.  
Wait till installation is finished, and then click the [Next page >] button in “MEC Setup Tool”.
- \* Be careful because the message “Installing device driver software” disappears after a certain while.
  - \* It may take a few minutes to install the device driver software depending on the condition of the PC.



“Device Driver Software Installation” Page

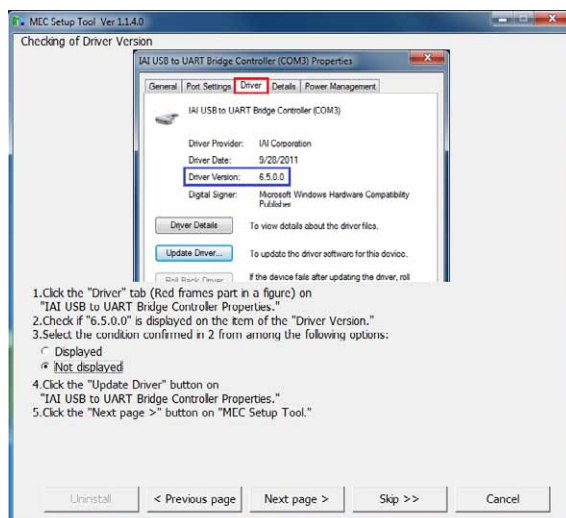
[16] The Device Manager will launch and the “How to start driver update (IAI USB to UART Bridge Controller)” page appears.

- If “CP2102 USB to UART Bridge Controller” is displayed in “Other Devices”, right-click “CP2102 USB to UART Bridge Controller” and click “Update Driver Software.” Select an option on “MEC Setup Tool”, and then click the [Next page >] button. Proceed to [18].
- If “IAI USB to UART Bridge Controller” is displayed in “Port (COM and LPT)”, right-click “IAI USB to UART Bridge Controller” and left-click “Property”. Select an option on “MEC Setup Tool”, and then click the [Next page >] button. Proceed to [17].
- In any cases other than above, there may be a concern that the connection between MEC and the PC is not properly established. Select an option on “MEC Setup Tool”, and then click the [Next page >] button. Go back to [15].



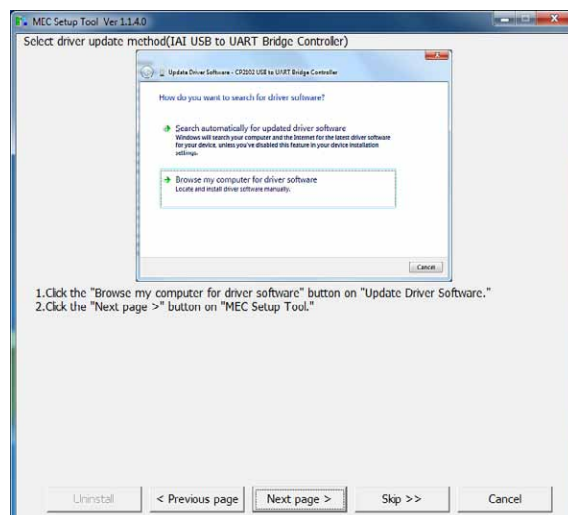
“How to start driver update (IAI USB to UART Bridge Controller)” Page

- [17] The “Checking of Driver Version” page appears. Click on “Driver” tab in “Property of IAI USB to UART Bridge Controller” screen to check the version.
- If the version is 6.5.0.0 or later, select an option on “MEC Setup Tool”, and then click the [Next page >] button. Proceed to [21].
  - If the version is earlier than 6.5.0.0, click on [Updata Driver...] button in “Property of IAI USB to UART Bridge Controller” screen .  
Select an option on “MEC Setup Tool”, and then click the [Next page >] button. Proceed to [18].



“Checking of Driver Version” Page

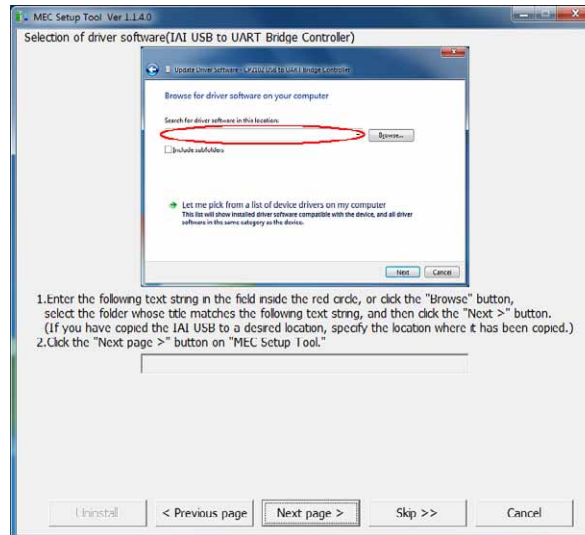
- [18] The “Select driver update method (IAI USB to UART Bridge Controller)” page appears. On the “Update Driver Software” screen, click the [Browse my computer for driver software] button. Click the [Next page >] button on “MEC Setup Tool”.



“Select driver update method (IAI USB to UART Bridge Controller)” Page

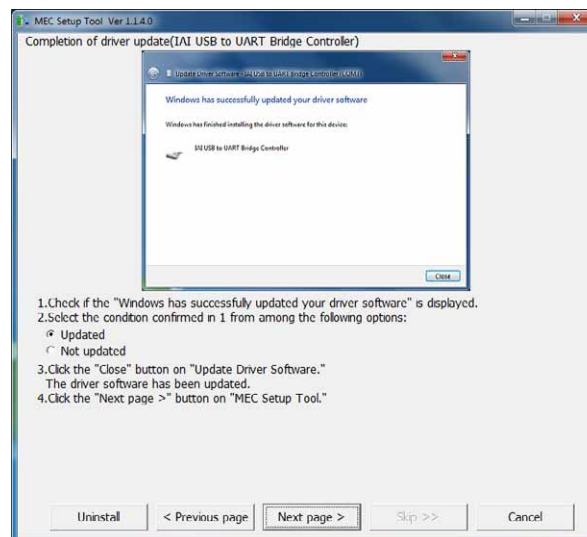
- [19] The “Selection of driver software (IAI USB to UART Bridge Controller)” page appears. Enter the file save location that is displayed in the MEC setup tool in the area circled in red on the “Update Driver Software” screen, and then click the [Next] button. Click the [Next page >] button on “MEC Setup Tool”.

\* If incorrect characters are entered, you cannot proceed to the next step.



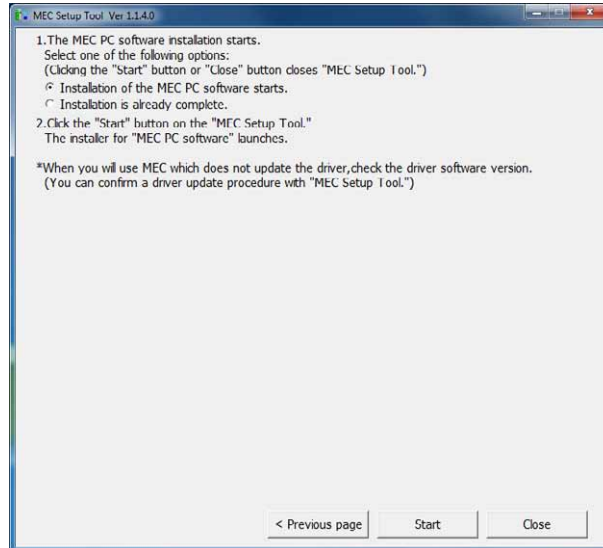
“Selection of driver software (IAI USB to UART Bridge Controller)” Page

- [20] The “Completion of driver update (IAI USB to UART Bridge Controller)” page appears. Click the [Close] button on the “Update Driver Software” screen. Select an option on “MEC Setup Tool”, and click the [Next page >] button.



“Completion of driver update (IAI USB to UART Bridge Controller)” Page

- [21] The “MEC PC Software Installation” page appears. Select an option on “MEC Setup Tool”, and then click the [Start] button. The MEC PC software installer will launch, and the “MEC Setup Tool” will be closed.

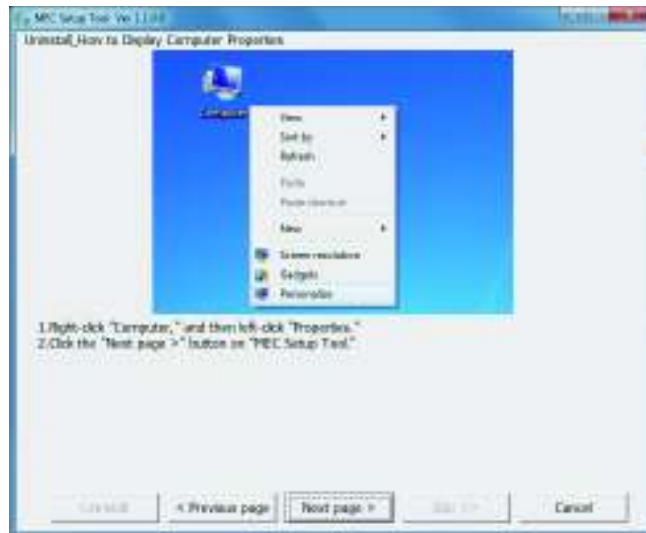


“MEC PC Software Installation” Page

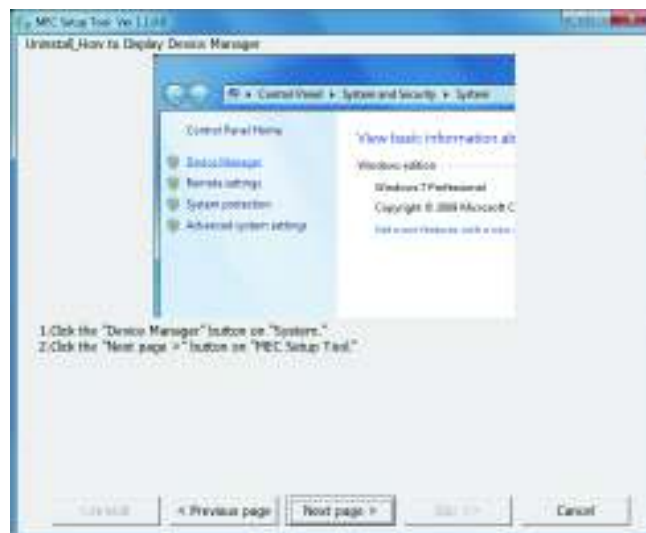


## [2] How to uninstall the USB driver

- [1] While the MEC controller is connected, click the [Uninstall] button on "MEC Setup Tool". The Device Manager will launch. If the Device Manager could not be launched, the "Uninstall\_How to display My Computer Properties" page appears first. Display the My Computer Properties screen by following the onscreen instructions. Next, the "Uninstall\_How to Display Device Manager" page appears. Click the [Device Manager] button.

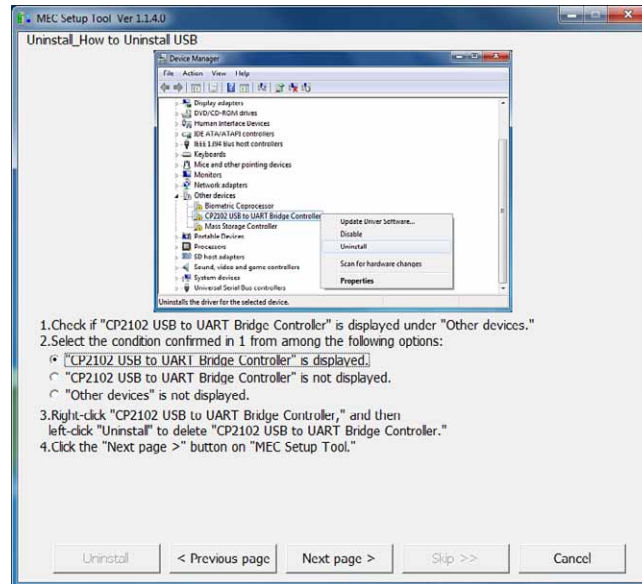


"Uninstall\_How to display My Computer Properties" Page



"Uninstall\_How to Display Device Manager" Page

- [2] The Device Manager launches, and the “Uninstall\_How to Uninstall USB” page appears. Right-click “CP2102 USB to UART Bridge Controller,” and then click “Uninstall” to delete the USB driver assignment. Click the [Next page >] button on “MEC Setup Tool”.

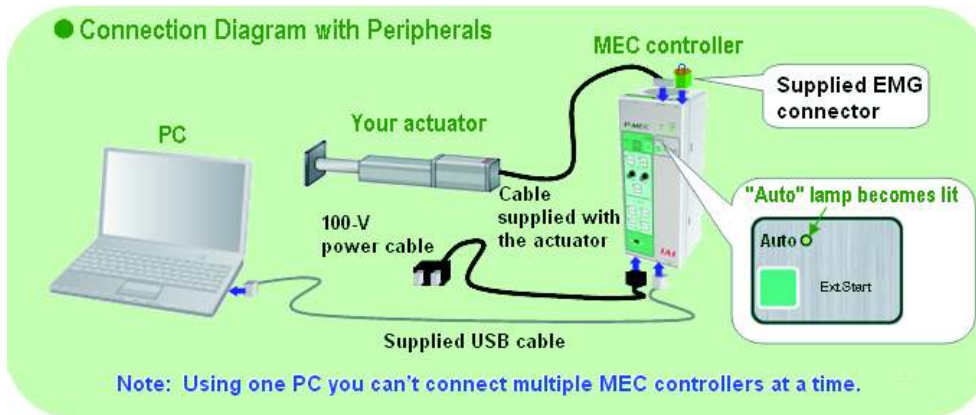


“Uninstall\_How to Uninstall USB” Page

- [3] The “Device Driver Software Installation” page appears, and you will return to the installation.

## 1.3 Launching the MEC PC Software

- [1] Turn off the controller power and PC power and connect the following devices as shown below.



- [2] When all devices have been connected, turn on the controller power and PC power.
- [3] Click the MEC PC software icon to start the MEC PC software.  
The "Initial Screen" appears which then automatically switches to the "Introduction" screen. Click [Enter].

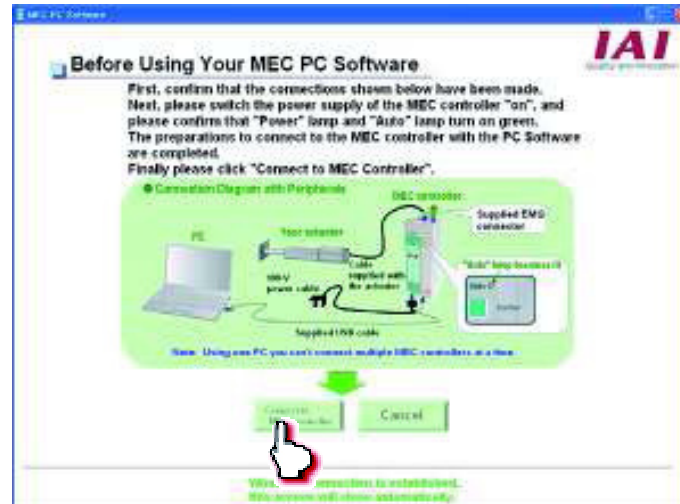


Initial Screen

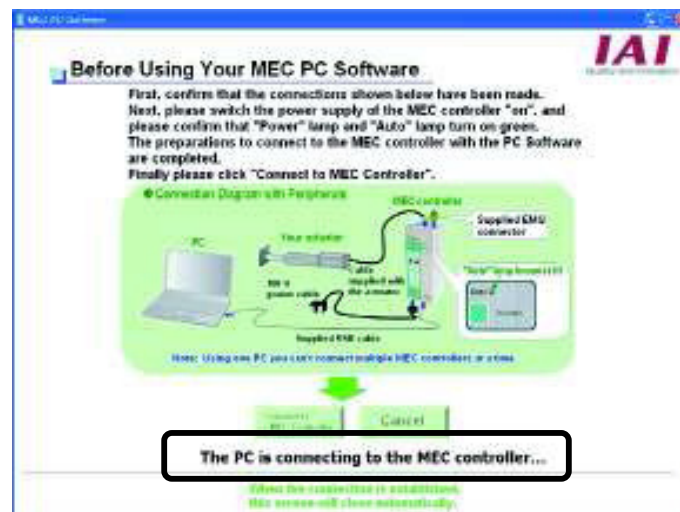


Introduction Screen

- [4] Check if the Auto lamp on the MEC controller is illuminating in green. If you see a steady green light, you are now ready to connect the MEC PC software and MEC controller.
- [5] Click [Connect to MEC Controller].  
Connection of the PC and MEC controller is started and the message "The PC is connecting to MEC controller..." appears.  
Clicking [Cancel] cancels the connection. Even if the connection is cancelled, the screen will not change.

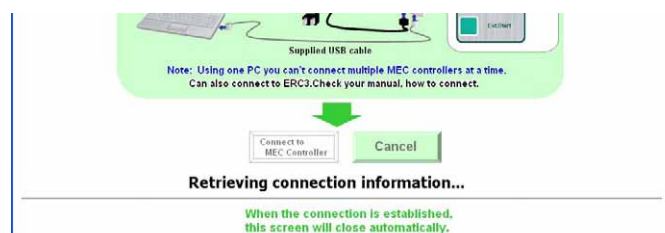


PC and MEC Controller Connection Screen



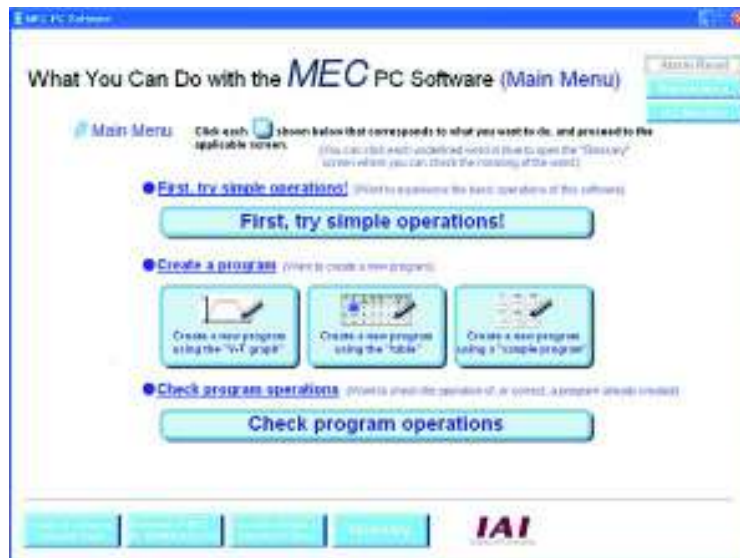
PC and MEC Controller Connection Screen

For version V2.00.00.00 and later, the display shows "Retrieving connection information" while obtaining the connected axis numbers from the controller and [Connect to MEC Controller] button turns invalid. After the axis numbers are obtained, [Connect to MEC Controller] button turns back valid.



# PMEC/A MEC

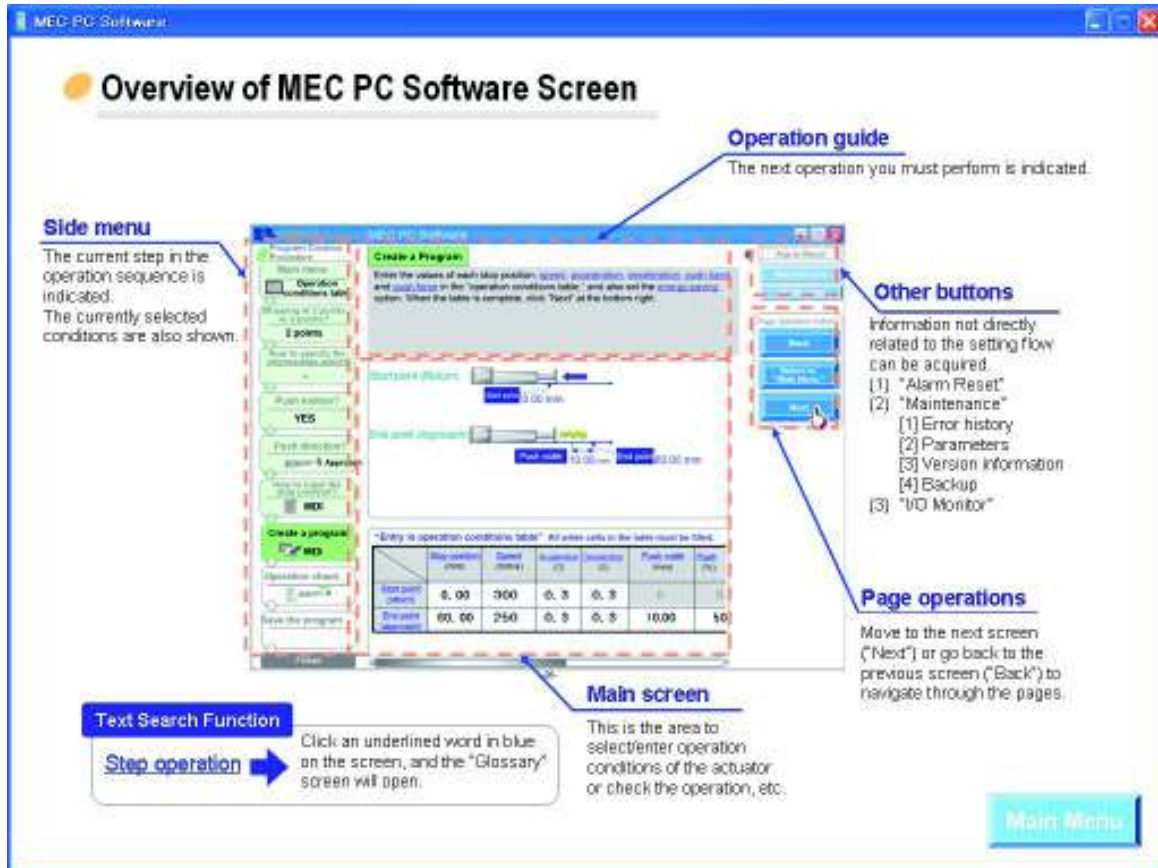
[6] When the connection is complete, the menu screen appears.



Menu Screen

## 2. Overview of MEC PC Software Screen

The operating screen of the MEC PC software is shown below. You can display this screen by clicking [Overview of MEC PC Software Screen] from the main menu.

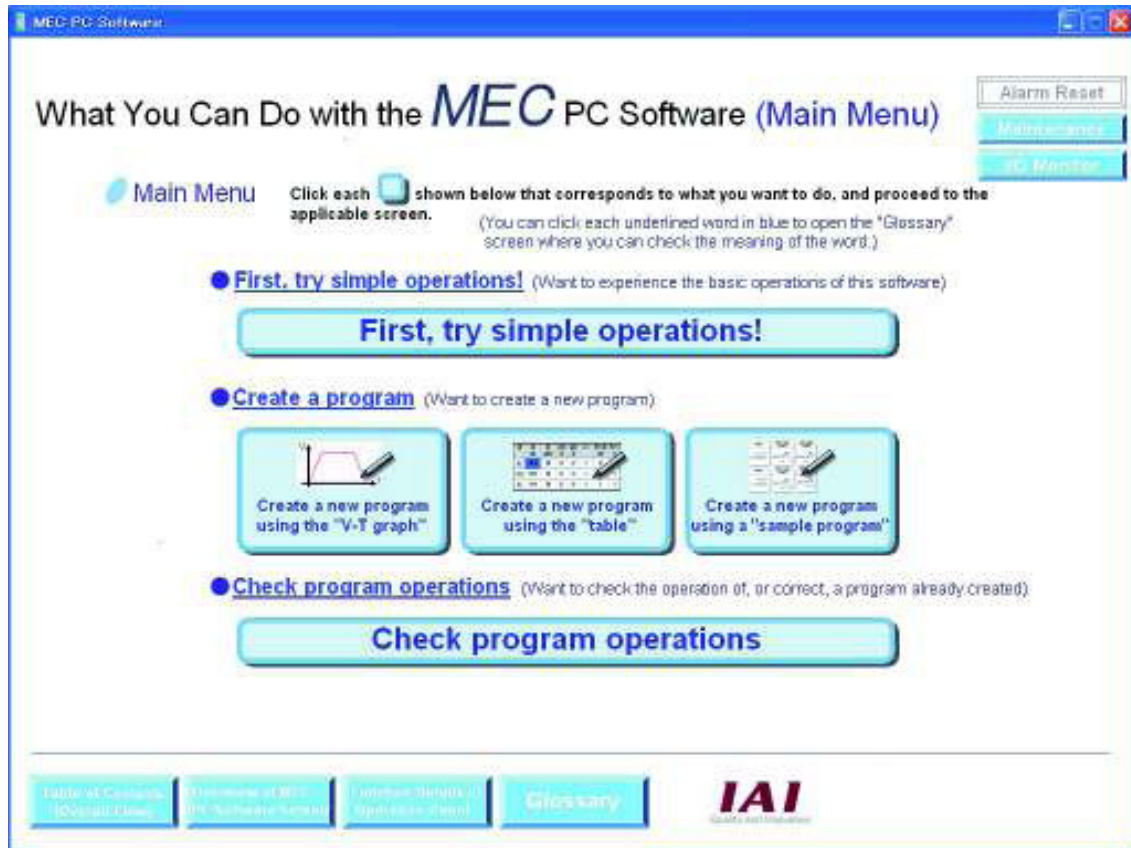




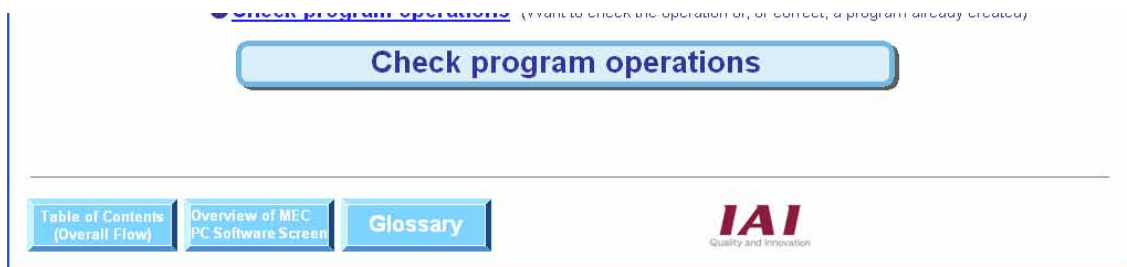
# PMEC/A MEC

## 3. What You Can Do with the MEC PC Software (Operations from the Main Menu)

Select the items appropriate for the purpose in the main menu.

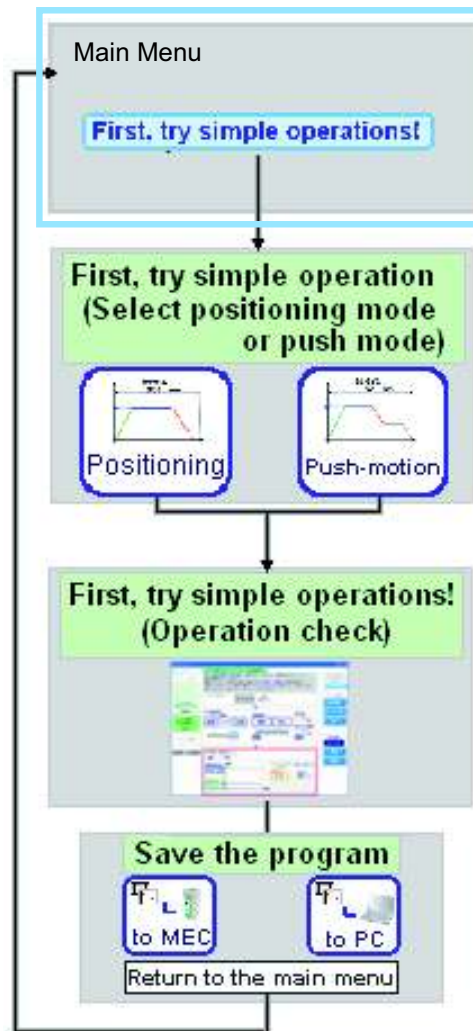


For ERC3, [MEC Controller Operation Panel Function Details] button is not shown since there is no explanation for the "operation panel function details".



The operation flow of each menu is explained.

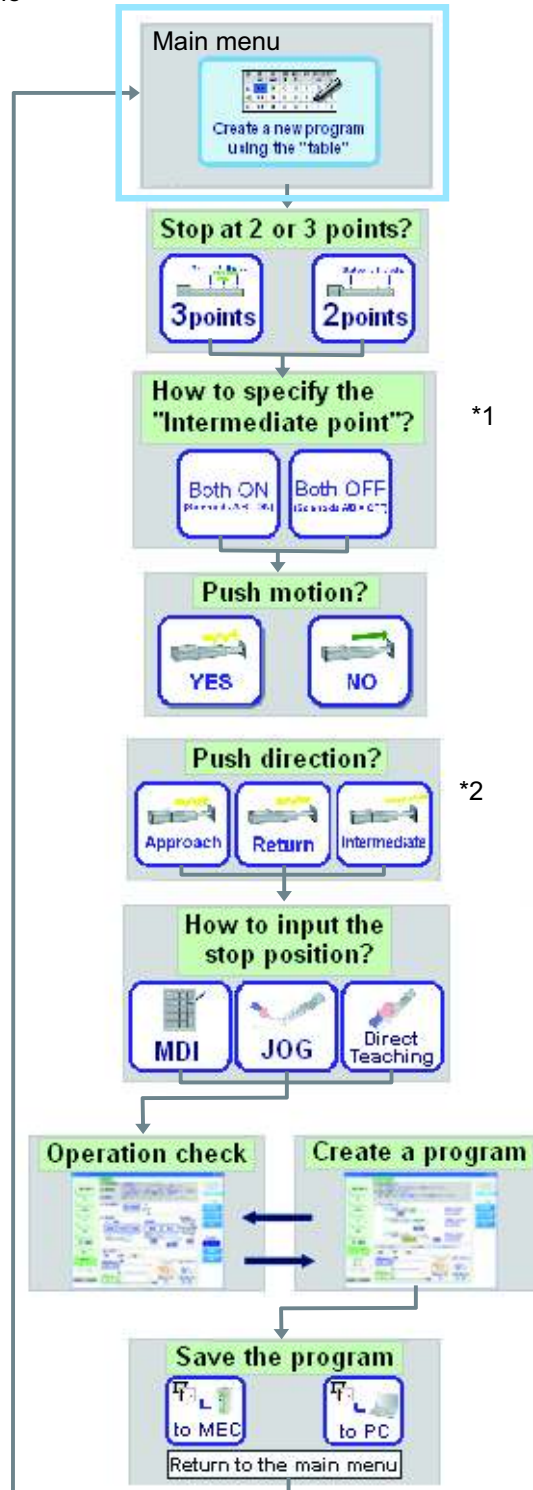
## 3.1 First, Try Moving an Actuator





## 3.2 Creating a Program

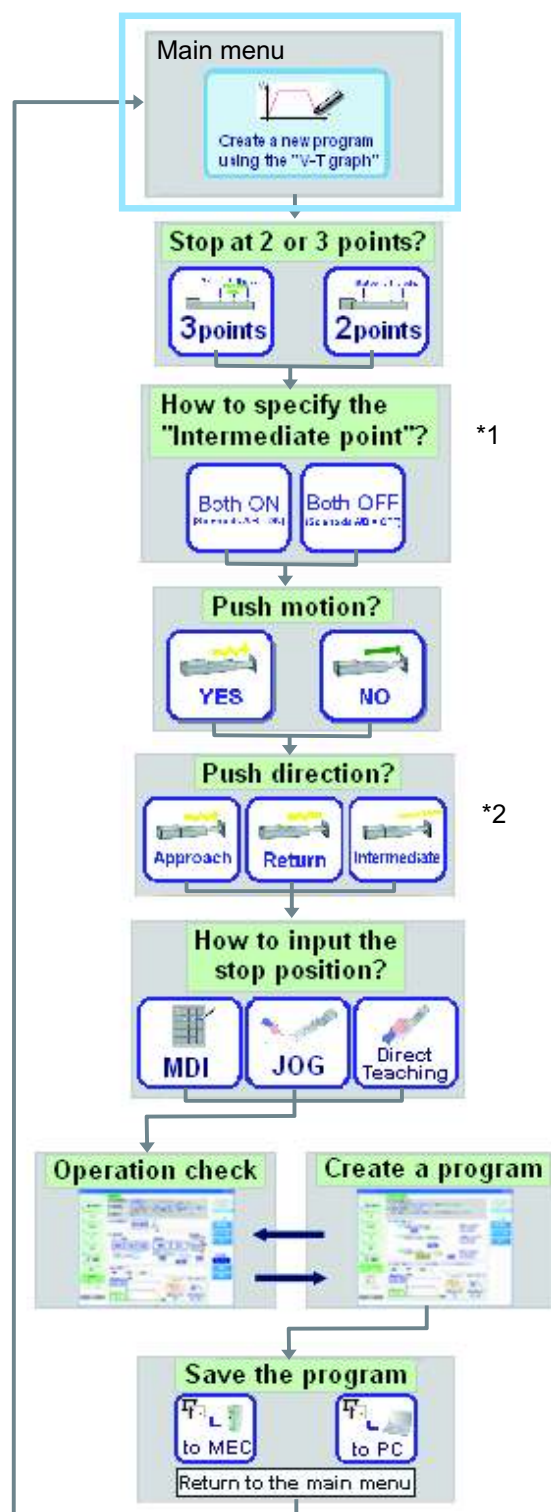
### 3.2.1 Using the "table"



\*1 This screen is not displayed if "Stop at 2 points" is selected as the specification for stopping positions.

\*2 This screen is not displayed if "NO" is selected for push motion.

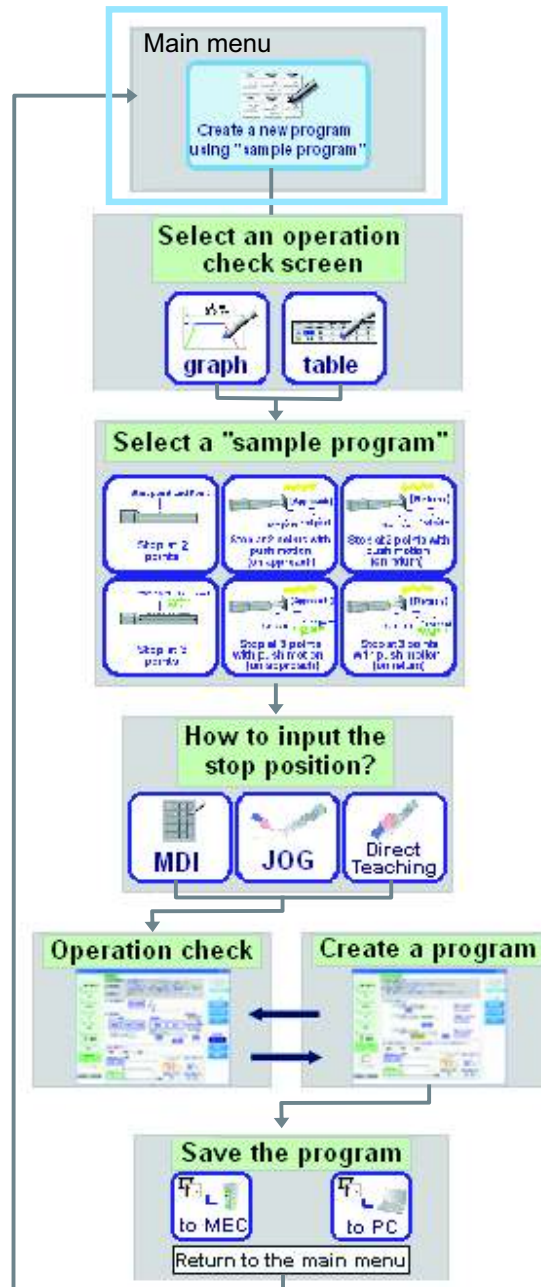
## 3.2.2 Using the “V-T Graph”



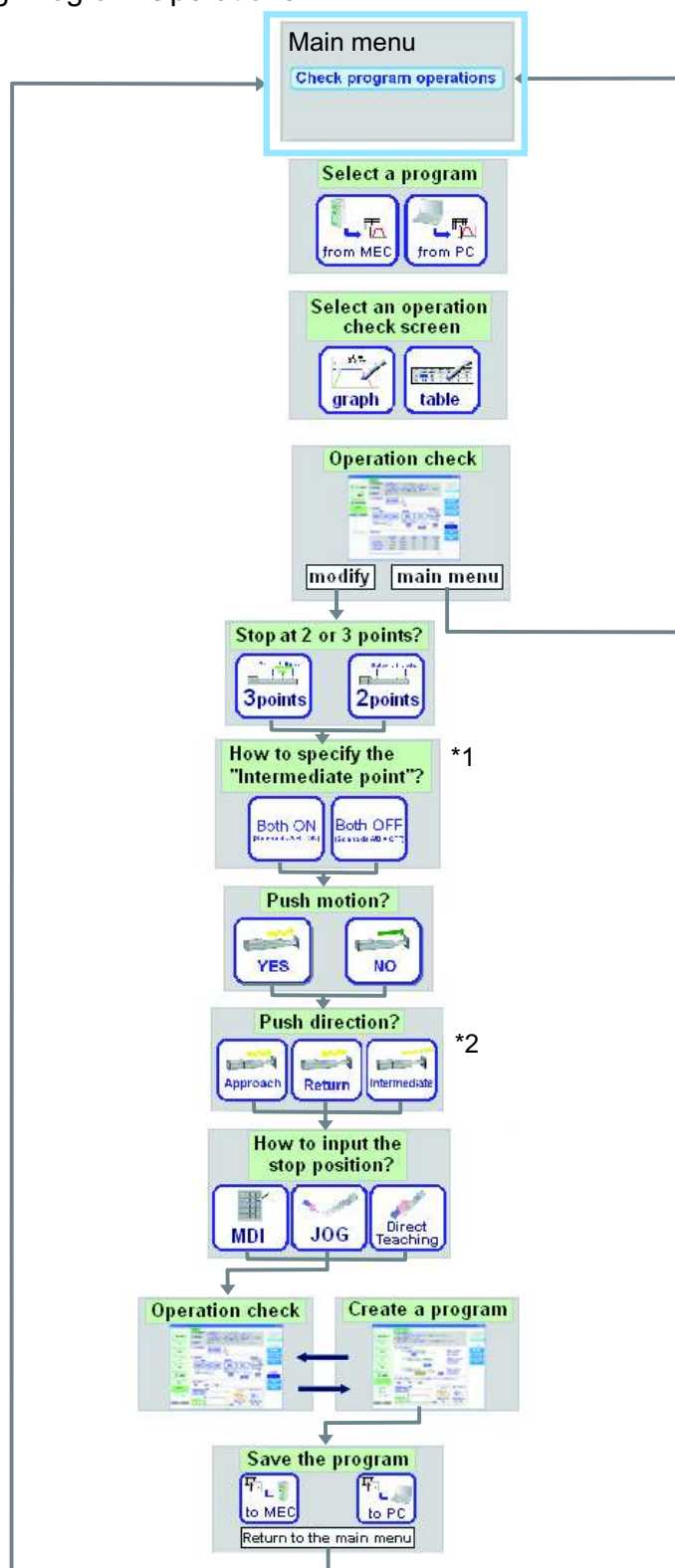
\*1 This screen is not displayed if “Stop at 2 points” is selected as the specification for stopping positions.

\*2 This screen is not displayed if “NO” is selected for push motion.

## 3.2.3 Using "sample program"



## 3.3 Checking Program Operations



\*1 This screen is not displayed if "Stop at 2 points" is selected as the specification for stopping positions.

\*2 This screen is not displayed if "NO" is selected for push motion.

## 4. Creating a Program

Programs to move actuators can be created by one of the following two methods:

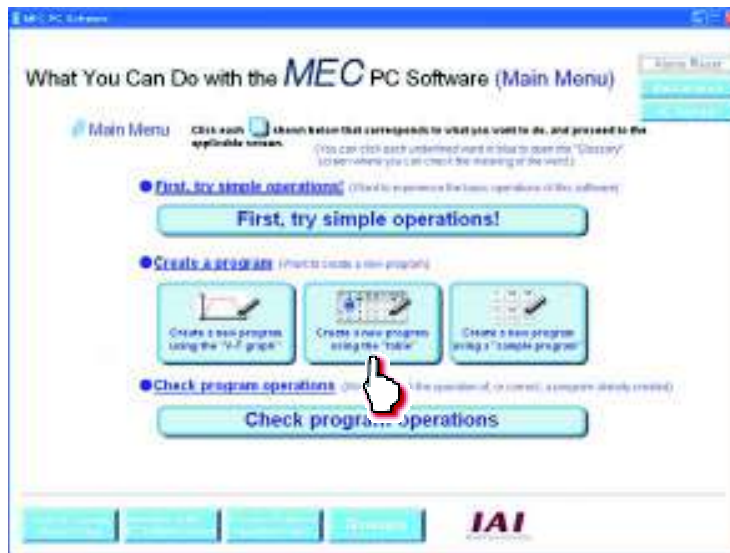
- Create an operation condition table to move the actuator  
[Refer to 4.1, "Creating an Operation Condition Table to Move the Actuator."]
- Create a speed vs. time graph to move the actuator  
[Refer to 4.3, "Creating a Speed vs. Time Graph to Move the Actuator."]
- Move the actuator using a sample program  
[Refer to 4.4, "Moving the Actuator Using a Sample Program."]

### 4.1 Creating an Operation Condition Table to Move the Actuator

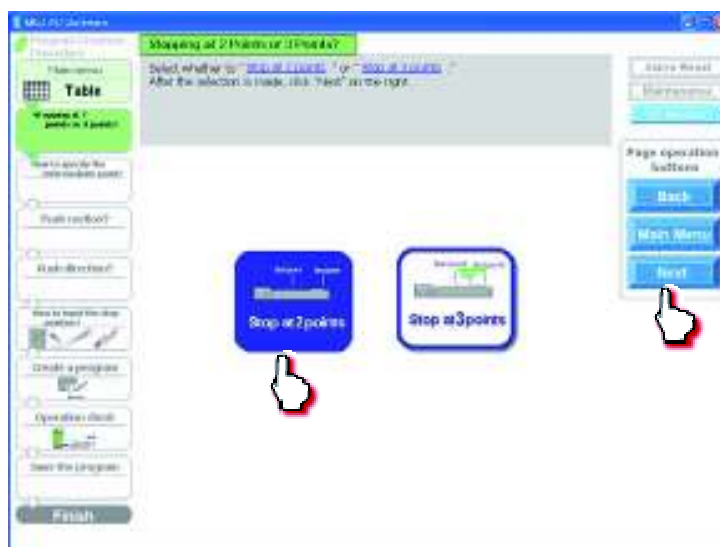
In this method, you set the operation conditions of the actuator in the operation condition table to move the actuator.

Click [Create a new program using the "table"] from the main menu.

Set the necessary conditions according to the onscreen instructions.

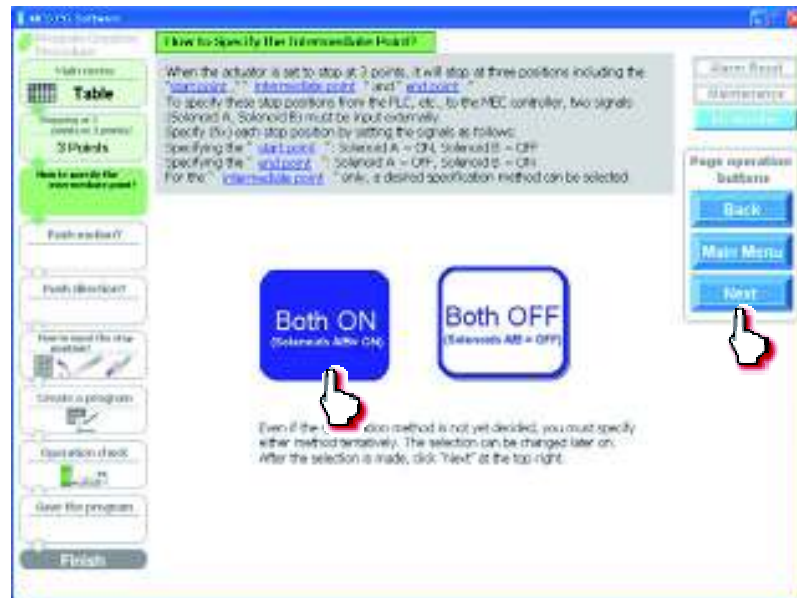


- [1] Select the number of stopping positions by clicking [Stop at 2 points] or [Stop at 3 points]. Once you have made the selection, click [Next].

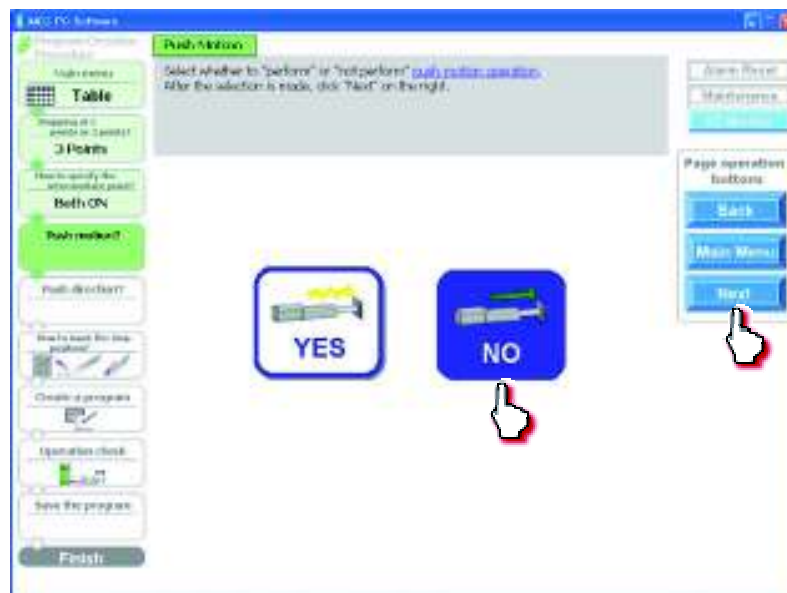


# PMEC/A MEC

- [2] If you have selected “Stop at 3 points,” select whether to turn both of solenoids A and B (ST0 and ST1 signals) OFF or turn both solenoids ON for the positioning to the intermediate point. Once you have made the selection, click [Next].



- [3] Select whether to “YES” or “NO” for push motion. Once you have made the selection, click [Next].





# PMEC/A MEC

- [4] If you have selected “YES” to perform push-motion operation, select “Approach” or “Return” as the push direction.

If the actuator is stopping at 3 points, you can also select “Intermediate.”

Once you have made the selection, click [Next].

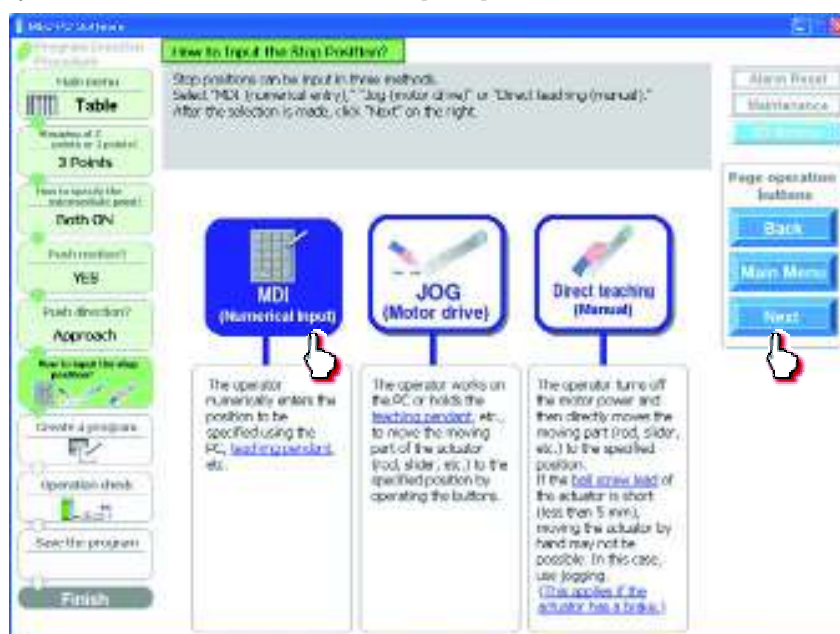


- [5] Select the stopping position input method from among “MDI (Numerical input),” “JOG (Motor drive)” and “Direct teaching (Manual).”

[Stopping position input by MDI (Numerical input)]

Select “MDI (Numerical input).”

Once you have made the selection, click [Next].

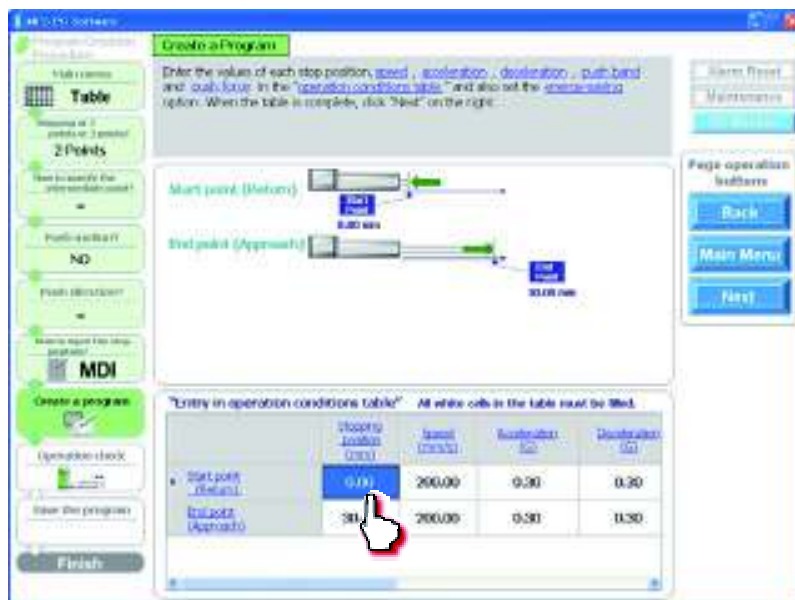


# PMEC/A MEC

Set values in the stopping position fields of the operation condition table.

[Refer to 4.2, "Setting the Operation Conditions."]

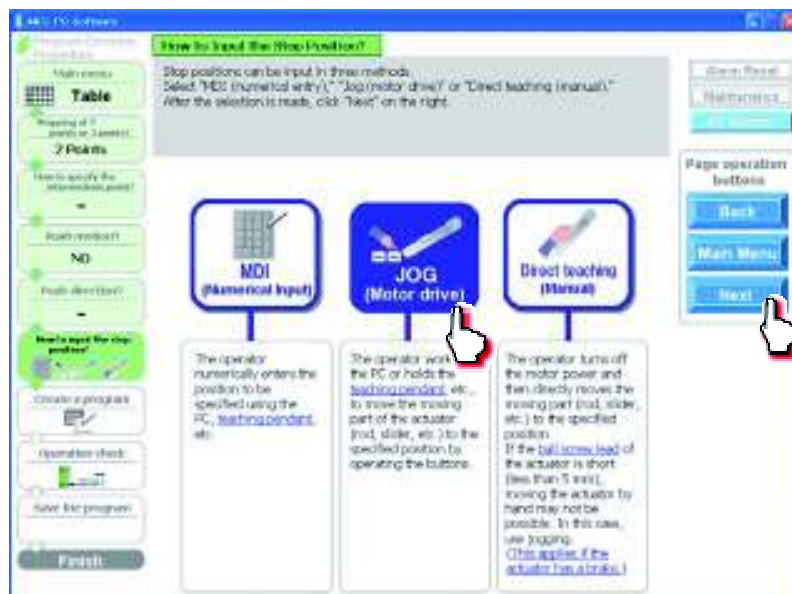
When setting a value of the stopping position corresponding to the end point, click the field of the operation condition table you want to set, as shown below. Enter a value from the keyboard and then press the ENTER key. The value will be input.



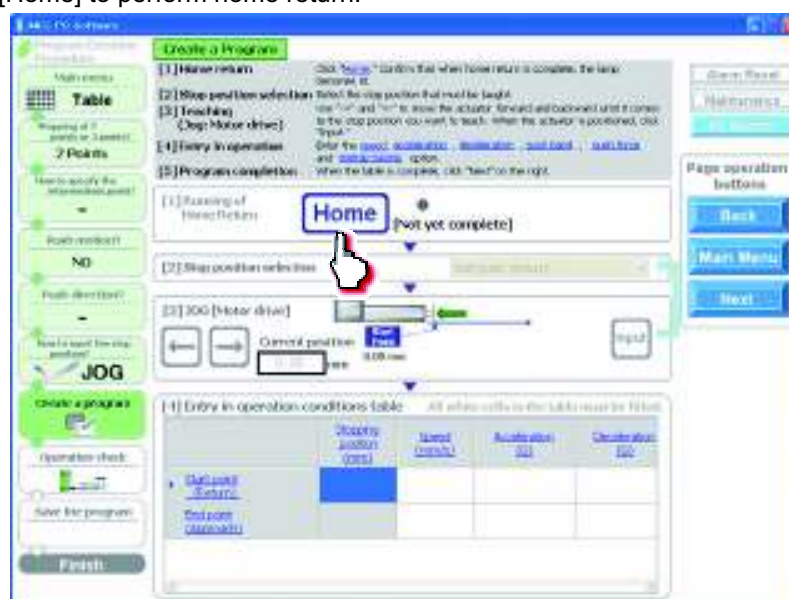


# PMEC/A MEC

[Stopping position input by jogging]  
 Select "JOG (Motor drive)."  
 Once you have made the selection, click [Next].



Click [Home] to perform home return.

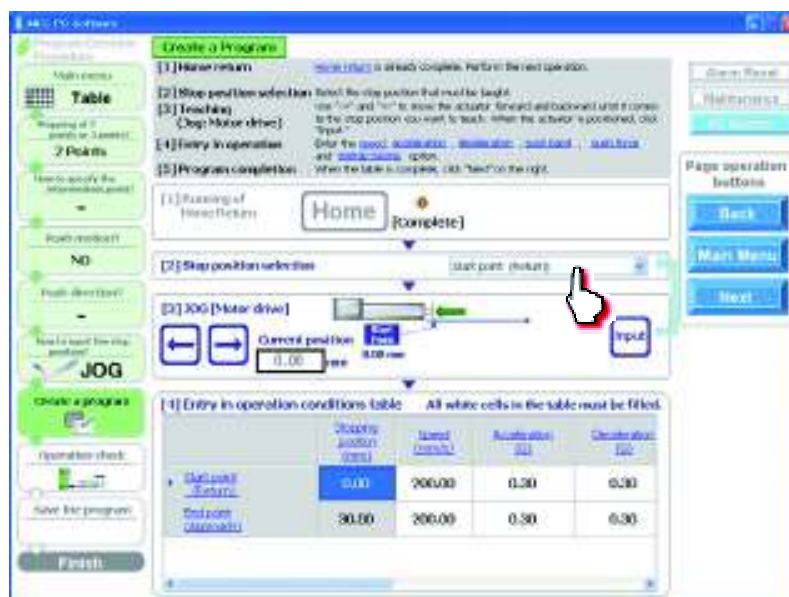


When the home return is complete, the lamp next to the button comes on and the text below it changes to [Complete].



# PMEC/A MEC

Select the stopping position you must teach the actuator.



When stopping at 3 points

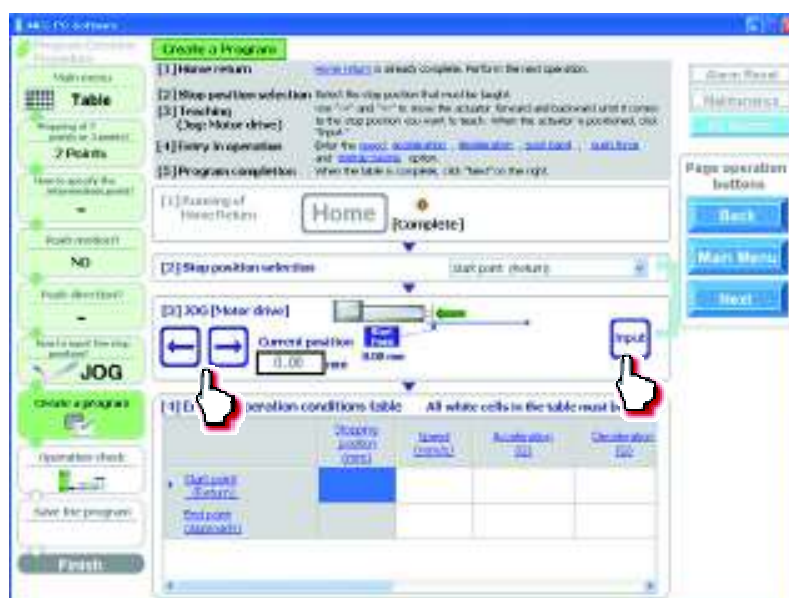
Start point (Return)	▼
Start point (Return)	
Intermediate point (Intermediate)	
End point(Approach)	

When stopping at 2 points

Start point (Return)	▼
Start point (Return)	
End point(Approach)	

Click [←]/[→] to move the actuator to the stopping position.

Click [Input]. The current position is saved as the stopping position you have selected.

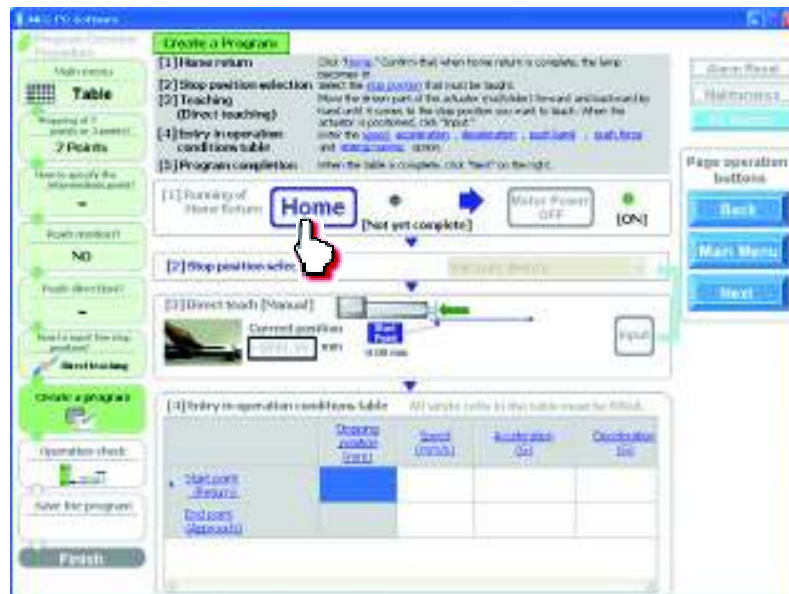


# PMEC/A MEC

[Stopping position input by direct teaching (manual)]  
Select "Direct teaching (Manual)."  
Once you have made the selection, click [Next].



Click [Home] to perform home return.

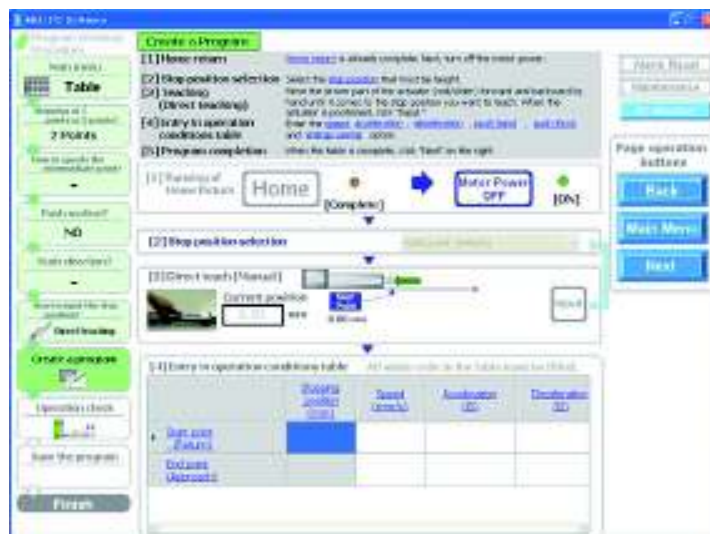


When the home return is complete, the lamp next to the button comes on and the text below it changes to [Complete].



# PMEC/A MEC

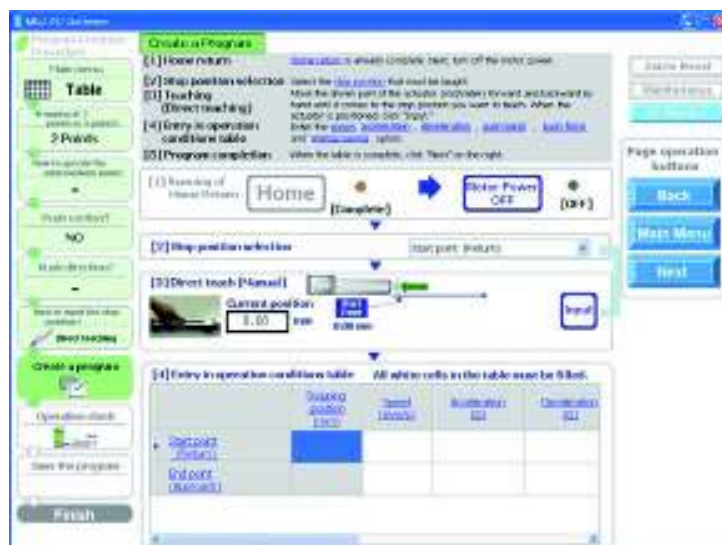
Click [Motor Power OFF] to turn off the motor power.  
The motor power (servo) turns off.



## ⚠ Caution:

If you are releasing the brake of a vertically installed actuator, be careful not to let your hand pinched or the work part damaged by the actuator falling due to its own weight.

Select the stopping position you must teach the actuator.



When stopping at 3 points

Start point (Return)	▼
Start point (Return)	
Intermediate point (Intermediate)	
End point (Approach)	

When stopping at 2 points

Start point (Return)	▼
Start point (Return)	
End point (Approach)	



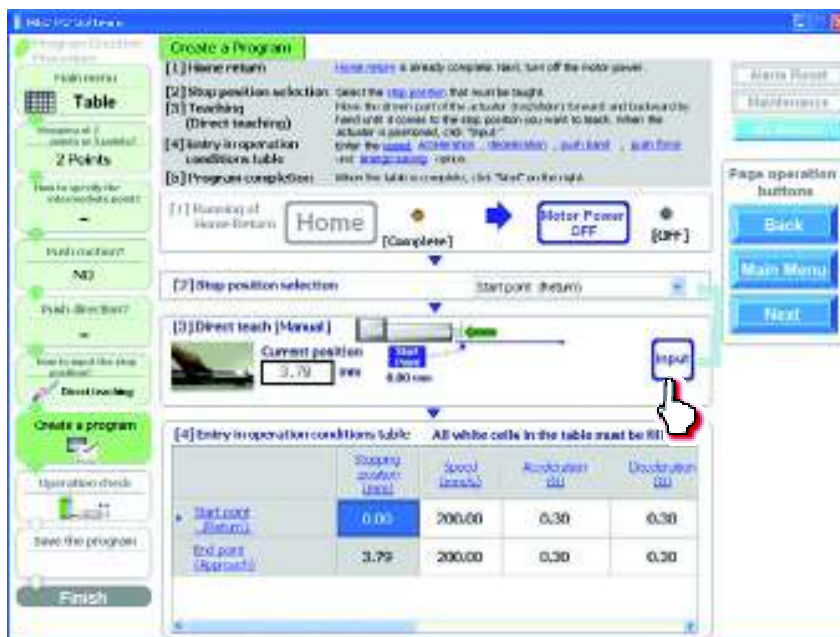
# PMEC/A MEC

Manually move the actuator to the stopping position.



The position is shown in the current position field.

Click [Input]. The current position is saved as the stopping position you have selected.

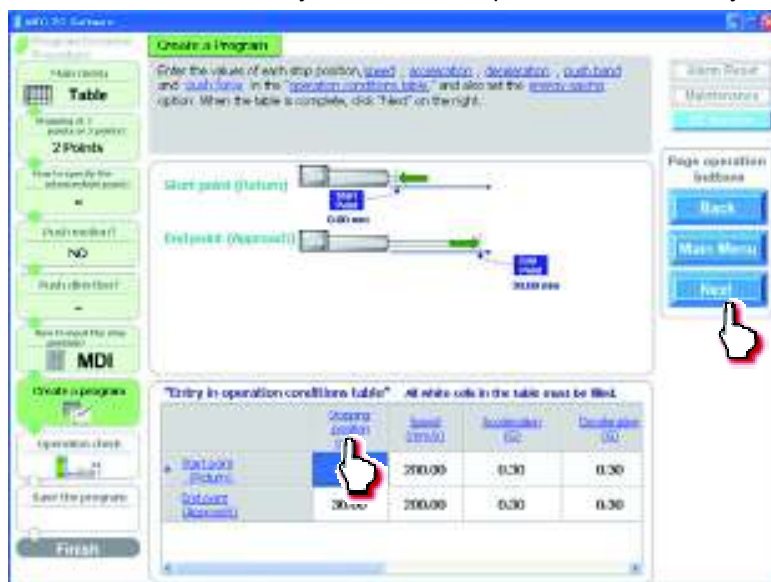


# PMEC/A MEC

- [6] Set the values of speed, acceleration, deceleration, push band, push force and energy saving setting, as necessary, in the applicable fields of the operation condition table.

[Refer to 4.2, "Setting the Operation Conditions."]

For example, assume you want to set the value of the stopping position corresponding to the start point. In this case, click the field of the operation condition table you want to set, as shown below. Enter a value from the keyboard and then press the ENTER key. The value will be input.



When all necessary values have been input, be sure to click [Next].

When [Next] is clicked, the confirmation message appears with the message "Do you want to start transferring the data?"

Click [Yes]. Clicking [Yes] transfers the values in the operation condition table to the controller.

(Note) The values in the operation condition table will not be transferred to the controller if [No] is clicked.



# PMEC/A MEC

The following message appears while the data is being transferred.  
When the transfer is complete, the display changes to the next screen for operation check.



- [7] Now you are ready to operate the actuator, so let's perform operation check.  
If home return is not completed yet, click [Home] to perform home return.  
If operation check is not performed, click [Next] to proceed to saving the program.



When the home return is complete, the lamp next to the button comes on and the text below it changes to [Complete].



# PMEC/A MEC

- [8] Perform operation check.  
Two types of operations are available, step operation and continuous operation.  
When the operation check is complete, click [Next].

[Safety Speed Setting]



Enable: Click [Enable] if you want to operate the actuator at the safety speed<sup>\*1</sup>.

Disable: Click [Disable] if you want to operate the actuator at a speed above the safety speed<sup>\*1</sup>.

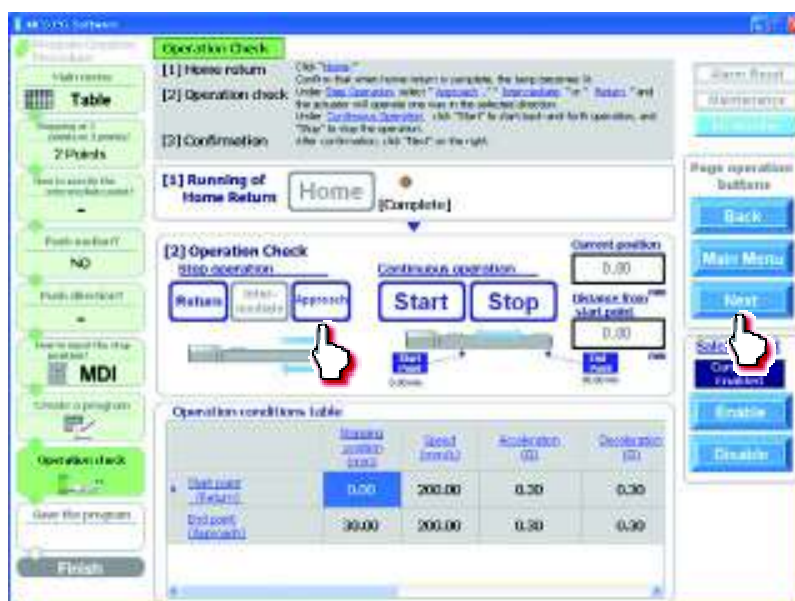
<sup>\*1</sup> Safety speed: The maximum speed is set to 100 mm/s or below.

[Step operation]

Approach (end point): Click [Approach] to move the actuator toward the end point.

Return (start point): Click [Return] to move the actuator toward the start point.

Intermediate point: Click [Intermediate] to move the actuator toward the intermediate point in a program where the actuator stops at 3 points.



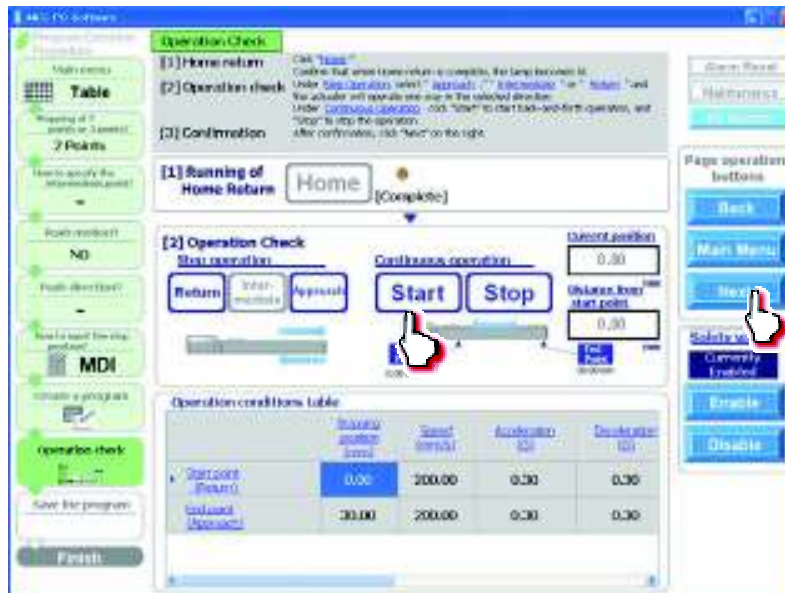


# PMEC/A MEC

[Continuous operation]

**Start:** Click [Start] to move the actuator forward and backward continuously (between the end point and start point) in a program where the actuator stops at 2 points. Similarly, click [Start] to move the actuator forward and backward continuously (between the end point and start point via the intermediate point) in a program where the actuator stops at 3 points.

**Stop:** Click [Stop] to stop the continuous operation.

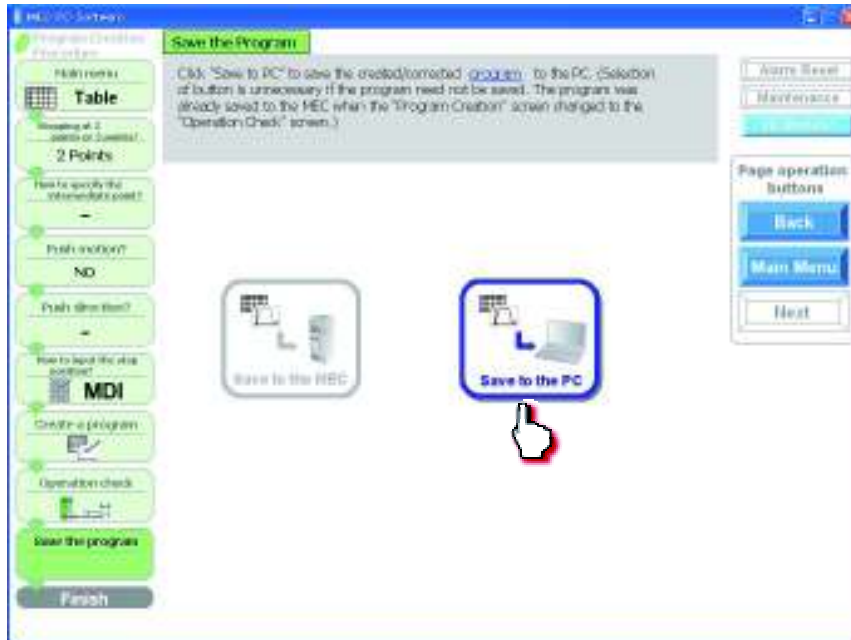


# PMEC/A MEC

[9] Saving the program

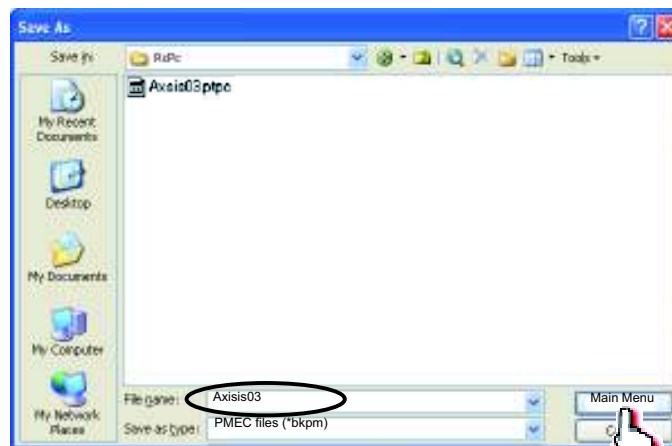
[Saving to the PC]

To save the program (operation condition table) you have created to the PC, click "Save to the PC."



The "Save As" screen appears.

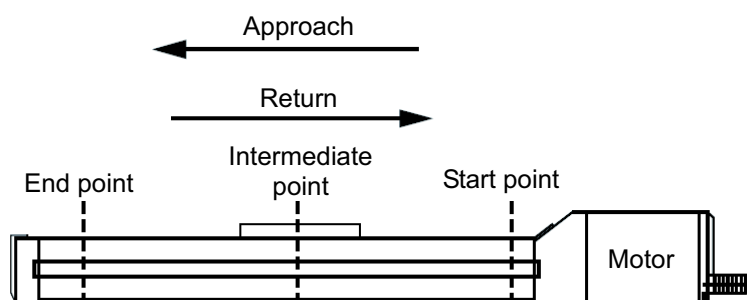
Enter a desired file name and click [Save (S)], and the program (operation condition table) you have created will be saved to the PC.



Once the program has been saved, click [Main Menu]. The screen returns to the main menu.

## 4.2 Setting the Operation Conditions

Each controller has an operation condition table like the one shown below in its memory. Positioning is performed according to the data in this operation condition table. Values are set using the operation panel on the front face of the controller, or the MEC PC software or other teaching tool.



Positioning Information

Stopping position	[1] Position [mm]	[2] Speed [mm/s]	[3] Acceleration [G]	[4] Deceleration [G]	[5] Push force [%]	[6] Push band [mm]	[7] Energy saving
Start point (approach)	10.00	50.00	0.1	0.1	0	0	Enable
Intermediate point (intermediate)	50.00	50.00	0.1	0.1	70	1.00	Enable
End point (return)	100.00	50.00	0.1	0.1	0	0	Enable

[1] Position [mm]: This is the position at which the actuator will stop at the completion of positioning. Set a position from the home. The following positions have the relationship shown below:

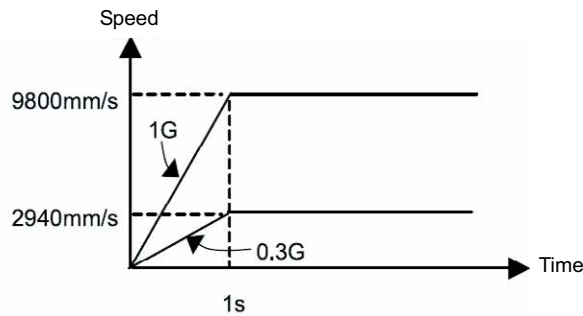
Start point < Intermediate point < End point

[2] Speed [mm/s]: Set the speed (mm/s) at which the actuator will move. The maximum speed varies from one actuator to another. Refer to the catalog or operation manual of your actuator.

[3] Acceleration [G]: Set the acceleration at start.

[4] Deceleration [G] Set the deceleration (G) at stop.

(Reference) Acceleration is explained. The same concept applies to deceleration, as well.  
 1 G = 9800 mm/s<sup>2</sup>: Acceleration where the actuator can accelerate to 9800 mm/s in 1 second.  
 0.3 G: Acceleration where the actuator can accelerate to 9800 mm/s x 0.3 = 2940 mm/s in 1 second



## ⚠ Caution:

### Setting the acceleration/deceleration

- (1) Make sure the acceleration/deceleration you have set does not exceed the rated acceleration/deceleration specified in the catalog or operation manual. If the set acceleration/deceleration exceeds the rated acceleration/deceleration, the life of the actuator may become significantly shorter.
- (2) If the actuator or work part receives shock or generates vibration, lower the acceleration/deceleration. If the actuator is used continuously in such condition subject to shock/vibration, the life of the actuator will become significantly shorter.
- (3) If the transferring mass is significantly smaller than the rated loading capacity of the actuator, an acceleration/deceleration greater than the rating may be set. Increasing the acceleration/deceleration is a way to reduce the tact time, so contact IAI for details. When you do so, let us know the weight, shape and installation method of the work part as well as the installation condition (horizontal or vertical) of the actuator.

[5] Push force [%]: Set the push torque (current-limiting value) of the push-motion operation in %. If the current-limiting value (%) is increased, the push force increases. When it is set to 0, it becomes the positioning operation.

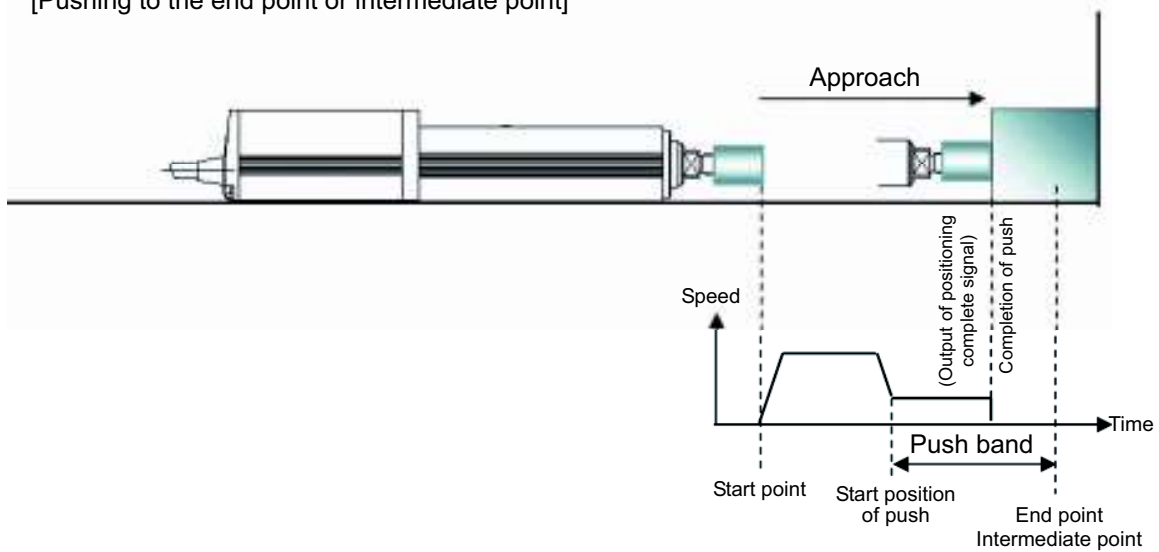
For the relationship between push force and current limiting value (%), refer to the catalog or MEC controller operation manual.

[6] Push band [mm]: Set the distance the actuator will travel during push-motion operation.

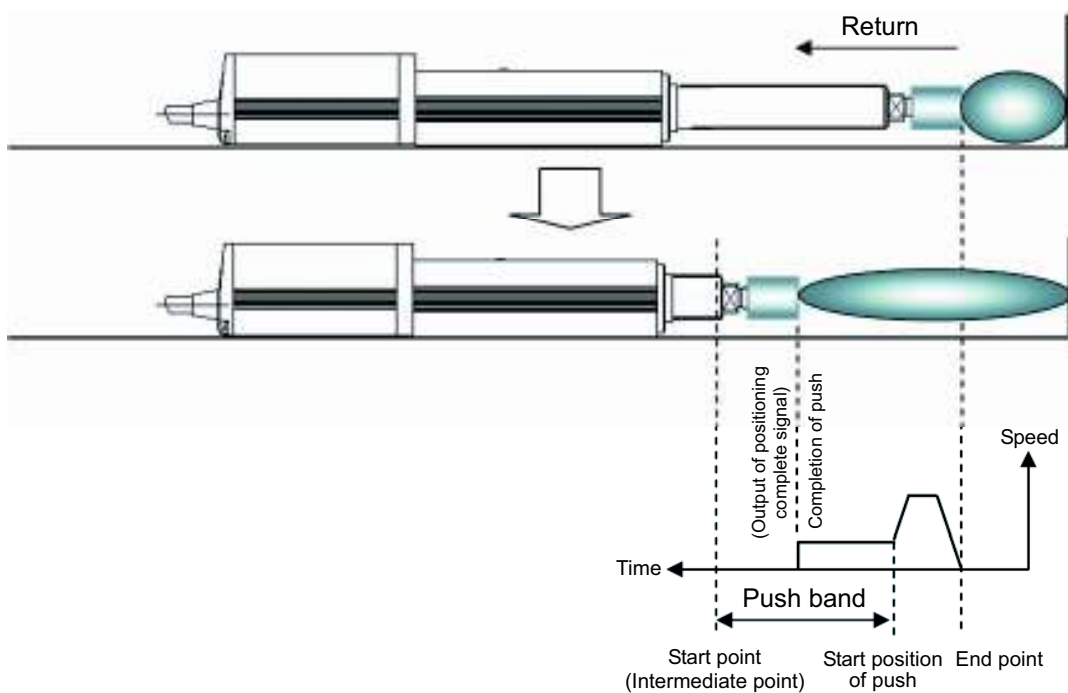
When push-motion operation is performed, the actuator moves at the speed and rated torque set as part of the positioning information, just like in normal positioning operation, until the remaining travel enters the range set here. Once the remaining travels is in this range, the actuator moves by pushing the work part until the position set in [1].

The speed at which the actuator moves during push-motion operation is set as the push speed in parameter No. 7. (For the speeds of the push-motion operation, refer to the specifications of the connectable actuators provided in the appendix of the MEC controller operation manual.) Do not specify any setting that exceeds this speed. If the setting in [2] is at or below the push speed, the push-motion operation is performed at the set speed. Actuator operations are illustrated in the figure below when a push-motion operation is performed toward the end point, start point and intermediate point.

[Pushing to the end point or intermediate point]



[Pushing (= pulling) to the start point or intermediate point]



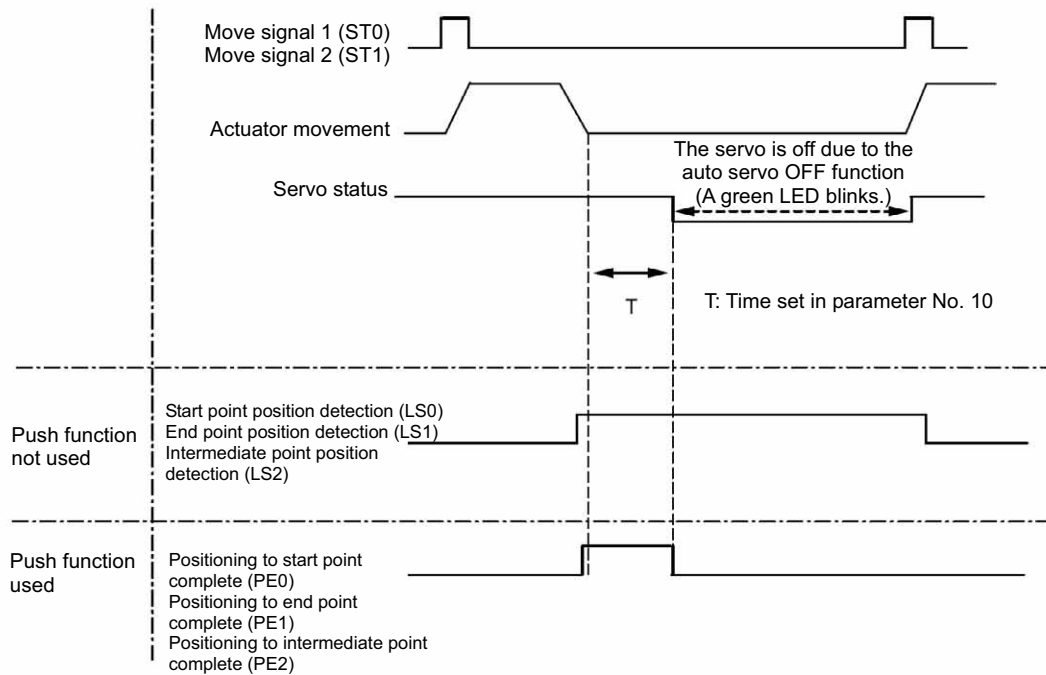
[7] Energy saving function: When the energy saving function is enabled, the motor power (servo) will turn off automatically after a specified time to save the power consumed after completion of positioning.  
Set this time beforehand using a parameter.

Parameter No.	Parameter name	Default	Setting range
10	Auto servo OFF delay time [SEC]	1	0 to 9999

# PMEC/A MEC

## [Auto motor power (servo) OFF\*1]

When a specified time elapses after positioning has completed, the motor power (servo) turns off automatically. Once the next positioning command is issued, the motor (servo) will turn on automatically and the actuator will perform positioning operation. This way, power consumption can be reduced because no holding current is supplied while the actuator is at standstill.



## [Position detection output signal status when the push function is not used]

Even if the motor power (servo) turns off, the start point position detection signal (LS0), end point position detection signal (LS1) or intermediate point position detection signal (LS2) will turn ON according to the applicable position, just like when the sensors are used, as long as the actuator position is within the positioning band (parameter No. 1). Accordingly, the position detection signal, once it has turned ON, will remain ON if the actuator does not move after the completion of positioning.

## [Positioning complete signal status when the push motion is used]

In push-motion operation, the motor power (servo) does not turn off automatically while the actuator is pushing the work part. If the actuator has missed the work part, the motor power (servo) turns off automatically. Once the motor power (servo) turns off, the positioning complete status is lost. Accordingly, all of the push complete signal 0 (PE0), push complete signal 1 (PE1) and push complete signal 2 (PE2) will turn OFF.

### Caution:

There is no holding torque while the servo is off due to the auto servo OFF function. Because the actuator will move if an external force is applied in this condition, pay due attention to contact and safety when setting this function.

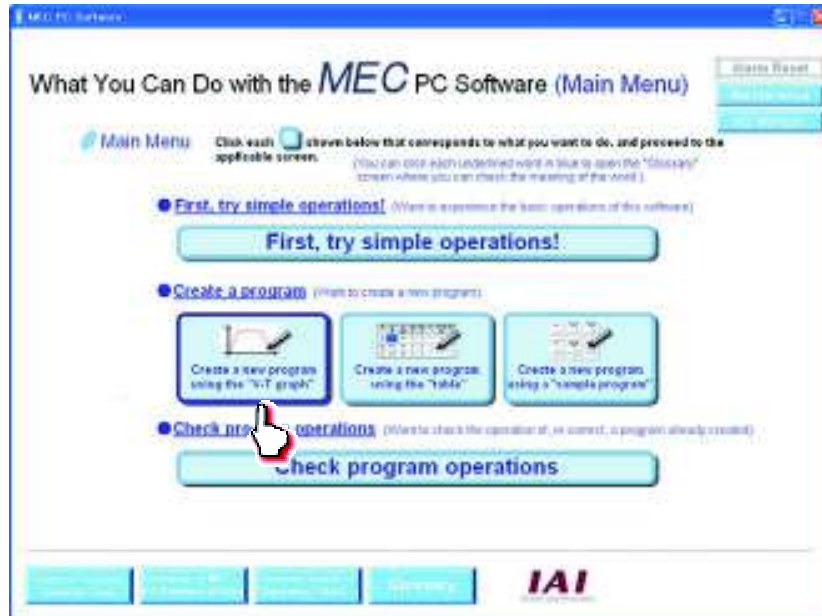
\*1 In the operation check performed in the MEC PC software, the auto motor power (servo) OFF function is not implemented. This function is enabled only during PIO operation.

# PMEC/A MEC

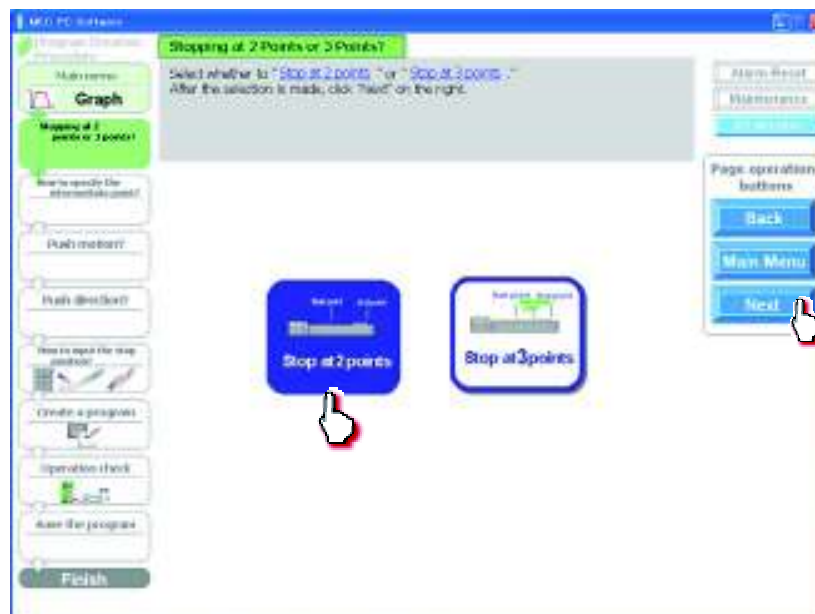
## 4.3 Creating a Speed vs. Time Graph to Move the Actuator

In this method, you create a speed vs. time graph to move the actuator.

Click [Create a new program using the "V-T graph"] from the main menu. Set the necessary items according to the onscreen instructions.



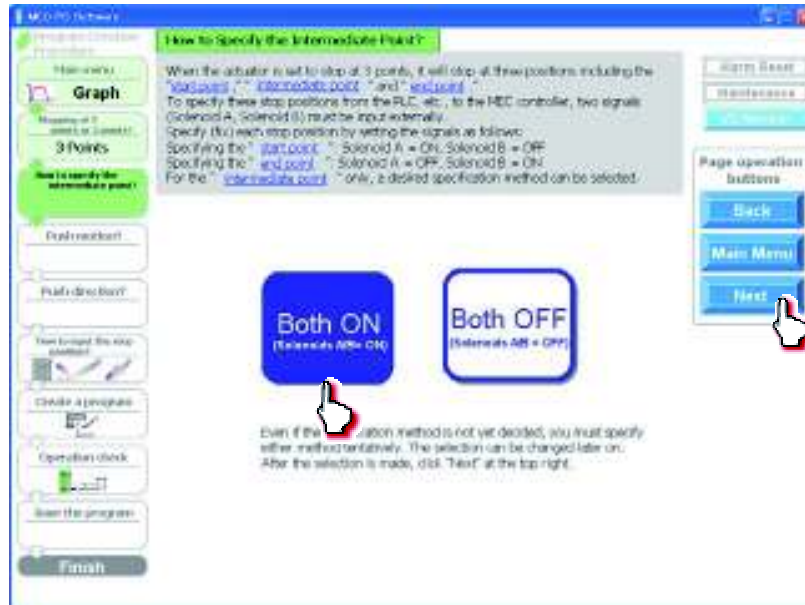
- [1] Select the number of stopping positions by clicking [Stop at 2 points] or [Stop at 3 points]. Once you have made the selection, click [Next].





# PMEC/A MEC

- [2] If you have selected “Stop at 3 points,” select whether to turn both of solenoids A and B (ST0 and ST1 signals) OFF or turn both solenoids ON for the positioning to the intermediate point. Once you have made the selection, click [Next].



- [3] Select whether to “YES” or “NO” for push motion. Once you have made the selection, click [Next].





- [4] If you have selected “YES” to perform push-motion operation, select “Approach” or “Return” as the push direction.

If the actuator is stopping at 3 points, you can also select “Intermediate.”  
Once you have made the selection, click [Next].

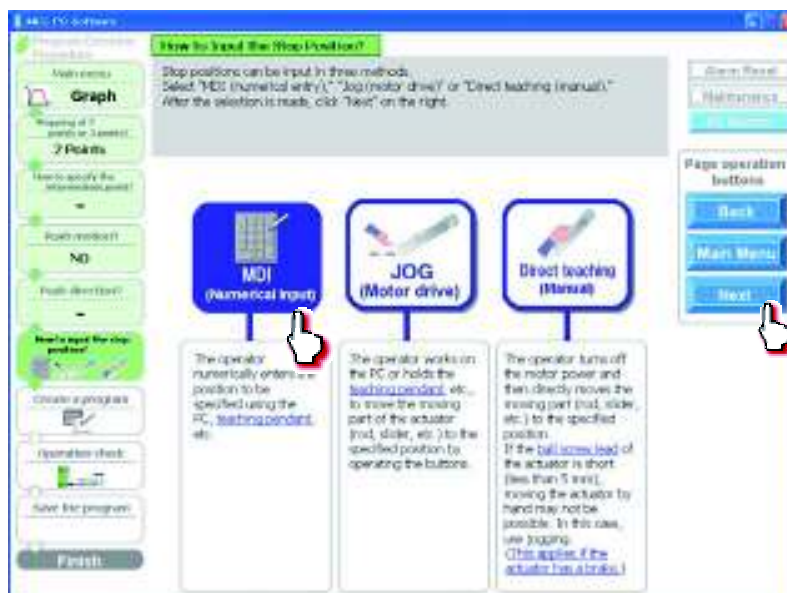


- [5] Select the stopping position input method from among “MDI (Numerical input),” “JOG (Motor drive)” and “Direct teaching (Manual).”

[Stopping position input by MDI (Numerical input)]

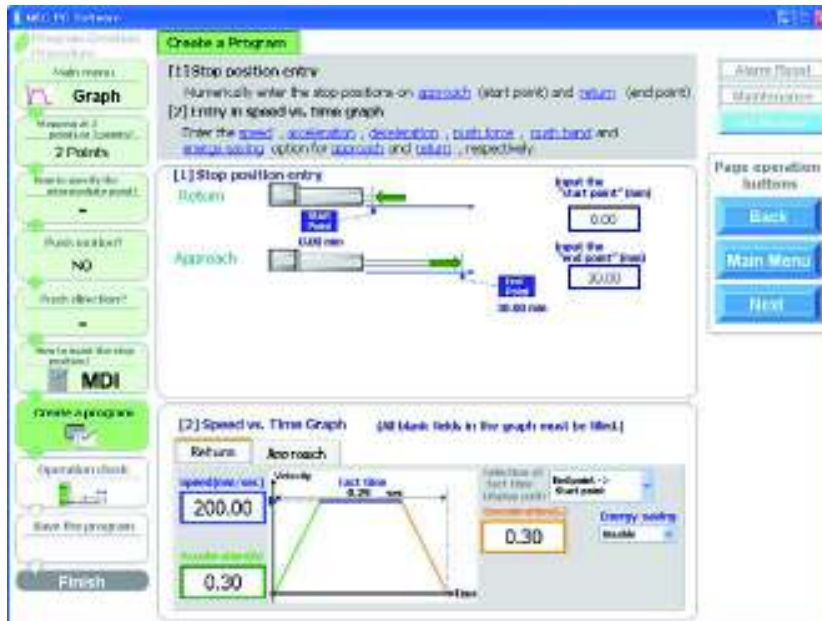
Select “MDI (Numerical input).”

Once you have made the selection, click [Next].



# PMEC/A MEC

Set values for the stopping positions applicable to the “speed vs. time graph.”



# PMEC/A MEC

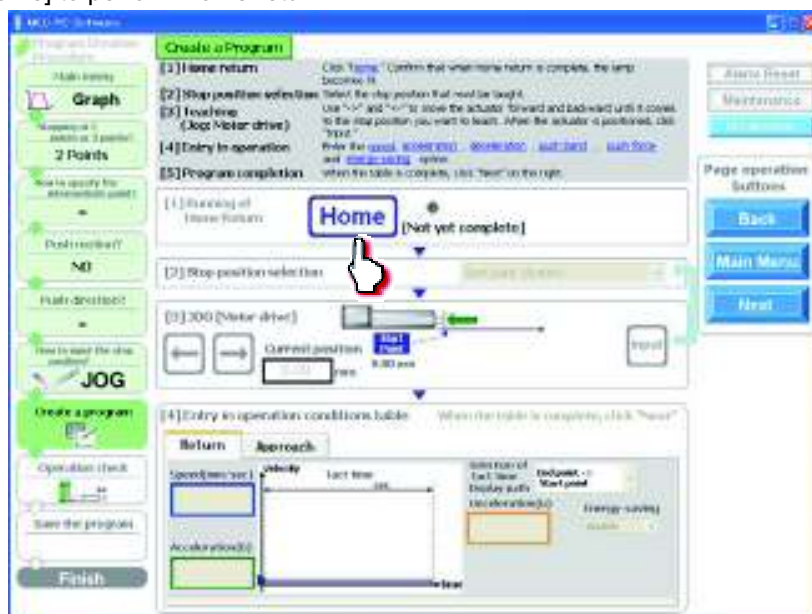
[Stopping position input by jogging]

Select "JOG (Motor drive)."

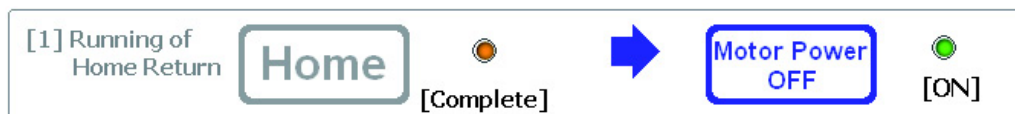
Once you have made the selection, click [Next].



Click [Home] to perform home return.

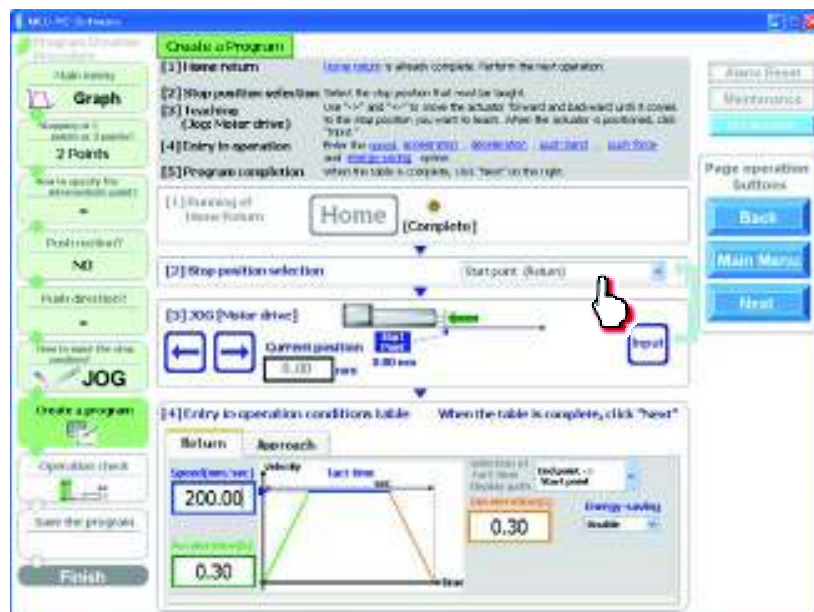


When the home return is complete, the lamp next to the button comes on and the text below it changes to [Complete].

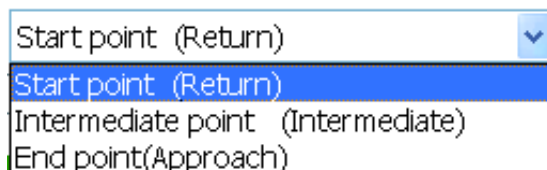


# PMEC/A MEC

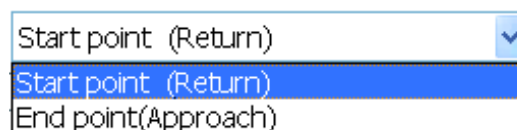
Select the stopping position you must teach the actuator.



When stopping at 3 points

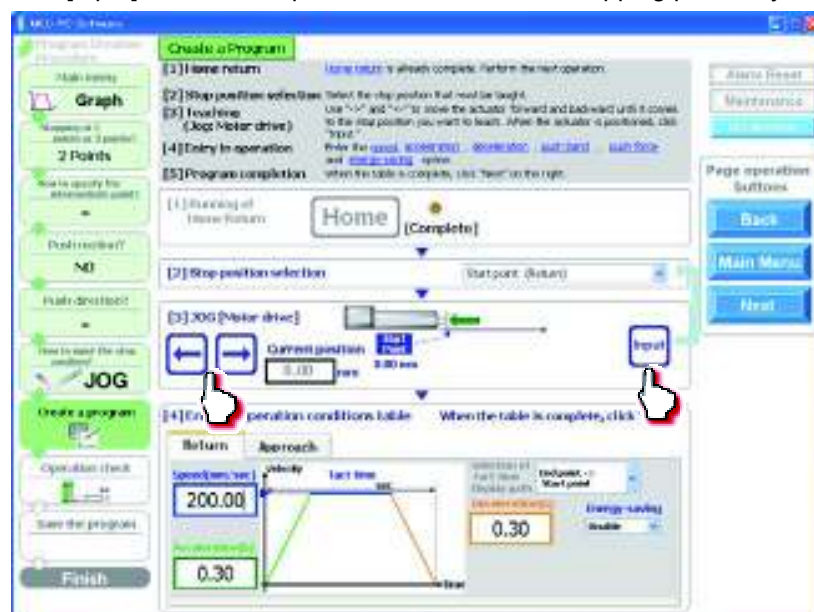


When stopping at 2 points



Click [←]/[→] to move the actuator to the stopping position.

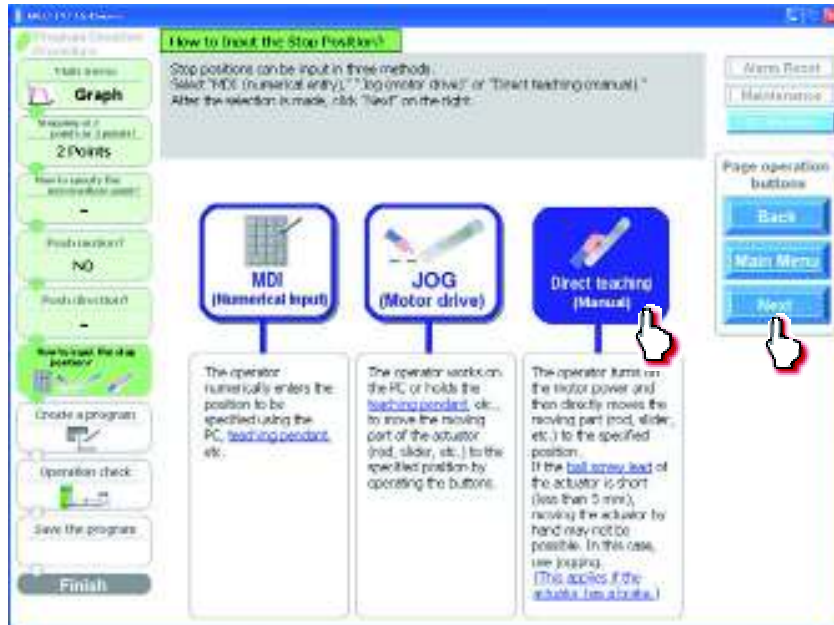
Click [Input]. The current position is saved as the stopping position you have selected.



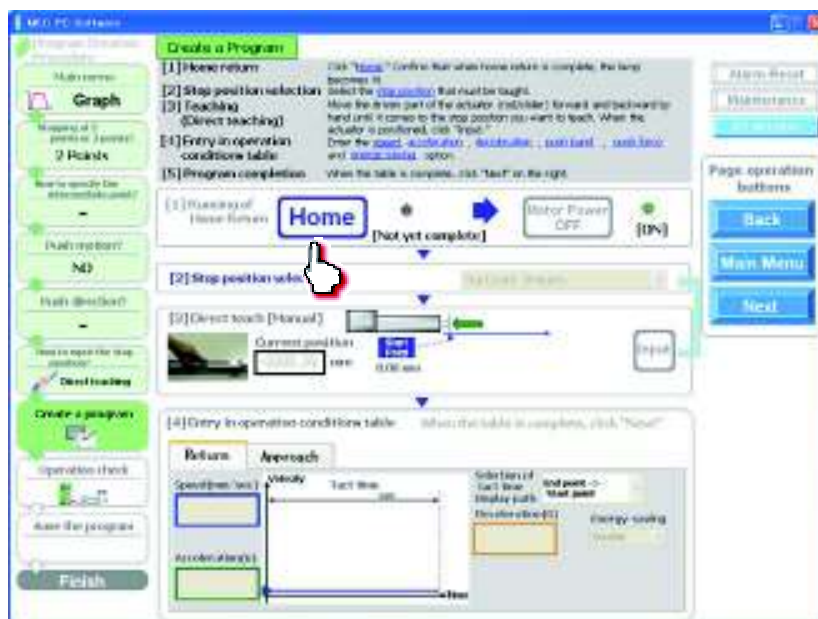


# PMEC/A MEC

[Stopping position input by direct teaching (manual)]  
Select "Direct teaching (Manual)."  
Once you have made the selection, click [Next].



Click [Home] to perform home return.

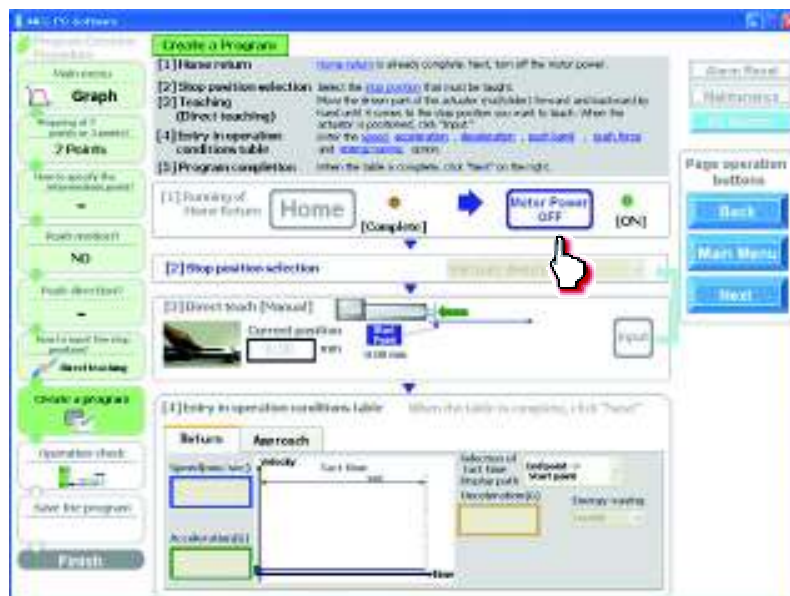


When the home return is complete, the lamp next to the button comes on and the text below it changes to [Complete].



# PMEC/A MEC

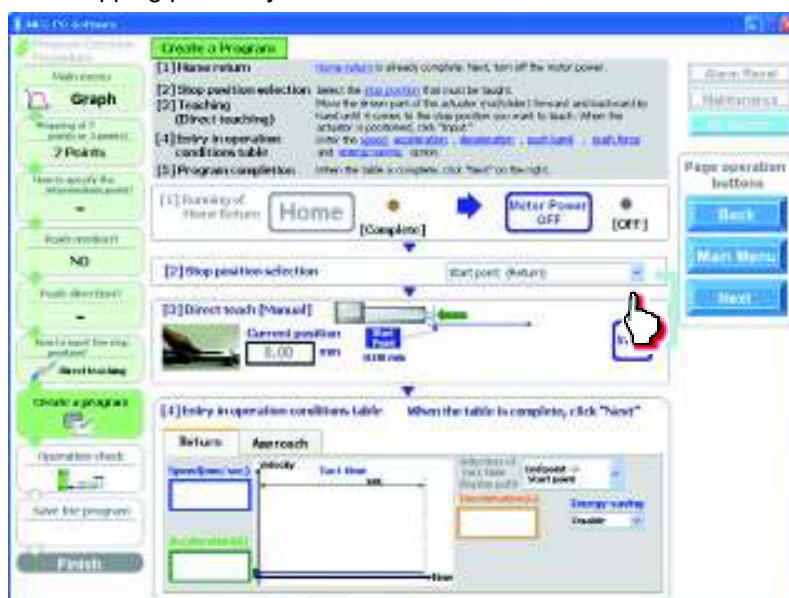
Click [Motor Power OFF] to turn off the motor power.  
The motor power (servo) turns off.



## ⚠ Caution:

If you are releasing the brake of a vertically installed actuator, be careful not to let your hand pinched or the work part damaged by the actuator falling due to its own weight.

Select the stopping position you must teach the actuator.



When stopping at 3 points

Start point (Return)	▼
Start point (Return)	
Intermediate point (Intermediate)	
End point(Approach)	

When stopping at 2 points

Start point (Return)	▼
Start point (Return)	
End point(Approach)	

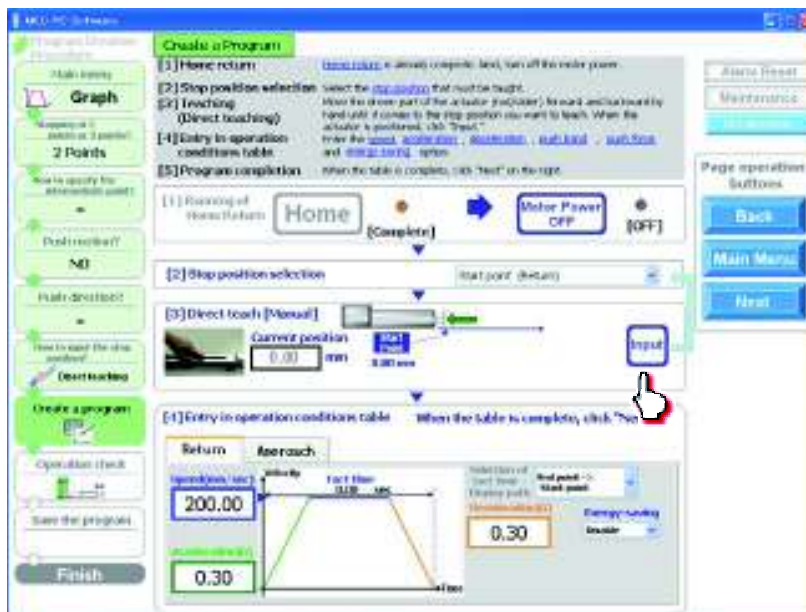
# PMEC/A MEC

Manually move the actuator to the stopping position.



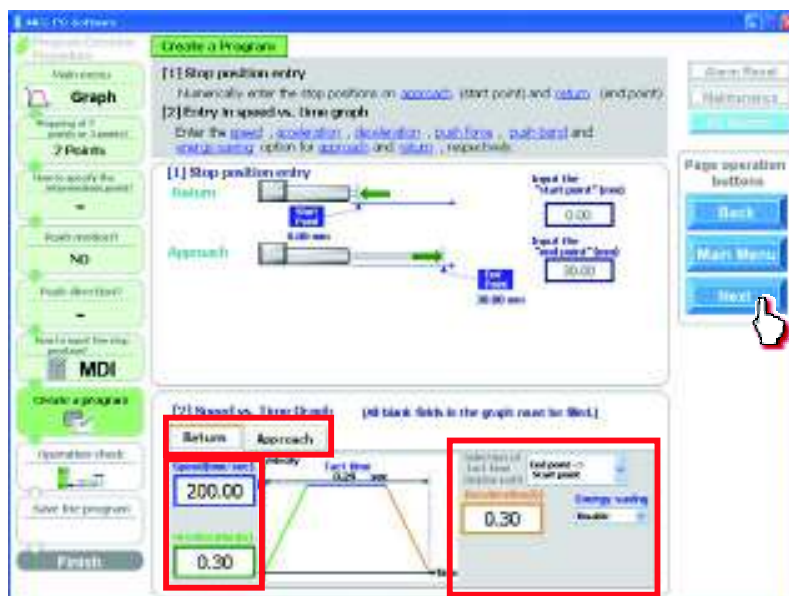
The position is shown in the current position field.

Click [Input]. The current position is saved as the stopping position you have selected.



# PMEC/A MEC

- [6] Select either the approach or return. If the actuator is stopping at 3 points, you can also select an intermediate point. Set values for the speed, acceleration, deceleration, push band and push force applicable to the speed vs. time graph. Select whether to enable or disable energy saving. Use the displayed tact time as a reference.  
(The screen is based on MDI (Numerical input).)

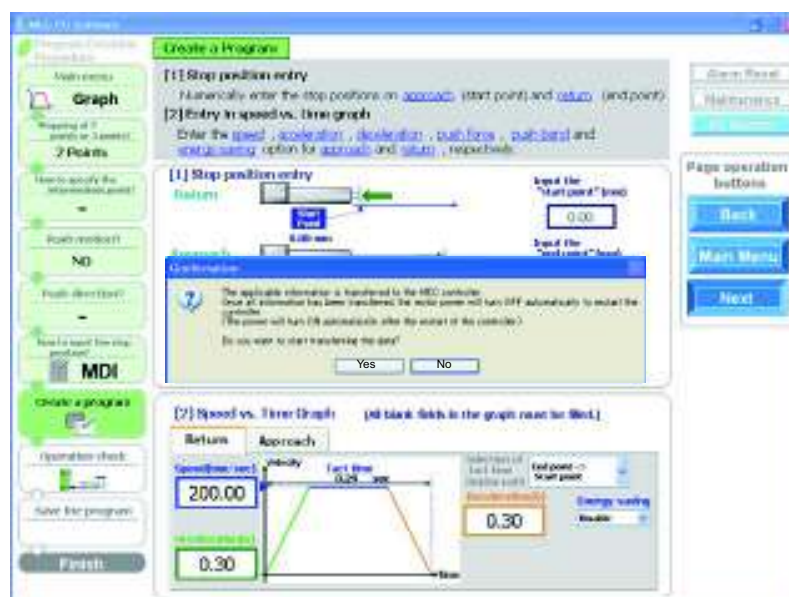


When all necessary values have been input, be sure to click [Next].

When [Next] is clicked, the confirmation message appears with the message "Do you want to start transferring the data?"

Click [Yes]. Clicking [Yes] transfers the values in the operation condition table to the controller.

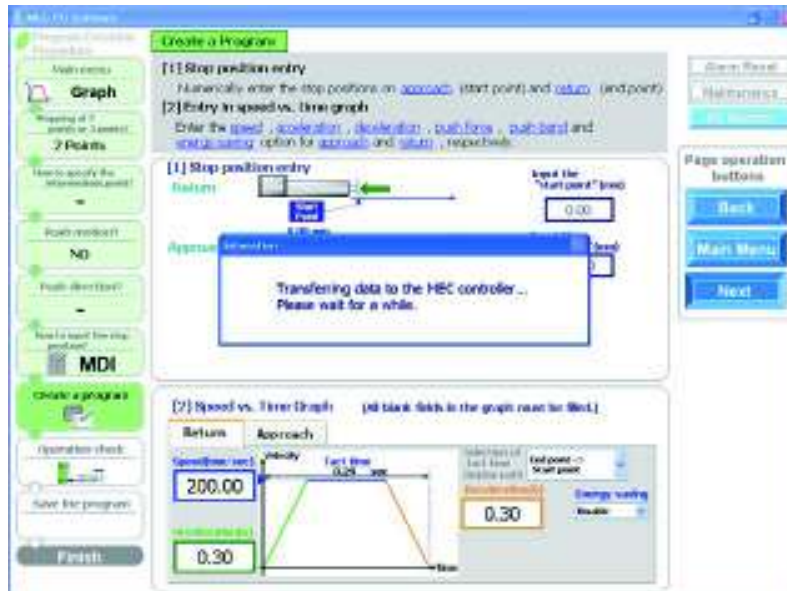
(Note) The values in the operation condition table will not be transferred to the controller if [No] is clicked.



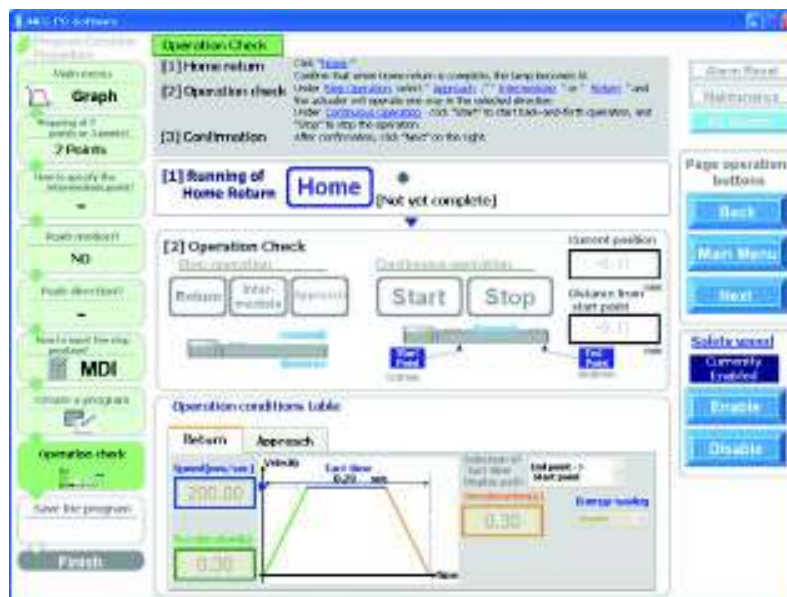


# PMEC/A MEC

The following message appears while the data is being transferred.  
When the transfer is complete, the display changes to the next screen for operation check.



- [7] Now you are ready to operate the actuator, so let's perform operation check.  
If home return is not completed yet, click [Home] to perform home return.  
If operation check is not performed, click [Next] to proceed to saving the program.



When the home return is complete, the lamp next to the button comes on and the text below it changes to [Complete].

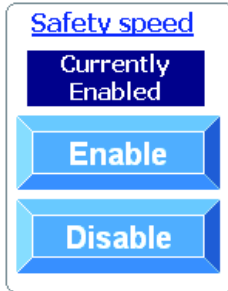


# PMEC/A MEC

## [8] Perform operation.

Two types of operations are available, step operation and continuous operation.  
When the operation check is complete, click [Next].

## [Safety Speed Setting]



Enable: Click [Enable] if you want to operate the actuator at the safety speed<sup>\*1</sup>.

Disable: Click [Disable] if you want to operate the actuator at a speed above the safety speed<sup>\*1</sup>.

<sup>\*1</sup> Safety speed: The maximum speed is set to 100 mm/s.

## [Step operation]

Approach (end point):

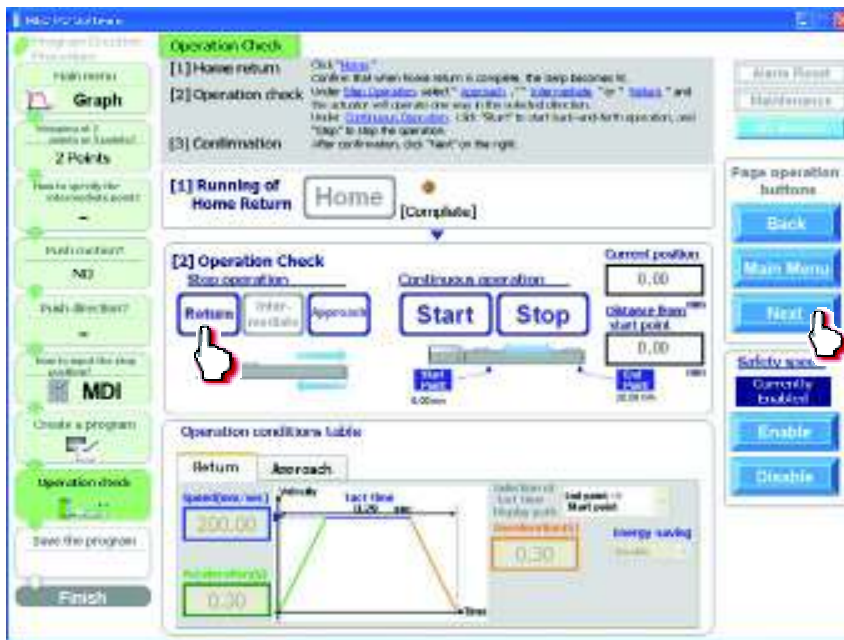
Return (start point):

Intermediate point:

Click [Approach] to move the actuator toward the end point.

Click [Return] to move the actuator toward the start point.

Click [Intermediate] to move the actuator toward the intermediate point in a program where the actuator stops at 3 points.



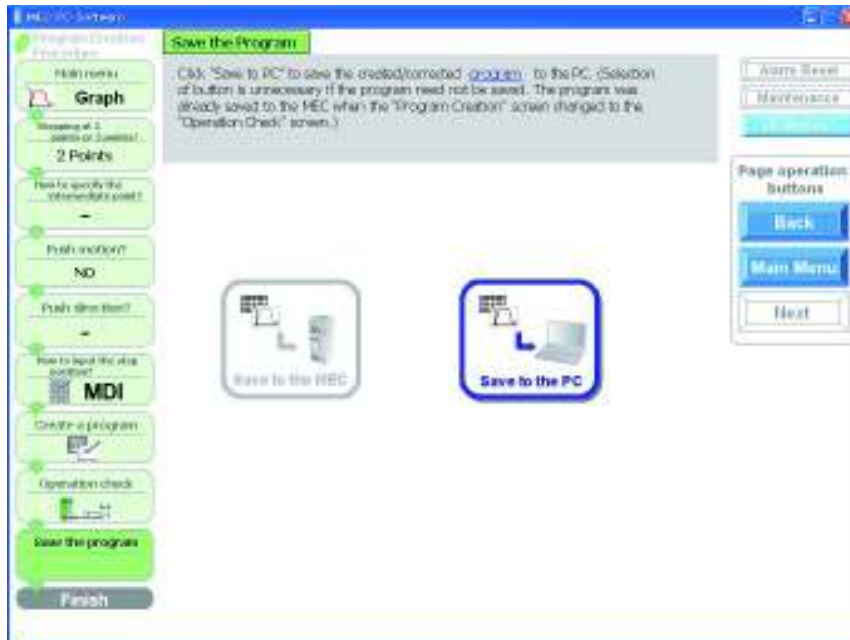


# PMEC/A MEC

## [9] Saving the program

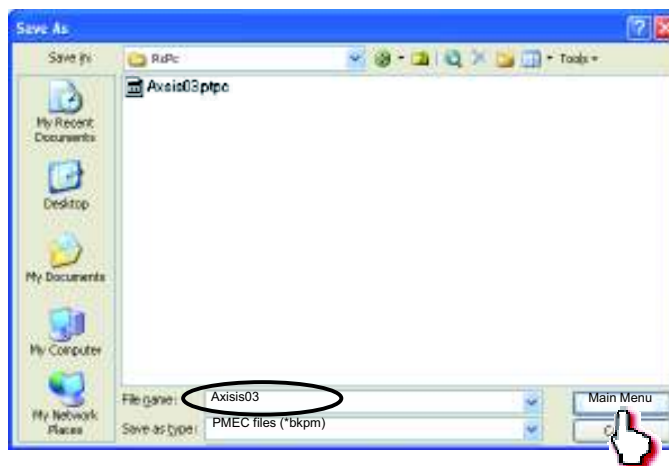
[Saving to the PC]

To save the program (operation condition table) you have created to the PC, click "Save to the PC."



The "Save As" screen appears.

Enter a desired file name and click [Save (S)], and the program (operation condition table) you have created will be saved to the PC.

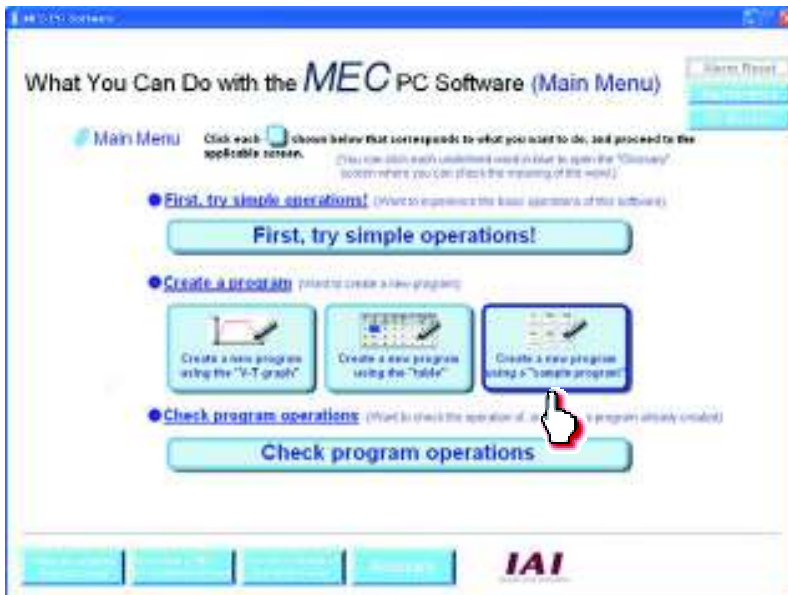


Once the program has been saved, click [Return to the "Main Menu."]. The screen returns to the main menu.

## 4.4 Moving the Actuator Using a Sample Program

In this method, you move the actuator using a sample program.

Click [Create a new program using a "sample program"] from the main menu.  
Set the necessary conditions according to the onscreen instructions.

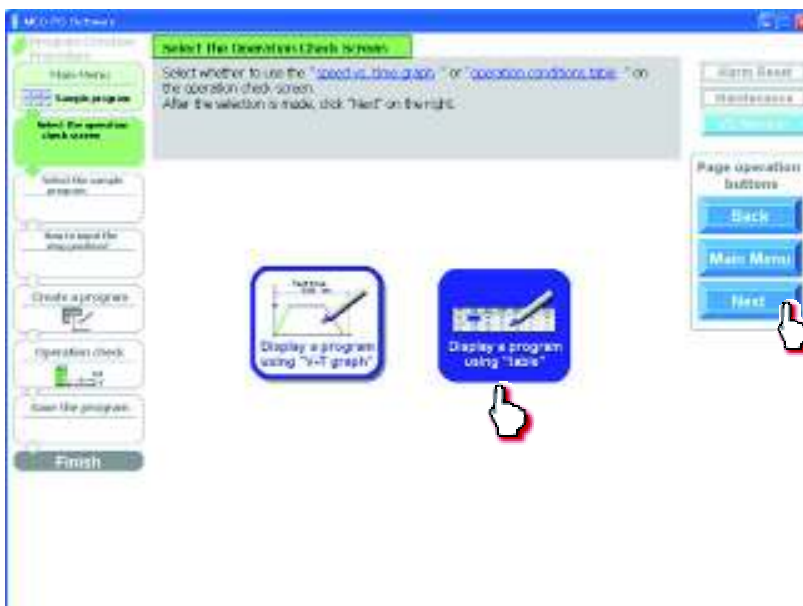


You can choose one of the following methods to create a program using a sample program:

- Create an operation condition table
- Create a speed vs. time graph

[Creating an operation condition table]

[1] Click [Create a program using the "table"]. Click [Next].





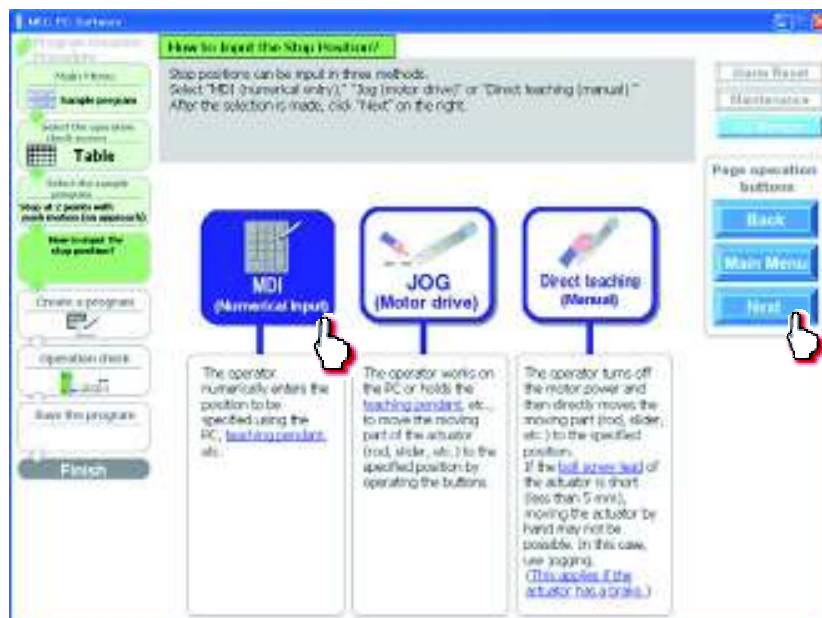
# PMEC/A MEC

- [2] Select and click one of six sample programs.  
The screen shows an example where “Stop at 2 points with push motion (on approach)” is selected. Click [Next].



- [3] Select the stopping position input method from among “MDI (Numerical input),” “JOG (Motor drive)” and “Direct teaching (Manual).”

- [Stopping position input by MDI (Numerical input)]  
Select “MDI (Numerical input).”  
Once you have made the selection, click [Next].

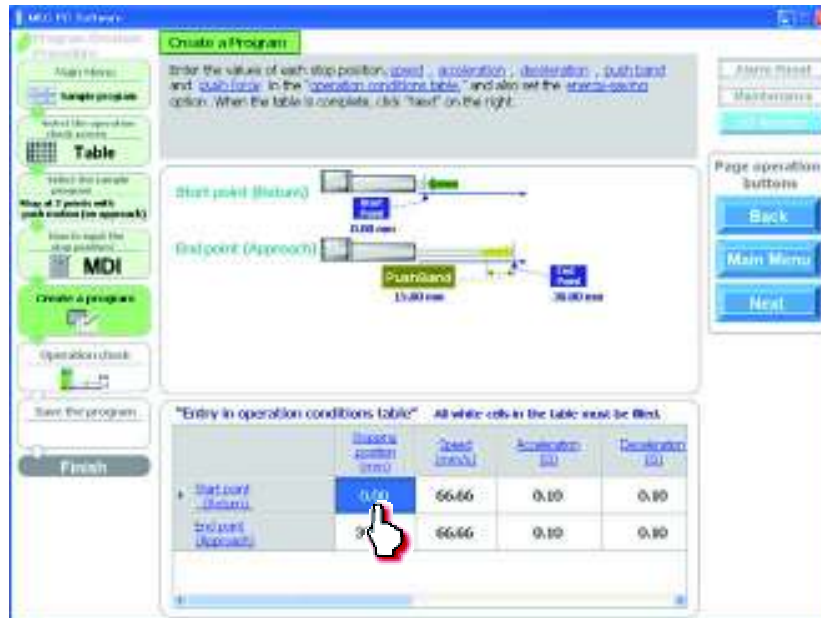


# PMEC/A MEC

Set values in the stopping position fields of the operation condition table.

[Refer to 4.2, "Setting the Operation Conditions."]

When setting a value of the stopping position corresponding to the end point, click the field of the operation condition table you want to set, as shown below. Enter a value from the keyboard and then press the ENTER key. The value will be input.

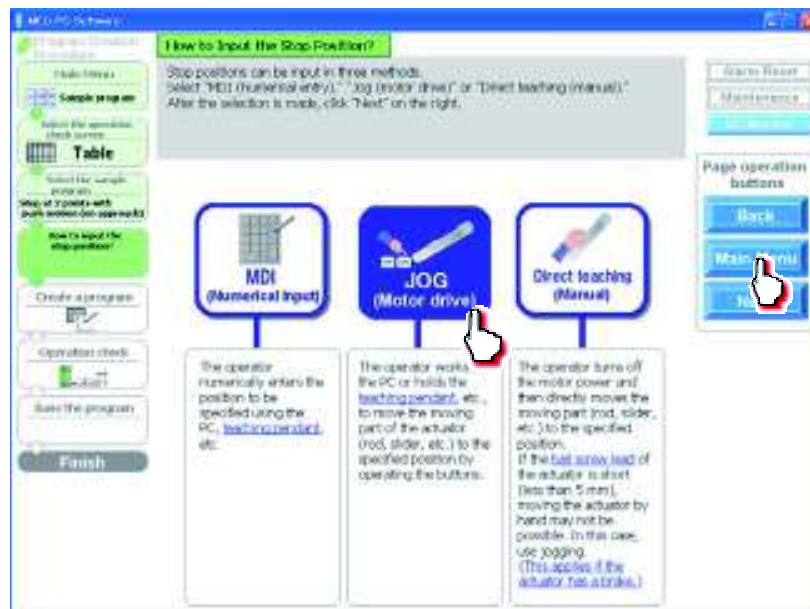


# PMEC/A MEC

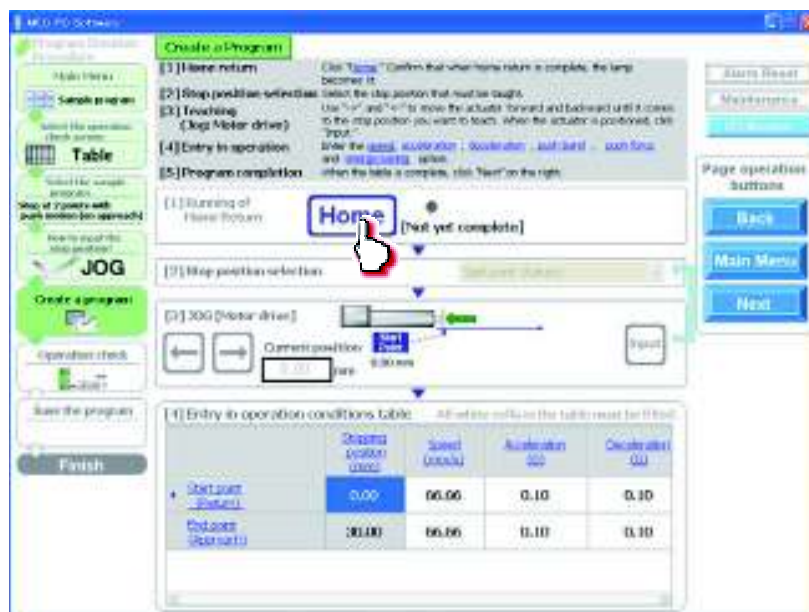
[Stopping position input by jogging]

Select "JOG (Motor drive)."

Once you have made the selection, click [Next].



Click [Home] to perform home return.



When the home return is complete, the lamp next to the button comes on and the text below it changes to [Complete].

[1] Running of Home Return

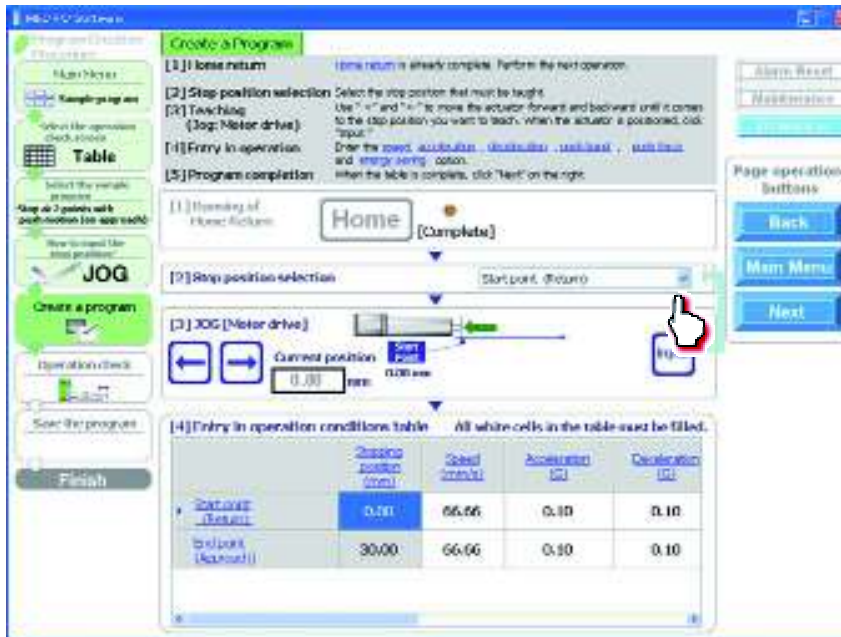
Home

[Complete]



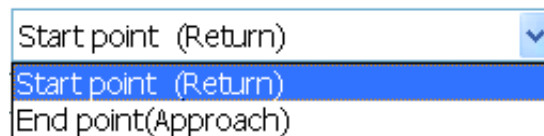
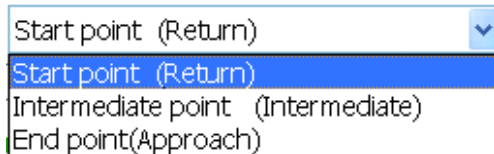
# PMEC/A MEC

Select the stopping position you must teach the actuator.



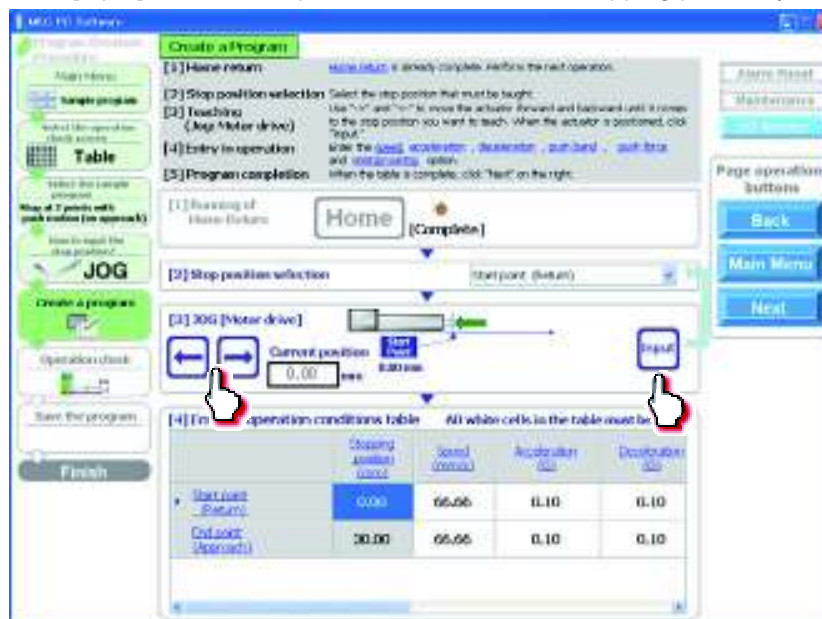
When stopping at 3 points

When stopping at 2 points



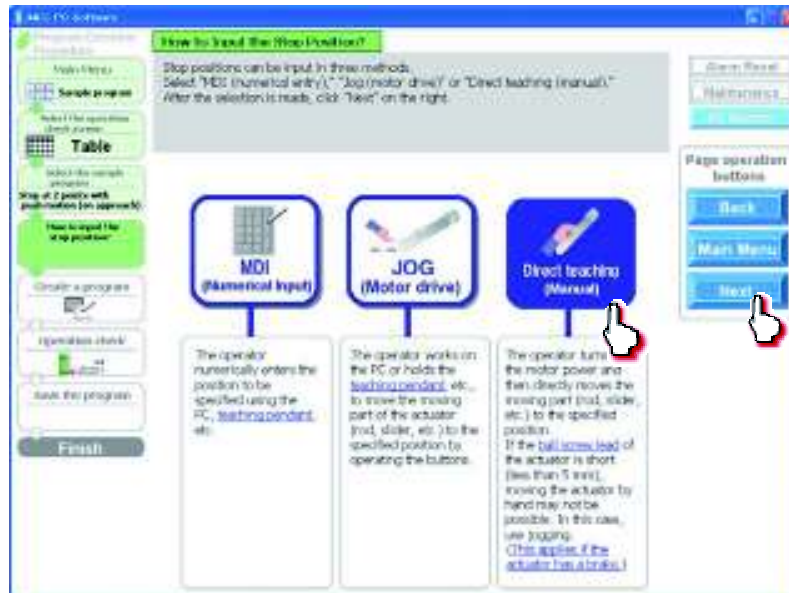
Click [←]/[→] to move the actuator to the stopping position.

Click [Input]. The current position is saved as the stopping position you have selected.

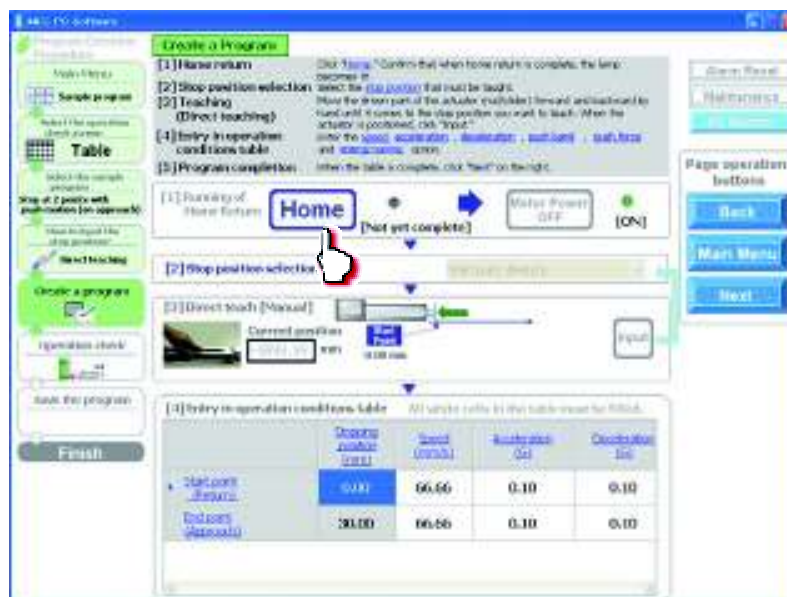


# PMEC/A MEC

[Stopping position input by direct teaching (manual)]  
Select "Direct teaching (Manual)."  
Once you have made the selection, click [Next].



Click [Home] to perform home return.

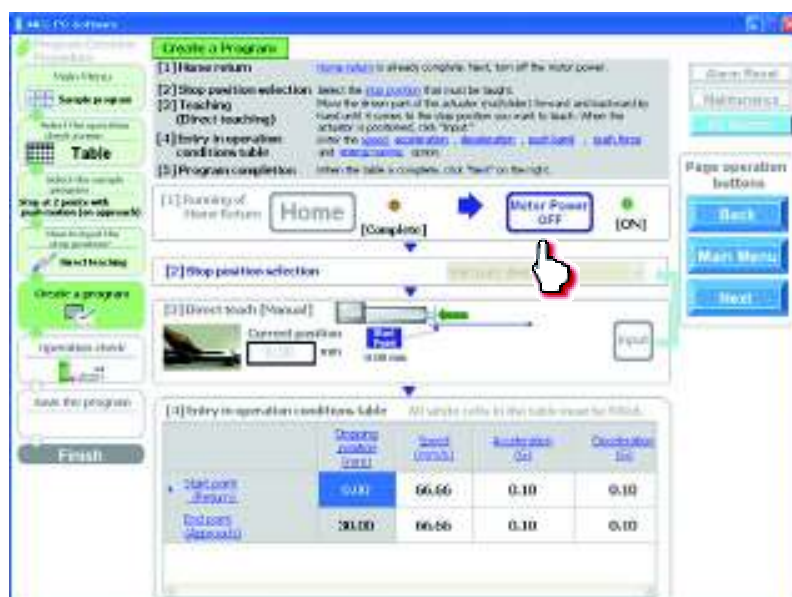


When the home return is complete, the lamp next to the button comes on and the text below it changes to [Complete].



# PMEC/A MEC

Click [Motor Power OFF] to turn off the motor power.  
The motor power (servo) turns off.




## Caution:

If you are releasing the brake of a vertically installed actuator, be careful not to let your hand pinched or the work part damaged by the actuator falling due to its own weight.

Select the stopping position you must teach the actuator.



When stopping at 3 points


Start point (Return) 

Start point (Return)

Intermediate point (Intermediate)

End point(Approach)

When stopping at 2 points

Start point (Return) 

Start point (Return)

End point(Approach)

# PMEC/A MEC

Manually move the actuator to the stopping position.



The position is shown in the current position field.

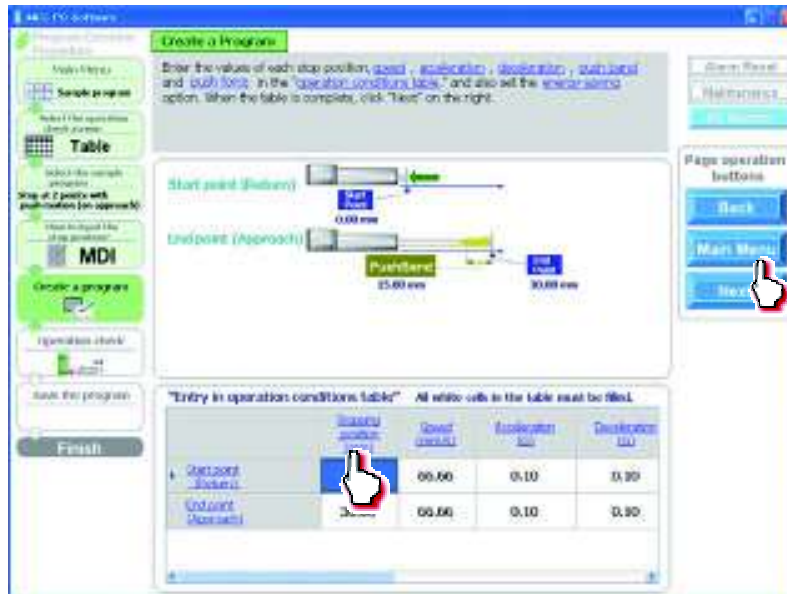
Click [Input]. The current position is saved as the stopping position you have selected.





- [4] Set the values of speed, acceleration, deceleration, push band, push force and energy saving setting, as necessary, in the applicable fields of the operation condition table.  
[Refer to 4.2, "Setting the Operation Conditions."]

For example, assume you want to set the value of the stopping position corresponding to the start point. In this case, click the field of the operation condition table you want to set, as shown below. Enter a value from the keyboard and then press the ENTER key. The value will be input.



When all necessary values have been input, be sure to click [Next].

When [Next] is clicked, the confirmation message appears with the message "Do you want to start transferring the data?"

Click [Yes]. Clicking [Yes] transfers the values in the operation condition table to the controller.

(Note) The values in the operation condition table will not be transferred to the controller if [No] is clicked.

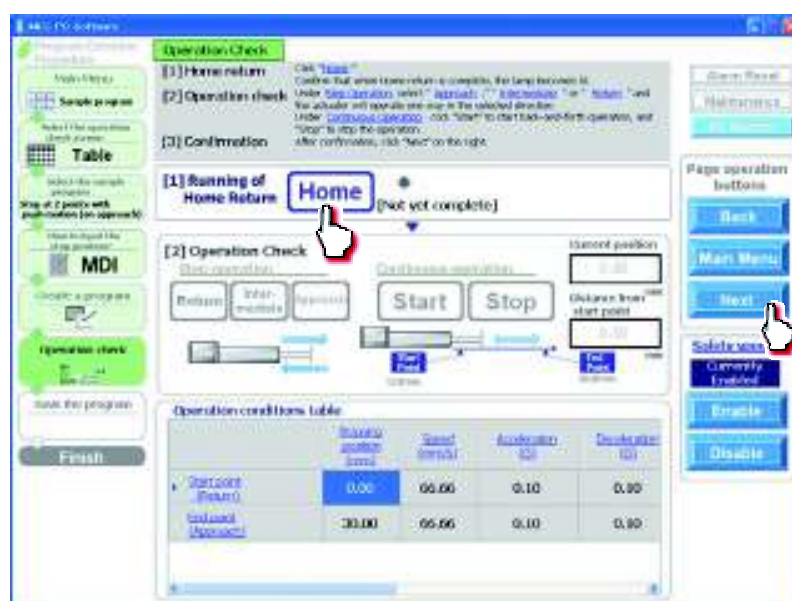


# PMEC/A MEC

The following message appears while the data is being transferred.  
When the transfer is complete, the display changes to the next screen for operation check.



- [5] Now you are ready to operate the actuator, so let's perform operation check.  
If home return is not completed yet, click [Home] to perform home return.  
If operation check is not performed, click [Next] to proceed to saving the program.



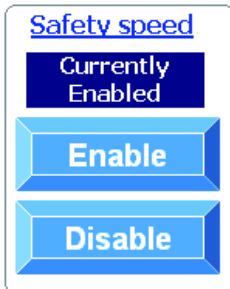
When the home return is complete, the lamp next to the button comes on and the text below it changes to [Complete].



## [6] Perform operation.

Two types of operations are available, step operation and continuous operation.  
When the operation check is complete, click [Next].

## [Safety Speed Setting]



Enable: Click [Enable] if you want to operate the actuator at the safety speed<sup>\*1</sup>.

Disable: Click [Disable] if you want to operate the actuator at a speed above the safety speed<sup>\*1</sup>.

<sup>\*1</sup> Safety speed: The maximum speed is set to 100 mm/s.

## [Step operation]

Approach (end point):

Return (start point):

Intermediate point:

Click [Approach] to move the actuator toward the end point.

Click [Return] to move the actuator toward the start point.

Click [Intermediate] to move the actuator toward the intermediate point in a program where the actuator stops at 3 points.

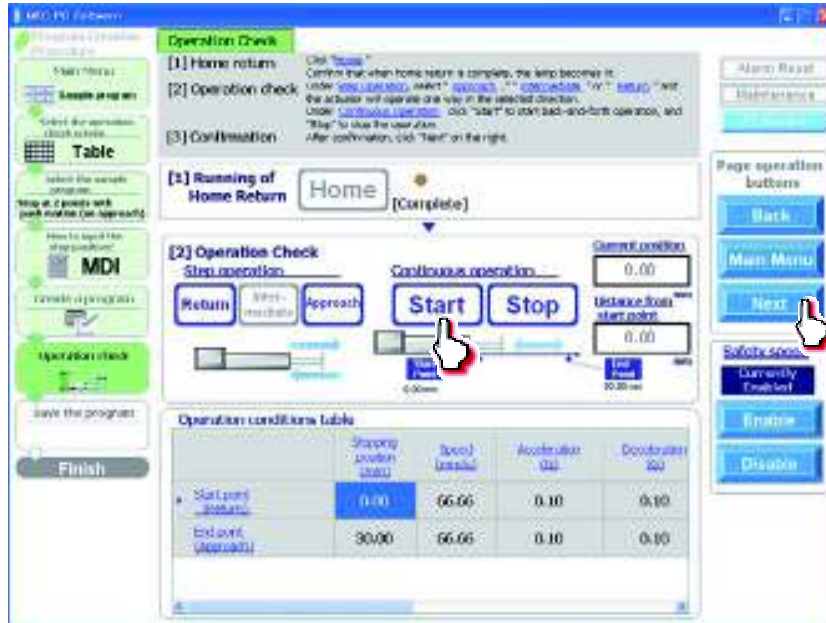


# PMEC/A MEC

[Continuous operation]

**Start:** Click [Start] to move the actuator between approach and return continuously (between the end point and start point) in a program where the actuator stops at 2 points. Similarly, click [Start] to move the actuator between approach and return continuously (between the end point and start point via the intermediate point) in a program where the actuator stops at 3 points.

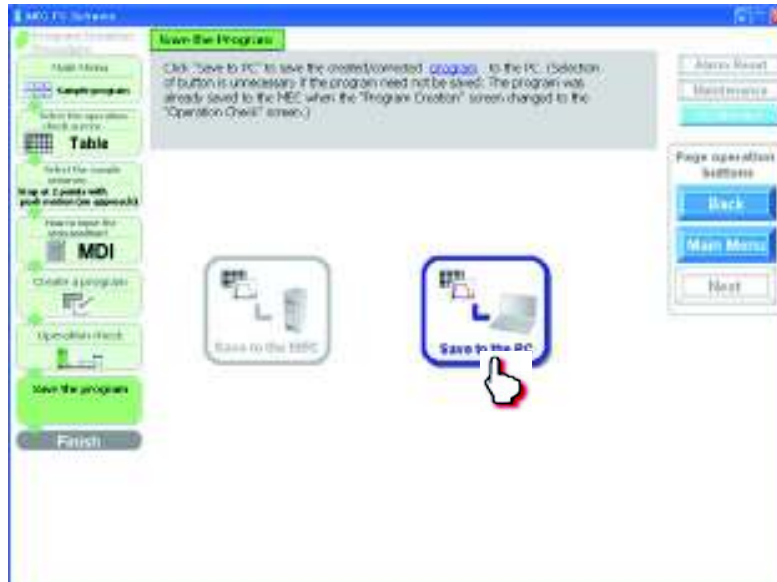
**Stop:** Click [Stop] to stop the continuous operation.





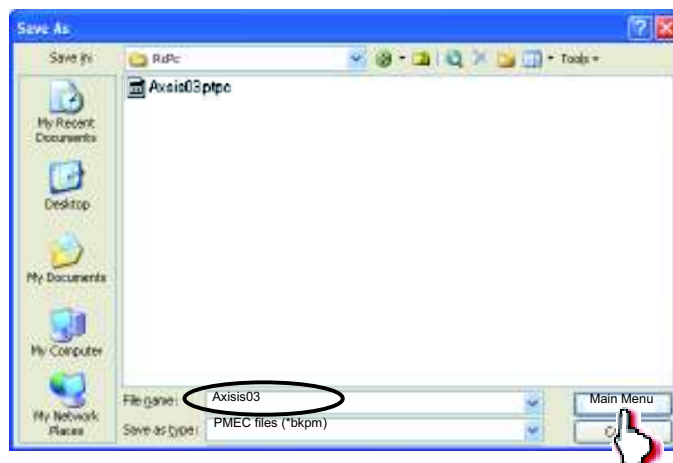
## [7] Saving the program [Saving to the PC]

To save the program (operation condition table) you have created to the PC, click "Save to the PC."



The "Save As" screen appears.

Enter a desired file name and click [Save (S)], and the program (operation condition table) you have created will be saved to the PC.



Once the program has been saved, click [Return to the "Main Menu."]. The screen returns to the main menu.

# PMEC/A MEC

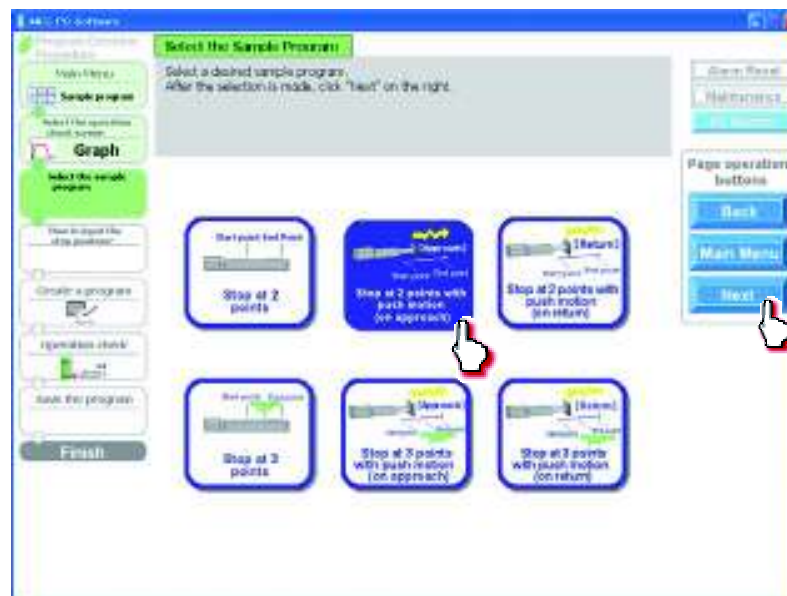
[Creating a speed vs. time graph]

[1] Click [Create a program using "V-T graph"]. Click [Next].



[2] Select and click one of six sample programs.

The screen shows an example where "Stop at 2 points with push motion (on approach)" is selected. Click [Next].



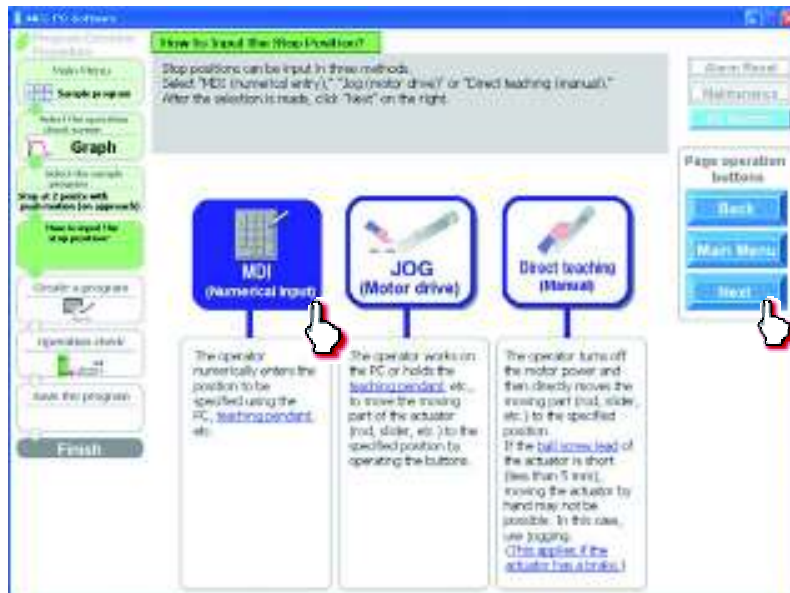
# PMEC/A MEC

- [3] Select the stopping position input method from among “MDI (Numerical input),” “JOG (Motor drive)” and “Direct teaching (Manual).”

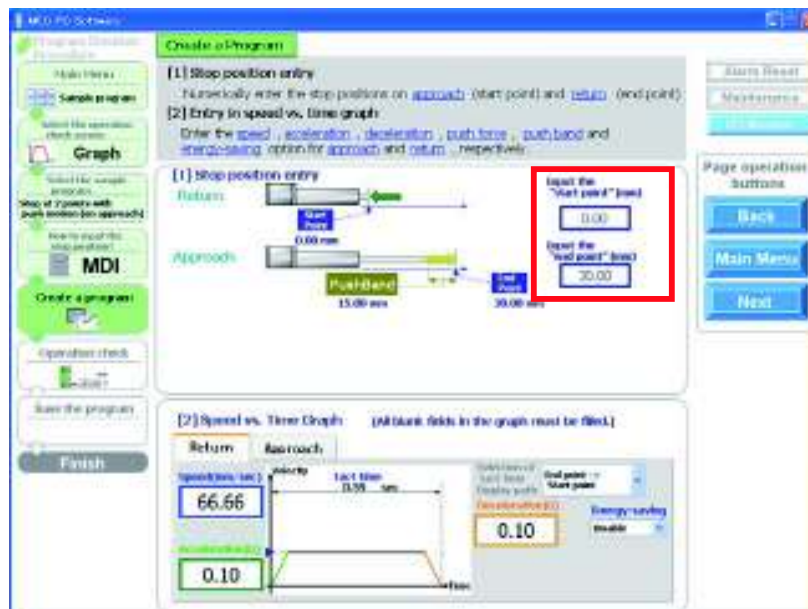
[Stopping position input by MDI (Numerical input)]

Select “MDI (Numerical input).”

Once you have made the selection, click [Next].



Set values in the stopping position fields of the "speed vs. time graph."

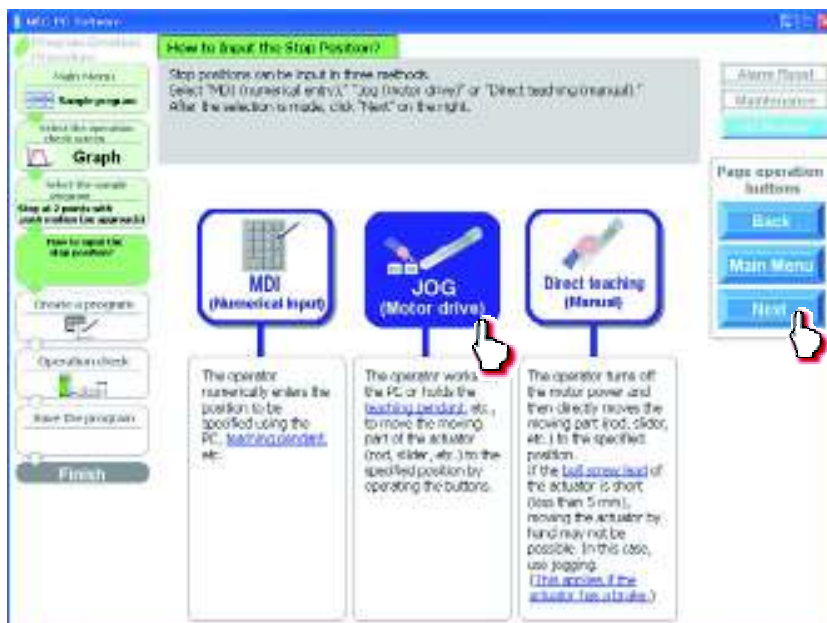


# PMEC/A MEC

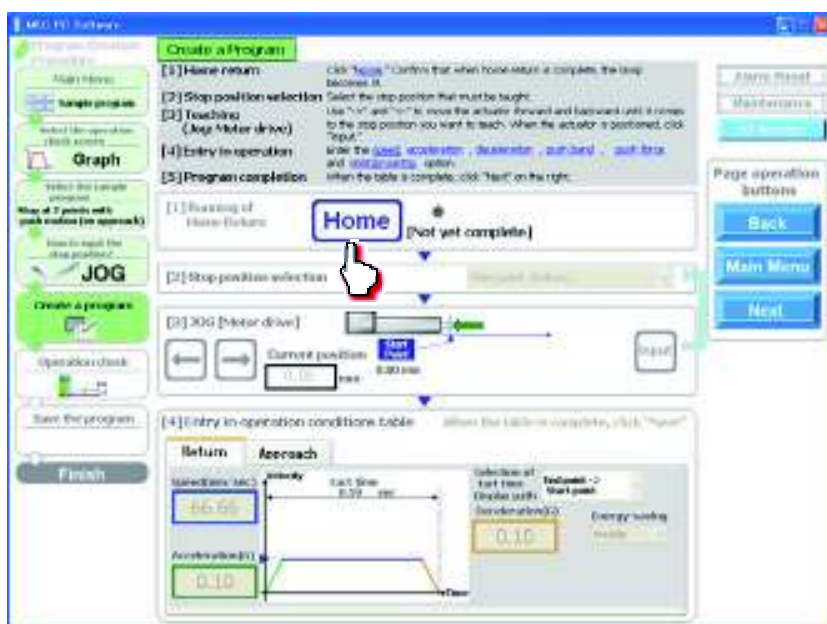
[Stopping position input by jogging]

Select "JOG (Motor drive)."

Once you have made the selection, click [Next].



Click [Home] to perform home return.



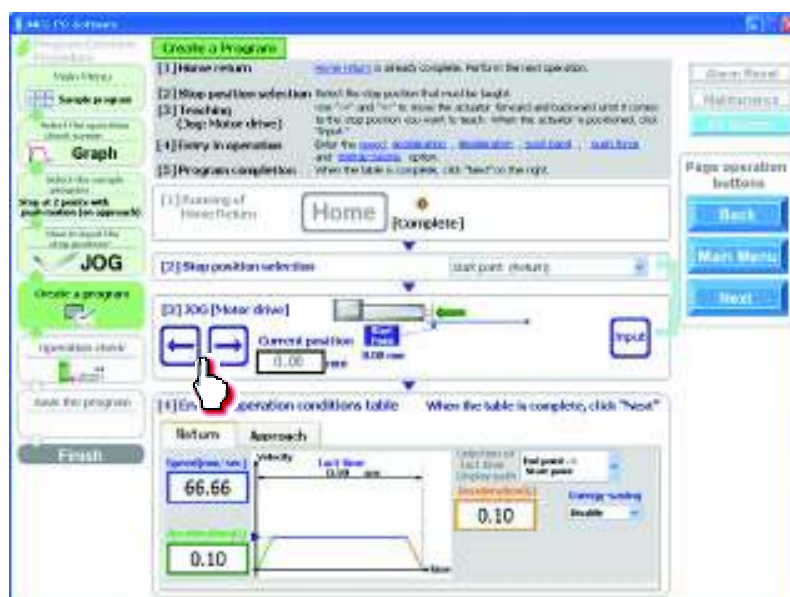
When the home return is complete, the lamp next to the button comes on and the text below it changes to [Complete].

[1] Running of  
Home Return

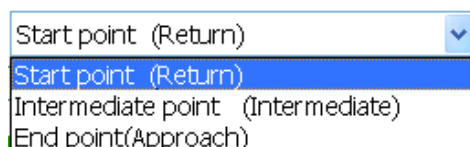
Home [Complete]

# PMEC/A MEC

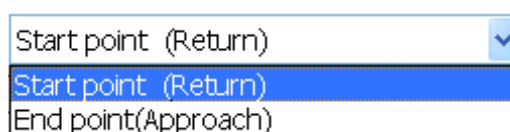
Select the stopping position you must teach the actuator.



When stopping at 3 points

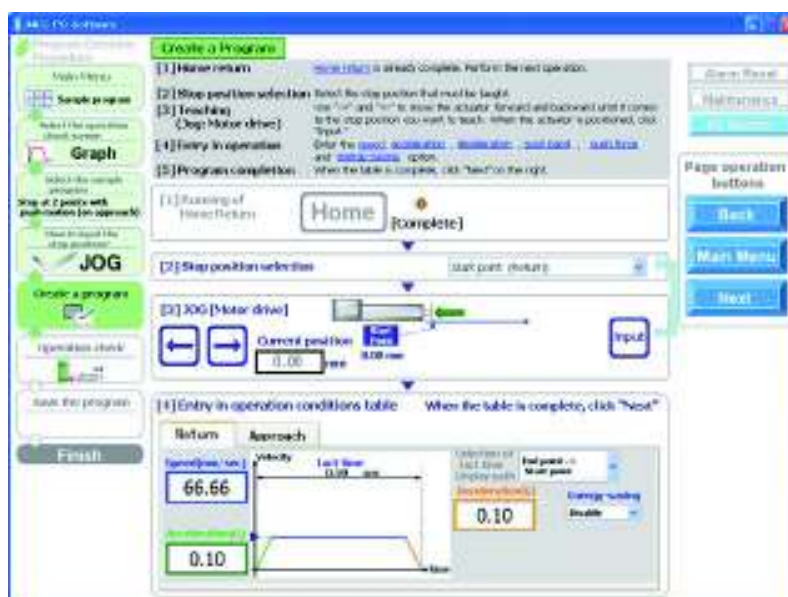


When stopping at 2 points



Click [←]/[→] to move the actuator to the stopping position.

Click [Input]. The current position is saved as the stopping position you have selected.



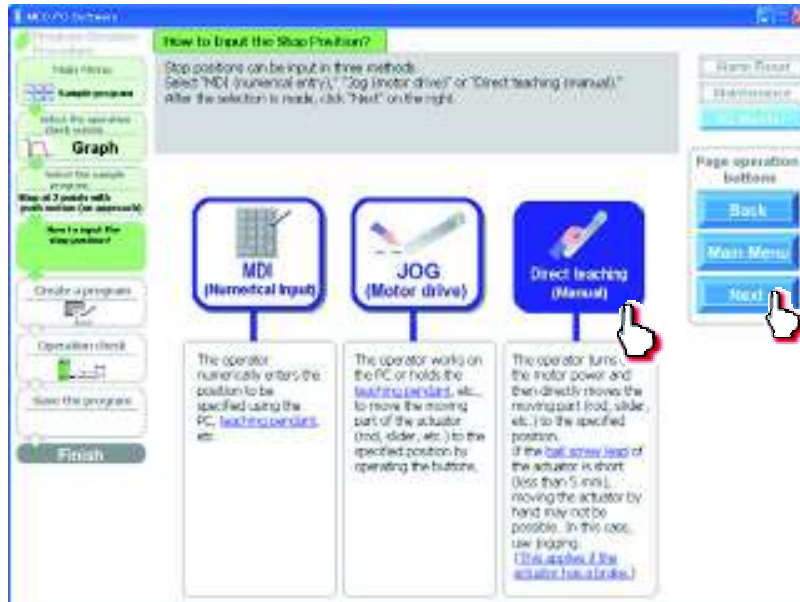


# PMEC/A MEC

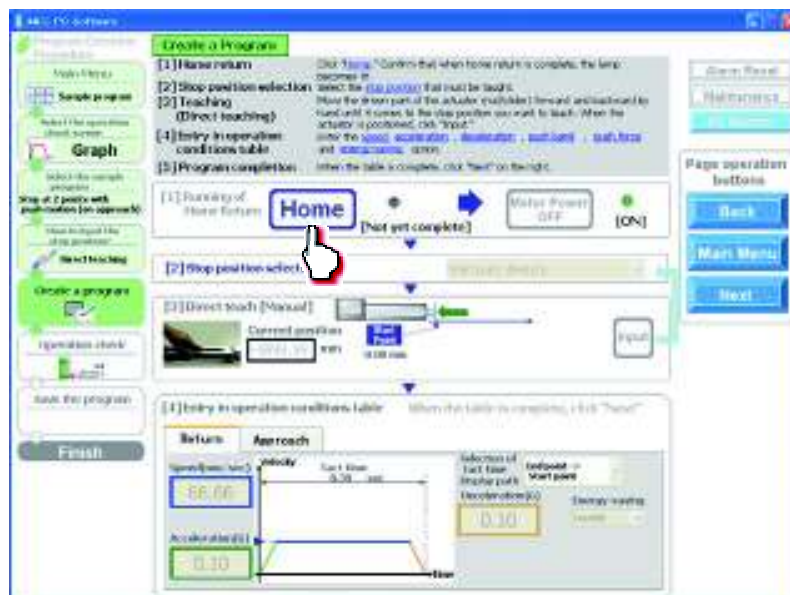
[Stopping position input by direct teaching (manual)]

Select "Direct teaching (Manual)."

Once you have made the selection, click [Next].



Click [Home] to perform home return.

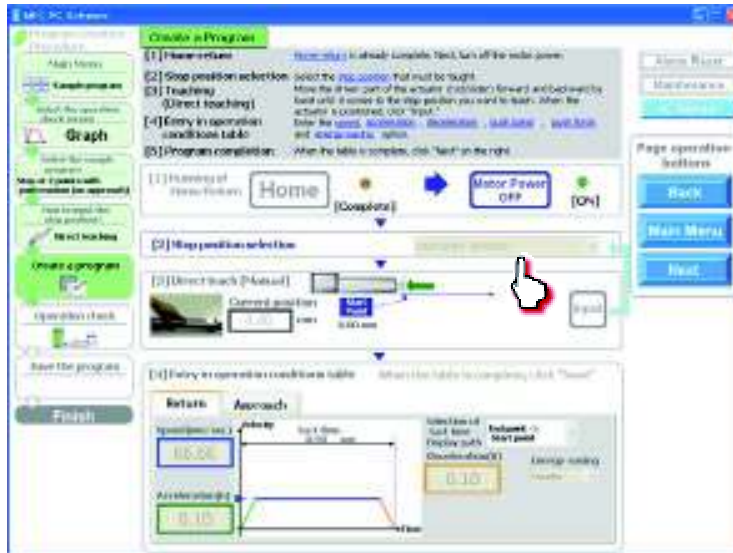


When the home return is complete, the lamp next to the button comes on and the text below it changes to [Complete]



# PMEC/A MEC

Click [Motor Power OFF] to turn off the motor power.  
The motor power (servo) turns off.



## Caution:

If you are releasing the brake of a vertically installed actuator, be careful not to let your hand pinched or the work part damaged by the actuator falling due to its own weight.

Select the stopping position you must teach the actuator.



When stopping at 3 points

Start point (Return)	▼
Start point (Return)	
Intermediate point (Intermediate)	
End point(Approach)	

When stopping at 2 points

Start point (Return)	▼
Start point (Return)	
End point(Approach)	

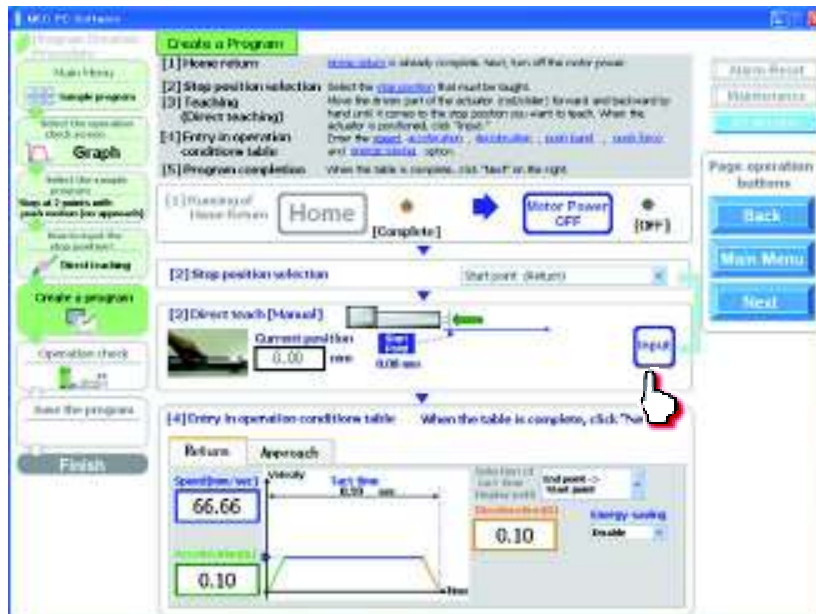
# PMEC/A MEC

Manually move the actuator to the stopping position.



The position is shown in the current position field.

Click [Input]. The current position is saved as the stopping position you have selected.

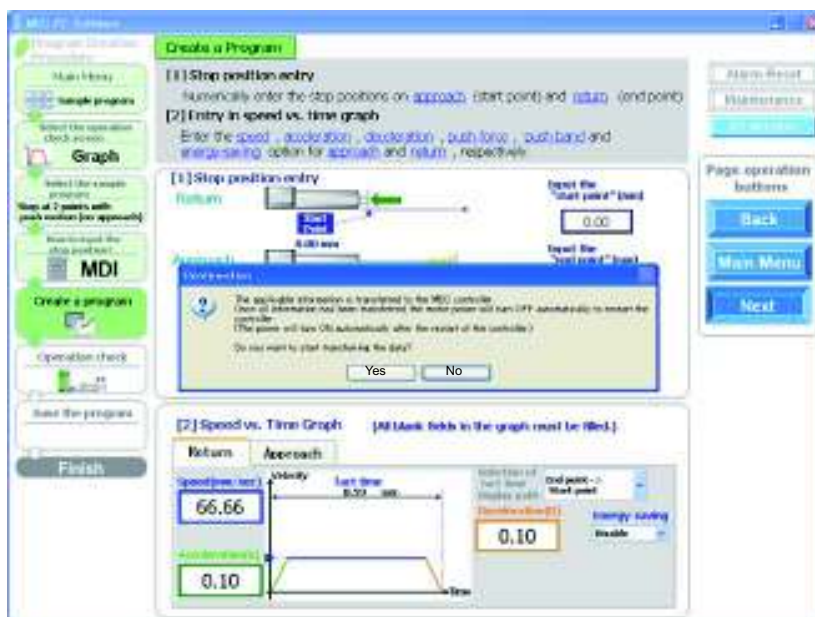




- [4] Select either the approach or return. If the actuator is stopping at 3 points, you can also select an intermediate point. Set values for the speed, acceleration, deceleration, push band and push force applicable to the speed vs. time graph. Select whether to enable or disable energy saving. Use the displayed tact time as a reference.  
(The screen is based on MDI (Numerical input).)



When all necessary values have been input, be sure to click [Next].  
When [Next] is clicked, the confirmation message appears with the message “Do you want to start transferring the data?”  
Click [Yes]. Clicking [Yes] transfers the values in the operation condition table to the controller.  
(Note) The values in the operation condition table will not be transferred to the controller if [No] is clicked.

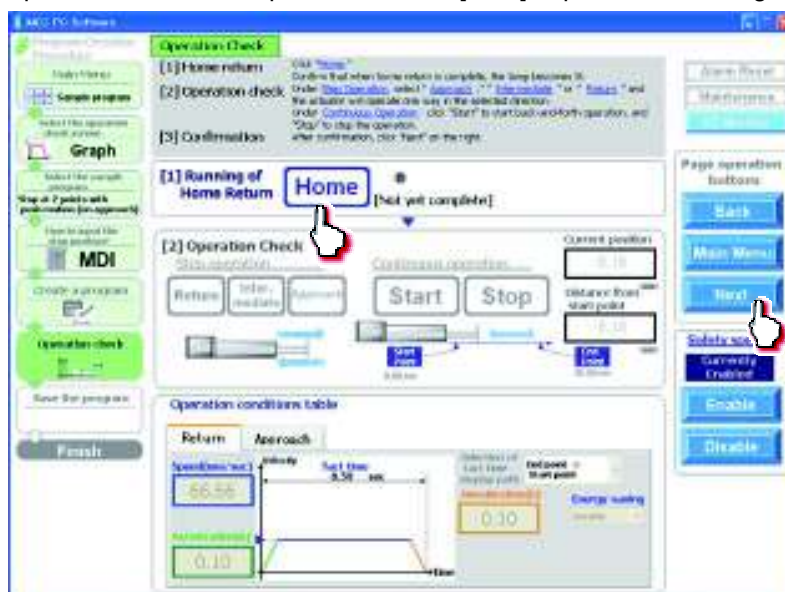


# PMEC/A MEC

The following message appears while the data is being transferred.  
When the transfer is complete, the display changes to the next screen for operation check.



- [5] Now you are ready to operate the actuator, so let's perform operation check.  
If home return is not completed yet, click [Home] to perform home return.  
If operation check is not performed, click [Next] to proceed to saving the program.



When the home return is complete, the lamp next to the button comes on and the text below it changes to [Complete].

[1] Running of  
Home Return

Home

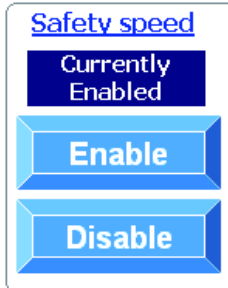
[Complete]

# PMEC/A MEC

[6] Perform operation.

Two types of operations are available, step operation and continuous operation.  
When the operation check is complete, click [Next].

[Safety Speed Setting]



Enable: Click [Enable] if you want to operate the actuator at the safety speed<sup>\*1</sup>.

Disable: Click [Disable] if you want to operate the actuator at a speed above the safety speed<sup>\*1</sup>.

<sup>\*1</sup> Safety speed: The maximum speed is set to 100 mm/s or below.

[Step operation]

Approach (end point):

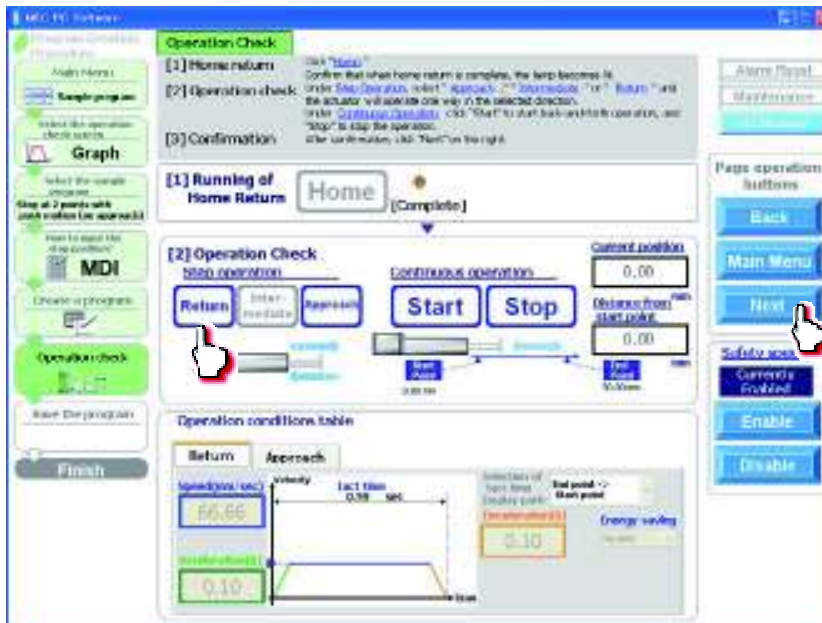
Return (start point):

Intermediate point:

Click [Approach] to move the actuator toward the end point.

Click [Return] to move the actuator toward the start point.

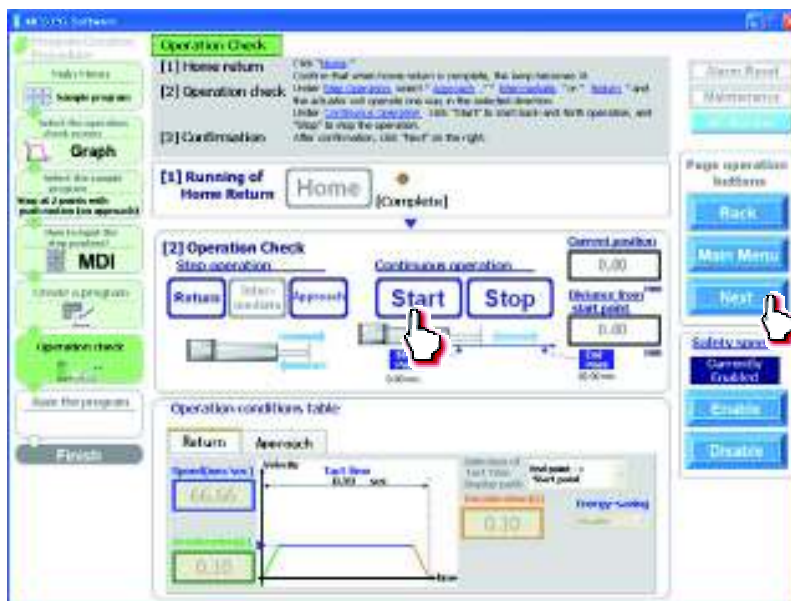
Click [Intermediate] to move the actuator toward the intermediate point in a program where the actuator stops at 3 points.



# PMEC/A MEC

## [Continuous operation]

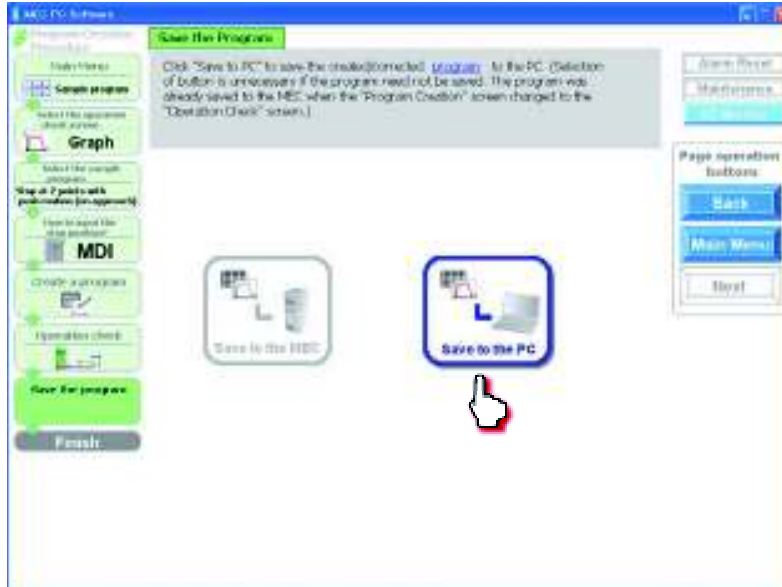
- Start: Click [Start] to move the actuator between approach and return continuously (between the end point and start point) in a program where the actuator stops at 2 points. Similarly, click [Start] to move the actuator between approach and return continuously (between the end point and start point via the intermediate point
- Stop: Click [Stop] to stop the continuous operation.



## [7] Saving the program

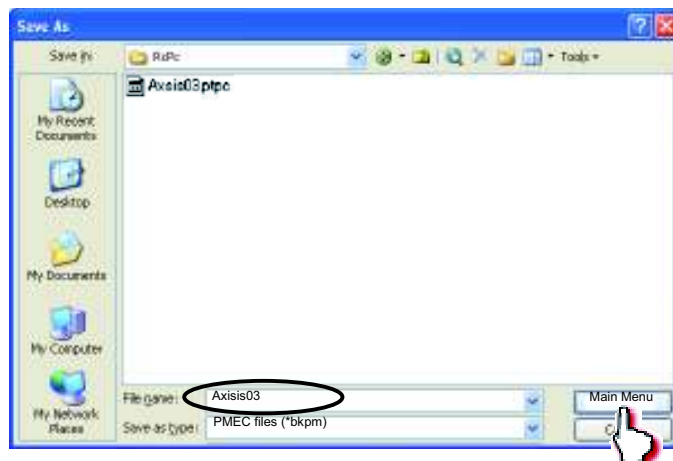
### [Saving to the PC]

To save the program (operation condition table) you have created to the PC, click "Save to the PC."



The "Save As" screen appears.

Enter a desired file name and click [Save (S)], and the program (operation condition table) you have created will be saved to the PC.



Once the program has been saved, click [Return to the "Main menu."]. The screen returns to the main menu.



## 5. First, Try Simple Operations

Try moving an actuator according to the values set in the operation condition table in the controller.

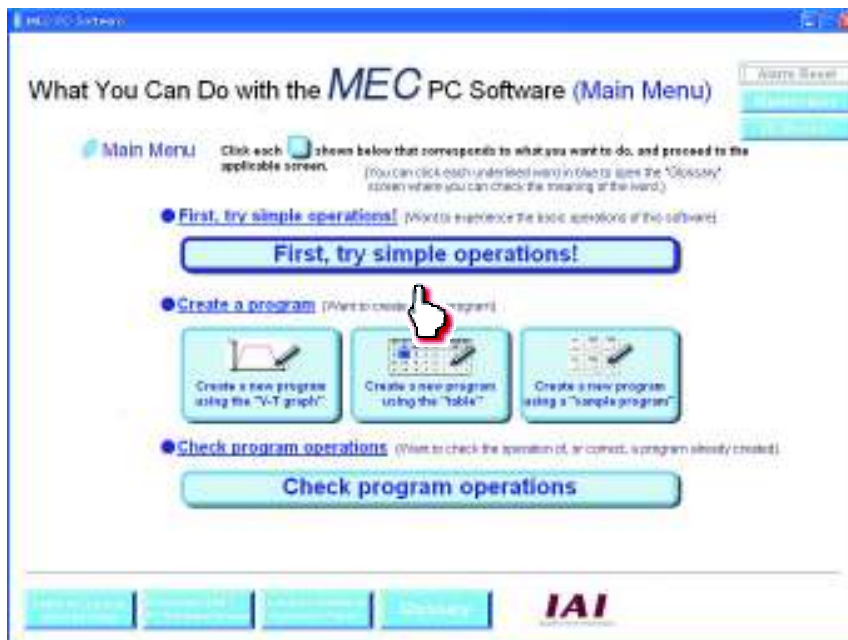
You can choose positioning operation or push-motion operation.

Although the operation conditions are initially fixed when this menu item is selected, the speed, acceleration, deceleration, push force and energy saving setting can be changed afterward.

[Initial operation conditions]

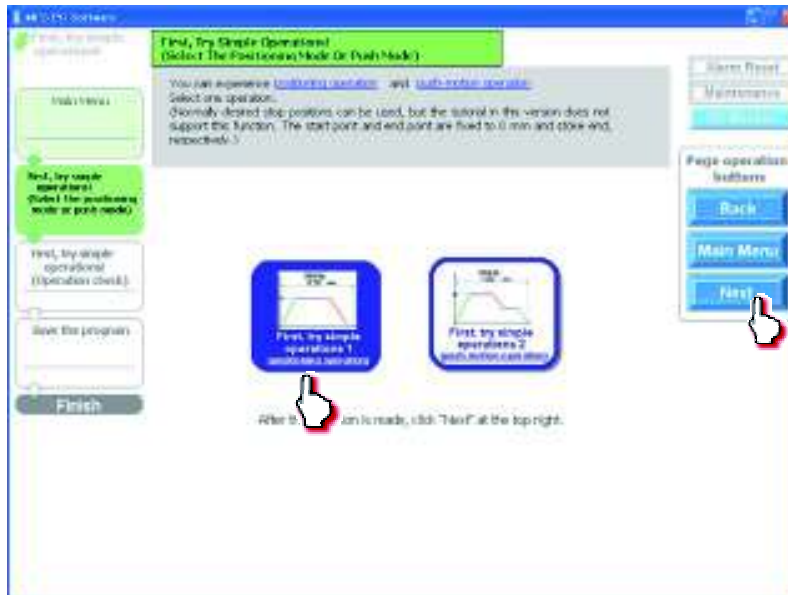
Stopping position:	Full-stroke position
Speed, acceleration, deceleration:	1/3 of defaults (factory defaults)
Push band:	1/2 of full stroke
Push force:	30%
Energy saving:	Disabled

Click "First, try simple operations!" from the main menu. Move your actuator according to the onscreen instructions

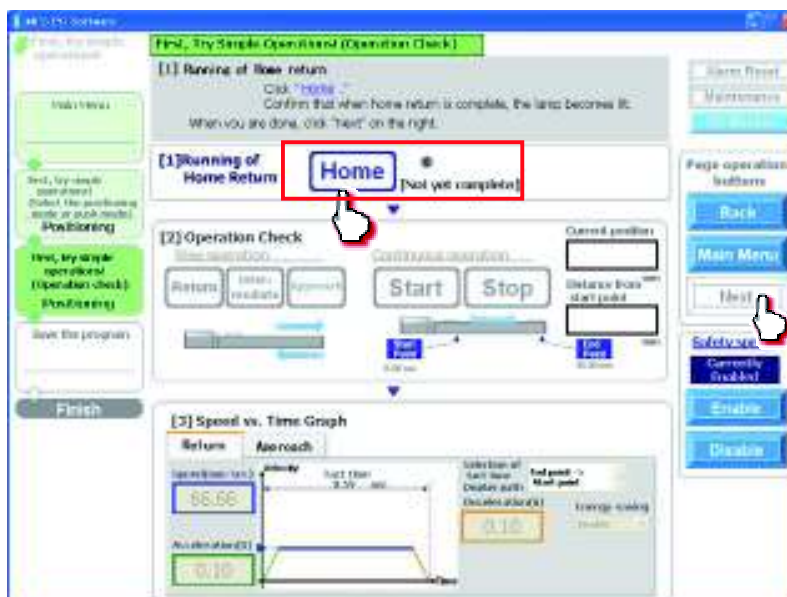


## 5.1 Performing Positioning Operation

- [1] Click "First, try simple operations 1 (positioning operation)."  
Then, click [Next].



- [2] Click [Home] to perform home return.



When the home return is complete, the lamp next to the button comes on and the text below it changes to [Complete].



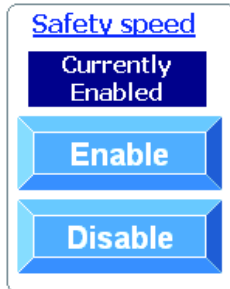
When the home return is complete, click [Next].



# PMEC/A MEC

- [3] First, try moving your actuator.  
Two types of operations are available, step operation and continuous operation.  
When the operation check is complete, click [Next].

## [Safety Speed Setting]



Enable: Click [Enable] if you want to operate the actuator at the safety speed<sup>\*1</sup>.

Disable: Click [Disable] if you want to operate the actuator at a speed above the safety speed<sup>\*1</sup>.

<sup>\*1</sup> Safety speed: The maximum speed is set to 100 mm/s or below.

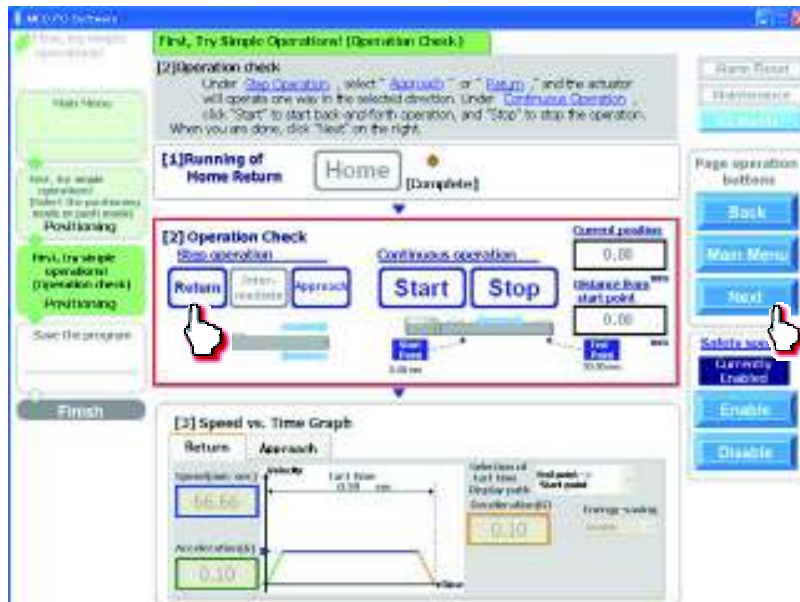
## [Step operation]

Approach (end point):

Click [Approach] to move the actuator toward the end point.

Return (start point):

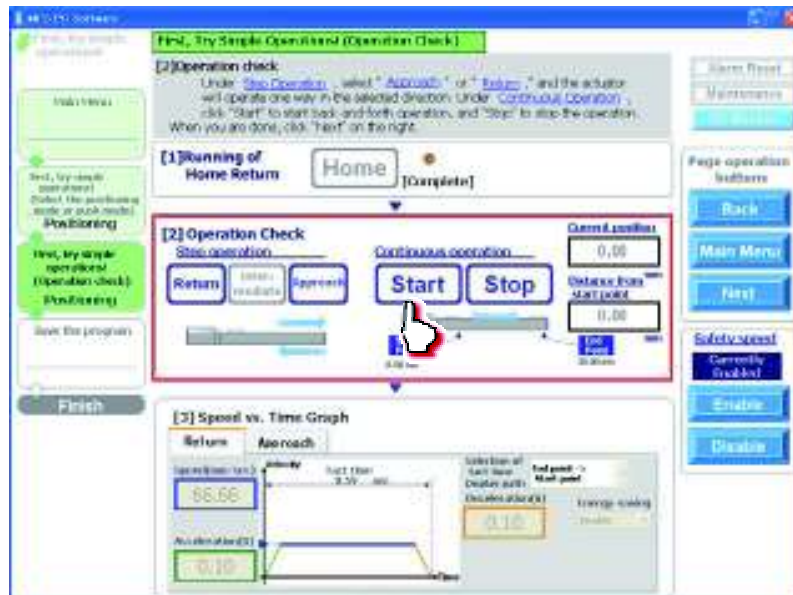
Click [Return] to move the actuator toward the start point.



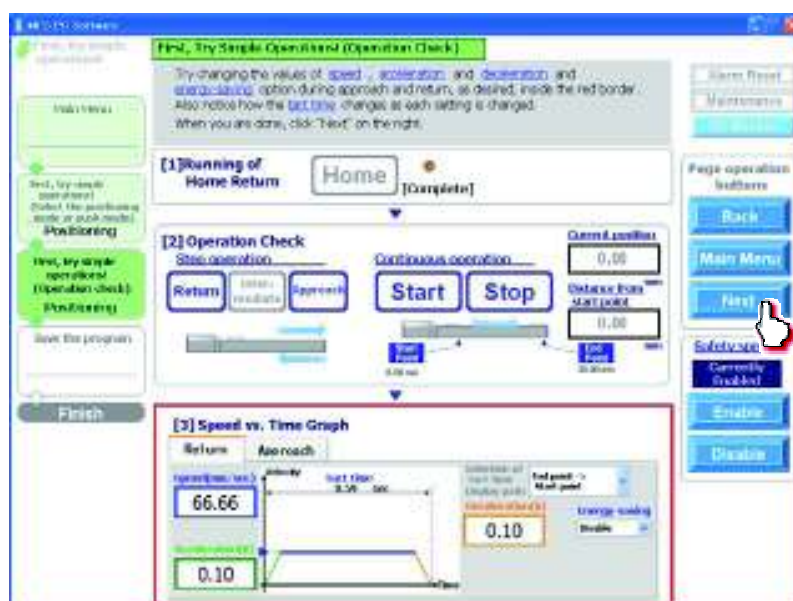
# PMEC/A MEC

[Continuous operation]

- Start: Click [Start] to move the actuator forward and backward continuously (between the end point and start point) in a program where the actuator stops at 2 points
- Stop: Click [Stop] to stop the continuous operation.



- [4] On this screen, you can change the speed, acceleration, deceleration and energy saving settings. Select either the approach or return.
- Change the speed, acceleration, deceleration and energy saving settings.
- After the changes have been made, perform step operation and continuous operation to check how the actuator operates.
- When the operation check is complete, click [Next].

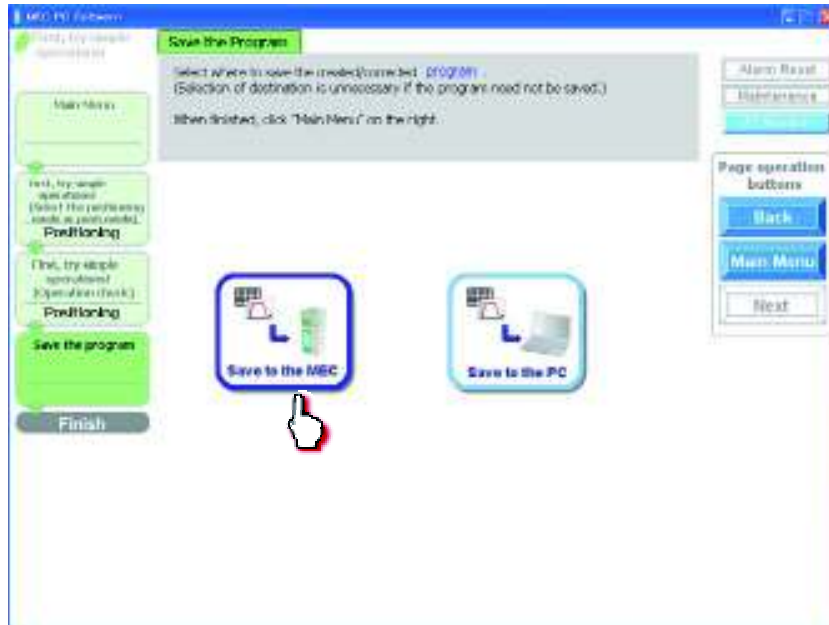


# PMEC/A MEC

## [5] Saving the program

### [Saving to the MEC]

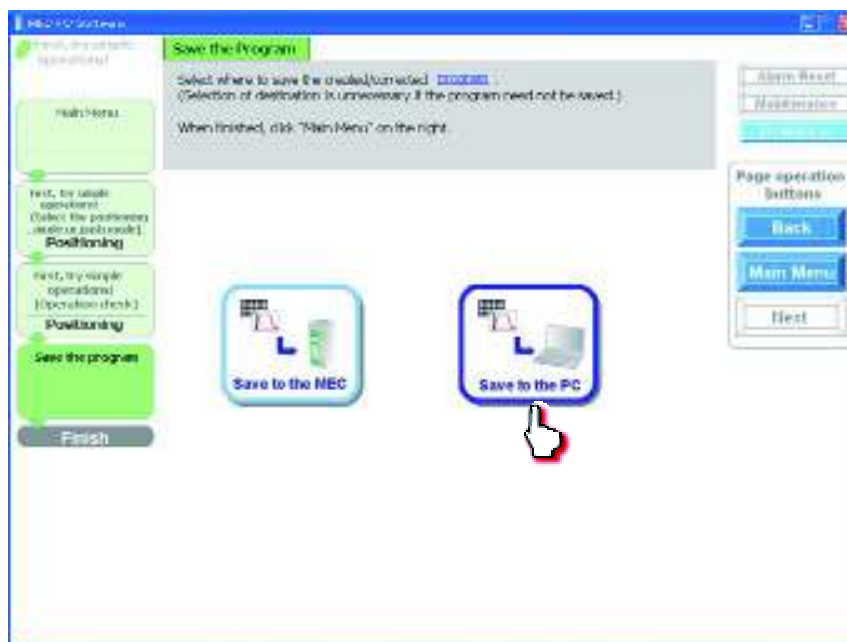
To move the actuator by reflecting the speed and other operation conditions you have just changed, click [Save to the MEC]. Turn off the power and then turn it back on. The actuator will move according to the new operation conditions such as speed.



## [6] Saving the program

### [Saving to the PC]

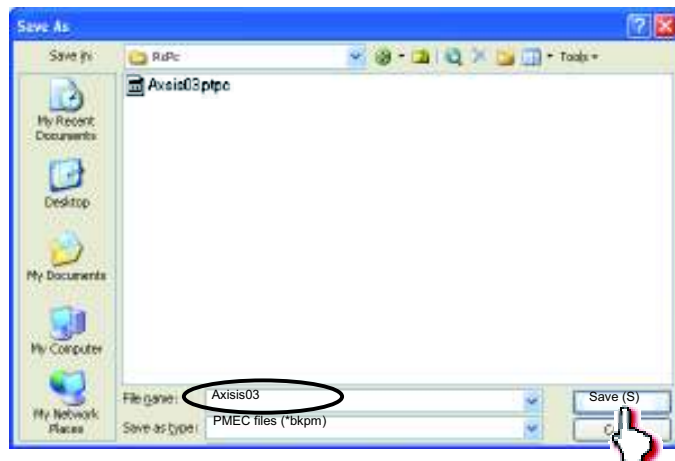
To save to the PC the changes you have made to the speed and other operation conditions, click [Save to the PC].



# PMEC/A MEC

The "Save As" screen appears.

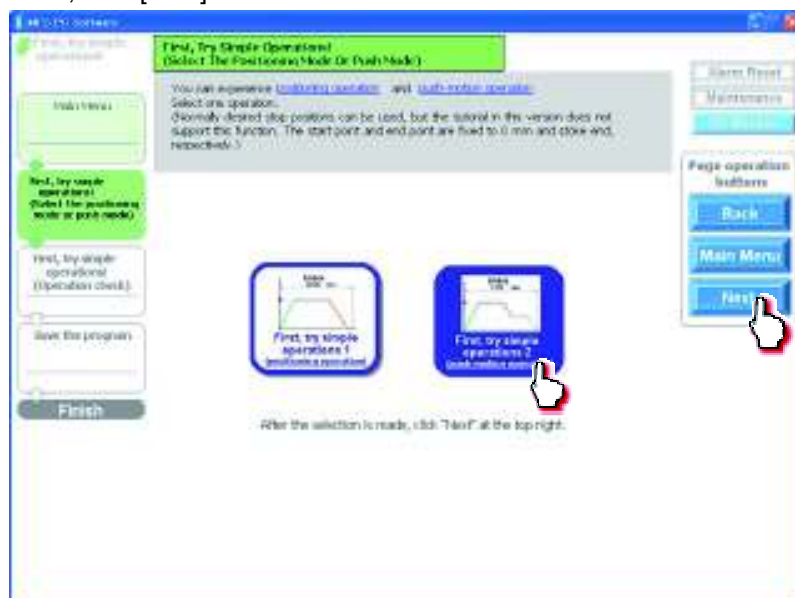
Enter a desired file name and click [Save (S)], and the program (operation condition table) you have created will be saved to the PC.



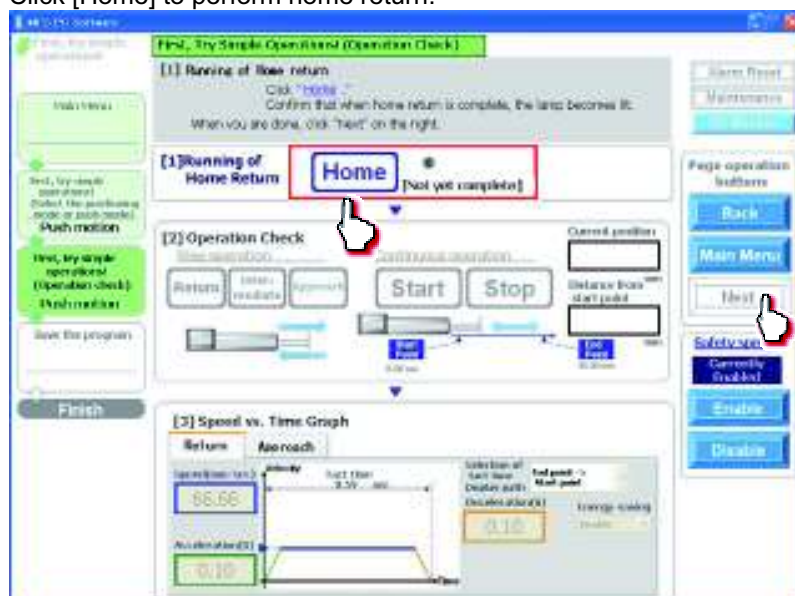
Once the program has been saved, click [Return to the "Main Menu."]. The screen returns to the main menu.

## 5.2 Performing Push-motion Operation

- [1] Click "First, try simple operations 2 (push-motion operation)."  
Then, click [Next].



- [2] Click [Home] to perform home return.



When the home return is complete, the lamp next to the button comes on and the text below it changes to [Complete].

[1] Running of Home Return

Home  [Complete]

When the home return is complete, click [Next].

# PMEC/A MEC

- [3] First, try moving your actuator.  
Two types of operations are available, step operation and continuous operation.  
When the operation check is complete, click [Next].

[Safety Speed Setting]



Enable: Click [Enable] if you want to operate the actuator at the safety speed<sup>\*1</sup>.

Disable: Click [Disable] if you want to operate the actuator at a speed above the safety speed<sup>\*1</sup>.

<sup>\*1</sup> Safety speed: The maximum speed is set to 100 mm/s or below.

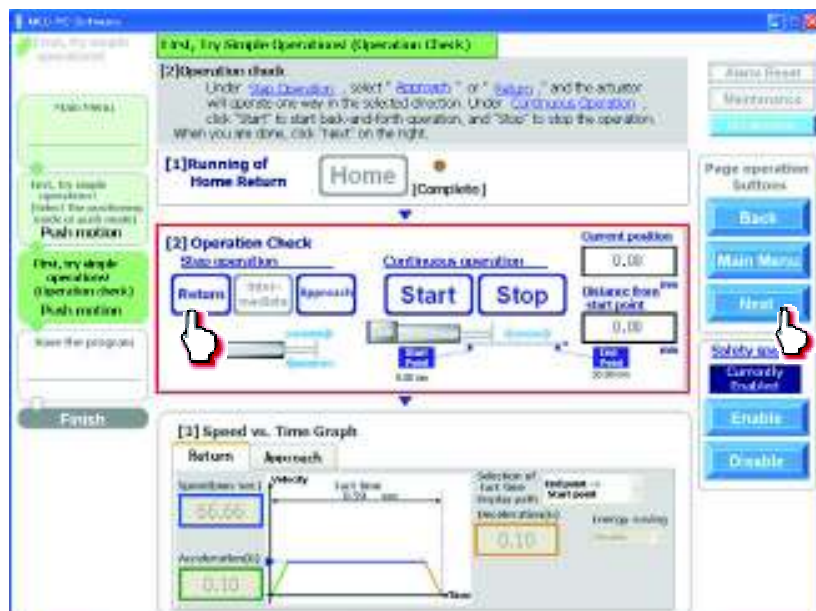
[Step operation]

Approach (end point):

Click [Approach] to move the actuator toward the end point.

Return (start point):

Click [Return] to move the actuator toward the start point.

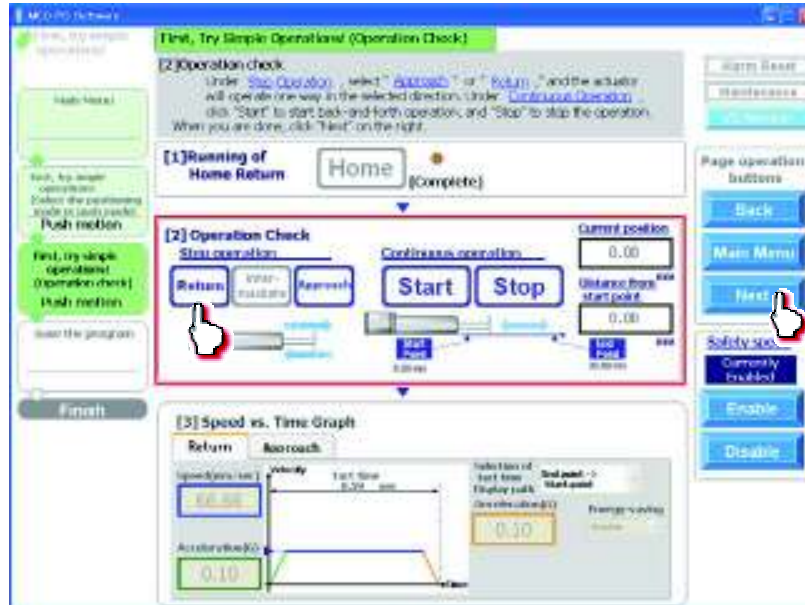




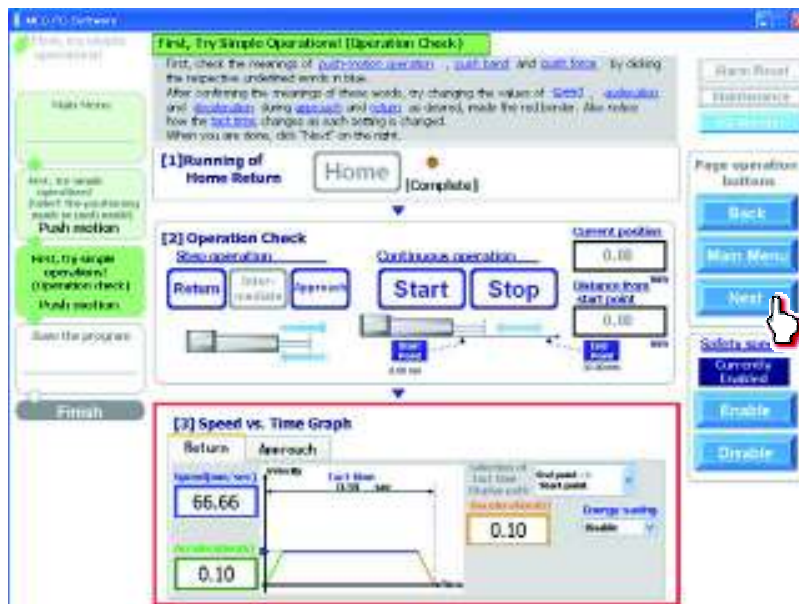
# PMEC/A MEC

[Continuous operation]

- Start: Click [Start] to move the actuator between approach and return continuously (between the end point and start point) in a program where the actuator stops at 2 points.
- Stop: Click [Stop] to stop the continuous operation.



- [4] On this screen, you can change the speed, acceleration, deceleration, push band (only for the approach), push force (only for the approach) and energy saving settings. Select either the approach or return. Change the speed, acceleration, deceleration, push band (only for the approach), push force (only for the approach) and energy saving settings. After the changes have been made, perform step operation and continuous operation to check how the actuator operates. When the operation check is complete, click [Next].

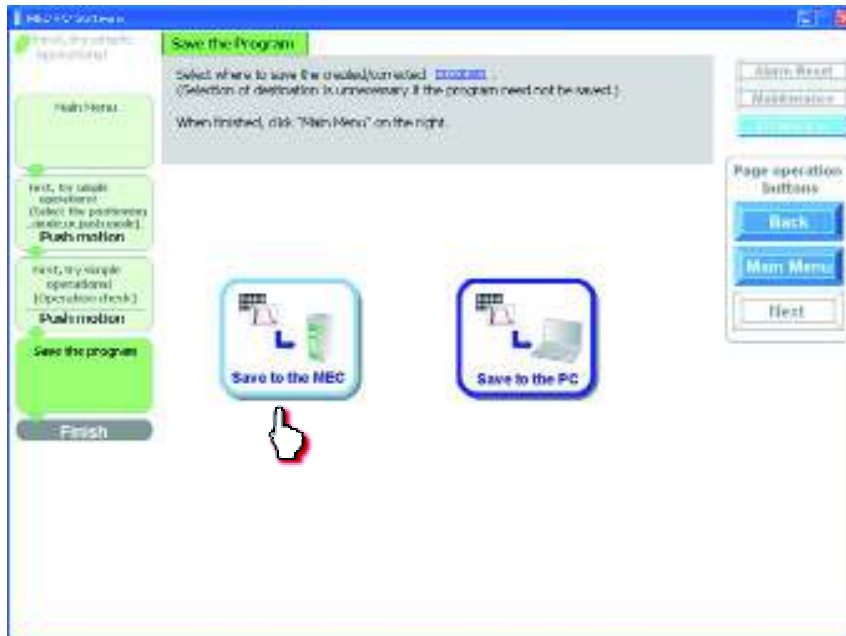




# PMEC/A MEC

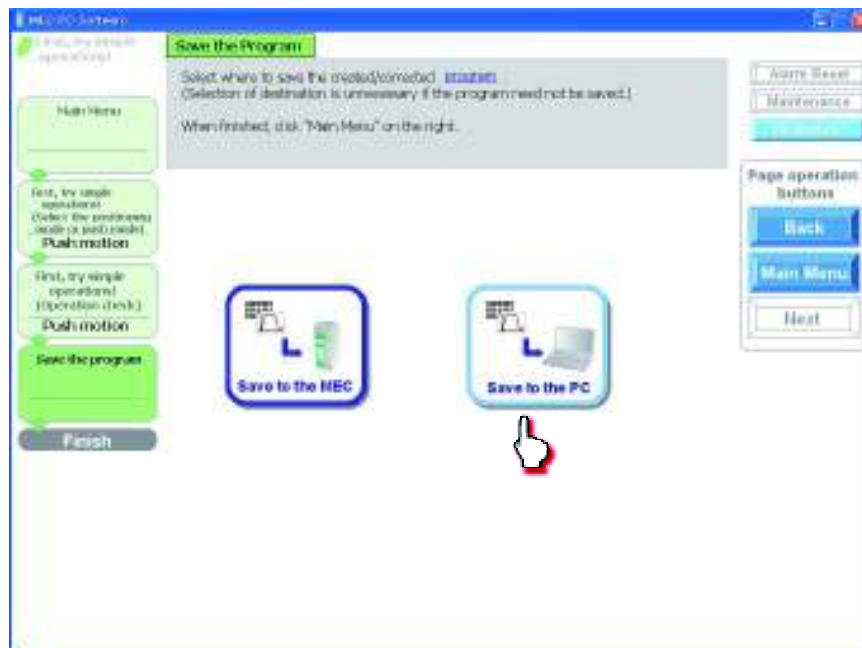
## [5] Saving the program [Saving to the MEC]

To operate the MEC controller by reflecting the speed and other operation conditions you have just changed, click [Save to the MEC]. Turn off the power and then turn it back on. The controller will operate according to the new operation conditions such as speed.



## [6] [Saving to the PC]

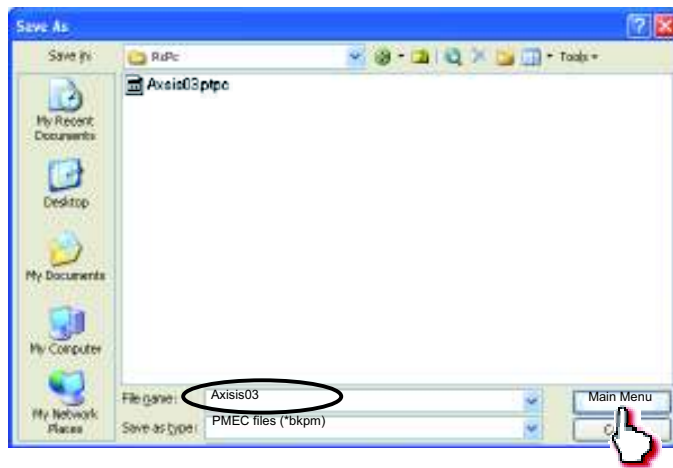
To save to the PC the changes you have made to the speed and other operation conditions, click [Save to the PC].



# PMEC/A MEC

The "Save As" screen appears.

Enter a desired file name and click [Save (S)], and the program (operation condition table) you have created will be saved to the PC.



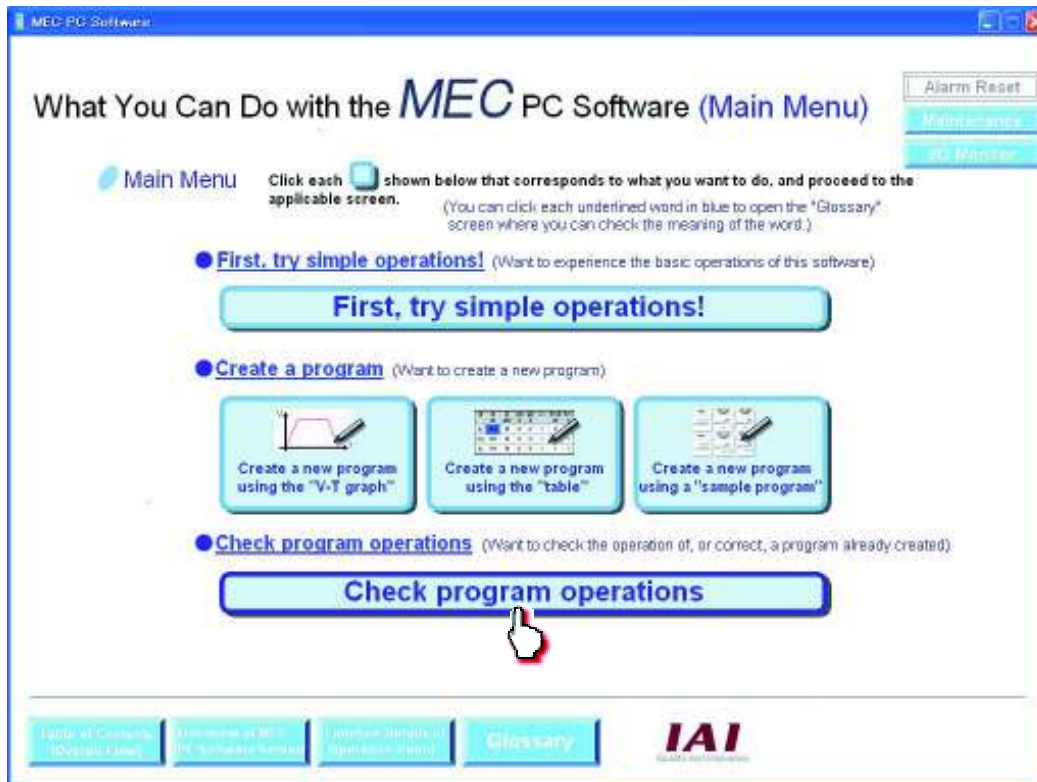
Once the program has been saved, click [Return to the "Main Menu."]. The screen returns to the main menu.

## 6. Checking Program Operations

### 6.1 Checking the Operation of a Program Saved in the MEC

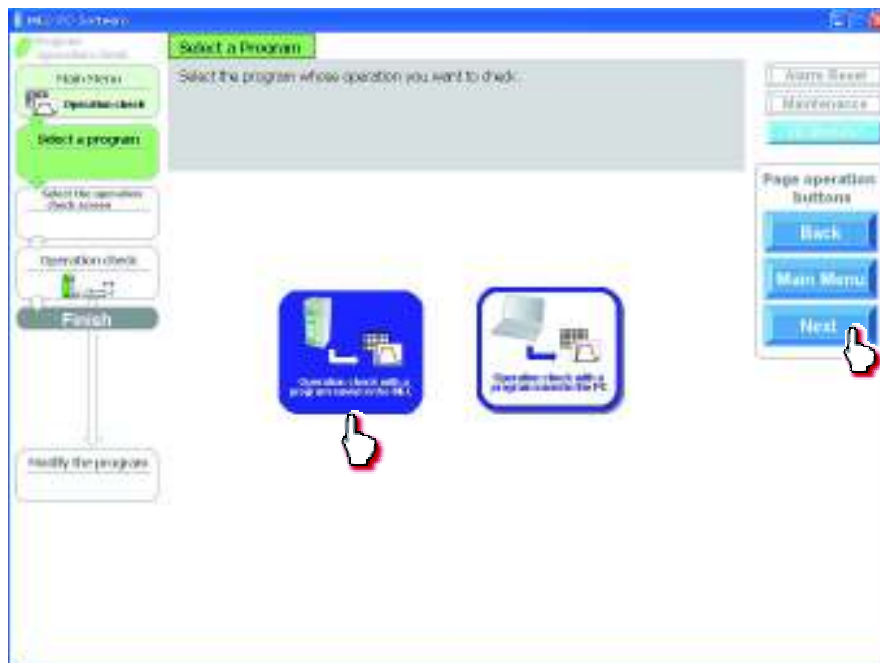
You can check the operation of, or modify, a program you have created.

Click [Check program operations] from the main menu. Check the operation according to the onscreen instructions.

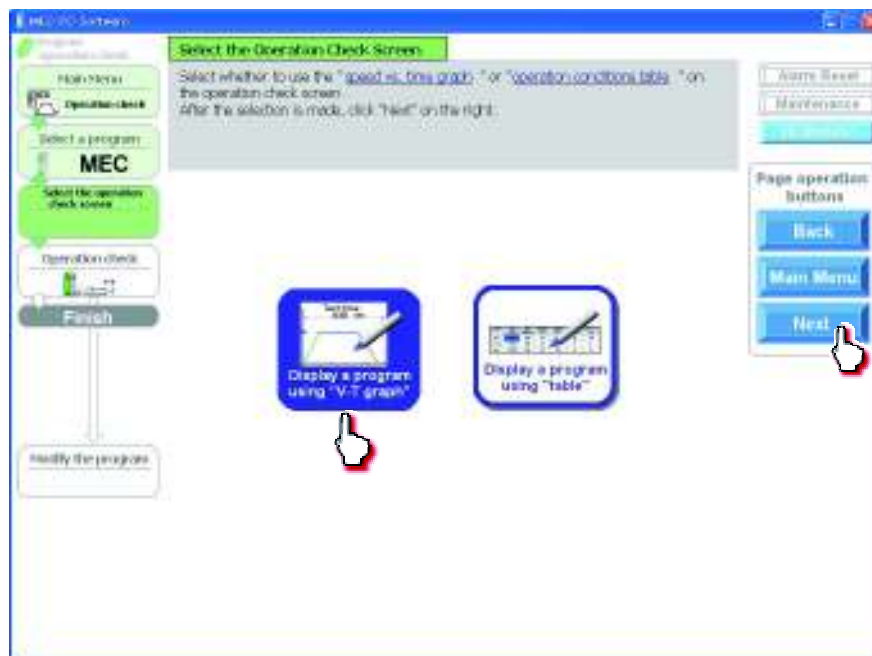


# PMEC/A MEC

- [1] Click [Operation check with a program saved in the MEC].  
The programs (operation condition settings) currently saved in the MEC controller are read to the PC.  
Click [Next].

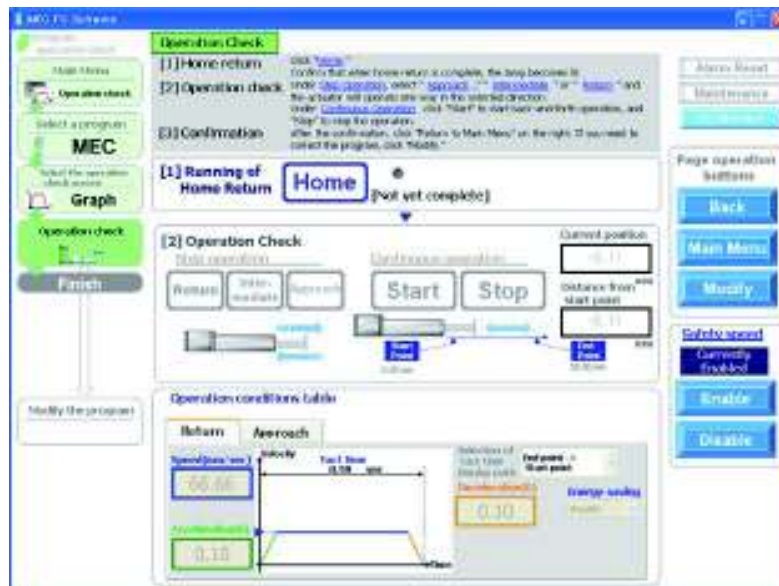


- [2] Select and click a desired display mode of the operation check screen. Click [Next].

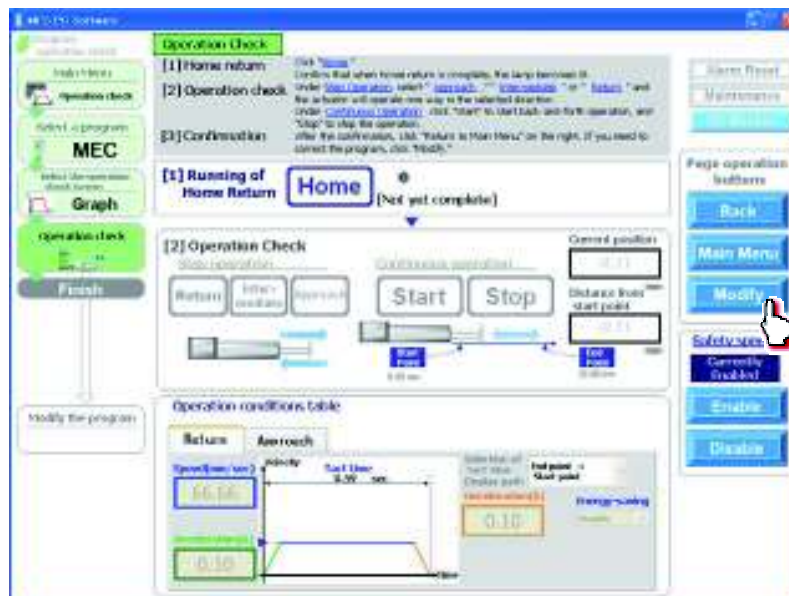


# PMEC/A MEC

- [3] The selected screen opens.  
 [When "Graph" was selected]  
 A speed vs. time graph is displayed.  
 You can use this graph to perform operation check.  
 The operating procedures are the same as those explained in 4.3, "Creating a Speed vs. Time Graph to Move the Actuator."



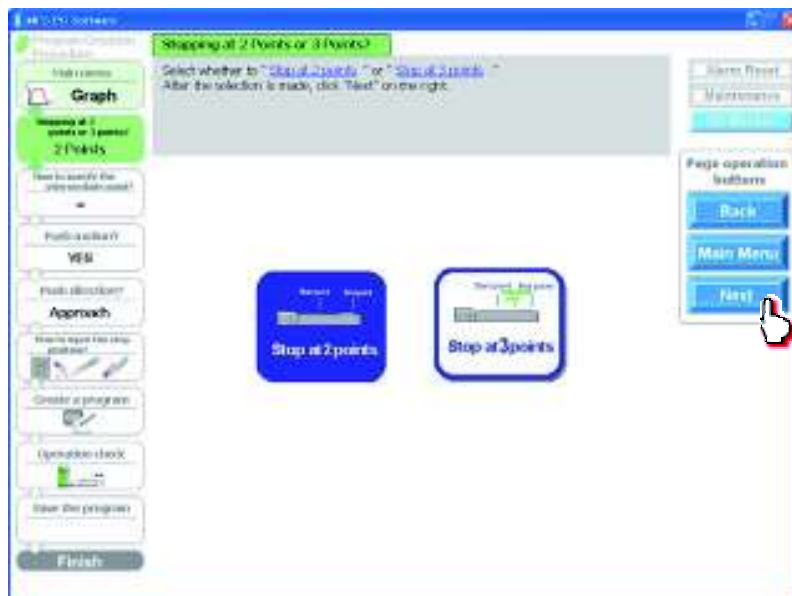
To correct the program, click [Modify].



# PMEC/A MEC

The display switches to the program edit screen.

The operating procedures are the same as those explained in 4.3, "Creating a Speed vs. Time Graph to Move the Actuator."

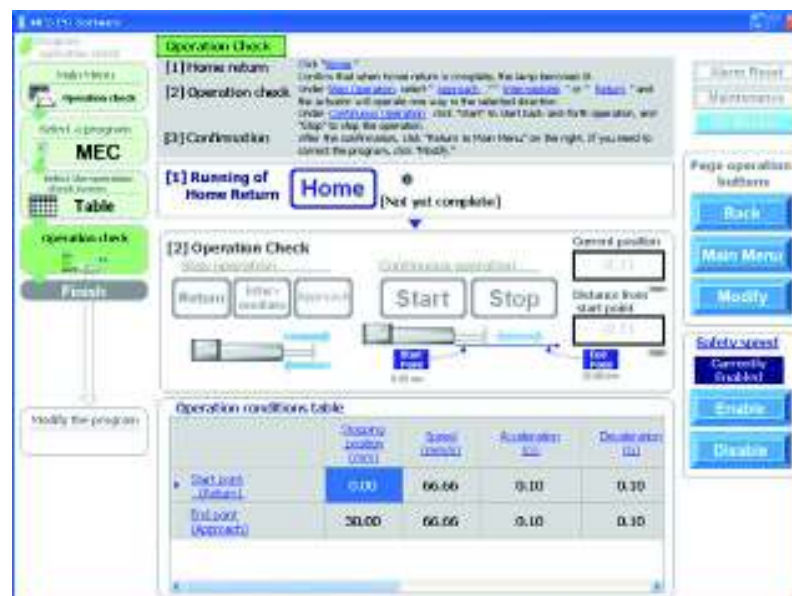


[When "Table" was selected]

An operation condition table appears.

You can use this table to perform operation check.

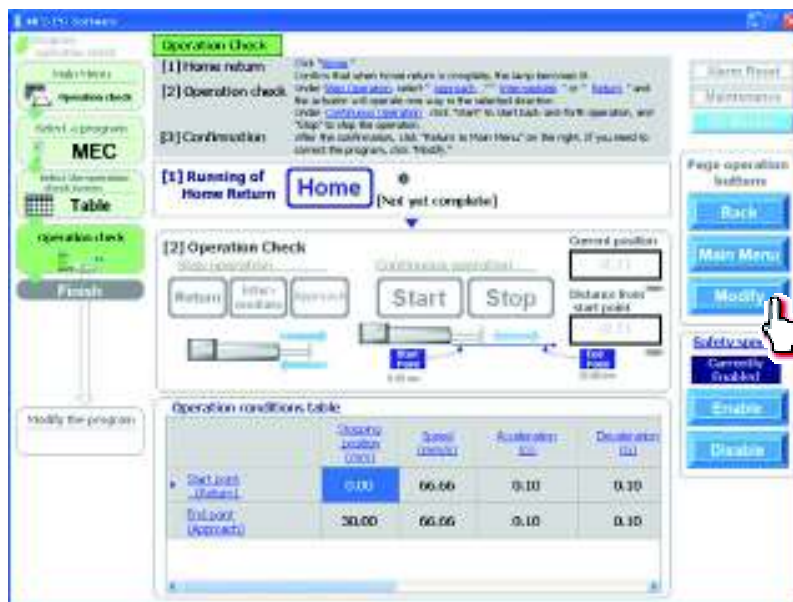
The operating procedures are the same as those explained in 4.1, "Creating an Operation Condition Table to Move the Actuator."





# PMEC/A MEC

To correct the program, click [Modify].



The display switches to the program edit screen.

The operating procedures are the same as those explained in 4.1, "Creating an Operation Condition Table to Move the Actuator."

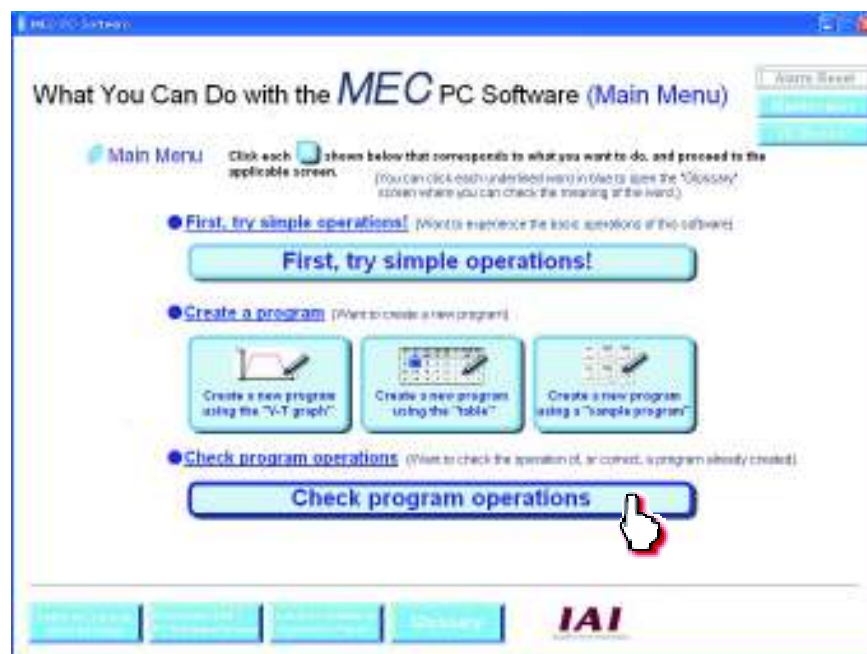




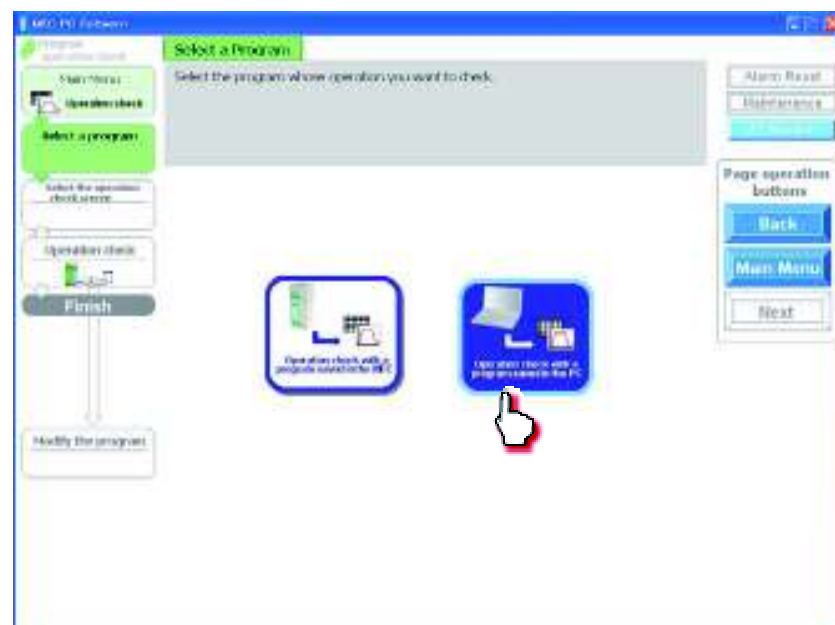
## 6.2 Checking the Operation of a Program Saved in the PC

You can check the operation of, or modify, a program you have created.

Click [Check program operations] from the main menu. Check the operation according to the onscreen instructions.



[1] Click [Operation check with a program saved in the PC].



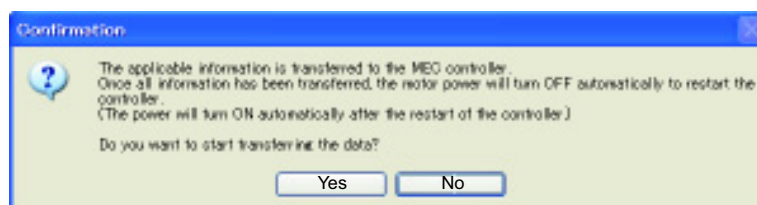
# PMEC/A MEC

The “Open File” screen appears.  
Select a desired file name, and then click [Open].

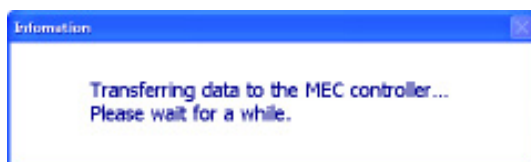


On the confirmation dialog box, click [Yes]. The program (operation condition settings) is transferred to the MEC controller from the PC.

(Note) If [No] is clicked, the program will not be saved to the MEC controller.



The following message appears while the data is being transferred.



# PMEC/A MEC

[2] Click [Next].

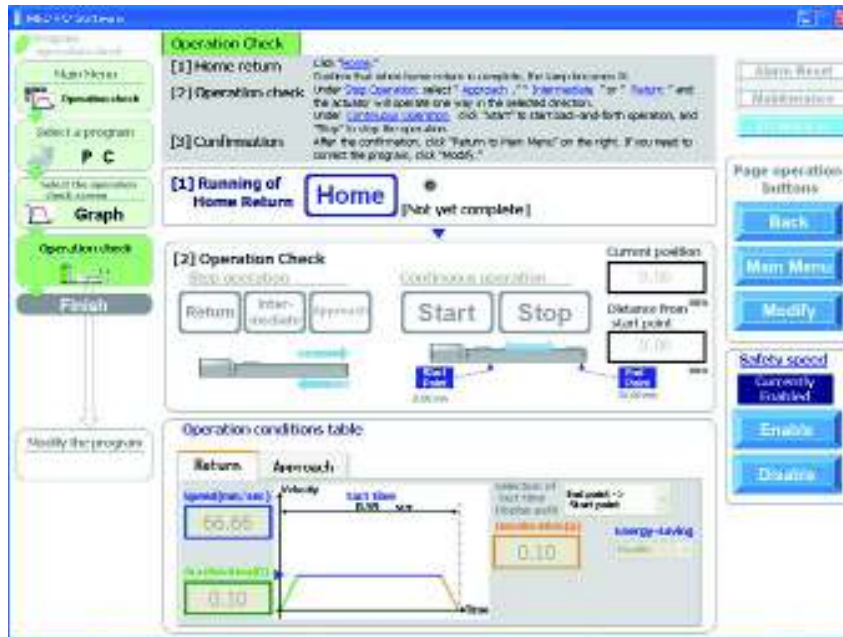


[3] Select and click a desired display mode of the operation check screen. Click [Next].

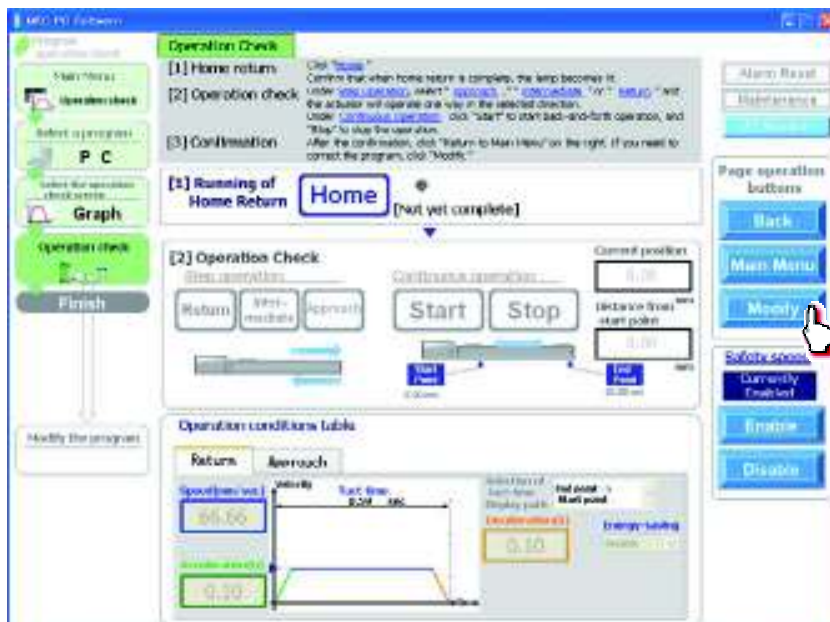


# PMEC/A MEC

- [4] The selected screen opens.  
 [When "Graph" was selected]  
 A speed vs. time graph is displayed.  
 You can use this graph to perform operation check.  
 The operating procedures are the same as those explained in 4.3, "Creating a Speed vs. Time Graph to Move the Actuator."



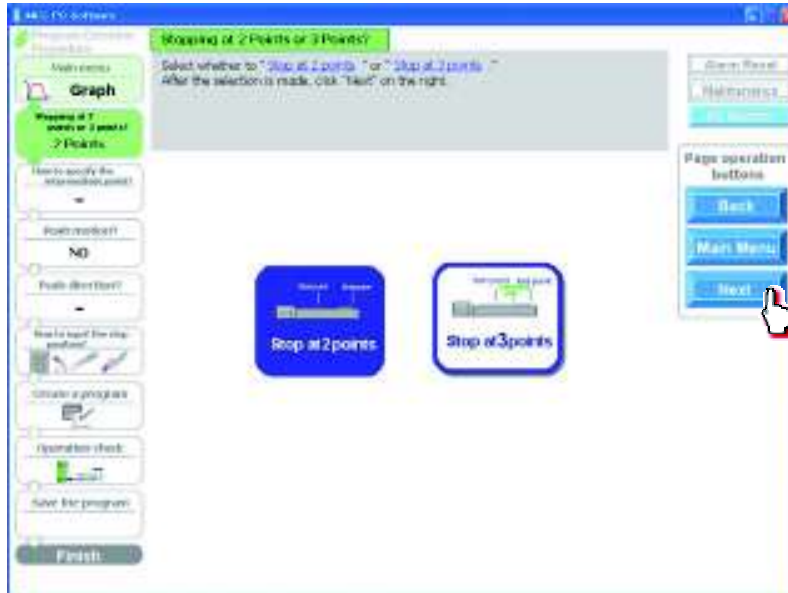
To correct the program, click [Modify].



# PMEC/A MEC

The display switches to the program edit screen.

The operating procedures are the same as those explained in 4.3, "Creating a Speed vs. Time Graph to Move the Actuator."



# PMEC/A MEC

[When "Table" was selected]

An operation condition table appears.

You can use this table to perform operation check.

The operating procedures are the same as those explained in 4.1, "Creating an Operation Condition Table to Move the Actuator."

**Operation Check**

[1] Home return: Click "Stop" to confirm that when home return is complete, the loop becomes 0. Under "Stop Operation", select "Approach", "Inter-mediate", "In", "Return" and the actuator will operate one way in the selected direction. Under "Continuous operation", click "Start" to start back-and-forth operation, and "Stop" to stop the operation. After the confirmation, click "Return to Main Menu" on the right. If you need to correct the program, click "Modify."

[2] Operation check: Click "Start" to start back-and-forth operation, and "Stop" to stop the operation. After the confirmation, click "Return to Main Menu" on the right. If you need to correct the program, click "Modify."

[3] Confirmation: After the confirmation, click "Return to Main Menu" on the right. If you need to correct the program, click "Modify."

**Operation conditions table**

	Stopping position (mm)	Speed (mm/s)	Acceleration (m/s²)	Deceleration (m/s²)
Start point (Return)	0.00	66.66	0.10	0.10
End point (Approach)	30.00	66.66	0.10	0.10

To correct the program, click [Modify].

**Operation Check**

[1] Home return: Click "Stop" to confirm that when home return is complete, the loop becomes 0. Under "Stop Operation", select "Approach", "Inter-mediate", "In", "Return" and the actuator will operate one way in the selected direction. Under "Continuous operation", click "Start" to start back-and-forth operation, and "Stop" to stop the operation. After the confirmation, click "Return to Main Menu" on the right. If you need to correct the program, click "Modify."

[2] Operation check: Click "Start" to start back-and-forth operation, and "Stop" to stop the operation. After the confirmation, click "Return to Main Menu" on the right. If you need to correct the program, click "Modify."

[3] Confirmation: After the confirmation, click "Return to Main Menu" on the right. If you need to correct the program, click "Modify."

**Operation conditions table**

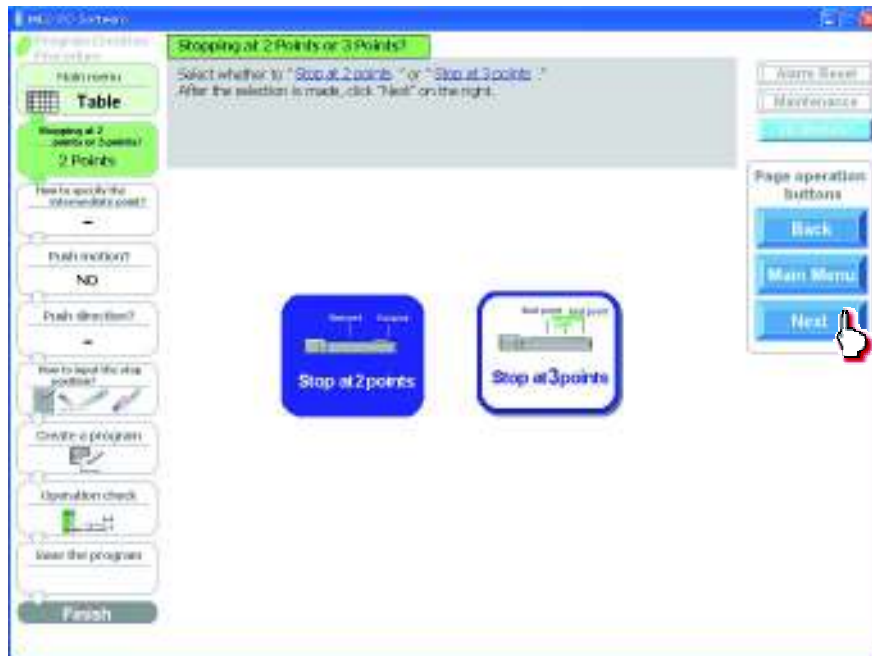
	Stopping position (mm)	Speed (mm/s)	Acceleration (m/s²)	Deceleration (m/s²)
Start point (Return)	0.00	66.66	0.10	0.10
End point (Approach)	30.00	66.66	0.10	0.10



# PMEC/A MEC

The display switches to the program edit screen.

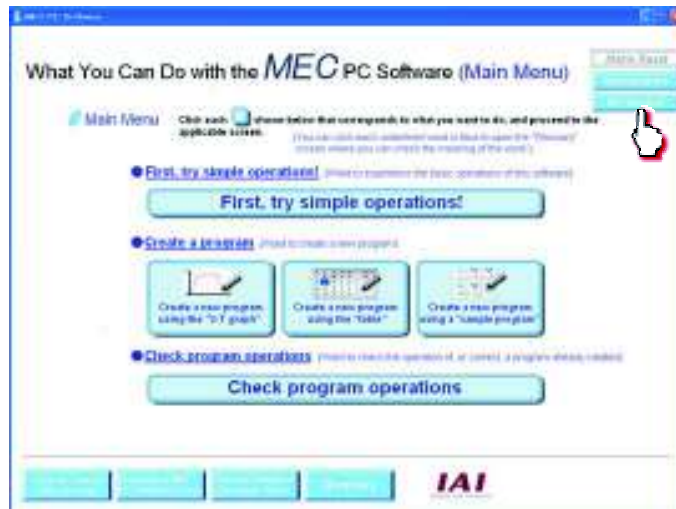
The operating procedures are the same as those explained in 4.1, "Creating an Operation Condition Table to Move the Actuator."



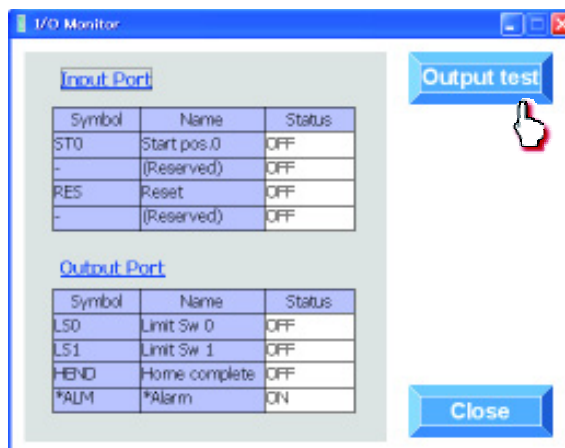


## 7. Monitoring I/Os

To display the I/O monitor screen, click [I/O Monitor] on the menu screen.



To check the input/output signals, you can monitor the input and output ports. Click [Output test].



A warning dialog box appears. Click [Yes]. This forcibly turns OFF the signals.



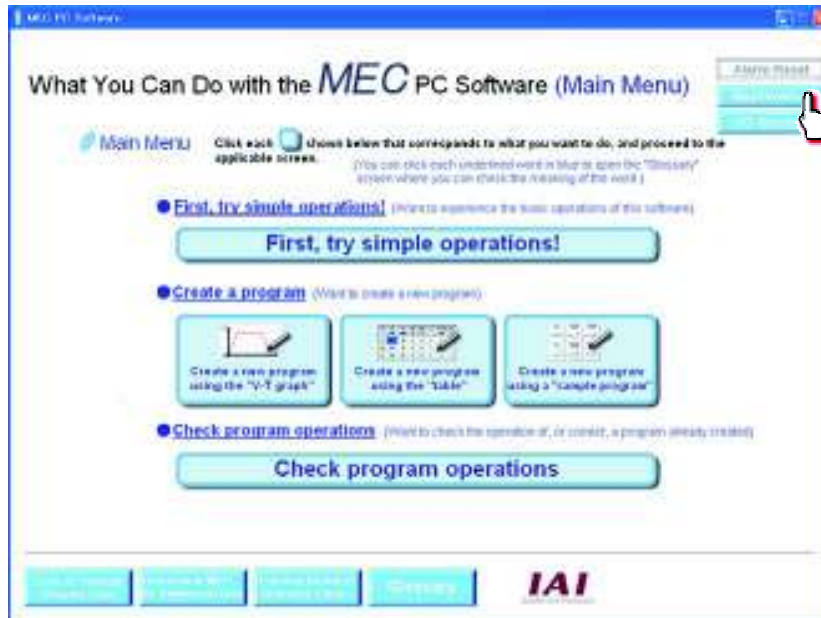
# ***PMEC/A MEC***=====

Click to select the port you want to turn ON the output of, to forcibly turn ON the signal.



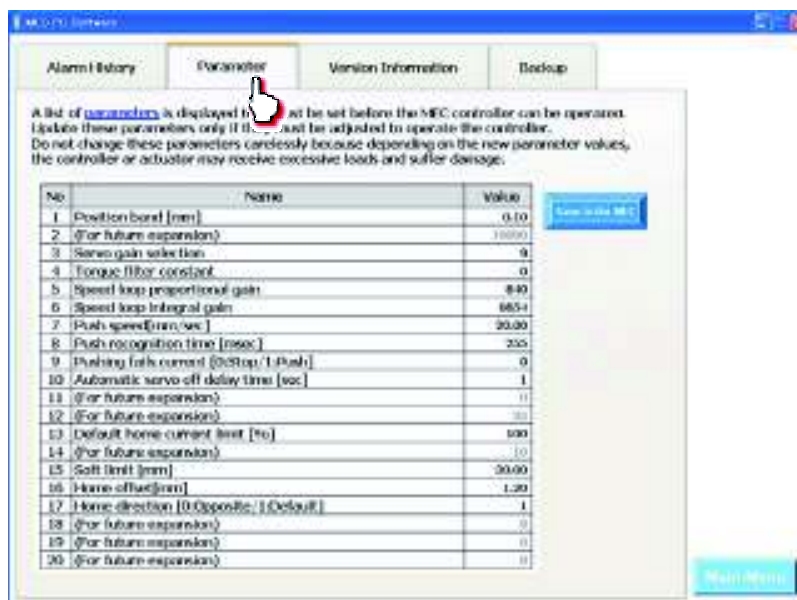
## 8. Editing Parameters

To load parameter data from the controller and change parameters, click [Maintenance] on the menu screen.



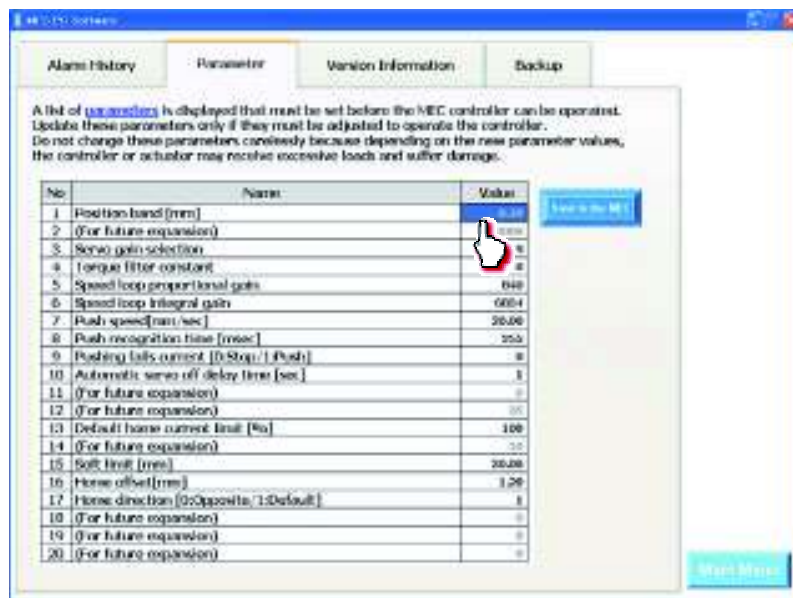
Menu Screen

- [1] The maintenance screen appears.  
Click the [Parameter] tab. The parameter screen appears.

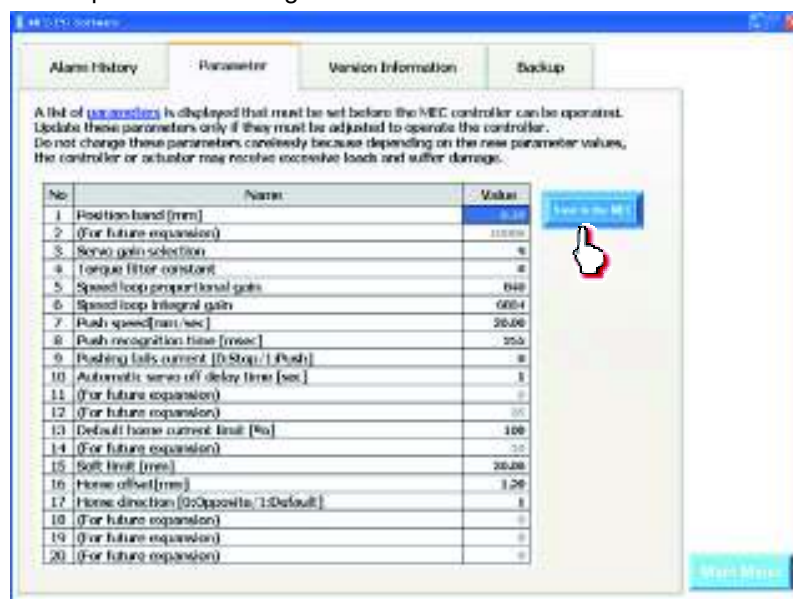


# PMEC/A MEC

- [2] Click the set value of the parameter you want to change, enter a new value from the keyboard, and then press the ENTER key to input the value.



- [3] Click [Save to the MEC].  
The new parameter wetting is saved to the MEC controller.



Click [Main Menu] to return to the main menu.

## 9. Alarm Display

### 9.1 Alarm Display upon Generation of Alarm

When an alarm generates, [Alarm generated: 0E7] changes to red.  
At the same time, a message indicating the nature of the alarm and remedial action appears.  
Take an appropriate action according to the message.  
When [OK] on this message dialog box is clicked, the message dialog box closes.

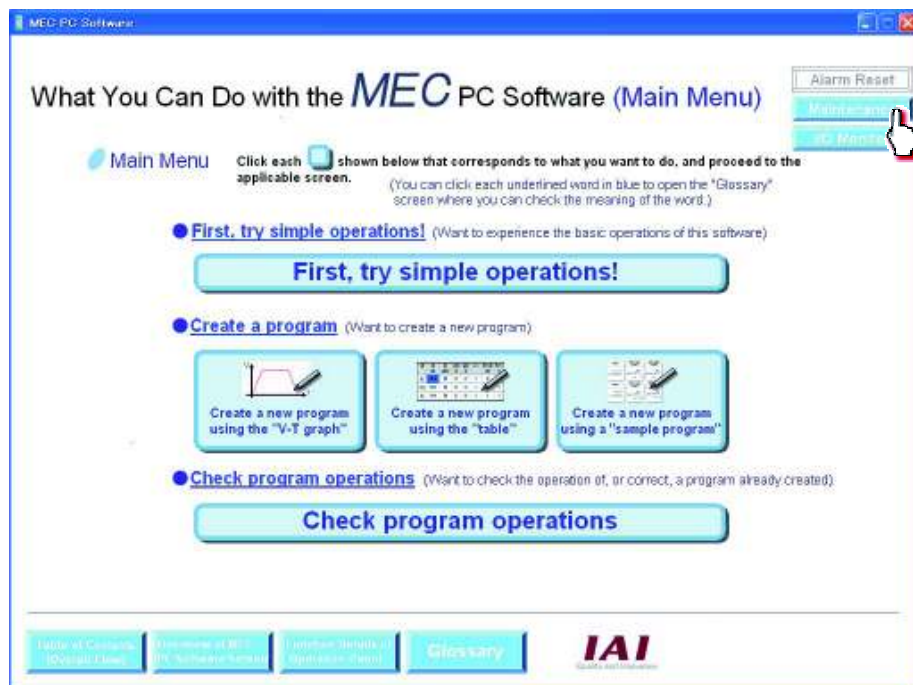


When this button turns red, an alarm code is displayed

# PMEC/A MEC

## 9.2 Alarm History

To display the alarm history, click [Maintenance] on the menu screen.





## 9.2.1 Displaying the Alarm History

- [1] Click the [Alarm History] tab. The alarm history appears.

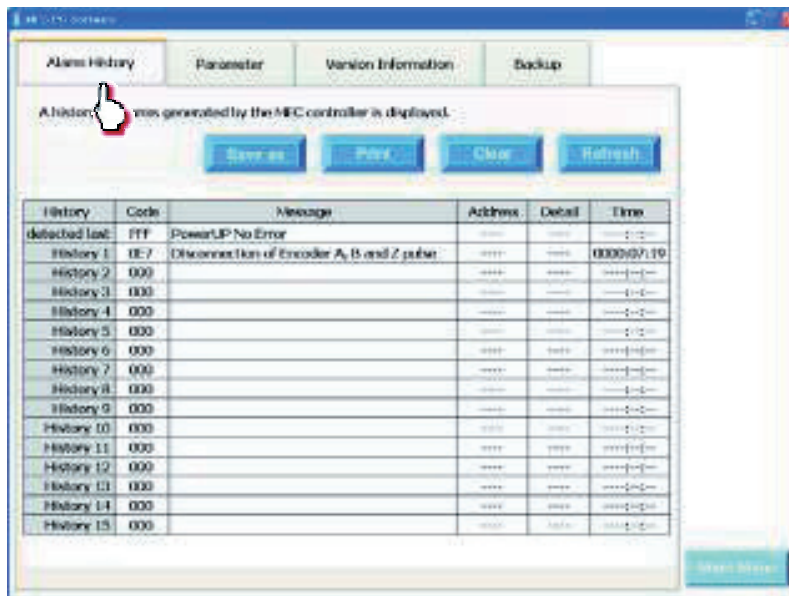
The last detected warning code, 16 most recent alarm codes and addresses where a runtime error generated (for use in the manufacturer's investigation), detailed codes and times when warnings/alarms generated are displayed.

(Note) A power ON log entry (no error) indicates that the controller power was turned on. This is not an error. The time of generation indicates an elapsed time after this power ON log entry (no error).

Clicking [Refresh] refreshes the display to the latest information.

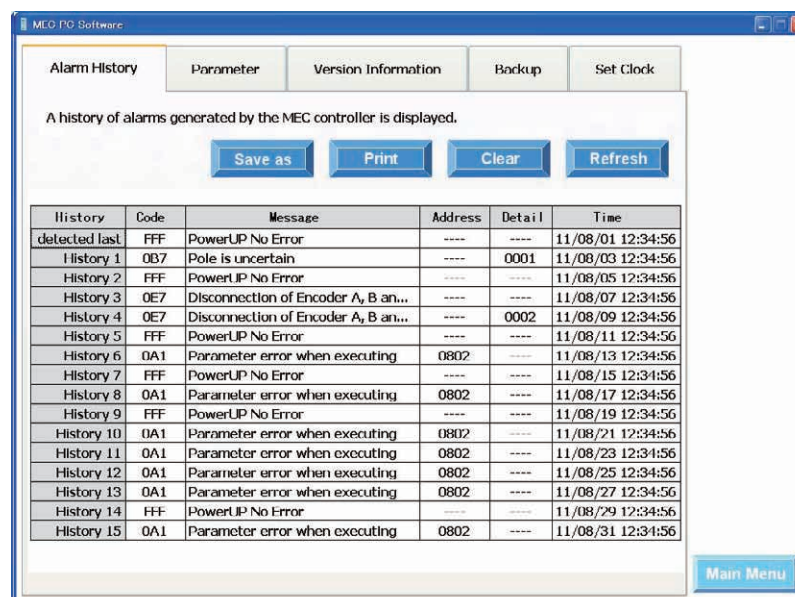
Clicking [Clear] clears the history.

AMEC and PMEC Display



Display When ERC3 PIO Converter (Option) is Used

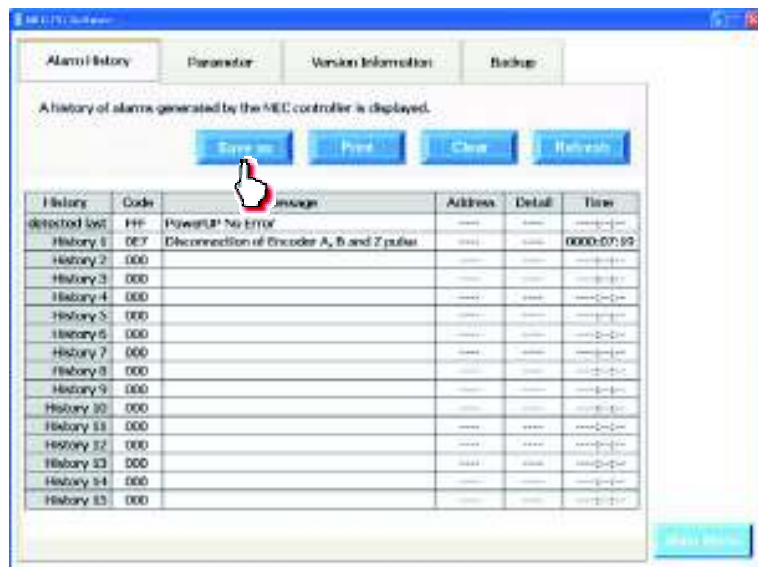
For ERC3 PIO Converter, the time when an alarm is issued is displayed.



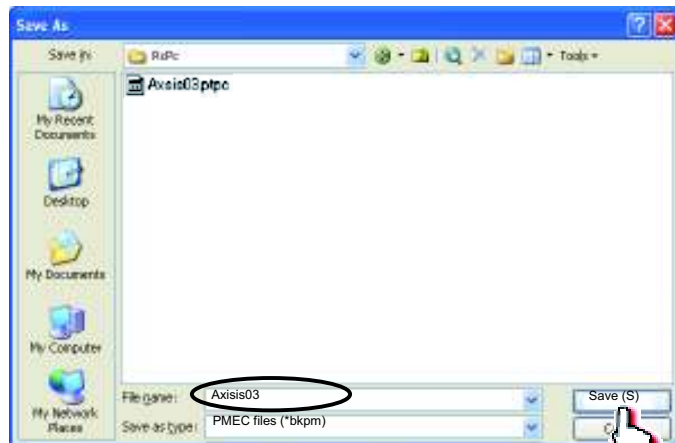


## 9.2.2 Saving the Alarm History

- [1] You can save the alarm history by clicking [Save as].  
(Version 1.00.05.00 or later)

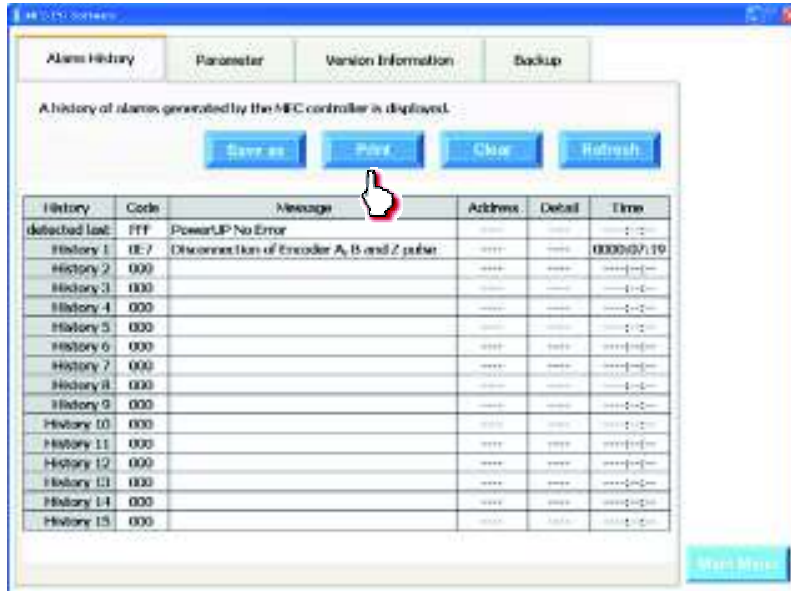


- [2] The "Save As" screen appears.  
Enter a desired file name and click [Save (S)], and the alarm history will be saved.

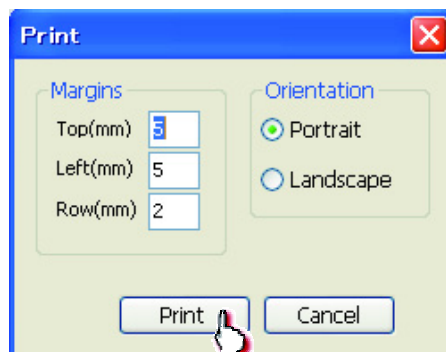


## 9.2.3 Printing the Alarm History

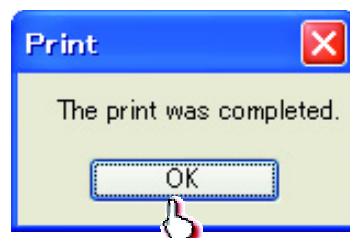
- [1] You can print the alarm history by clicking [Printing].  
(Version 1.00.05.00 or later)



- [2] The print setup screen appears.  
To change the margins and orientation, change the settings and then click [Print], and the alarm history will be printed accordingly.



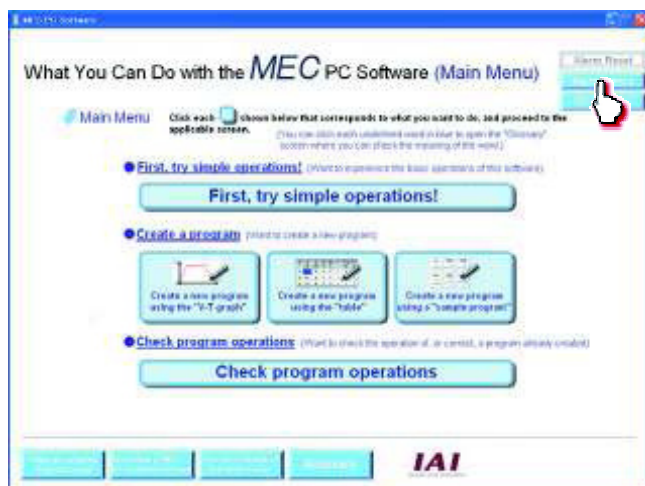
- [3] When the printing is complete, the printing complete screen appears. Click [OK].



# PMEC/AMEC

## 10. Displaying the Version Information

To display the version information, click [Maintenance] on the menu screen.



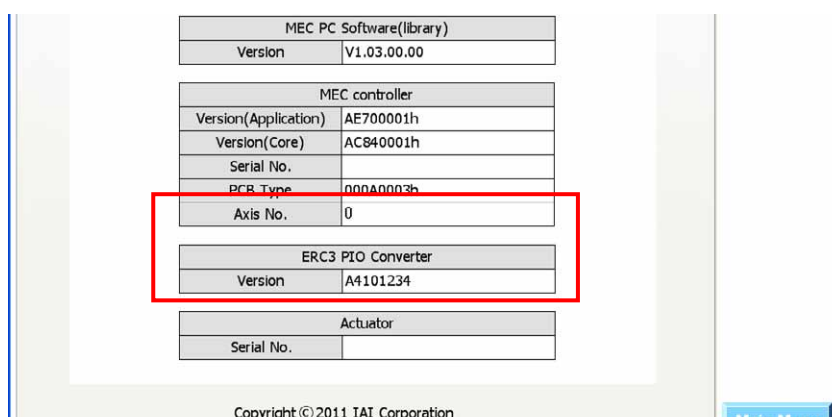
Click the [Version Information] tab. The versions of your MEC PC software, controller, etc., are displayed.

### AMEC and PMEC Display



The contents of display for ERC3 differ from those of PMEC and AMEC.

- Axis number is displayed on the controller.
- There is no display of the version on MEC Panel Board.
- The version of PIO converter is displayed.

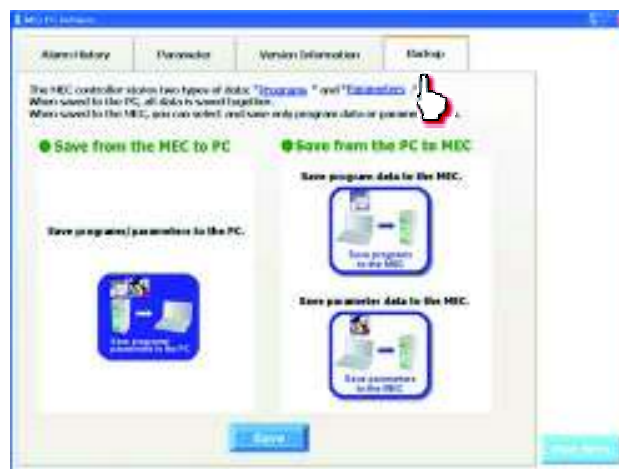


## 11. Backup

To backup the programs and parameters, click [Maintenance] on the menu screen.

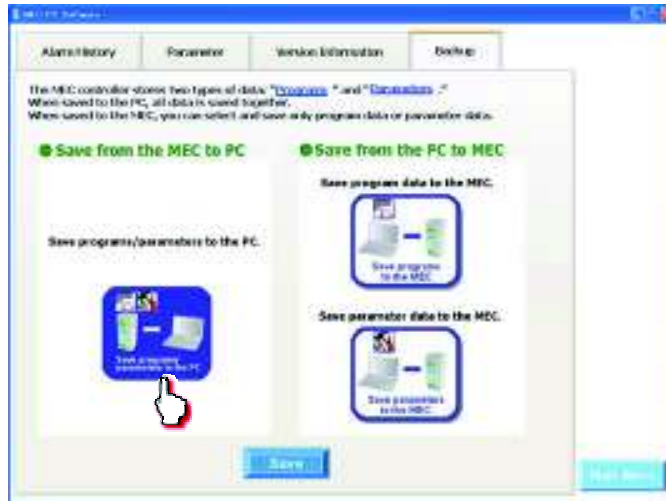


Click the [Backup] tab. The backup operation screen appears.



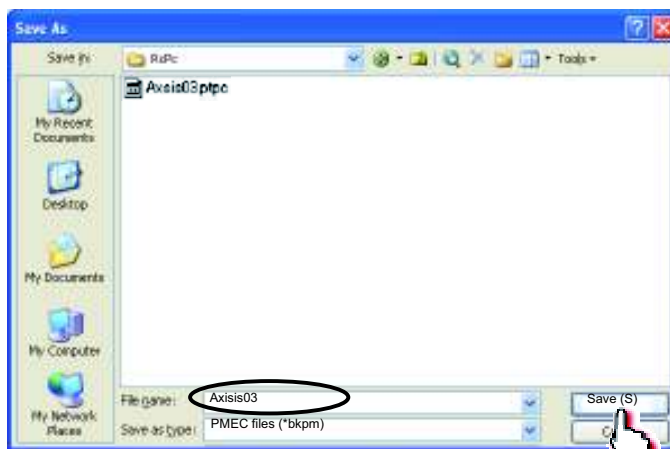
# PMEC/A MEC

- (1) Saving the programs and parameters to the PC  
To save the programs and parameters to the PC, select [Save programs/parameters to the PC], and then click [Save].



The "Save As" screen appears.

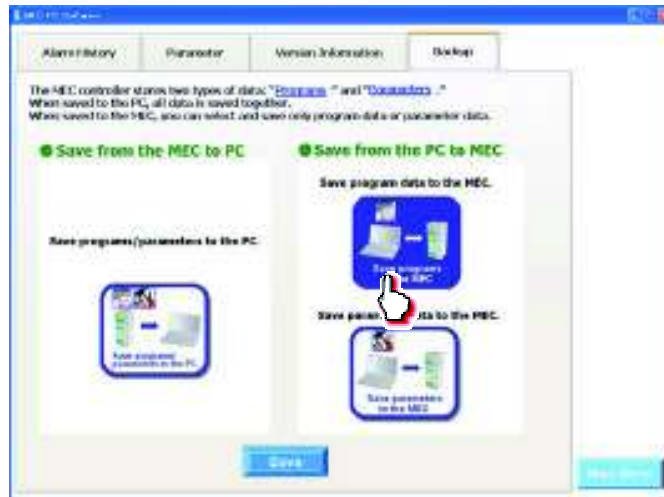
Enter a desired file name and click [Save (S)], and the programs you have created will be saved to the PC.



Once the program has been saved, click [Return to the "Main Menu."]. The screen returns to the main menu screen.

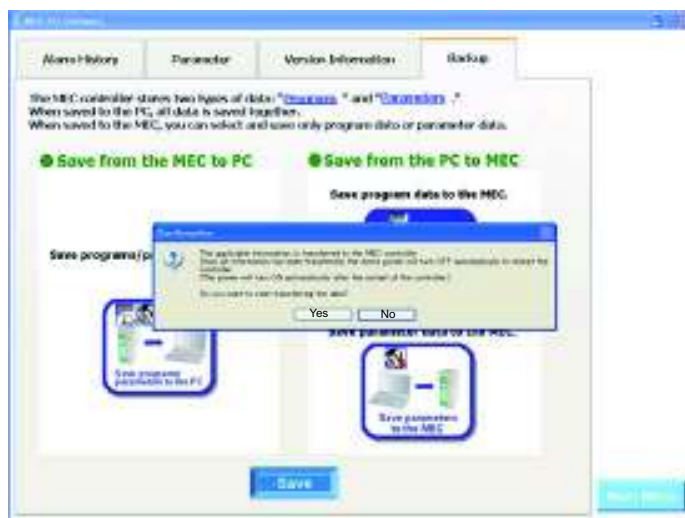
# PMEC/A MEC

- (2) Saving the programs from the PC to the controller  
To save the programs from the PC to the controller, select [Save program data to the MEC], and then click [Save].



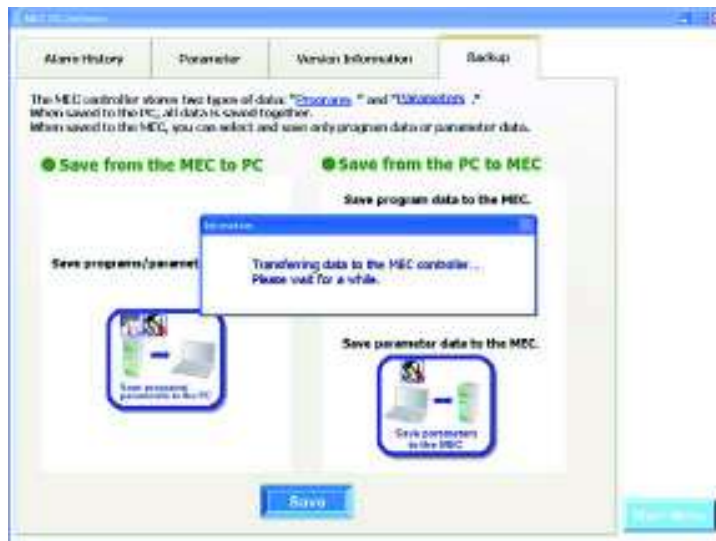
Click [Yes] to save the programs to the MEC controller.

(Note) If [No] is clicked, the programs will not be saved to the MEC controller.



# PMEC/A MEC

The following message appears while the data is being transferred.

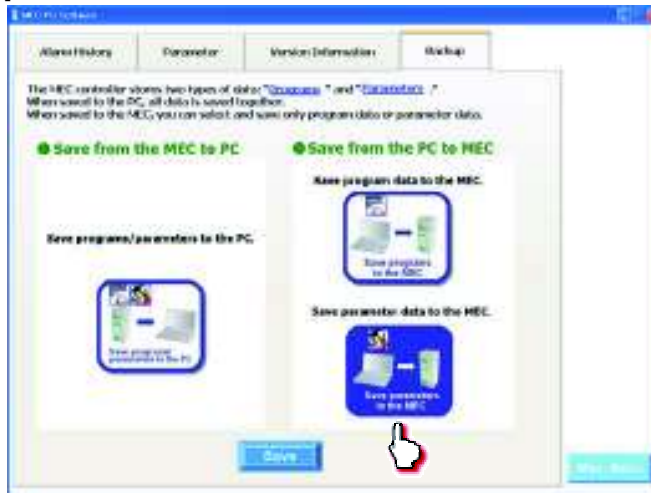




# PMEC/A MEC

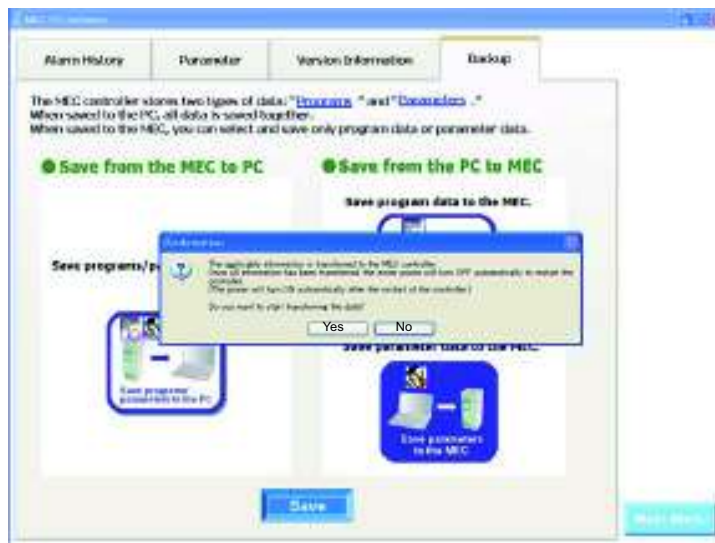
## (3) Saving the parameters from the PC to the controller

To save the parameters from the PC to the controller, select [Save parameter data to the MEC], and then click [Save].



Click [Yes] to save the parameters to the MEC controller.

(Note) If [No] is clicked, the programs will not be saved to the MEC controller



# PMEC/A MEC

The following message appears while the data is being transferred.



## 12. Set Clock

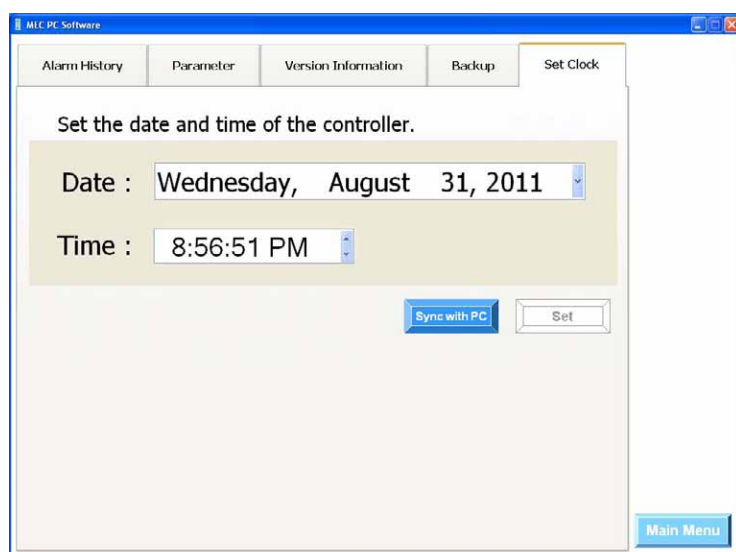
(Note) Clock setting is available only for ERC3 PIO Converter. (Version V2.00.00.00)

To set the clock information, click [Maintenance] in Menu Window.



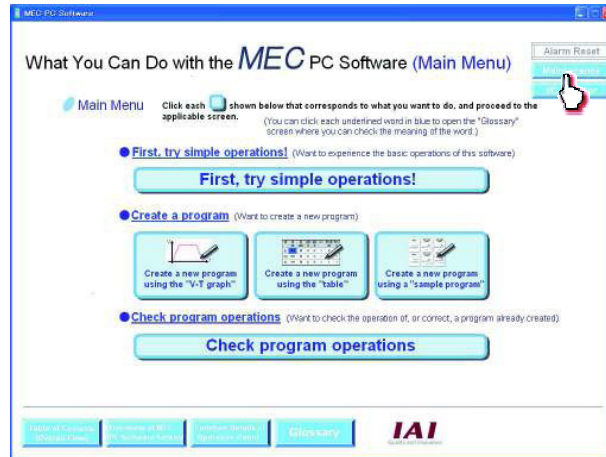
Click on [Set Clock] tab. The window for clock setting appears.

- 1) Date Setting: Click on the date and the calendar appears. The date can directly be input with the numeral keys in the calendar display window. It is also available to click on a date on the calendar to select.
- 2) Time Setting: Click on either hour, minute or second to shade it in blue. Shaded number can directly be set with numeral keys. Also, it is available to increase and decrease the numbers with ▲ and ▼ keys.
- 3) Click [Set] and the changes to the date and time are set to the controller.  
(Note) Click [Sync with PC] and the date and time information of the PC is set to the controller.

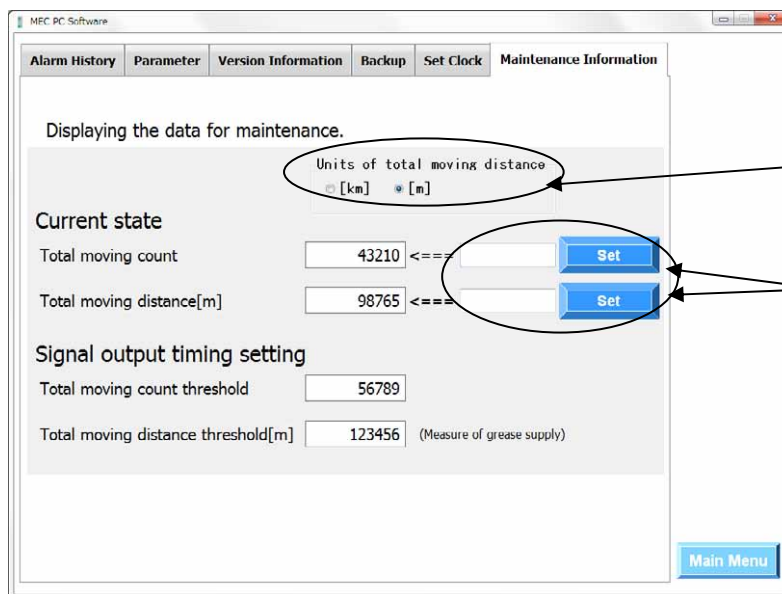


## 13. Maintenance Information

To set up the maintenance information, click on Maintenance in Menu Window.



Click "Maintenance Information" tab. Clock setting window appears.



Switch over between km and m

Update data of maintenance information

This window shows the total moving count and total moving distance of the actuator.

- Total moving count Displays the calculative total of moving count of the actuator.
- Total moving distance Displays the calculative total of moving distance of the actuator. The total moving distance can be switched over between km and m.

(1) Change in Total Moving Count and Total Moving Distance

Input a value in the maintenance update data for the total moving count and total moving distance and then click update, and a change will be made to the total moving count and total moving distance.

(2) Threshold of Total Moving Count and Total Moving Distance Count

Set the threshold for the total moving count and total moving distance count, and an alarm of message level can be generated when the count exceeds the target. The set threshold gets stored in the following parameter.

Parameter No.	Name
26	Total movement count threshold
27	Total operated distance threshold

Message Level Alarm

Alarm Code	Name	Content
4E	Movement count threshold violation	It is issued when the total moving count exceeds the threshold set in Parameter No. 26.
4F	Operated distance threshold violation	It is issued when the total moving distance exceeds the threshold set in Parameter No. 27.

[Example of use for Total Operated Distance Times]

For an instance, it is recommended to have a grease supply on the ball screw in the regular inspections when the drive distance exceeds 5000km within 3 years after starting operation for RCP2 Short Type Actuator.

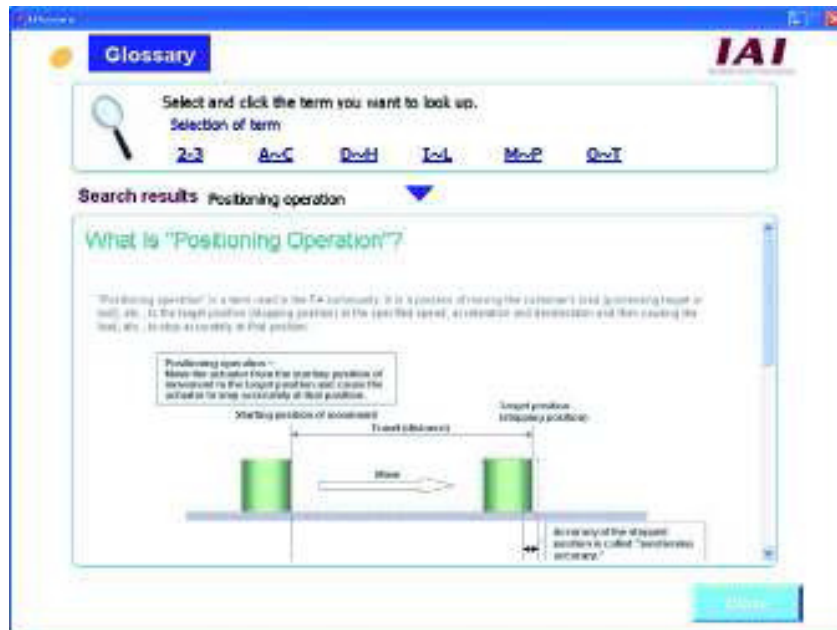
In this case, set '5000' in Parameter No.27 at the start of the first run, and an alarm notifies that grease supply is required when the drive distance exceeds 5000km.

## 14. Term Search Function

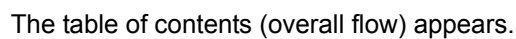
Clicking a desired text with a blue underline on each screen opens the “Glossary” screen.  
You can also access the “Glossary” screen by clicking [Glossary] on the main menu screen.

[Glossary]

Move the mouse cursor to an appropriate group in the term selection area and click the term you want to check. An explanation of the selected term is displayed.



To display the Table of Contents (Overall Flow), click [Table of Contents (Overall Flow)] in the Main Menu.



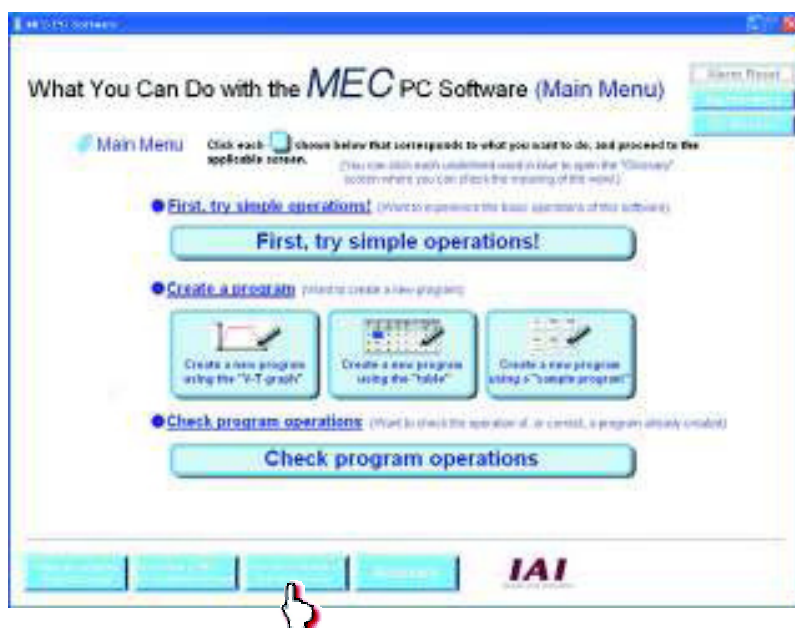


# PMEC/A MEC

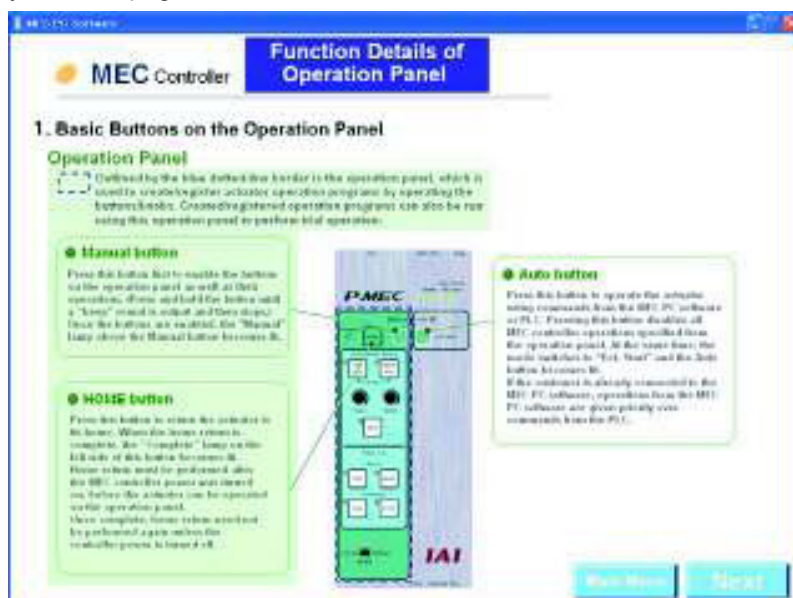
## 16. Displaying the Function Details of the MEC Controller Operation Panel

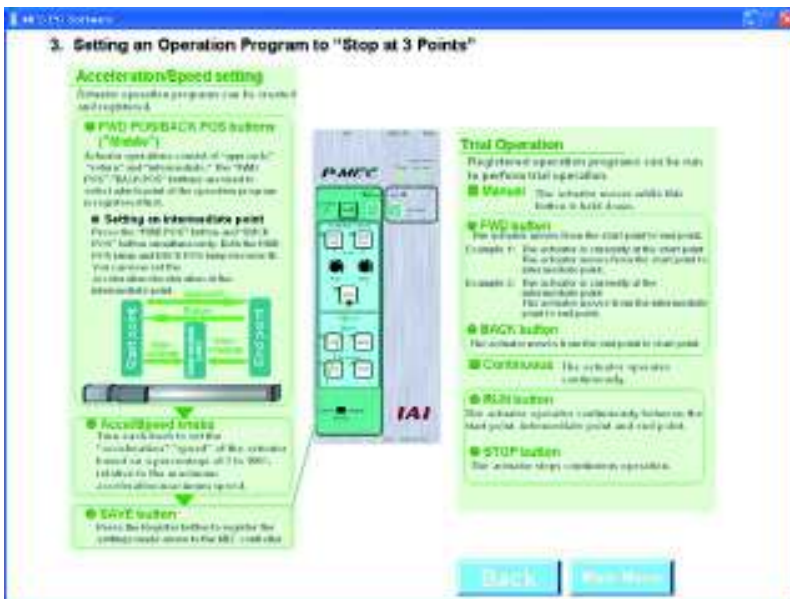
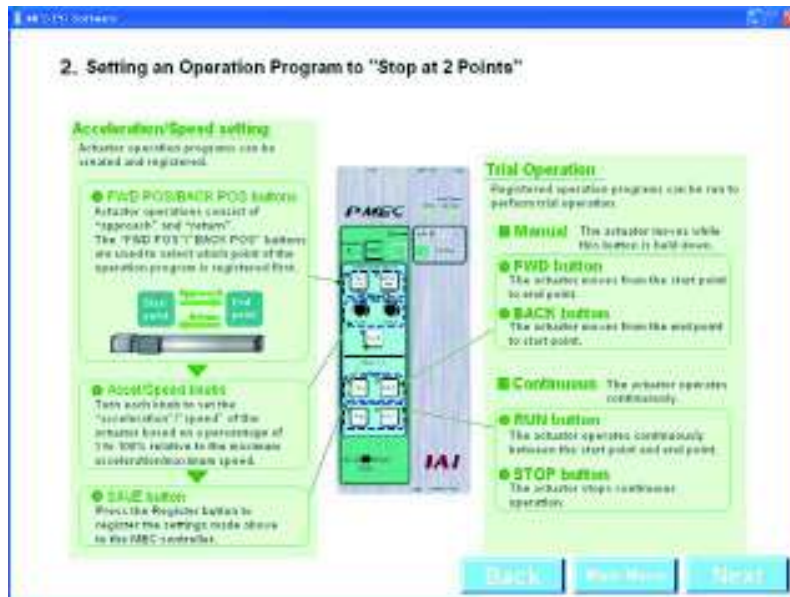
To display the details of the MEC controller operation panel functions, click [Function Details of Operation Panel] in the Main Menu.

(Note) For ERC3, there is no operation panel function detail display.



The function details of the MEC controller operation panel are displayed over three pages. Click [Next] to display the next page.





## 17. Appendix

### How to Initialize the Parameters (to Their Factory Defaults)

The parameters can be reset to their factory defaults according to the procedure specified below.  
(Version 1.00.05.00 or later)



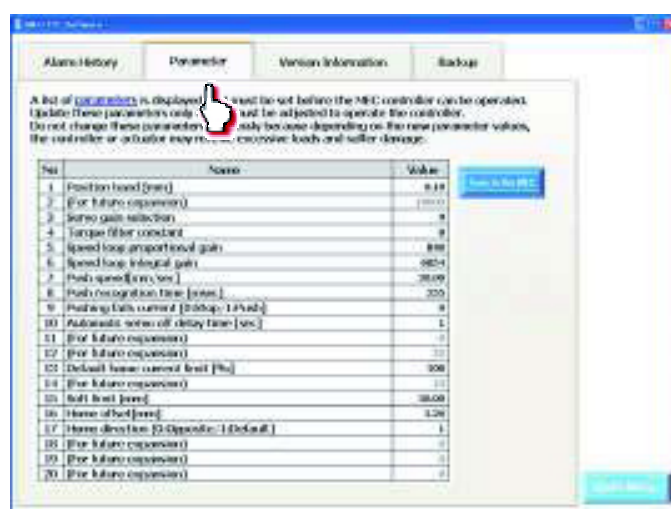
#### Caution:

This should be the last resort when an alarm cannot be reset by resetting the software or turning on/off the power. Take note that initializing the parameters (to their factory defaults) restores the factory set parameters by discarding all changes you have made to the parameters.

Click [Maintenance] on the menu screen.

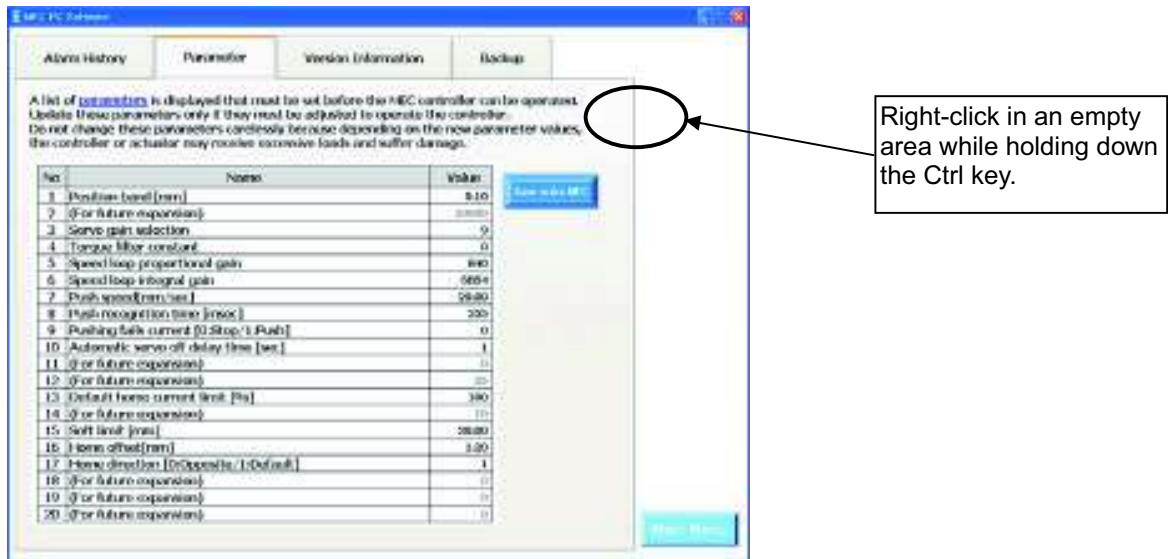


- [1] The maintenance screen appears.  
Click the [Parameter] tab. The parameter screen appears.

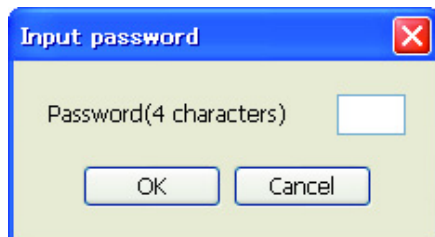


# PMEC/A MEC

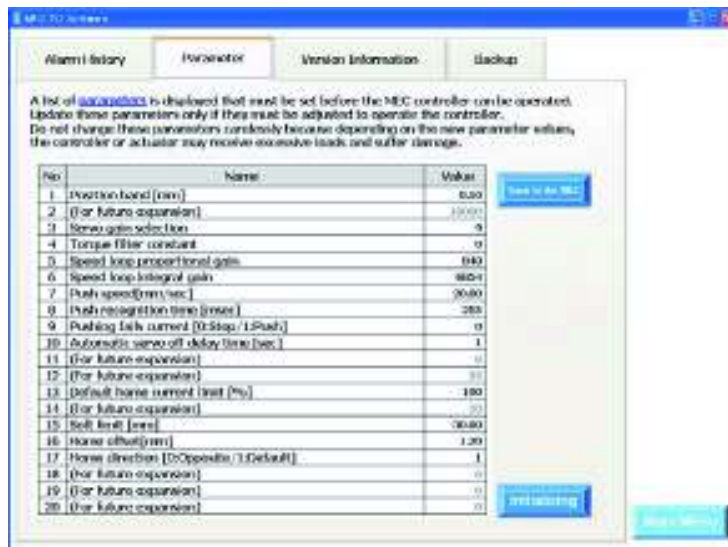
- [2] Right-click in an empty area as shown below while holding down the Ctrl key.



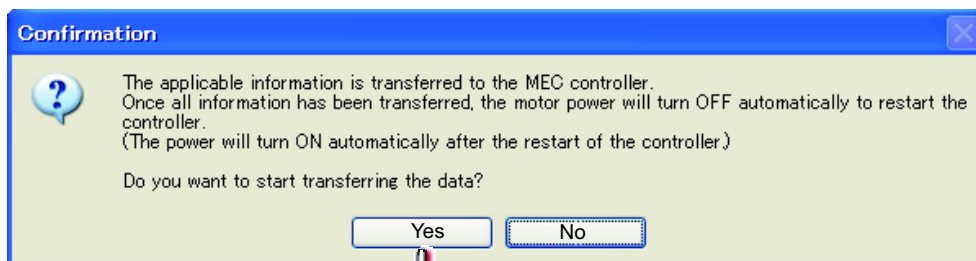
- [3] The "Input password" appears. Enter the password 5119.



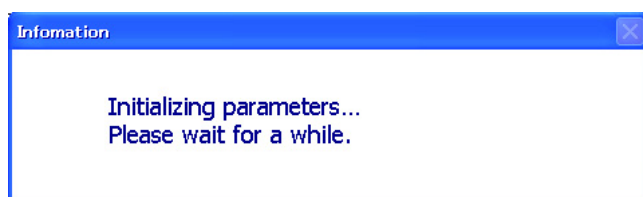
- [4] The [Initializing] button appears. Click the [Initializing] button.



- [5] The confirmation screen for parameter initialization (to factory defaults) appears. Clicking [Yes] initializes the parameters.



The following message appears while the initialization is in progress.



## Change History

Revision Data	Description of Revision
March 2010	First edition
March 2010	Second edition P9 to 38 Added methods to start the installer when "ZIP file was downloaded" and "Self-extracting file was downloaded."
May 2010	Third edition Added an operation flow for each menu in 3.1, 3.2 and 3.3. Changed operations in 8, "Editing Parameters." Added 9.1, "Alarm Display upon Generation of Alarm." Added 9.2.2, "Saving the Alarm History." Added 9.2.3, "Printing the Alarm History." Added 10, "Displaying the Version Information." Added 11, "Backup." Added 13, "Displaying the Table of Contents (Overall Flow)." Added 14, "Displaying the Function Details of the MEC Controller Operation Panel." 15, "Appendix"
July 2010	Fourth edition Added 1.2.3, "How to Install the Software/Uninstall the USB Driver on a PC Running Windows Vista." Added 1.2.4, "How to Install the Software/Uninstall the USB Driver on a PC Running Windows 7."
August 2011	Fifth edition Change in software license agreement.
September 2011	Sixth edition ERC3 added to supported model Pg. 108, 111, 203, 206, 213 and 216 The contents of ERC3 are added.
October 2014	Seventh edition Change made to procedure of installing USB Driver for Windows Vista and Windows 7. Added 13, "Maintenance Information."









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