

- 24-hour Telephone Number: (937) 847-3200  
Use for urgent or emergency needs for technical support, service and/or replacement parts
- Routine Technical Inquiries: [techsupport@motoman.com](mailto:techsupport@motoman.com)  
Allow up to 36 hours for response

## YRC1000micro OPTIONS INSTRUCTIONS

### FOR SOFTWARE PENDANT

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Upon receipt of the product and prior to initial operation, read these instructions thoroughly, and retain for future reference.

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#### MOTOMAN INSTRUCTIONS


MOTOMAN-□□□ INSTRUCTIONS  
YRC1000micro INSTRUCTIONS  
YRC1000micro OPERATOR'S MANUAL  
YRC1000micro MAINTENANCE MANUAL

Please have the following information available when contacting Yaskawa Customer Support:

- System
- Primary Application
- Software Version (*Located on Programming Pendant by selecting: {Main Menu} - {System Info} - {Version}*)  
Robot Serial Number (*Located on robot data plate*)  
Robot Sales Order Number (*Located on controller data plate*)

Part Number: 181303-1CD  
Revision: 1

MANUAL NO.

HW1484787  1/42



## DANGER

- This manual describes the software pendant of the YRC1000micro system and general operations. Read this manual carefully and be sure to understand its contents before handling the YRC1000micro. Any matter, including operation, usage, measures, and an item to use, not described in this manual must be regarded as “prohibited” or “improper”.
- General information related to safety are described in “Chapter 1. Safety” of the YRC1000micro INSTRUCTIONS. To ensure correct and safe operation, carefully read “Chapter 1. Safety” of the YRC1000micro INSTRUCTIONS.



## CAUTION

- In some drawings in this manual, protective covers or shields are removed to show details. Make sure that all the covers or shields are installed in place before operating this product.
- YASKAWA is not responsible for incidents arising from unauthorized modification of its products. Unauthorized modification voids the product warranty.

## NOTICE

- The drawings and photos in this manual are representative examples and differences may exist between them and the delivered product.
- YASKAWA may modify this model without notice when necessary due to product improvements, modifications, or changes in specifications. If such modification is made, the manual number will also be revised.
- If your copy of the manual is damaged or lost, contact a YASKAWA representative to order a new copy. The representatives are listed on the back cover. Be sure to tell the representative the manual number listed on the front cover.

## Notes for Safe Operation

Read this manual carefully before installation, operation, maintenance, or inspection of the YRC1000micro.

In this manual, the Notes for Safe Operation are classified as “DANGER”, “WARNING”, “CAUTION”, or “NOTICE”.



### DANGER

Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury. Safety Signs identified by the signal word DANGER should be used sparingly and only for those situations presenting the most serious hazards.



### WARNING

Indicates a potentially hazardous situation which, if not avoided, will result in death or serious injury. Hazards identified by the signal word WARNING present a lesser degree of risk of injury or death than those identified by the signal word DANGER.



### CAUTION

Indicates a hazardous situation, which if not avoided, could result in minor or moderate injury. It may also be used without the safety alert symbol as an alternative to “NOTICE”.

### NOTICE

NOTICE is the preferred signal word to address practices not related to personal injury. The safety alert symbol should not be used with this signal word. As an alternative to “NOTICE”, the word “CAUTION” without the safety alert symbol may be used to indicate a message not related to personal injury.

Even items described as “CAUTION” may result in a serious accident in some situations.

At any rate, be sure to follow these important items.



To ensure safe and efficient operation at all times, be sure to follow all instructions, even if not designated as “DANGER”, “WARNING” and “CAUTION”.



## DANGER

- Before using the software pendant, the user must supply the emergency stop button.
- Before operating the manipulator, make sure the servo power is turned OFF by performing the following operations. When the servo power is turned OFF, the SERVO ON LED on the programming pendant is turned OFF.
  - Press the emergency stop button on the programming pendant or on the external control device, etc.
  - Disconnect the safety plug of the safety fence. (when in the play mode or in the remote mode)

If operation of the manipulator cannot be stopped in an emergency, personal injury and/or equipment damage may result.

*Fig. : Emergency Stop Button*



- Before releasing the emergency stop, make sure to remove the obstacle or error caused the emergency stop, if any, and then turn the servo power ON.

Failure to observe this instruction may cause unintended movement of the manipulator, which may result in personal injury.

*Fig. : Release of Emergency Stop*



- Observe the following precautions when performing a teaching operation within the manipulator's operating range:
  - Be sure to perform lockout by putting a lockout device on the safety fence when going into the area enclosed by the safety fence. In addition, the operator of the teaching operation must display the sign that the operation is being performed so that no other person closes the safety fence.
  - View the manipulator from the front whenever possible.
  - Always follow the predetermined operating procedure.
  - Always keep in mind emergency response measures against the manipulator's unexpected movement toward a person.
  - Ensure a safe place to retreat in case of emergency.

Failure to observe this instruction may cause improper or unintended movement of the manipulator, which may result in personal injury.

- Confirm that no person is present in the manipulator's operating range and that the operator is in a safe location before:
  - Turning ON the YRC1000micro power
  - Moving the manipulator by using the programming pendant
  - Running the system in the check mode
  - Performing automatic operations

Personal injury may result if a person enters the manipulator's operating range during operation. Immediately press an emergency stop button whenever there is a problem. The emergency stop button is located on the upper right of the programming pendant.



## DANGER

- Read and understand the Explanation of the Warning Labels before operating the manipulator.
- In the case of not using the programming pendant, be sure to supply the emergency stop button on the equipment. Then before operating the manipulator, check to be sure that the servo power is turned OFF by pressing the emergency stop button. Connect the external emergency stop button to the 4-14 pin and 5-15 pin of the Safety connector (Safety).
- Upon shipment of the YRC1000micro, this signal is connected by a jumper cable in the dummy connector. To use the signal, make sure to supply a new connector, and then input it.

If the signal is input with the jumper cable connected, it does not function, which may result in personal injury or equipment damage.



## WARNING

- Perform the following inspection procedures prior to conducting manipulator teaching. If there is any problem, immediately take necessary steps to solve it, such as maintenance and repair.
  - Check for a problem in manipulator movement.
  - Check for damage to insulation and sheathing of external wires.
- Return the programming pendant to a safe place after use.

If the programming pendant is left unattended on the manipulator, on a fixture, or on the floor, etc., the Enable Switch may be activated due to surface irregularities of where it is left, and the servo power may be turned ON. In addition, in case the operation of the manipulator starts, the manipulator or the tool may hit the programming pendant left unattended, which may result in personal injury and/or equipment damage.

- If communication between the software pendant and the YRC1000micro is interrupted, the operation cannot be performed from the software pendant.

After the interruption of communication with the software pendant, the YRC1000micro enters into the following conditions:

- Mode: The mode is retained when the interruption of communication occurs.
- Emergency stop signal of the software pendant: Released
- HOLD signal of the software pendant: Released
- The pendant switches cannot be operated while the character input field, CHANGE FONT, CHANGE BUTTON, or CHANGE WINDOW PATTERN window, or a warning dialog box is displayed. Be sure to close the window and dialog box before operating the pendant switches.

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## Definition of Terms Used Often in This Manual

The MOTOMAN is the YASKAWA industrial robot product.

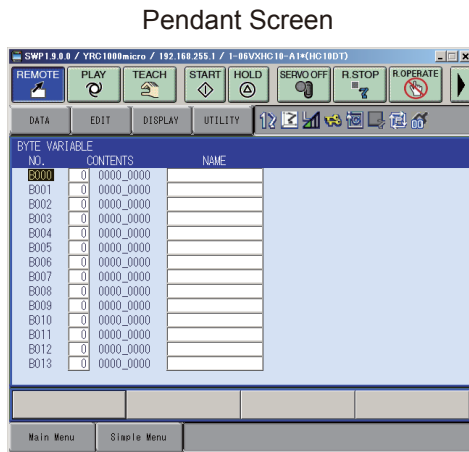
The MOTOMAN usually consists of the manipulator, the YRC1000micro controller, manipulator cables, the YRC1000micro programming pendant (optional), the YRC1000micro programming pendant safety signal short circuit connector (optional), and the YRC1000micro software pendant (optional).

In this manual, the equipment is designated as follows:

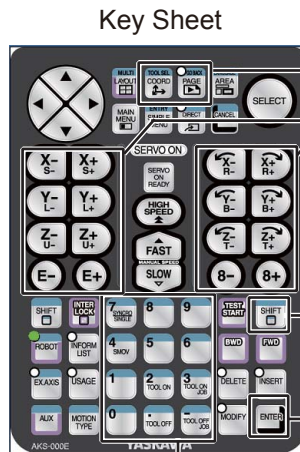
Equipment	Manual Designation
YRC1000micro controller	YRC1000micro
YRC1000micro programming pendant	Programming pendant (optional)
Cable between the manipulator and the controller	Manipulator cable
YRC1000micro programming pendant safety signal short circuit connector	Programming pendant safety signal short circuit connector (optional)
YRC1000micro software pendant	Software pendant (optional)

Descriptions of the keys, buttons, and screen of the software pendant and the keyboard keys and screen of the PC (personal computer) are shown as follows:

Equipment		Manual Designation	
Software Pendant	Key Sheet	Character Keys /Symbol Key	The keys which have characters or symbols printed on them are denoted with [ ]. e.g. [ENTER]
		Axis Keys /Numeric Keys	[Axis Key] and [Numeric Key] are generic names for the keys for axis operation and number input.
		Cursor Keys	Denoted as "cursor key", or by an arrow [↑], [↓], [←], or [→].
		Keys pressed simultaneously	To press two keys simultaneously on the software pendant, click or double-click [SHIFT], and then click the desired key, e.g. [COORD]. The keys are denoted with a "+" sign between them, e.g. [SHIFT]+[COORD].
Pendant Screen	Pendant Screen	Button	The button shown on the screen is denoted with { }. e.g. {REMOTE}
		Screen	The menu shown on the screen is denoted with { }. e.g. {JOB}
PC Keyboard and Screen	PC Keyboard and Screen	Keyboard	Denoted by the key name.
		Screen	Denoted with { }. e.g. { } screen



Pendant Screen



Key Sheet

Numeric keys

Page key  
Coordinate key  
Axis keys

Shift key

Enter key

\*The button/switch names are denoted as symbols.

## Description of the Operation Procedure

In the explanation of operation procedure, the expression "Click . . ." means moving the cursor to the item and clicking [SELECT], or clicking the item on the screen by using the mouse.

## Registered Trademark

In this manual, names of companies, corporations, or products are trademarks, registered trademarks, or brand names for each company or corporation. The indications of (R) and TM are omitted.

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1	Introduction
1.1	Overview of Software Pendant

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# 1 Introduction

## 1.1 Overview of Software Pendant

The software pendant on the PC provides functions equivalent to those of the programming pendant for the YRC1000micro (excluding some functions).

The software pendant enables the following operations:

- Creating, editing, or executing the job of manipulator motion without using the programming pendant
- Monitoring the playback state of the manipulator in the same way as the programming pendant
- Connecting to the YRC1000micro on the same network as the PC

To connect the software pendant, the YRC1000micro must meet the following conditions:

- The communication between the programming pendant and the YRC1000micro is disconnected.  
(For the method of disconnecting communication, refer to chapter 11.1 “Disconnection Function” in “YRC1000micro INSTRUCTIONS (RE-CTO-A222)”.)
- When the programming pendant is not connected, the programming pendant safety signal short circuit connector is connected.
- Other software pendant is not connected.
- LAN interface is set up according to chapter 6.19.3 “Connection to the Controller” in “YRC1000micro OPERATOR’S MANUAL (RE-CSO-A058)”.



- 1 Introduction
  - 1.2 Terms and Conditions of Use
- 

## **1.2 Terms and Conditions of Use**

The following shows the Terms and Conditions of Use for the software pendant. To use the software pendant, the user must agree to these Terms and Conditions of Use.

1. Before using the software pendant, confirm that no person is present in the manipulator's operating range and that you are in a safe location. Injury may result if anyone enters the working envelope of the manipulator during operation.
2. Before using the software pendant, the user must supply the emergency stop button that can turn OFF the servo power supply. Connect the emergency stop button to the external emergency stop signal for the YRC1000micro. Then, before operating the manipulator, check that pressing the emergency stop button turns OFF the servo power supply. When the servo power is turned OFF, the SERVO ON LED on the key sheet of the software pendant turns OFF. If the manipulator cannot be stopped during an emergency, personal injury or equipment damage may result.
3. Once the emergency stop button is released, clear an obstacle or a failure that caused an emergency stop. Then turn ON the servo power.
4. View the manipulator from the front whenever possible. Improper operation or unexpected manipulator motion during teaching or operation may result in personal injury or equipment damage.
5. Before using the software pendant, exit other applications and the screen-saver. Improper operation of the software pendant may result due to another application running.

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1	Introduction
1.3	Limitations

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### 1.3 Limitations

The following shows the limitations in using the software pendant.

1. The following functions cannot be used by the software pendant. To use one of these functions, use the programming pendant, the concurrent IO, and the MotoPlus for the YRC1000micro.
  - Overrun release
  - Manual brake release
  - Automatic backup (save destination: SD of programming pendant)
  - Zeroing (optional)
  - Programming pendant customization
2. The software pendant function supports YBS1.03-00 or later.
3. The Software Pendant function does not operate properly when settings are applied for signals to be output on the safety logic circuit under the conditions in Teach mode or Play mode.

## 2 Installation Procedure

### 2.1 Environments for Installation

The environments to install the software pendant are shown below.

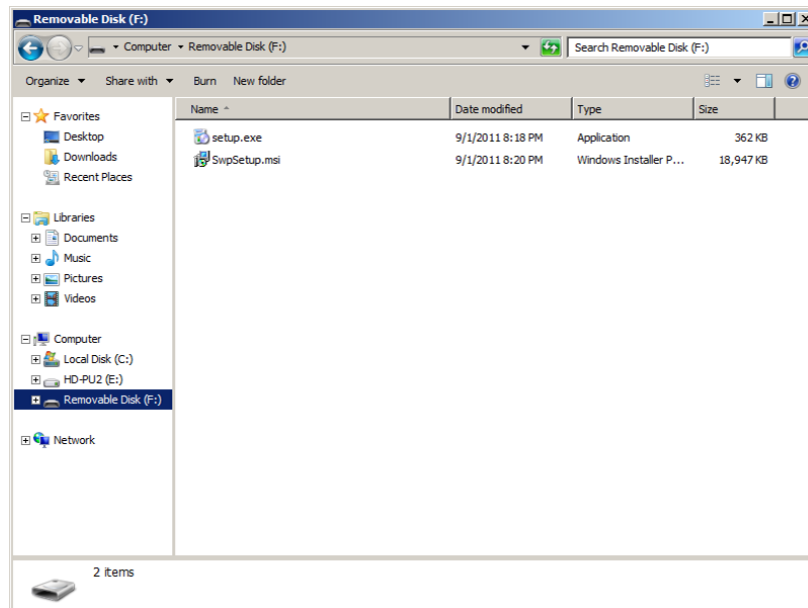
OS	Windows 10 (64-bit version) Windows 7 ServicePack1 (32-bit version / 64-bit version)
CPU	Intel Core2 Duo 2 GHz or more
Memory	2 GB or more
Hard disk	Free space of 500 MB or more
Display	Display (256 colors or more) supported by MS-Windows
Mouse	Mouse supported by MS Windows

## 2 Installation Procedure

### 2.2 Installation of Software Pendant

## 2.2 Installation of Software Pendant

1. Double-click “setup.exe”.



Installation must be performed as the administrator of the PC.

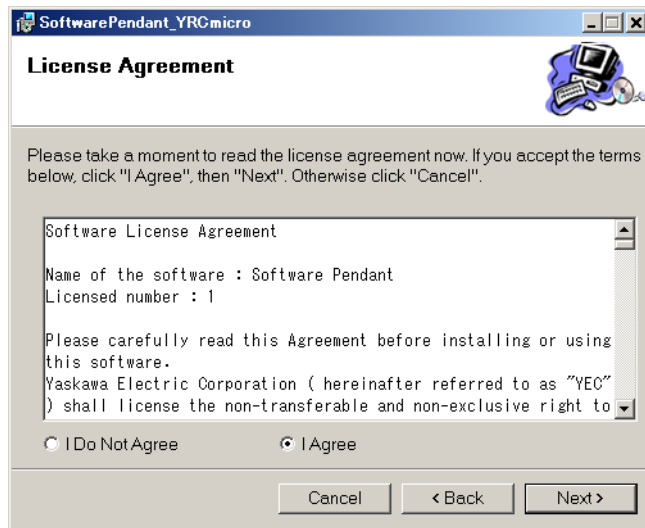
- The setup wizard starts.



## 2 Installation Procedure

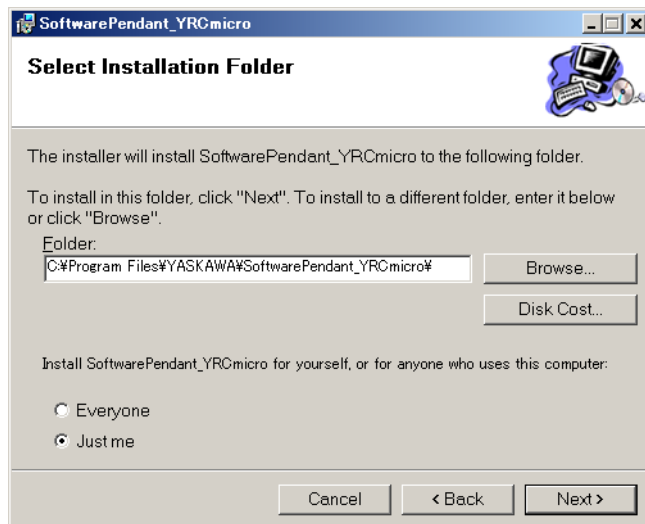
### 2.2 Installation of Software Pendant

2. Click {Next}.
  - “License Agreement” appears.



To use the software pendant, the user must agree to this Software License Agreement.

3. Carefully read the Software License Agreement. If you agree, select “I Agree” and click {Next}.
  - “Select Installation Folder” appears.

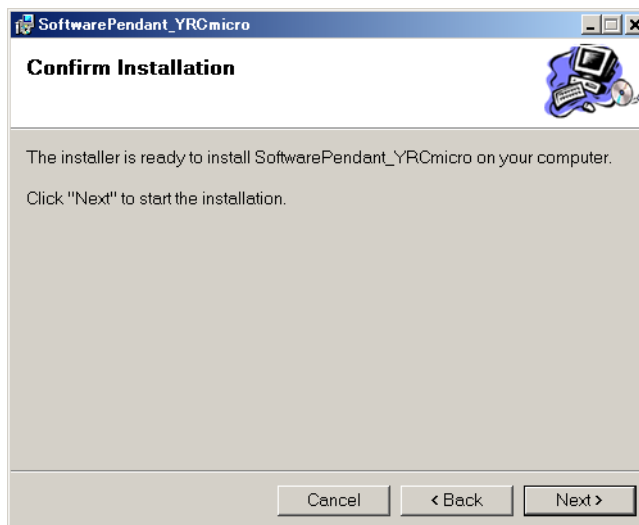


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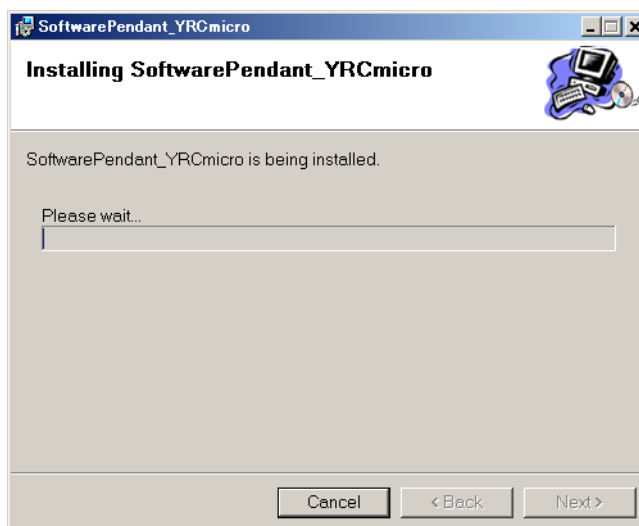
2 Installation Procedure  
2.2 Installation of Software Pendant

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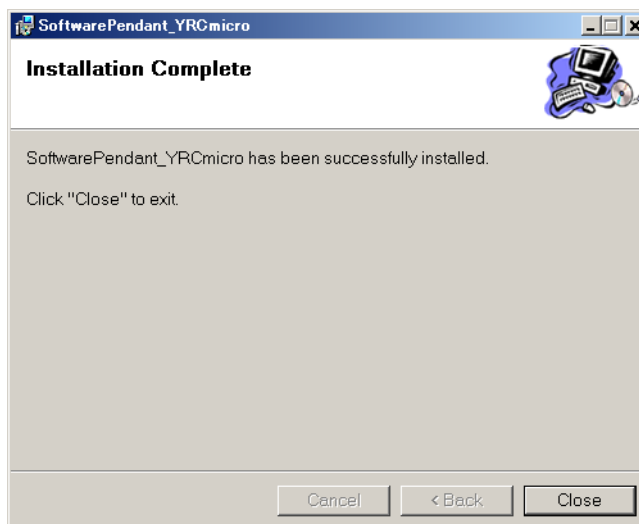
4. Select the install destination, select the user, and then click {Next}.  
– "Confirm Installation" appears.



5. Click {Next}.  
– The installation starts.



- "Installation Complete" appears.





## 2.3 Installation of Hardware Key Driver

To operate the software pendant properly, be sure to connect the hardware key (USB-stick type) supplied with the package to the PC in advance.

Before connecting the key to the PC, be sure to perform the following procedures "*Note on PC*" and "*Installation of driver*", and then connect the key to the USB port.

### ■ Note on PC

Due to the hardware configuration, multiple USB-stick type keys cannot be connected to one USB port by connecting the keys each other. Thus, connect one key to one USB port.

To install multiple pieces of offline software and connect multiple USB-stick type keys to one PC, use the PC which has the same number of USB ports as that of pieces of offline software.

### ■ Installation of driver



The key must be removed from the PC before installing the driver.

To install the driver, execute the "\SentinelDriver-7.6.3\Sentinel Protection Installer 7.6.3.exe" in the install CD-ROM.

For the installation procedure, refer to "\SentinelDriver-7.6.3\Manual\SafeNet\_Sentinel\_EndUser\_Guide.pdf."

### 3 Network Configuration

#### 3.1 Changing Network Configuration

## 3 Network Configuration

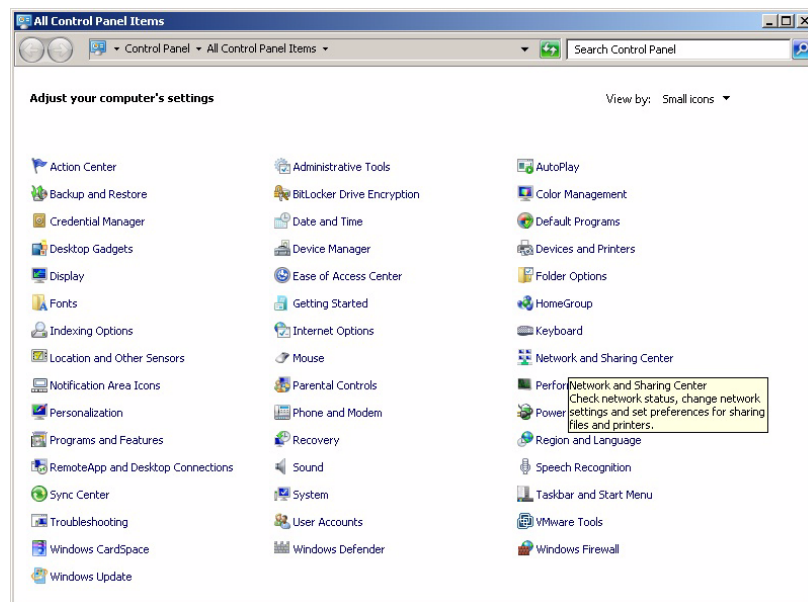
The software pendant communicates with the YRC1000micro. Thus, the network configuration of the PC on which the software pendant runs must be changed so that the software pendant is connected to the same network as the YRC1000micro.

### 3.1 Changing Network Configuration

1. Click "Control Panel" from the Start menu.

**NOTE** The network configuration must be changed by the administrator of the PC.

- The "All Control Panel Items" window appears.

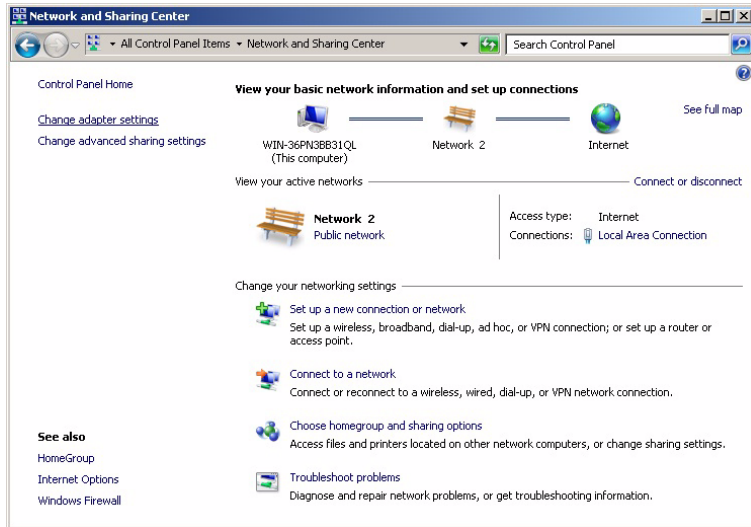


### 3 Network Configuration

#### 3.1 Changing Network Configuration

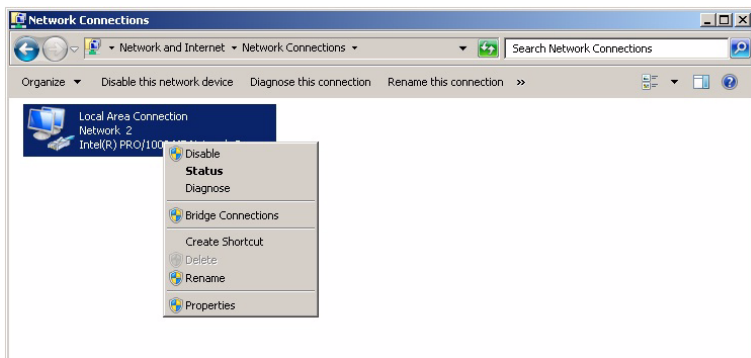
2. Click “Network and Sharing Center”.

– The “Network and Sharing Center” window appears.



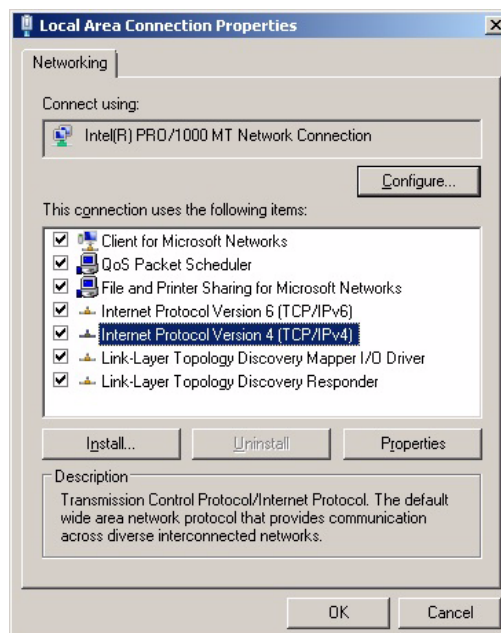
3. Click “Change adapter settings”.

– The “Network Connections” window appears.



4. Select the desired network device, and then click “Properties”.

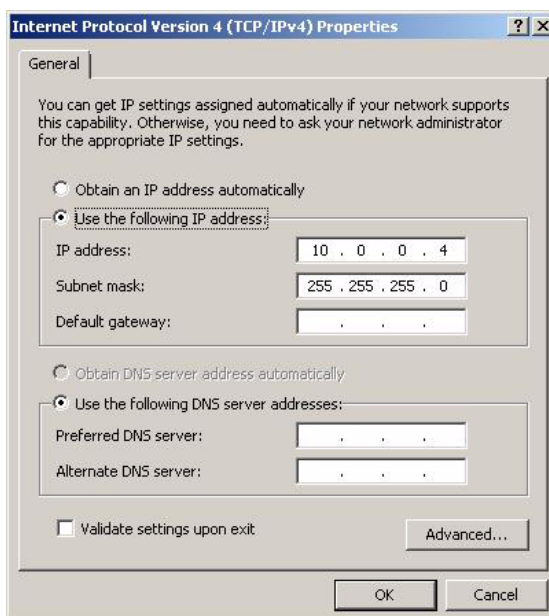
– The “Local Area Connection Properties” window appears.



### 3 Network Configuration

#### 3.1 Changing Network Configuration

5. Select “Internet Protocol Version 4 (TCP/IPv4)”, and then click “Properties”.
  - The “Internet Protocol Version 4 (TCP/IPv4) Properties” window appears.



6. Select “Use the following IP address”, and then enter the IP address appropriate to the user’s network configuration.



If the PC network configuration is the same as the YRC1000micro, the IP address may conflict and cause a failure in the network operation.

## 4 Resolution Settings

### 4.1 Changing the Resolution Settings

## 4 Resolution Settings

Adjust the resolution of the PC to start the software pendant.

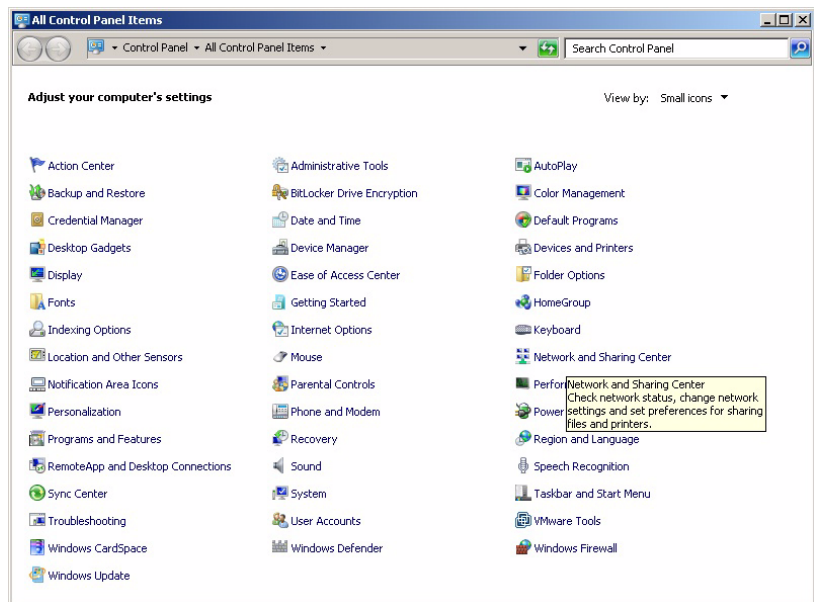
### 4.1 Changing the Resolution Settings

1. Click [Control Panel] from the Start menu.



Network settings must be performed by the administrator of the PC.

- All Control Panel Items window appears.



2. Click [Display].
  - Display window appears.
3. Select "Small", click [Apply].
  - Resolution of the PC is changed.

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5	Operations
5.1	Wiring

---

## 5 Operations

### 5.1 Wiring

To connect with the PC, insert the LAN cable into the LAN connector on the front of the YRC1000micro.

### 5.2 Disconnecting the Communication Between the Programming Pendant and the YRC1000micro

For the method of disconnecting communication, refer to chapter 11.1 “Disconnection Function” in “YRC1000micro INSTRUCTIONS (RE-CTO-A222)”.

## 5 Operations

### 5.3 Startup of Software Pendant

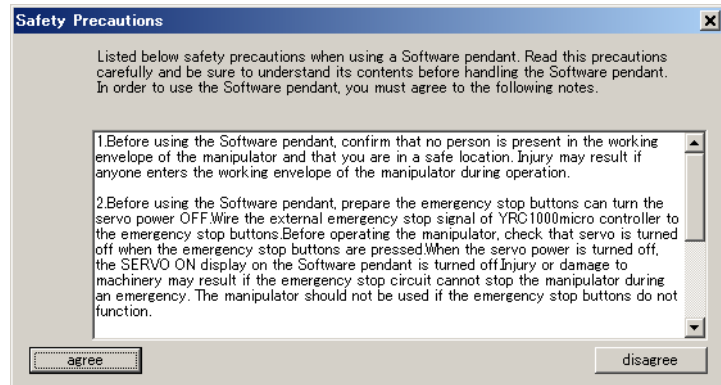
#### 5.3 Startup of Software Pendant

1. Click the shortcut on the desktop, or click “SoftwarePendant for YRC1000micro” from the Start menu.



The software pendant cannot be started unless the hardware key is connected to the USB port of the PC.

- The “Safety Precautions” window appears.

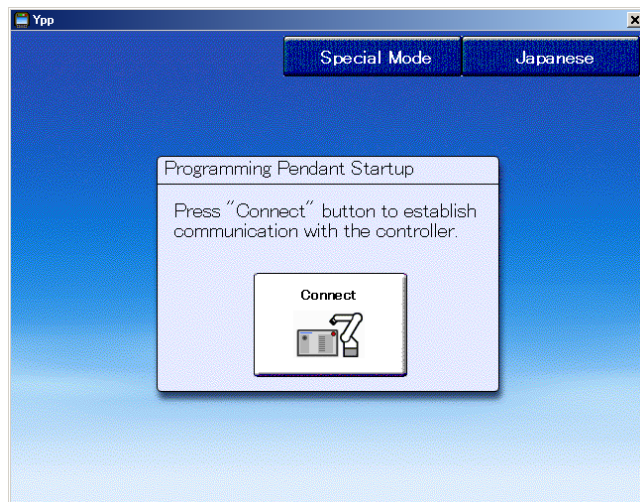


2. Carefully read the precautions, and click {agree} if you agree.



To use the software pendant, the user must agree to these safety precautions.

- The “Programming Pendant Startup” window appears.



The software pendant communicates with the YRC1000micro.  
If the block warning appears due to the firewall, release the block, and then use the software pendant.

- 5 Operations
- 5.4 Connection to YRC1000micro

## 5.4 Connection to YRC1000micro

1. Click "Connect".



- The "Select YRC1000micro" window appears. In this window, the user can select the YRC1000micro to be connected on the network.



To sort items, click the tab "RC Name", "IP Address", etc.

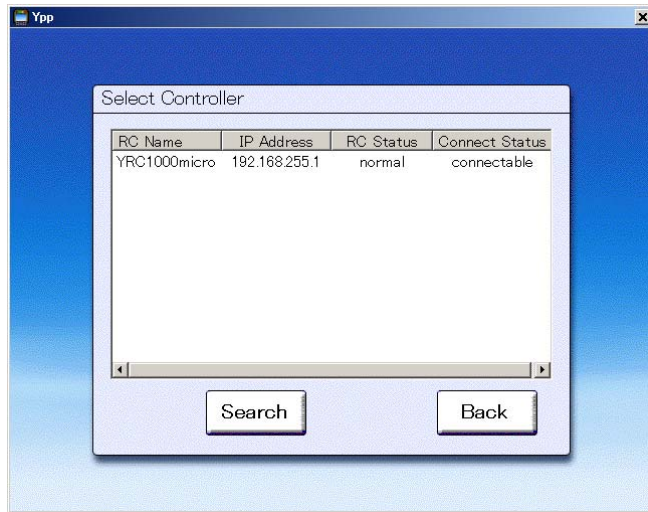


To search for the YRC1000micro on the network again, click "Search".

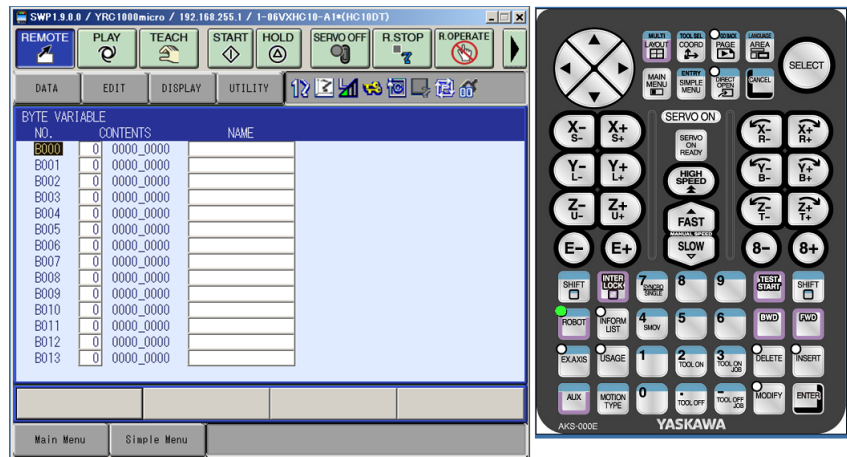


5 Operations  
 5.4 Connection to YRC1000micro

2. Select the YRC1000micro to be connected, and then click {Connect}.



– The YRC1000micro is connected, and the pendant screen and the key sheet are displayed.

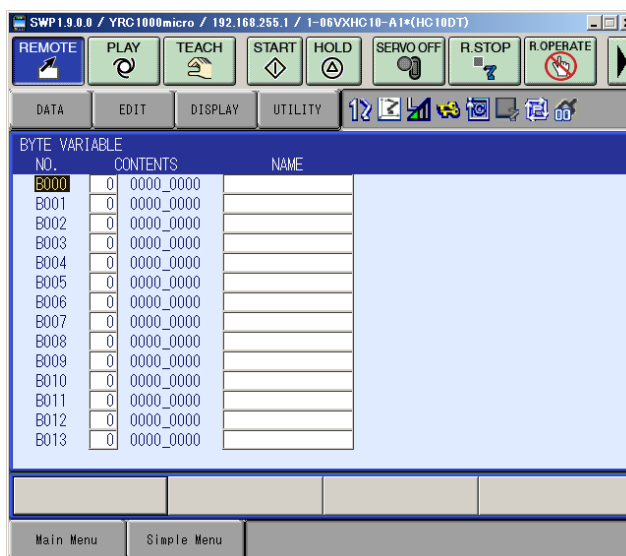


## 5 Operations

### 5.5 Description of Buttons

#### 5.5 Description of Buttons

The software pendant can be controlled similarly to the programming pendant, but mouse-clicking is used instead of button-pressing, switch-turning, or screen-touching.





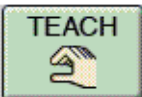


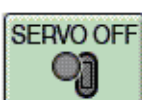

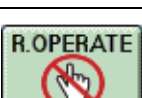

For usage of buttons not described in this chapter, refer to “YRC1000micro OPERATOR’S MANUAL (RE-CSO-A058)” and “YRC1000micro INSTRUCTIONS (RE-CTO-A222)”.

5 Operations  
5.5 Description of Buttons

■ **Pendant Switch**

When a button is selected, it is displayed in blue. When the buttons cannot be used, they are shown shaded.

Table 5-1: Pendant Switch

Button	Function and application	
	Mode switch Remote mode state	By clicking this button, the mode is changed to the remote mode.
	Mode switch Play mode state	By clicking this button, the mode is changed to the play mode.
	Mode switch Teach mode state	By clicking this button, the mode is changed to the teach mode.
	{START}	By clicking this button, the playback operation of the manipulator starts.
	{HOLD}	By clicking this button, the manipulator's operation is stopped temporarily.
	{SERVO ON/OFF} Displayed in green while the servo power is ON.	By clicking this button, the servo power is turned ON.
	{R.STOP} Displayed in blue while the robot is stopped. Click again to cancel.	By clicking this button, the servo power is turned OFF.
	{R.OPERATE} Displayed in blue while the robot operation is valid.	By clicking this button, the robot operation is valid without pressing Ctrl key. The robot operation is invalid unless the robot is operated for a definite time. S2C1447 Effective time of the robot operation button 0: 5 (sec.) Except for 0: Specified time (sec.)
	{KEY SHEET} Displayed in blue while the key sheet is displayed.	By clicking this button, switch the key sheet display/non-display.







The pendant switches cannot be used when inputting the characters, changing the font style, changing the size of buttons, and also when the window pattern change display and the warning dialog box is shown.  
Before using the pendant switches, be sure to close every windows and dialog boxes.

5 Operations  
5.5 Description of Buttons

■ **Pendant Switch**





When a key is selected, it is displayed in blue. When the keys cannot be used, they are shown shaded.

Table 5-2: Software Pendant Keys and Keyboard Keys (Sheet 1 of 2)

Key	Corresponding key on keyboard	Function and application
SELECT 	Space key	<b>Works as described below.</b> <ul style="list-style-type: none"> <li>• Selects menu items in the main menu area and the pull-down menu area.</li> <li>• Makes the selected item ready to be set in the general-purpose display area.</li> <li>• Displays multiple messages in the message area.</li> </ul>
Cursor 	Arrow keys ↑ ↔ ↓	<b>Moves the cursor in the direction of the arrow.</b> <ul style="list-style-type: none"> <li>• The size of the cursor and the range or place where the cursor can move will vary depending on the window.</li> <li>• If [↑] is pressed when the cursor is on the [NOP] line, the cursor will move to the [END] line.</li> </ul> [SHIFT] + [↑] Scrolls the screen upward. [SHIFT] + [↓] Scrolls the screen downward. [SHIFT] + [→] Scrolls the screen to the right. [SHIFT] + [←] Scrolls the screen to the left.
CANCEL 	Esc	<b>Cancels the current status.</b> <ul style="list-style-type: none"> <li>• Deletes the sub menu in the main menu area and the pull-down menu area.</li> <li>• Cancels the input data or the input status in the general-purpose display area.</li> <li>• Cancels the multiple-message display in the message area.</li> <li>• Cancels the occurred error.</li> </ul>
AREA 	Tab	<b>Moves the cursor in the following order: "Menu Area"→"General-Purpose Display Area"→"Message Area"→"Main Menu Area". If no item is displayed, the cursor does not move.</b> <p>[SHIFT] + [AREA]            The language can be switched when the bilingual function is valid.            (Bilingual function is optional.)</p>

5 Operations  
 5.5 Description of Buttons

Table 5-2: Software Pendant Keys and Keyboard Keys (Sheet 2 of 2)

Key	Corresponding key on keyboard	Function and application
<p>SHIFT</p> 	<p>Shift</p>	<p><b>When a key is pressed with [SHIFT], the function of the key is alternated.</b></p> <p>The keys whose functions are alternated by pressing with [SHIFT] are following: [MAIN MENU], [ASSIST], [COORD], [AREA], [MOTION TYPE], cursor key and numeric key.</p> <p><b>By single-clicking, [SHIFT] becomes “pressed state”. By clicking another key, the “pressed state” is released.</b></p> <p><b>By double-clicking, [SHIFT] remains “pressed state”. Clicking another key cannot release the pressed state. Thus, the simultaneous pressing of keys can be performed continuously. To release the pressed state, click [SHIFT] again.</b></p>
<p>INTERLOCK</p> 		<p><b>When a key is pressed with [INTERLOCK], the function of the key is alternated.</b></p> <p>The keys whose functions are alternated by pressing with [INTERLOCK] are following: [ASSIST], [MULTI], [TEST START], [FWD], and numeric key (numeric key customize function).</p> <p><b>By single-clicking, [INTERLOCK] becomes “pressed state”. By clicking another key, the “pressed state” is released.</b></p> <p><b>By double-clicking, [INTERLOCK] remains “pressed state”. Clicking another key cannot release the pressed state. Thus, the simultaneous pressing of keys can be performed continuously. To release the pressed state, click [INTERLOCK] again.</b></p>
<p>ENTER</p> 	<p>Enter</p>	<p><b>Registers instructions, data, current position of the manipulator, etc.</b></p> <p>Clicking [ENTER] moves the instruction or data displayed in the input buffer line to the cursor position to complete a registration, insertion, or modification.</p>
<p>Numeric Keys</p> 	<p>0 to 9                      -                      . (period)</p>	<p><b>Enters the number or symbol when the “&gt;” prompt appears on the input line.</b></p> <ul style="list-style-type: none"> <li>• “.” is the decimal point. “-” is a minus sign or hyphen.</li> </ul>

5 Operations  
5.6 Teaching

## 5.6 Teaching

1. Click the {TEACH} button.



2. Click [SERVO ON READY].



3. Click the {SERVO OFF} button.



- “Notice of safety” dialog box appears.



4. Confirm that no person is present in the range of motion of the manipulator, and then click the {Yes} button.
  - The servo power supply turns ON and the {SERVO ON} button lights up.



The servo power supply cannot be turned ON unless it is confirmed that no person is present in the range of motion of the manipulator.



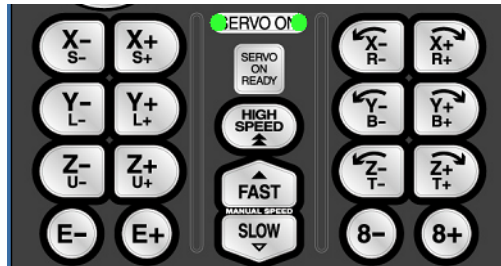
**DANGER**

- The servo power supply cannot be turned ON if the safeguarding is open.  
The software pendant must be operated from outside of the safeguarding.

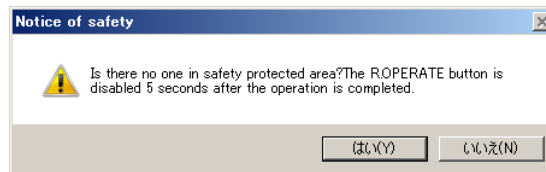
## 5 Operations

### 5.6 Teaching

5. While pressing the Ctrl key on the keyboard, click the JOG key button.



Or, click the {R.OPERATE} button, and click the {Yes} button of the “Notice of safety” dialog box.



Click the JOG key button while the robot operation is enabled.

6. The manipulator moves.  
Move the manipulator to the desired position and perform teaching.



When clicking the {START} button, the {FWD} button, the {BWD} button, the {TEST START} button or a JOG-related button, it is required to press with the Ctrl key of the keyboard simultaneously or to enable the {R.OPERATE} button.



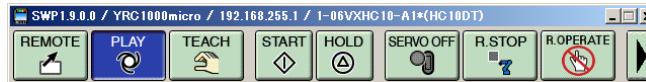
For detailed instructions on teaching, refer to “YRC1000micro INSTRUCTIONS (RE-CTO-A222)” and “YRC1000micro OPERATOR’S MANUAL (RE-CSO-A058)”.

## 5 Operations

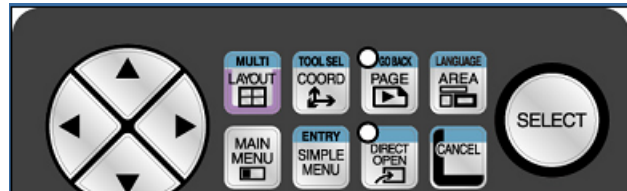
### 5.7 Playback

## 5.7 Playback

1. Click the {PLAY} button.



2. Click [SERVO ON READY].



- The servo power supply turns ON, and the {SERVO ON} button lights up.



3. While pressing the Ctrl key on the keyboard, click the {START} button.
  - The playback starts.



When clicking the {START} button, the {FWD} button, the {BWD} button, the {TEST START} button or a JOG-related button, it is required to press with the Ctrl key of the keyboard simultaneously or to enable the {R.OPERATE} button.

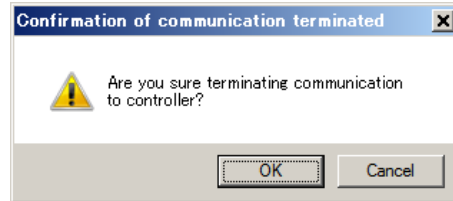


## 5.8 Exit of Software Pendant

1. Click {x} at the right end of the title bar.



- A confirmation dialog box appears.



2. Click {OK} to exit out of the software pendant.



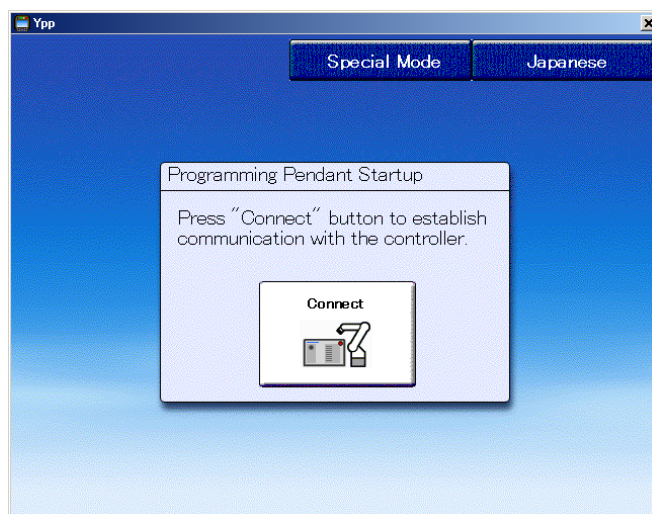
### CAUTION

- Followings are the conditions of the YRC1000micro after the completion of communication with the software pendant.
  - Mode: The mode is retained when the interruption of communication occurs.
  - Emergency stop signal of the programming pendant: Released
  - HOLD signal of the programming pendant: Released



During the external memory operation, the software pendant cannot be exited. After the external memory operation is completed, perform the exit operation again.

- The “Programming Pendant Startup” window appears.



3. Click {x} at the right end of the title bar.
  - The software pendant exits.

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6	Frequently Asked Questions
6.1	Connection to YRC1000micro Cannot Be Established

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## 6 Frequently Asked Questions

### 6.1 Connection to YRC1000micro Cannot Be Established

To connect the software pendant to the YRC1000micro, the YRC1000micro and the software pendant must meet the following conditions:

- The programming pendant is not connected with the YRC1000micro.
- When the programming pendant is not connected, the programming pendant safety signal short circuit connector is connected.
- Other software pendant is not connected.
- The LAN interface setting is valid.
- The firewall is not allowed.

If the above conditions are met and the connection is still not established, the PC and the YRC1000micro may not be connected by network. To check the network connection, use the Command Prompt.

1. Click "Command Prompt" from the Start menu.
  - The Command Prompt starts.
2. Enter the command as follows:
  - >ping 10.0.0.2 (IP address of the YRC1000micro to be connected)
  - If the network is established, a response is returned.



If the response is not returned, a network failure has occurred. Contact your network administrator to correct the failure.

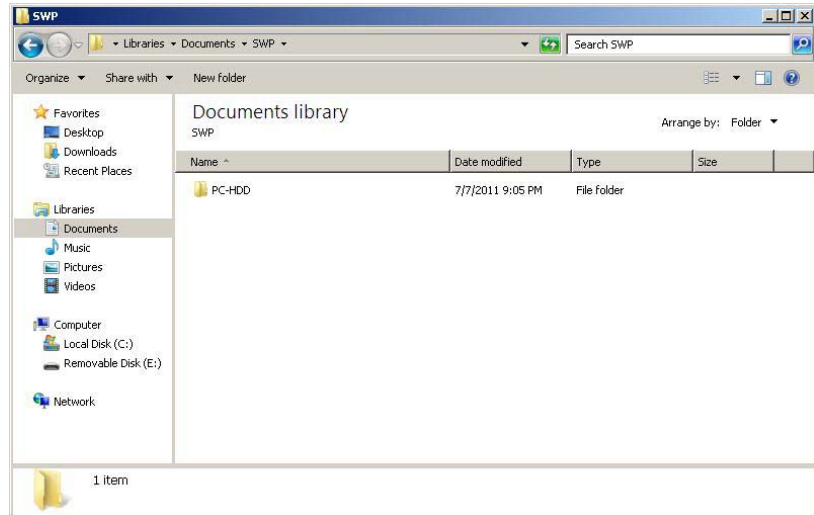
## 6 Frequently Asked Questions

### 6.2 What Folder Is Used for External Memory?

#### 6.2 What Folder Is Used for External Memory?

The folder of the external memory for the software pendant is “Documents\SWP\PC-HDD”. The save, load, or verification can be performed for the data in the folder.

<Example> Local Disk (C:) ▼ User ▼ “username” ▼ Documents ▼ SWP  
▼ PC-HDD



#### 6.3 Software Pendant Does Not Start

To use the software pendant, the dedicated hardware key is necessary.

To purchase the hardware key, contact your YASKAWA representative.

If the hardware key is not connected properly, the following dialog box appears.



#### 6.4 Software Pendant Behavior is Unstable

Before using the software pendant, other applications and screen-saver must be exited. Another application with high execution priority may cause the improper operation of the software pendant.

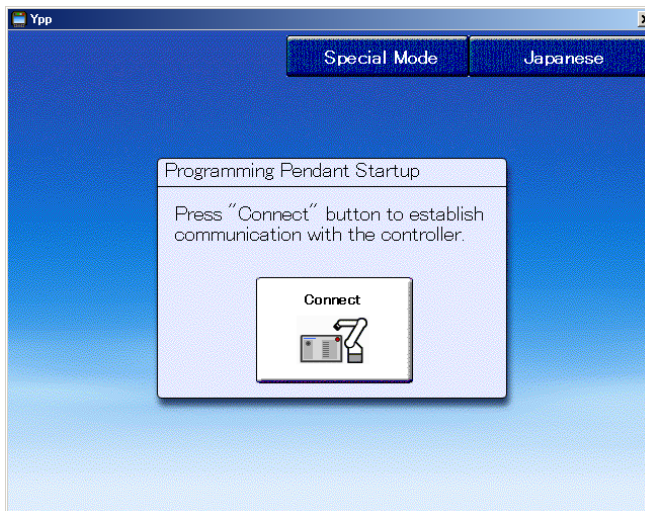
Also, the power-saving setting of the PC may cause the unstable behavior of the software pendant. When using the software pendant, disable the power-saving setting.

- 6 Frequently Asked Questions  
6.5 To Use PC with Multiple Network Adapters

## 6.5 To Use PC with Multiple Network Adapters

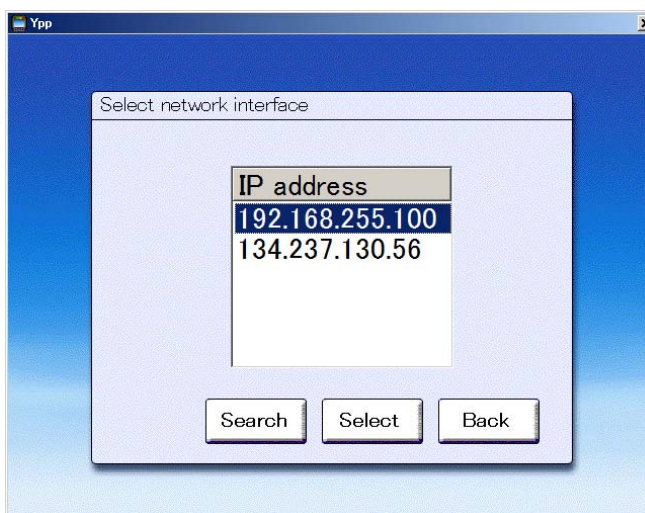
When using the software pendant on the PC with multiple network adapters (multiple IP addresses), the network adapter can be selected.

1. Click the {Transmission Setting} button in the startup screen.



– The “Select network interface” window appears.

2. Select the IP address of the desired network adapter, and then click the {Select} button.



Click the {Search} button to retrieve the IP address set to the PC.



If the IP address is not set, a network failure has occurred. Contact your network administrator to correct the failure.

- 
- 6 Frequently Asked Questions
  - 6.6 If Hardware Key Driver Is Installed with USB-type Key Plugged into PC
- 

## 6.6 If Hardware Key Driver Is Installed with USB-type Key Plugged into PC

1. With the USB-type key plugged into the PC, delete the drive registered as “unknown device” by using “Device Manager”.
2. Uninstall the driver (Sentinel System Driver) from “Programs and Features”.
3. Install the driver with the USB-type key removed from the PC. This allows the software pendant to operate properly.

## 6.7 If Hardware Key Driver of Version Older than Currently Installed One Is Installed

Installing the hardware key driver of a version older than the currently installed one may cause a problem. Uninstall the driver from “Programs and Features”, and then reinstall it.

For details of installation, refer to *chapter 2.3 “Installation of Hardware Key Driver”*.



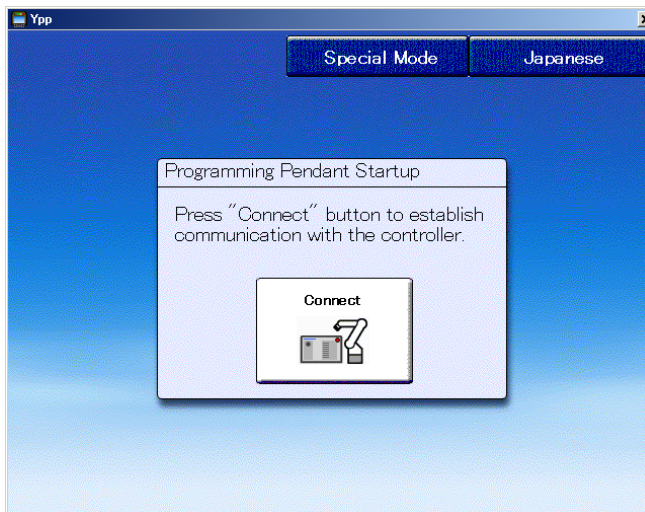
To display the “Programs and Features” menu, go to the Start menu, click “Control Panel”, and then click “Programs and Features”.

- 6 Frequently Asked Questions
- 6.8 To Start YRC1000micro in Maintenance Mode

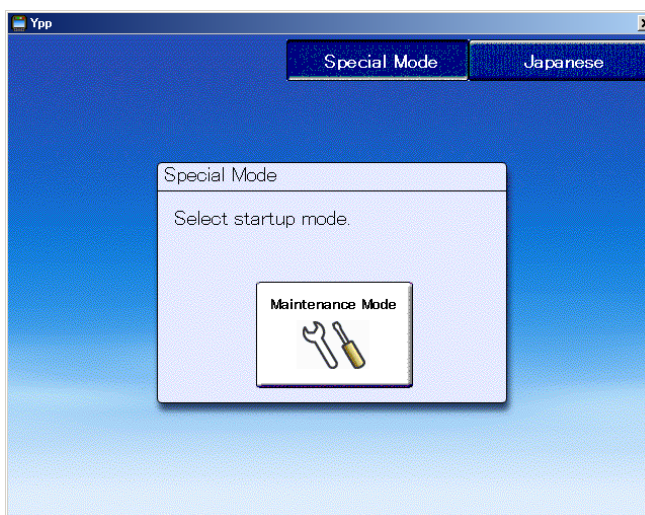
## 6.8 To Start YRC1000micro in Maintenance Mode

To start the YRC1000micro in the maintenance mode by using the software pendant, follow the procedure below.

1. Click the {Special Mode} button in the startup screen.



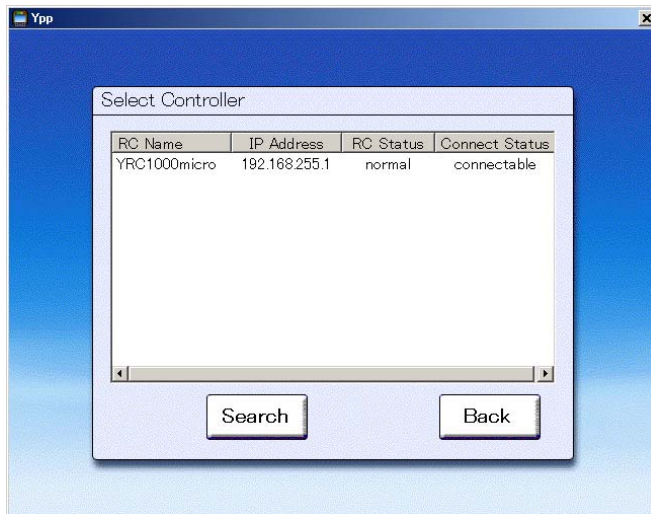
- The “Select Mode” window appears.



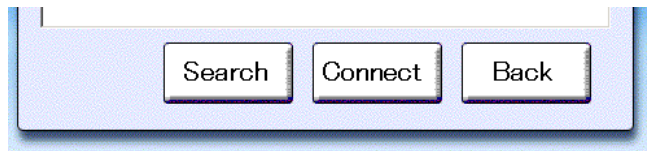
## 6 Frequently Asked Questions

### 6.8 To Start YRC1000micro in Maintenance Mode

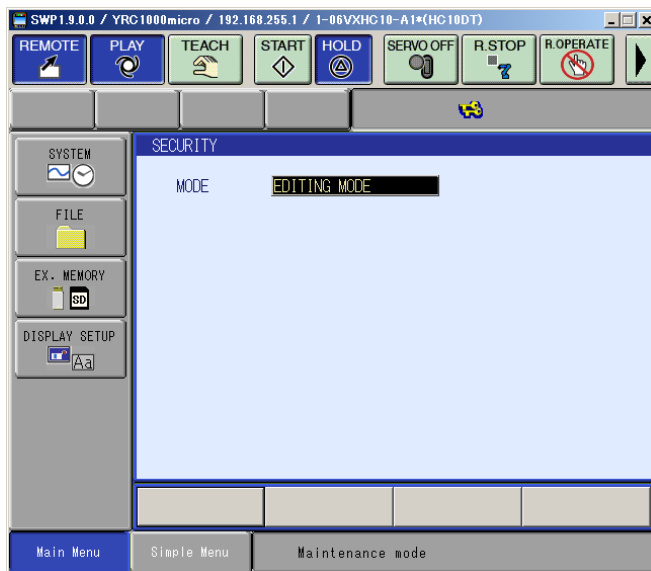
2. Click the {Maintenance Mode} button.
  - The “Select YRC1000micro” window appears.



3. Click the YRC1000micro to be started in the maintenance mode.
  - The {Connect} button appears.



4. Click the {Connect} button.
  - The YRC1000micro restarts in the maintenance mode.



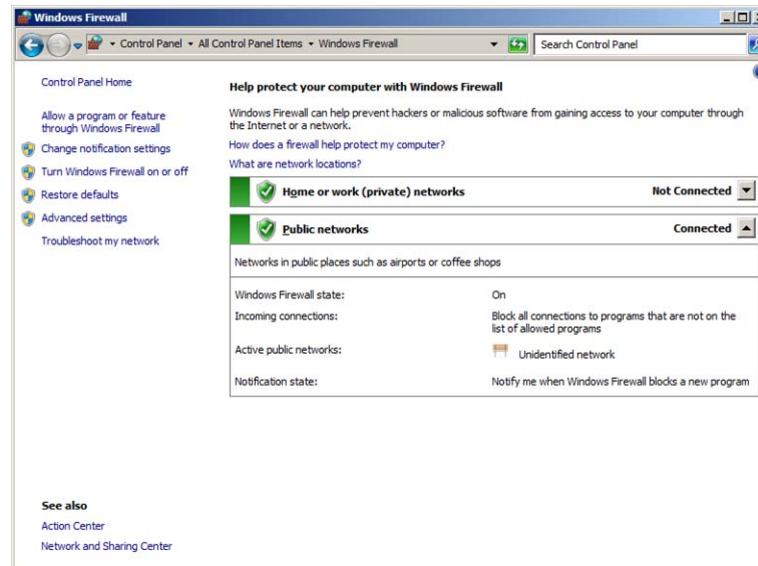
When the servo power is turned ON, YRC1000micro cannot be started in the maintenance mode. Use the maintenance mode after turning the servo power OFF while in the online mode.

6 Frequently Asked Questions  
6.9 To Check Firewall Settings

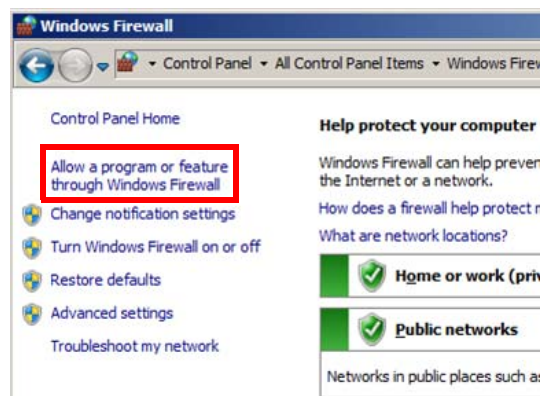
## 6.9 To Check Firewall Settings

To connect the software pendant to the YRC1000micro, communication through Windows Firewall of the PC must be allowed.

1. Click “Windows Firewall” from “Control Panel”.
  - The “Windows Firewall” window appears.



2. Click “Allow a program or feature through Windows Firewall”.



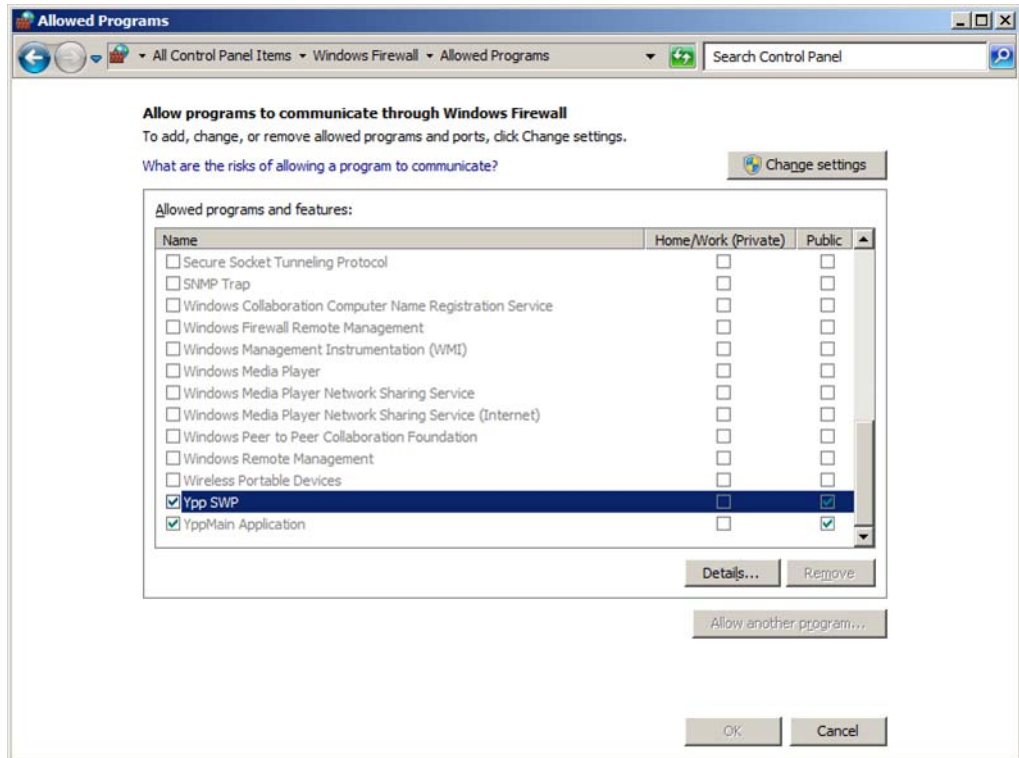
- The “Allowed Programs” window appears.



## 6 Frequently Asked Questions

### 6.9 To Check Firewall Settings

3. Make sure that the check boxes for “Ypp SWP”, “YppMain Application”, and corresponding networks are selected.



The firewall must be set or checked as the administrator of the PC.



The software pendant cannot be connected to the YRC1000micro unless the communication via the firewall of “Ypp SWP” and “YppMain Application” are allowed. Be sure to allow the communication before using the software pendant.

# YRC1000micro OPTIONS INSTRUCTIONS

**FOR SOFTWARE PENDANT**

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