

## Machine Controller MP900/MP2000 Series

プログラミング装置用 ソフトウェア PROGRAMMING PANEL SOFTWARE

MPE720

MPE720

## 取扱説明書

## INSTRUCTIONS

この取扱説明書は、最終的に本製品をお使いになる方のお手元に確実に届けられるよう、お取り計らい願います。

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



YASKAWA

株式会社 安川電機

資料番号 (MANUAL NO.) TOBP C880700 00B

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# INTRODUCTION

## ■ Manual Contents

This manual consists of Japanese Version and English Version.

- Japanese Version: Described on pages J-1 to J-39.
- English Version: Described on pages E-1 to E-52.

Use the Japanese Version or English Version as needed.

## ■ User Instructions

Use these instructions for the following jobs:

- Checking MP900/MP2000-series Machine Controller on delivery
- Installing and wiring MP900/MP2000-series Machine Controller
- Operating MP900/MP2000-series Machine Controller
- Inspecting and maintenance of MP900/MP2000-series Machine Controller

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# INSTRUCTIONS

## MP900/MP2000-series Machine Controller Programming Panel Software

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## About This Manual

This manual describes the MPE720 Programming Panel software (hereinafter called MPE720) for the MP900/MP2000-series Machine Controller.

Read this manual carefully to ensure the proper use of the MP900/MP2000-series Machine Controller. Also, keep this manual in a safe place for reference.

### ■ Visual Aid

The following aid is used to indicate certain type of information for easier reference.

**IMPORTANT**

Indicates important information that should be memorized.



Indicates supplemental information.

## Related Manuals

Refer to the following related manuals as required.

Thoroughly check the specifications, restrictions, and other conditions of the product before attempting to use it.

Manual Name	Manual Number	Contents
MP900/MP2000 Series Machine Controller MPE720 Programming Device Software User's Manual	SIEPC88070005	Describes the installation and operation of the Programming System for the MP900/MP2000 Series.
Control Pack CP-9200SH Electronic Cam Data Preparation Tool Operation Manual *	SIE-C877-17.6	Describes the procedures for operating CP-9200SH Electronic Cam Data Preparation Tool.

\* This manual is not included. When using Electronic Cam Data Preparation Tool, contact your Yaskawa representative.



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## Software

### ■ Precautions on Use

- This software must be used only with one specified computer. For use on other computers, contact your Yaskawa representative.
- Copying this software for any reason other than for backup is strictly prohibited.
- Be sure to keep the original software stored for safekeeping.
- Inversely compiling or assembling this software is strictly prohibited.
- Any transferal, exchange, or rental and/or third party use of all or part of this software without prior notice is strictly prohibited.

### ■ Registered Trade Mark

- Windows, Windows 95/98/2000/NT4.0/XP, and Internet Explorer are trademarks of Microsoft corporation, U. S. A.
- Pentium is a trademark of Intel Corporation.
- Ethernet is a registered trademark of Xerox Corporation.

## Safety Precautions

Read this manual thoroughly before checking products on installation, operation, maintenance and inspection.

### ■ General Precautions

Always note the following to ensure safe use.

- MPE720 was not designed or manufactured for use in devices or systems directly related to human life. Users who intend to use the product described in this manual for special purposes such as devices or systems relating to transportation, medical space aviation, atomic power control, or underwater use must contact Yaskawa Electric Corporation beforehand.
- MPE720 has been manufactured under strict quality control guidelines. However, if this product is to be installed in any location in which a failure of MPE720 involves a life and death situation or in a facility where failure may cause a serious accident, safety devices MUST be installed to minimize the likelihood of any accident.
- Drawings in this manual show typical product examples that may differ somewhat from the product delivered.
- This manual may change without prior notice due to product improvements and specification changes or for easier use. We will update the manual number of the manual and issue revisions when changes are made. The revision number of the revised manual appears on the back of the manual.
- Contact your nearest Yaskawa sales representative or the dealer from whom you purchased the product and quote the manual number on the front page of the manual if you need to replace a manual that was lost or destroyed.
- Contact your nearest Yaskawa sales representative or the dealer from whom you purchased the product to order new nameplates whenever a nameplate becomes worn or damaged.
- Products modified by the customer are not covered by the Yaskawa warranty, nor does Yaskawa assume any liability for injury or damage that may result from such modifications.

# 1 MPE720

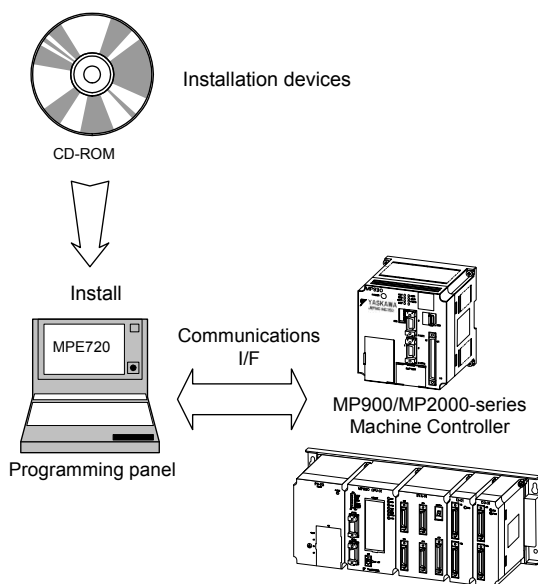
This section describes the overview of the MPE720 and specifications of the personal computer where the MPE720 is to be installed.

## 1.1 What is MPE720

“MPE720” is the programming software to control and monitor the MP900/MP2000-series Machine Controller.

MPE720 operates on Windows 95/98/2000/NT4.0/XP; the Unit where the MPE720 is installed in a personal computer (hereinafter called PC) is called “Programming Panel.”

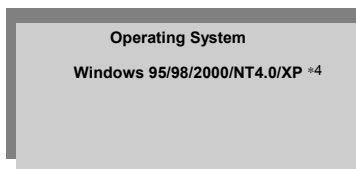
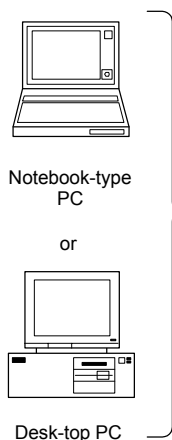
MPE720 Programming Panel and the MP900/MP2000-series Machine Controllers are normally connected by RS-232C Interface. For some MP900/MP2000 models, ETHERNET (218IF) or real time core network (215F) can also be used. For details, refer to the User’s Manual “Design and Maintenance” of each model.



## 1.2 Recommended Personal Computer for MPE720

The programming panel is required to have multifunctions such as high-speed data transmission with Machine Controller, control, or monitoring.

The following indicates the PC specifications for easy MPE720 operations. Check PC specifications before installing the MPE720.



PC Architecture	DOS/V
CPU	Pentium 200MHz or more *1
Memory	64M bytes or more (128M bytes recommended)*2
Resolution	800×600 dots or more
Hardware Disk Capacity	200M bytes *3
Web Browser	Internet Explorer 5.5 or later (required to display help)
Communications Port	RS-232C (19.2 Kbps)

\*1: Any Intel Corporation equivalent product may be used.

\*2: To operate other applications simultaneously, add more memory.  
Otherwise, memory source is often fetched causing reductions in performance.

\*3: Standard operating space after installation is also included.

\*4: The service pack 5 or later is required for Windows NT, and the service pack 1 or later for Windows 2000.

The following table shows an example of the applicable OS with MPE720.

MPE720 version	Applicable OS type
Version 4.30A (First edition) or later	Windows 95/98/2000/NT4.0
Version 4.50 or later	Windows 95/98/2000/NT4.0/XP

### IMPORTANT

If the software version is 4.20 or later for 717IF and 4.30 or later for MPE720, both programs can be installed together on one PC. If earlier versions are used, the software will not successfully be installed.

## 2 INSTALLATION PROCEDURE

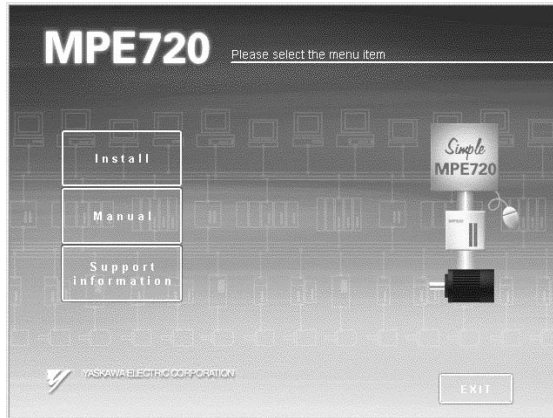
The following describes how to install the MPE720 system software.

### 2.1 Starting Installer

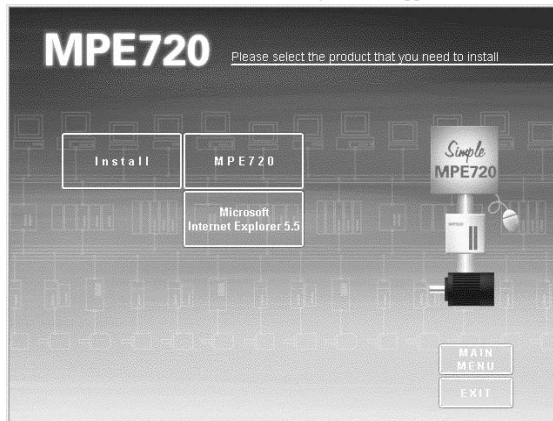
#### ■ Using a CD-ROM

Follow the procedure described below to start up the Installer.

1. Insert the CD-ROM into the CD drive. The following window appears.



2. Click the [Install] button. The following window appears.



3. Click the [MPE720] button to start up the Installer.



- Double-clicking "Launch.exe" in the CD-ROM drive on Explorer can also start up Installer.
- Unless Microsoft Internet Explorer 5.5 or more is installed on the PC, the following error message appears when Installer starts up.

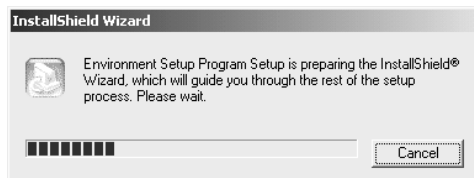


Click the [OK] button and install Microsoft Internet Explorer 5.5 or more, then install MPE720 again.

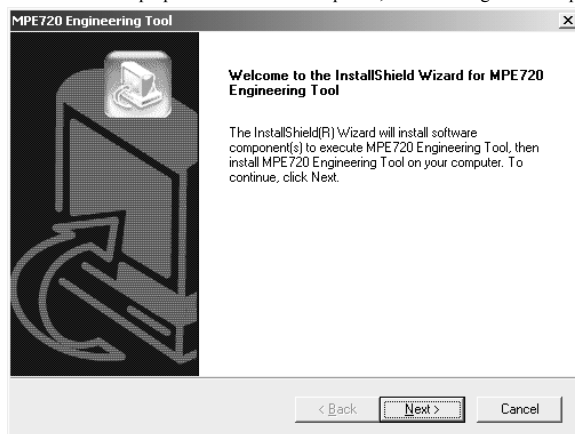
- Microsoft Internet Explorer 5.5 can be installed from this software.
-

## 2.2 Preparing Setup

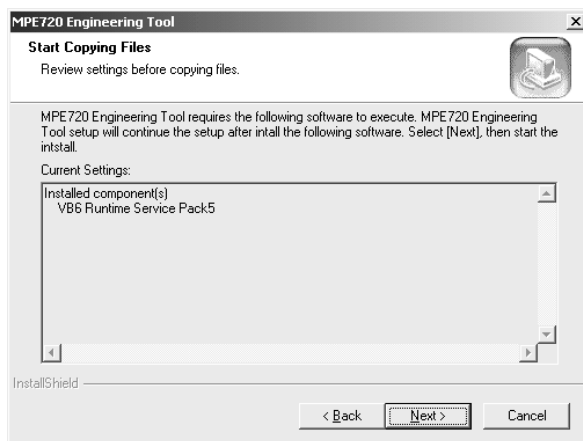
The window for setup preparation appears as shown below. While this window is given, installation is being prepared.



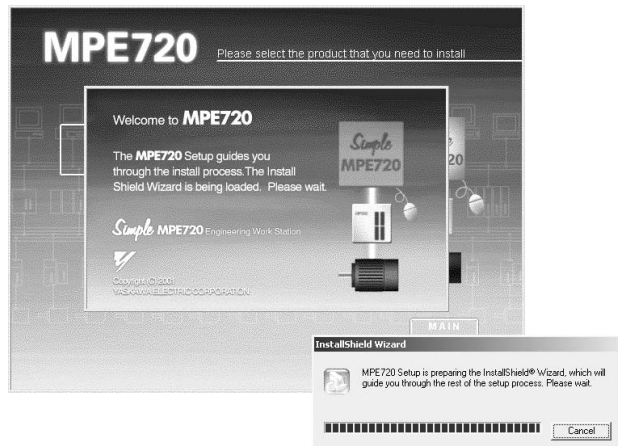
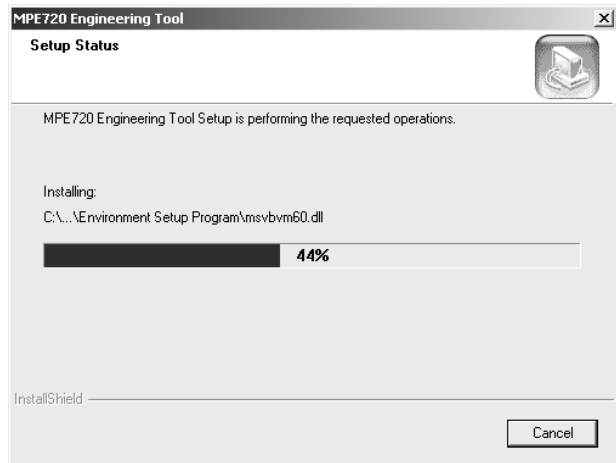
1. When installation preparation has been completed, the following window appears.



2. Click the [Next (N)] button after verifying the message. The following window appears.



3. Click the [Next (N)] button. File copy starts and the following windows appear in order.

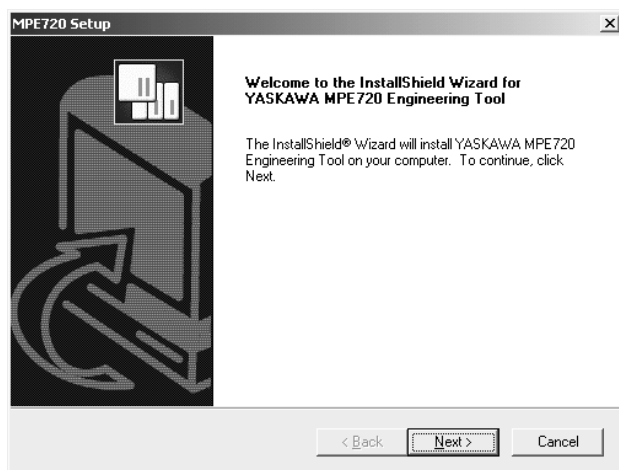


Time required until next window appears.

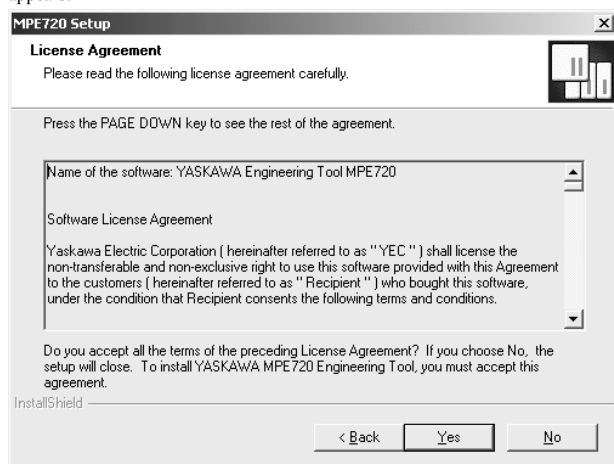


## 2.3 Starting Setup

The following window appears when preparation for setup has been completed, and installation can be started.



1. Click the [Next (N)] button after verifying the message. The following window appears.



2. Click the [Yes] button after verifying the message. Then setup starts and the "Customer Information" window appears.



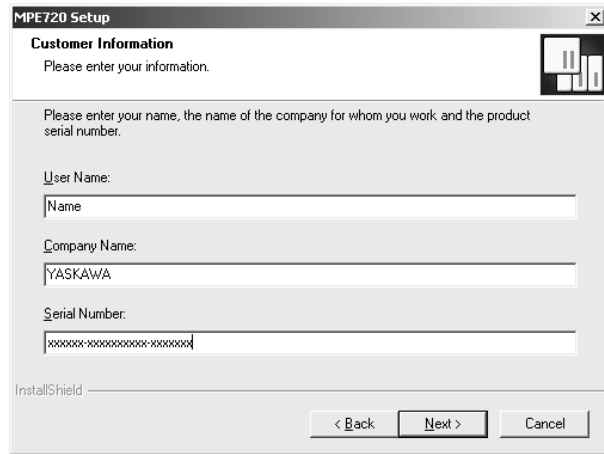
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The following is common in the operations described hereinafter.

- Clicking the [Next (N)] button executes processing to move to the next window.
  - Clicking the [Back (B)] button returns to the previous display.
  - Clicking the [Cancel] button terminates the processing.
-

## 2.4 Entering Customer Information

1. In the “Customer Information” window, enter the customer name, company name, and serial number as the customer information.



The screenshot shows a Windows-style dialog box titled "MPE720 Setup". Inside, there is a section titled "Customer Information" with a small icon of a server rack. Below the title, it says "Please enter your information." and then "Please enter your name, the name of the company for whom you work and the product serial number." There are three text input fields: "User Name:" with the placeholder "Name", "Company Name:" with the text "YASKAWA", and "Serial Number:" with a placeholder of sixteen "x" characters. At the bottom left, it says "InstallShield". At the bottom right, there are three buttons: "< Back", "Next >", and "Cancel".

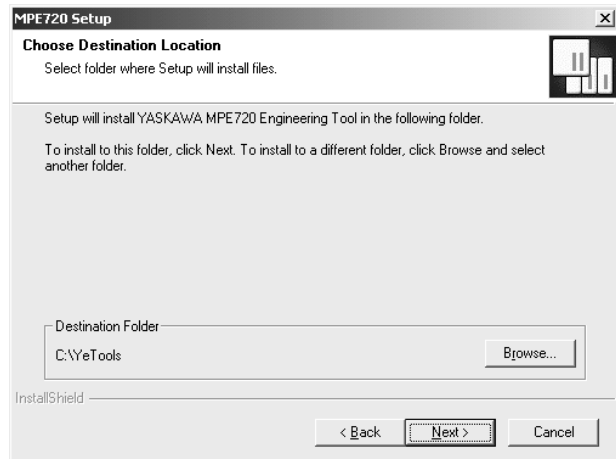
2. After inputting the data, click the [Next (N)] button. The “Choose Destination Location” window appears.

## 2.5 Selecting Installation Destination

1. Select the installation destination directory.

“C:\¥eTools” is the MPE720 default directory.

Clicking the [Browse...] button can change the installation destination directory, however, it is recommended that “C:\¥eTools” be used.

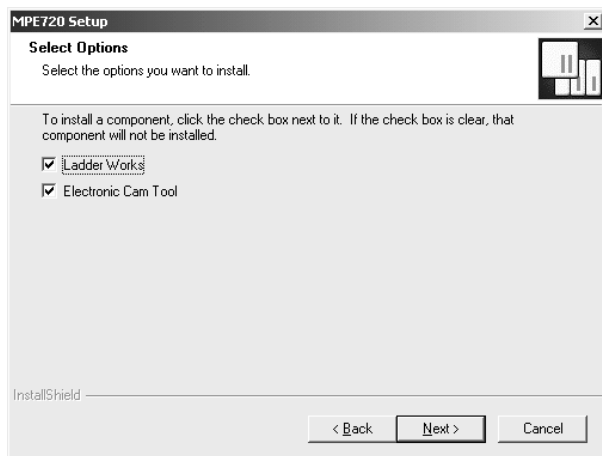


2. After selecting the installation destination directory, click the [Next (N)] button. The "Select Options" window appears.

## 2.6 Selecting Option Item

1. In this window, select the option items to execute the installation.

It is recommended to check both boxes, “Ladder Works” and “Electronic Cam Tool” to execute the installation of the New Ladder Editor and the Cam Tool as MPE720 standard options.



2. After selecting the option items, click the [Next (N)] button. The “Select Program Folder” window appears.

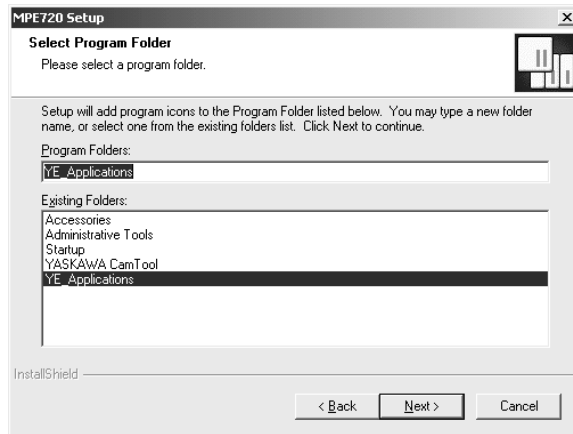


- New Ladder Editor: Ladder Editor for Windows with the MPE720 installed
- Cam Tool: Electronic cam data preparation tool

## 2.7 Selecting Program Folder

1. In this window, specify and register the program folder to register the application group. Default is “YE\_Applications.”

Any existing folder other than the default can be selected, however, it is recommended that “YE\_Applications” be used.

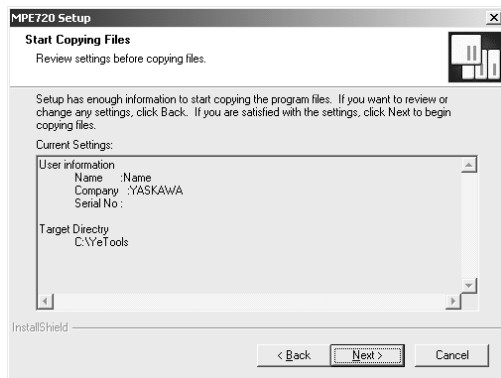


2. When selecting the program folder, click the [Next (N)] button. The “Start Copying Files” window appears.

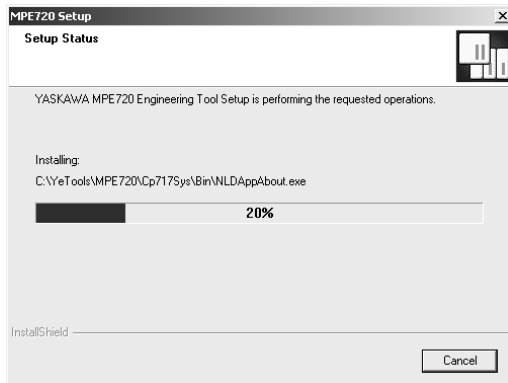
## 2.8 Starting and Completing File Copy

1. Verify the setting information.

- a) In this window, the information that has been input is displayed. To correct something, click the [Back (B)] button to return to the previous window and correct the relevant part.



- b) After setting is completed, click the [Next (N)] button to start copying a file.



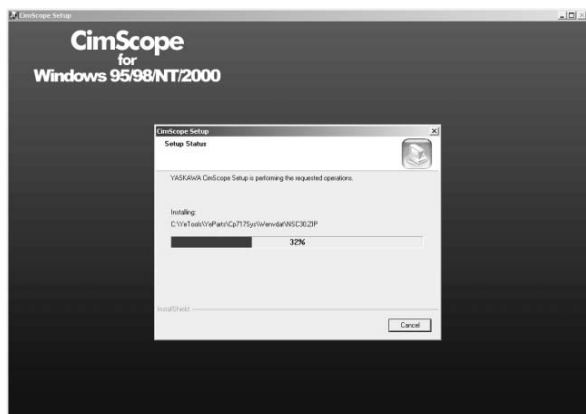
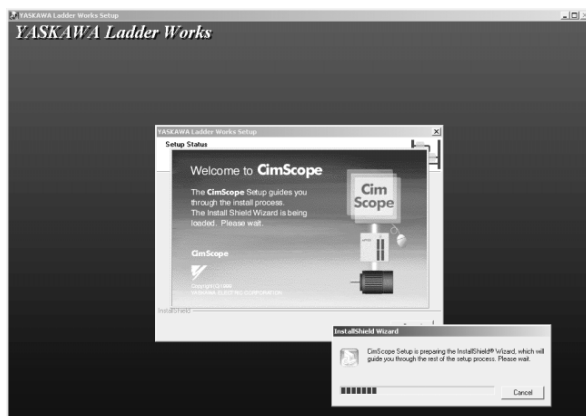
2. File copy starts. The following windows appear in order.

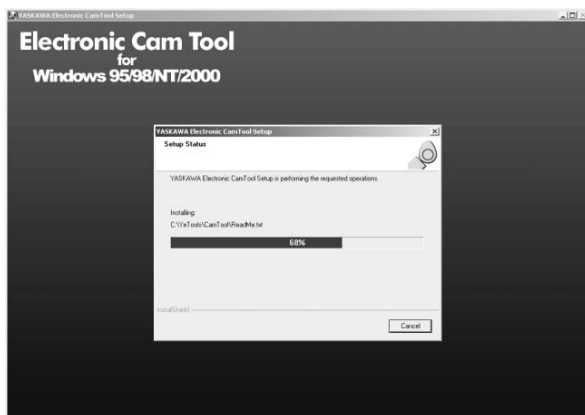
The copy progress status can be checked in the progress bar dialog box.

Wait until copy is completed.









The following messages may appear when installing the option items.

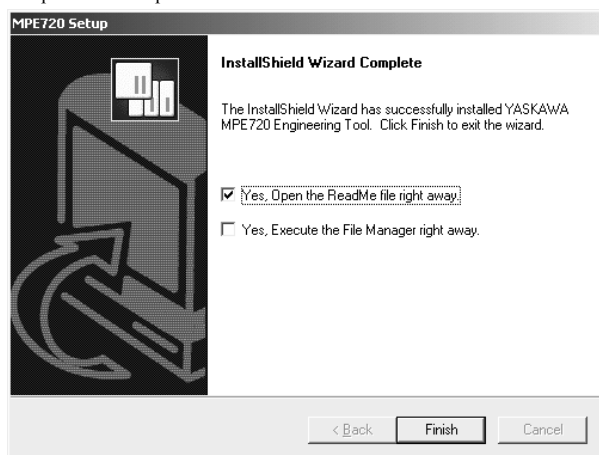
<p><b>Warning</b></p> <p>YASKAWA Electronic Cam Tool (Ver.4.15) is detected on your computer. Installer deletes the programs once, then installs YASKAWA Electronic Cam Tool (Ver.4.16). OK to continue?</p> <p><input type="button" value="OK"/> <input type="button" value="Cancel"/></p>	<p>These messages appear when the optional software with the older version is not uninstalled successfully. Verify the message and click the [OK] button to continue the installation that means updating the version.</p> <p>Clicking the [Cancel] button stops installing the optional software. However, it is recommended to update the optional software version when updating the MPE720 version.</p>
<p><b>Warning</b></p> <p>YASKAWA MPE720 Engineering Tool (Ver.4.30) is detected on your computer. Installer deletes the programs once, then installs YASKAWA MPE720 Engineering Tool (Ver.4.30A). OK to continue?</p> <p><input type="button" value="OK"/> <input type="button" value="Cancel"/></p> <p>C:\...\Data901\Motion\DW\GH\#7854321.TMP</p> <p><input type="button" value="OK"/> <input type="button" value="Cancel"/> 12%</p>	

## 2.9 Completing Setup

When setup is completed, the “MPE720 Setup” window appears.

There are two check boxes as follows. Mark the boxes of the items whenever necessary, and click the [Finish] button.

- Selecting “Yes, Open the ReadMe file right away.” displays the ReadMe file which describes the “Software License Agreement.” If not necessary, remove the check mark.
- Selecting “Yes, Execute the File Manager right away.” starts up the application after completion of setup.



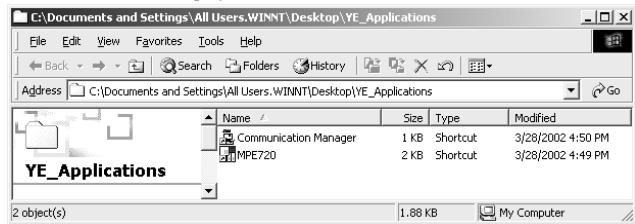
## 2.10 Verifying Setup Contents

When setup is completed, the common program folder (default:YE\_Applications, YASKAWA CamTool) which becomes a platform of the application groups is given on the desk top.



Perform the following steps to verify that the setup contents are installed correctly.

1. Double-click the “YE\_Applications” program folder. The program folder is opened and the contents are displayed as follows.



2. Double-click the “Total Engineering WorkStation” icon to verify that the application is started up correctly.



The application can also be started up by selecting this application from the program menu of the [Start] button at the left bottom on the desk top.

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## 2.11 Folder to be Created at Installation

Installer creates a folder for each file component, and the relevant file is copied.

	File Component	Folder to be Created
1	ReadMe (latest information) file, etc.	¥...¥YeTools *1
2	MPE720 program file	¥...¥YeTools¥MPE720 ¥Cp717sys
3	MPE720 data file	¥...¥YeTools¥MPE720 ¥Cp717Usr
4	Windows communications driver	¥...¥WINDIR *2¥System
5	Common DLL	¥...¥WINDIR¥system
6	MPE720 communications program file	¥...¥YeTools¥CpComSys

\*1. ¥...¥YeTools

The basic folder of the MPE720 system. Most files are installed under this folder. The folder name can be changed, however, it is recommended that the standard folder name “YeTools” be used.

\*2. ¥...¥WINDIR

Indicates the folder where the Windows system has been installed. “C:¥Windows” is used for the standard installation of Windows. Files depending on the Windows system are installed, such as communications driver module or common DLL, for the MPE720 data transmission with Machine Controller.



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File component: files classified into groups in the units of functions

## 3 COMMUNICATIONS SETTING

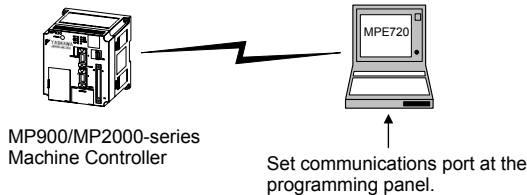
This section describes communications setting between the MPE720 and Machine Controller.

### 3.1 Outline of Communications Setting

When installation is completed, be sure to make communications setting for the MPE720 once. For communications medium, select the right one of the following three types and set the communications conditions.

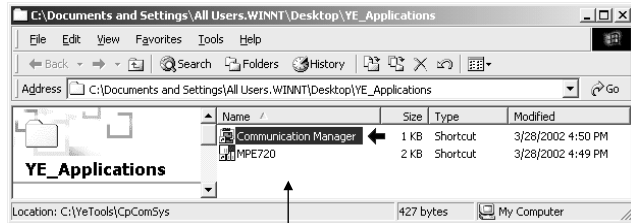
- Serial interface
- 215IF high-speed communications interface
- 218IF ETHERNET interface

Once setting is made, it is stored as MPE720 system information. No new setting needs to be made from the next operation, unless the setting is changed.



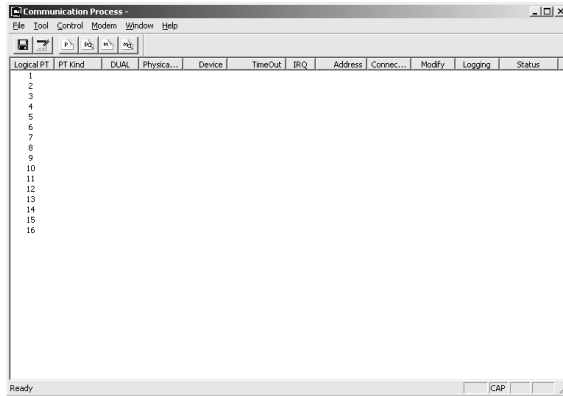
### 3.2 Calling Communication Process

1. Double-click the “Communication Manager” icon of the communication process in the “YE\_Applications” program folder. The “Communication Process” window appears.

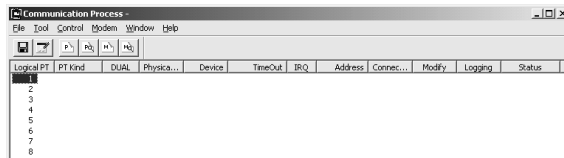


Double-click this icon.

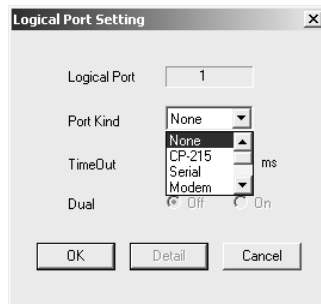
- For communication process, logical ports up to 16 channels can be operated. Select and set an unused logical port from the top in order.



- Double-click the relevant logical port number, or select relevant logical port number to select "Setting(E)..." from "File(F)." The following window appears when logical port number 1 has been selected.



- Selecting the logical port calls up the following "Logical Port Setting" window. Select the relevant communications interface in "Port Kind" and go to the relevant setting process.



#### IMPORTANT

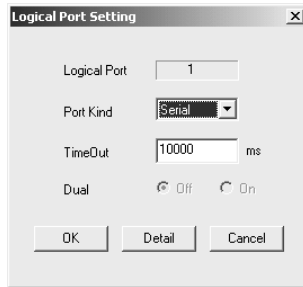
Do not set the logical port to any communications device (215IF or the like) which is not connected to the programming panel. Failure to observe this may make hardware operations unstable.

### 3.3 Setting of Serial Communications Port

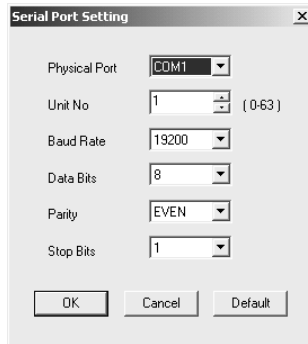
#### ■ Setting Procedure

The following describes the setting procedure of the serial communications port.

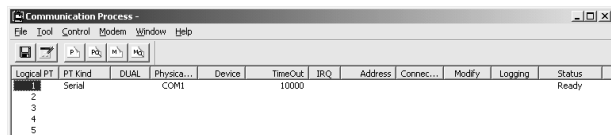
1. Select “Serial” as “Port Kind” in the “Logical Port Setting” window, and click the [Detail] button.



2. Clicking the [Detail] button calls up the “Serial Port Setting” window for the setting information; click the [OK] button after setting the serial port parameters. Normally, the following default values are entered.



3. When the “Logical Port Setting” window appears again, click the [OK] button again. The “Communication Process” window appears again, so that you can verify that “Serial” has been assigned to logical port 1.



Serial parameters have been set.

The setting contents are required to be saved in a file.

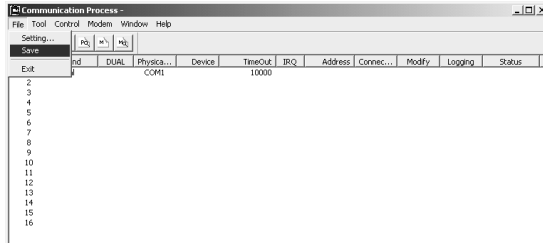


## ■ Saving Communications Port Set Values

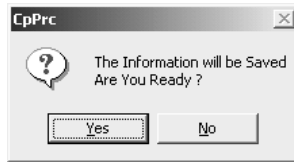
Save the set values of the communications port in a file. After that, this data is supplied as the communications port information when the communication process starts up.

The following describes how to save the communications port set values.

1. Select “Save (S)” from “File (F).”

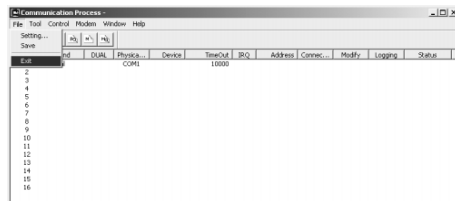


2. The “CpPrc” (Communication process) window appears to verify whether the information is to be saved. Click the [YES] button to save it.



## ■ Completion of Communication Process

Select “Exit (X)” from “File (F)” to close the “Communication Process” window.



### IMPORTANT

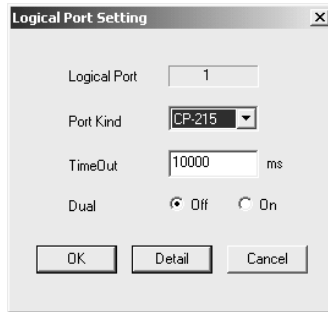
The communications port setting will be valid when the communication process is restarted after the set values are saved in a file.

### 3.4 Setting of 215IF Communications Port

#### ■ Setting Procedure

The following describes the setting procedure of the 215IF communications port.

1. Select “215IF (CP-215)” as “Port Kind” in the “Logical Port Setting” window, and click the [Detail] button.



2. Clicking the [Detail] button calls up the “215IF (CP-215) Port Setting” window. Set the 215IF parameters; “Hardware,” “Parameter,” “Channel” and “LinkMap” in this order which are indicated with four tabs. For “LinkMap” tab, no new setting is required.



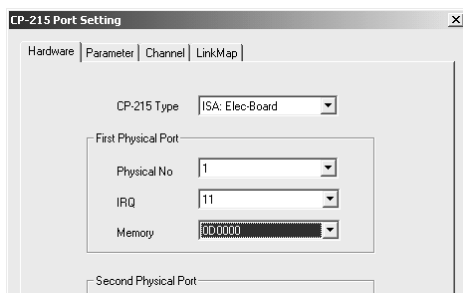
#### a) “Hardware” setting

Sets the operation conditions of the 215IF (CP-215) PC/AT card which is mounted on the PC.

- “Physical No” (physical port)  
Sets the I/O port number. If there is only one 215IF (CP-215) PC/AT card, set “1.” When more than one 215IF (CP-215) PC/AT card is used, assign 2, 3, 4 and so on in order.
- “IRQ” (interruption level)  
Select a hardware interruption number which is currently not in use.

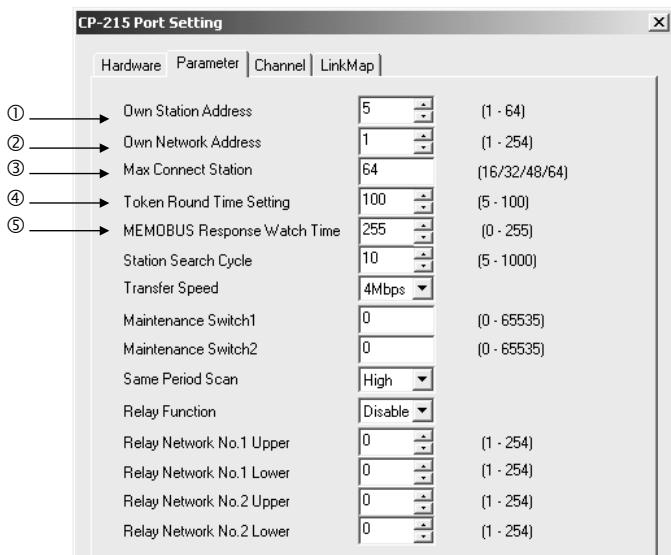
- “Memory” (common memory)

Sets the communications buffer address. Normally, set a memory address that is not used in UMB.



b) “Parameter” setting

Sets the 215IF transfer parameters. Set from the “Own Station Address” to the “MEMOBUS Response Watch Time.” For parameters below the “MEMOBUS Response Watch Time,” use the default values.



① “Own Station Address”

Set the MPE720 station number.

② “Own Network Address”

Set the network number where the MPE720 is connected. Set “1” when there is only one network segment.

## ③ “Max Connect Station”

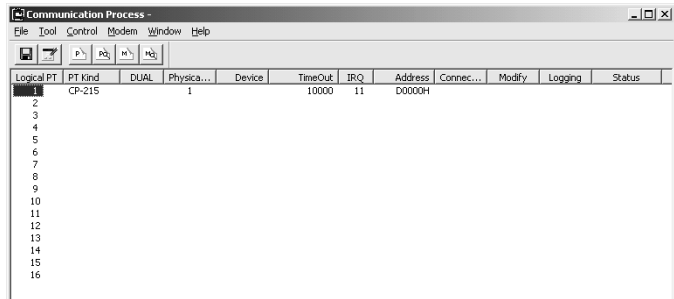
Set the number of the 215IF network stations. The number of stations indicates the number of 215IF interface modules incorporated into the Machine Controller, and the number of PCs with 215IF (CP-215) PC/AT card interface.

## ④ “Token Round Time Setting”

Sets the aimed time from when each station receives a token to when it receives the token again. Set “100.”

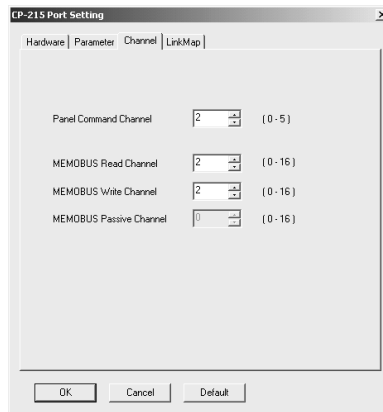
## ⑤ “MEMOBUS Response Watch Time”

Sets the time until when a response is received at message sending. Set “255.”

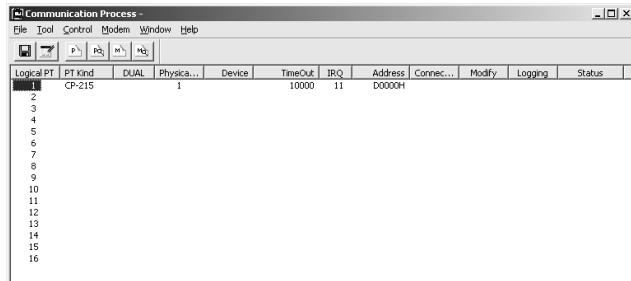


## c) “Channel” setting

Sets the number of panel command channels. Set “2” to the “Panel Command Channel.” Other parameters are not used with the MPE720. Use the default values. After completion of setting, click the [OK] button.



3. When the “Logical Port Setting” window appears again, click the [OK] button again. The “Communication Process” window appears again, so that you can verify that the “215IF” has been assigned to logical port 1.



The 215IF parameters have been set.

The setting contents are required to be saved in a file.

### ■ Saving Communications Port Set Value and Completing of Communication Process

Refer to 3.3 *Setting of Serial Communications Port*.

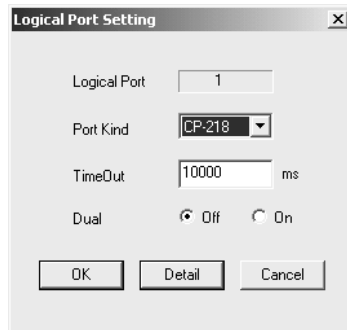
### 3.5 Setting of 218IF Communications Port

The ETHERNET is used for communications via the 218IF module mounted on the Machine Controller.

#### ■ Setting Procedure

The following describes the setting procedure of the 218IF communications port.

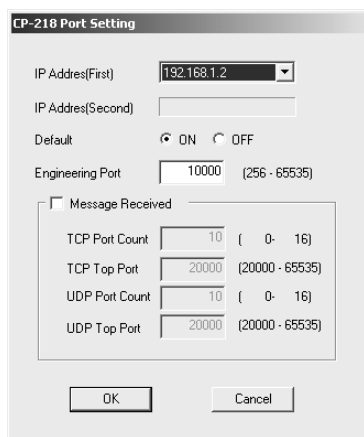
1. Select “218IF (CP-218)” as “Port Kind” in the “Logical Port Setting” window, and click the [Detail] button.



2. Click the [Detail] button calls up the “218IF (CP-218) Port Setting” window. Set only the “IP Address (First).” For other parameters, use the default values.

Set the IP address assigned to the ETHERNET board mounted on the PC that works as a programming panel or the PCMCIA card.

For the “IP Address,” either one of private addresses, “192.168.1.1” to “192.168.1.254” of class C are set automatically. Determine the IP address following the instructions of the personnel in charge of network management. IP address including the Machine Controller must be managed.



**CP-218 Port Setting**

IP Address(First)

IP Address(Second)

Default ☒ ON ☐ OFF

Engineering Port  (256 - 65535)

☐ Message Received

TCP Port Count  ( 0 - 16)

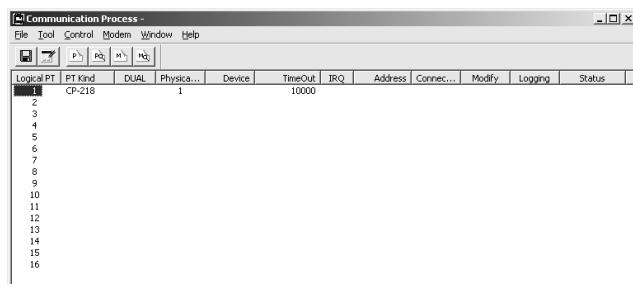
TCP Top Port  (20000 - 65535)

UDP Port Count  ( 0 - 16)

UDP Top Port  (20000 - 65535)

OK Cancel

- When the “Logical Port Setting” window appears again, click the [OK] button. The “Communication Process” window appears again, so that you can verify that the 218IF communications have been assigned to logical port 1.



Logical PT	PT Kind	DUAL	Physica...	Device	TimeOut	IRQ	Address	Connec...	Modify	Logging	Status
1	CP-218		1		10000						
2											
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											
16											

The 218IF communications have been set.

The setting contents are required to be saved in a file.

### ■ Saving Communications Port Set Value and Completing Communication Process

Refer to 3.3 *Setting of Serial Communications Port*.

### 3.6 Adjustment of Logical Port Number with MPE720

Up to 16 logical ports can be registered by communication process. However, when the Machine Controller is engineered by the MPE720, you must specify which logical port is to be used.

Logical port to be used can be set for each Machine Controller. Normally, logical ports are set when registering a new Machine Controller to be used in the “File Manager.”

Refer to MP900/MP2000 Series Machine Controller MPE720 Programming Device Software User’s Manual (SIEPC88070005).

When a new PLC folder is registered, or when the “Property” window is opened for a registered PLC folder, the following window appears. Click the “Nnetwork” tab.

The screenshot shows the 'Controller Configuration' dialog box with the 'Network' tab selected. The 'Logical Port No (Device Type)' dropdown menu is set to '1-CP-217'. An arrow points from the text 'This number corresponds to the logical port No. in the "Communication Process" window.' to the '1' in the dropdown menu. Other settings include 'OnLine' (Yes), 'Unit No' (1), and 'Route' (No).

This number corresponds to the logical port No. in the “Communication Process” window.

Set the logical port number to be used in the combo-box of “Logical Port No” in this window.



## 4 STARTING AND COMPLETING MPE720

This section describes the operation procedures to start and complete the MPE720 system.

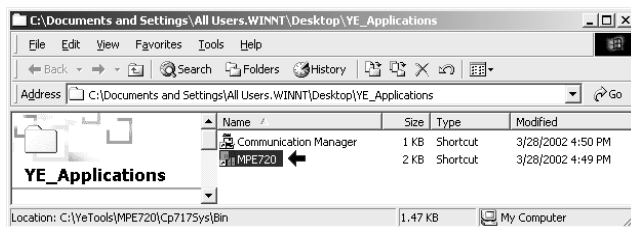
### 4.1 Starting MPE720

The following describes the operation procedure to start up the MPE720.

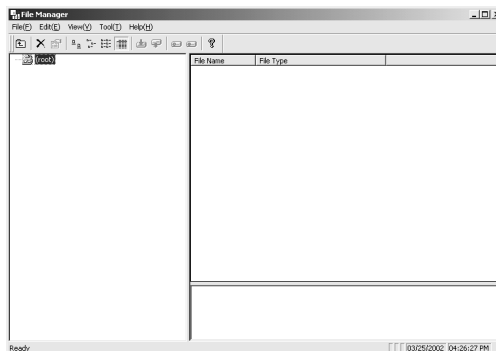
1. Turn ON the power supply to start up Windows 95/98/2000/NT4.0/XP.



2. Double-click the program folder “YE\_Applications” icon.



3. Double-click the “MPE720” icon of the “YE\_Applications” group to start up the “File Manager.”
4. The “File Manager” window that is the main window of the MPE720 appears.

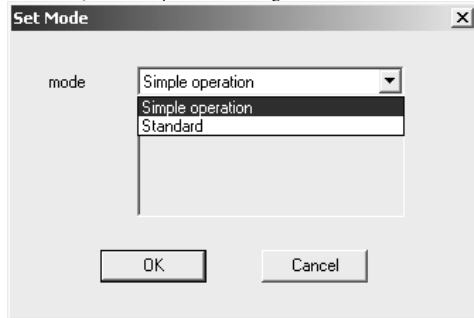


The “Communications Manager” is started up simultaneously with the “File Manager.” It can be verified with the following task bars.



# IMPORTANT

1. The mode is set to the “Simple operation” mode as default. To change it to “Standard mode,” select “Change Program Mode” from “View (V)” in the File Manager, set the mode to “Standard”, and start up the MPE720 again.



2. Unlike the standard mode, the simple operation mode has the following restrictions:
  - Group definition cannot be changed.
  - The number of groups is fixed at 1.
  - The station allocations for MECHATROLINK cannot be edited by changing the module configuration for any models other than MP940.

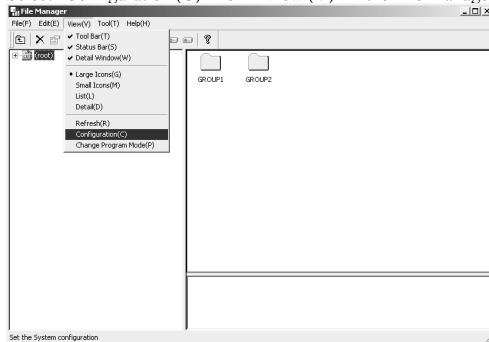
## 4.2 Selecting New Ladder Editor

When the new ladder program description method (new ladder editor) is used, the configuration must be set.

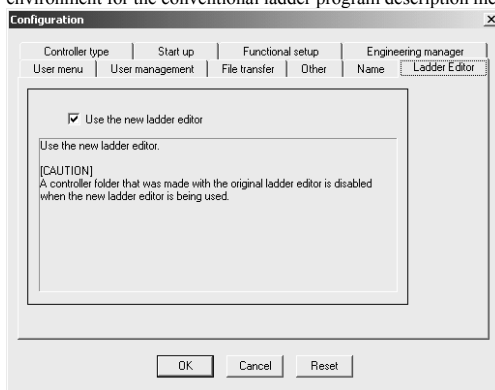
### ■ Setting Configuration

The following describes how to set the configuration.

1. Select "Configuration (C)" from "View (V)" in the File Manager.



2. The "Configuration" dialog box appears. Select "Ladder Editor" and mark the "Use the new ladder editor." box. Removing the check mark makes the settings of the environment for the conventional ladder program description method (same as CP-717).



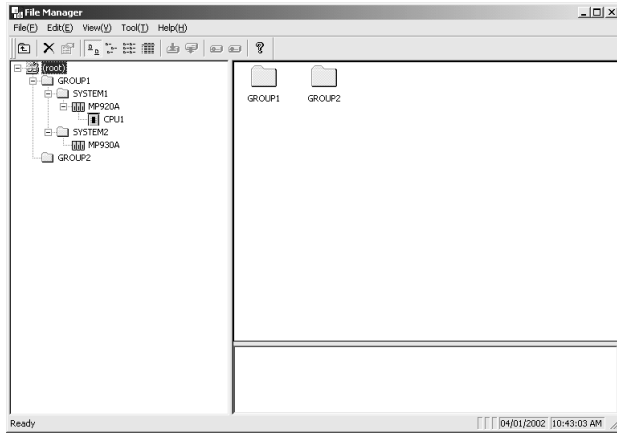
3. The description method setting will be valid by clicking the [OK] button and starting up File Manager again.



When the new ladder program description method is selected, any applications that have been created by the conventional ladder program description method cannot be used.

### 4.3 Selecting Machine Controller

The “File Manager” window is the starting point for all operations. Select a Machine Controller by PLC to create a program or define data. After selecting a Machine Controller, MPE720 functions can be used. This paragraph describes the procedure until a Machine Controller is selected.



As shown in the “File manager” window, open the “GROUP1” (group folder) and “SYSTEM1” (order folder) in this order from the “root” folder, to display the system configuration. Clicking “+” (plus) sign displayed at the left side to the folder icons can develop the system configuration.

Double-click the “SYSTEM1” (order folder) to open it, and the PLC folder name is displayed below.

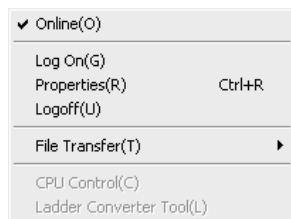


Before the PLC folder name, a different icon from others is displayed, so that it can be verified easily.

## ■ Logon

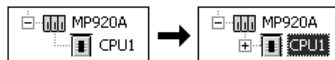
Double-clicking the PLC folder name can control the Machine Controller by programming or monitoring. Logon indicates the status where the control is available.

Move the cursor to the PLC folder name and right-click it before starting logon, the pop-up menu is displayed to switch online and offline modes.



“Online (O)” without a check mark indicates the offline mode and “Online (O)” with it indicates the online mode. Clicking the “Online (O)” switches the mode.

When logon is successful, “+” is displayed in front of the icon, indicating that logon is being done.



## ■ System Protection by User Registration

Double-clicking the PLC folder name for logon displays the following security dialog box.



Security Dialog Box

Users that are allowed to operate must be limited at logon in order to protect the Machine Controller system during programming or running. The MPE720 protects the system by the user name and password input.

User management supports user privileged level in addition to new user registration and registered user deletion. For details, refer to MP900/MP2000 Series Machine Controller MPE720 Programming Device Software User's Manual (SIEPC88070005).

#### 1. User name input

Input a user name within 8 half block letters or 4 full block letters.

#### 2. Password input

Input a password within 16 half block letters or 8 full block letters. For security, input letters are masked with “\*.” Password can be input again up to three times.

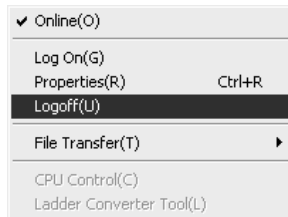
Inputting it more than three times cancels logon.

User registration is not made for the first logon. In this case, specified user name and password that are determined in the system are needed. Refer to MP900/MP2000 Series Machine Controller MPE720 Programming Device Software User's Manual (SIEPC88070005).

### ■ Logoff

Perform logoff after a series of operations is completed. Otherwise, anyone can operate the Machine Controller, may endanger the system. The status where the Machine Controller cannot be controlled is called logoff. Perform logon again to control the Machine Controller again. Logoff must always be done after logon.

Move the cursor to the Machine Controller name and right-click it. Clicking the “Logoff (U)” in the displayed pop-up menu can perform logoff.



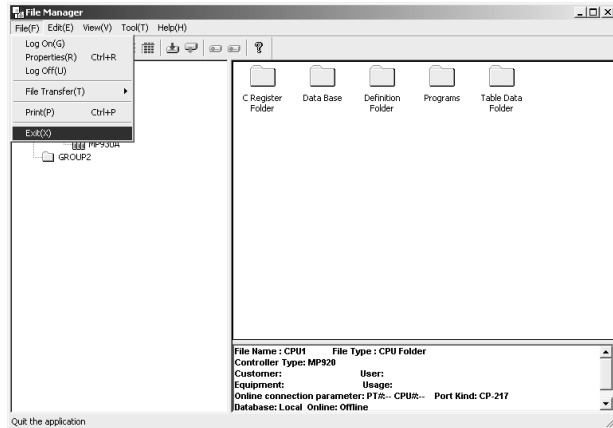
When logoff is successful, all commands for the Machine Controller are dimmed and unavailable. The plus mark, “+,” that was displayed on the left of the Machine Controller's name to indicate its logon status is no longer shown.

## 4.4 Exiting MPE720

Exit the MPE720 after logging off all the Machine Controllers that have been logged on. The MPE720 may not be exited if any windows other than the “File Manager” are opened. Therefore, close such windows.

Select “Exit (X)” from “File (F)” in the File Manager to exit the MPE720.

Clicking the “x” mark at the right top of the “File Manager” window can also exit the MPE720.



### ■ Closing Communication process

Move the cursor to the “Communication Process” displayed in the task bars and right-click it. Click the [Close] button in the displayed pop-up menu to close the “Communication Process.”



When the dialog box to verify completion of communications appears, click the [Yes] button after verifying that communications are not being done.



## 4.5 Installation Disk Contents

Folder or File Name	Description
¥MPE720¥Bin	Setup file of DemoShield
¥Driver	Driver software for MP2100
¥Eng¥Manual¥Ladder¥	New Ladder Editor User's Manual (English version)
¥Mpe¥CamTool¥Disk1¥	Electronic cam data preparation tool (English version)
¥CimScope¥Disk1¥	Communications driver for machine controller (English version)
¥CpComSys¥Disk1¥	Communication process (English version)
¥Install¥Disk1¥Setup.exe	MPE720 installer (English version)
¥Nld¥Disk1¥	New Ladder Editor (English version)
¥Jpn¥Manual¥Ladder¥	New Ladder Editor User's Manual (Japanese version)
¥Mpe¥CamTool¥Disk1	Electronic cam data preparation tool (Japanese version)
¥CimScope¥Disk1¥	Communications driver for machine controller (Japanese version)
¥CpComSys¥Disk1¥	Communication process (Japanese version)
¥Install¥Disk1¥Setup.exe	MPE720 installer (Japanese version)
¥Nld¥Disk1¥	New Ladder Editor (Japanese version)
¥Plugin¥Adobe¥	Adobe Acrobat Reader 4.05 installer (Application to start up the PDF file)
¥Microsoft¥IE55	Microsoft Internet Explorer 5.5
¥SAMPLE	Sample Ladder for MP2000-series Machine Controller
¥DataSheet¥EDS¥	EDS file for MP900/MP2000-series DeviceNet module
¥GDS¥	GSD file for MP2000-series PROFIBUS module
¥TPFunc_n¥Tp920_23¥	Teach Pendant function ver. 23 for MP920 with New Ladder Editor
¥Tp930_22¥	Teach Pendant function ver. 22 for MP930 with New Ladder Editor
¥TPFunc_o¥Tp920_23¥	Teach Pendant function ver. 23 for MP920 with conventional Ladder Editor
¥Tp930_22¥	Teach Pendant function ver. 22 for MP930 with conventional Ladder Editor



## 5 TEACH PENDANT FUNCTIONS

This section describes how to install and use the Teach Pendant functions (hereinafter called TP functions) required whenever Teach Pendant (model: JEPMC-TB350/TB351) is used.

The TP functions are included in this CD-ROM. For details, refer to *4.5 Installation Disk Contents*.

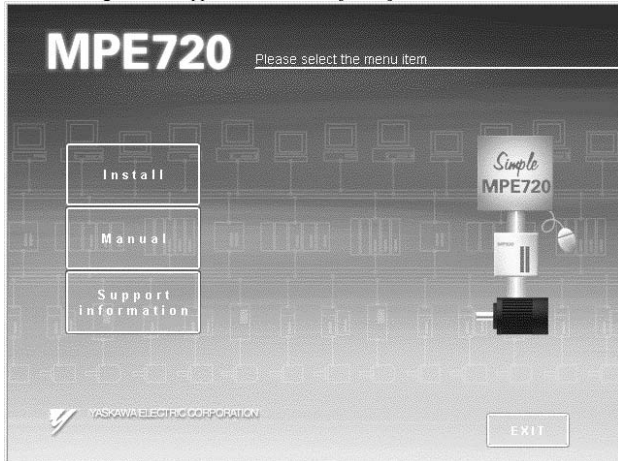
### 5.1 Installation Procedure of TP Functions

The following describes how to install the TP functions in the specified PLC folder.

1. Prepare for installing.

Insert the MPE720 installation CD-ROM into the CD drive.

The following window appears. Click the [EXIT] button to close the window.



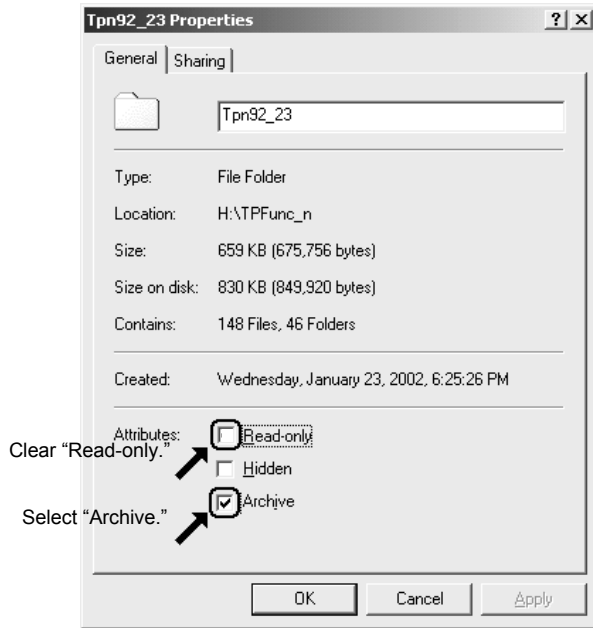
2. Change the attribute of TP function file (remove the check mark from "Read-only").

The TP functions in the CD-ROM has the file attribute of "Read-only." To use the MPE720, the file attribute must be changed.

- a) First, copy the required TP functions from the CD-ROM to the hard disk of the PC.  
The whole folder of the TP functions must be copied.

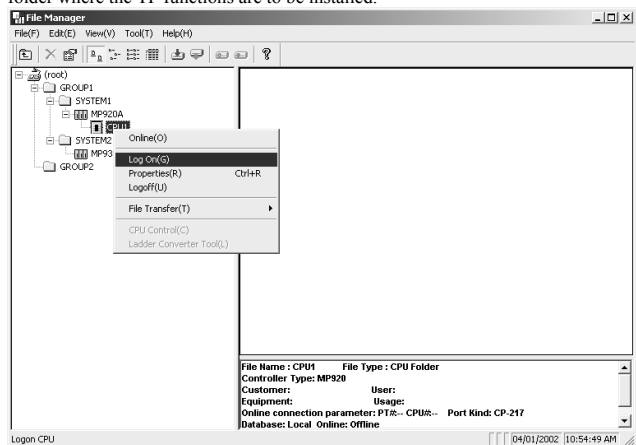
For example, when copying TP functions for MP920 and New Ladder Editor, copy the whole folder of "Tp920\_23" below "MPE720¥TPFunc\_n."

- b) Change the attribute of the files below "Tp920\_23" folder. (Clear "Read-only," then select Archive.") Change the attribute in the "Property" display of each folder or file.

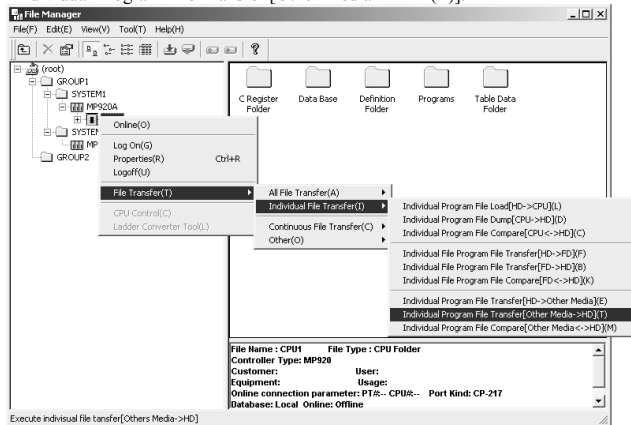


### 3. Install the TP functions.

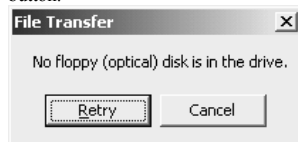
Start up the MPE720 and then File Manager, and perform logon in the offline to the PLC folder where the TP functions are to be installed.



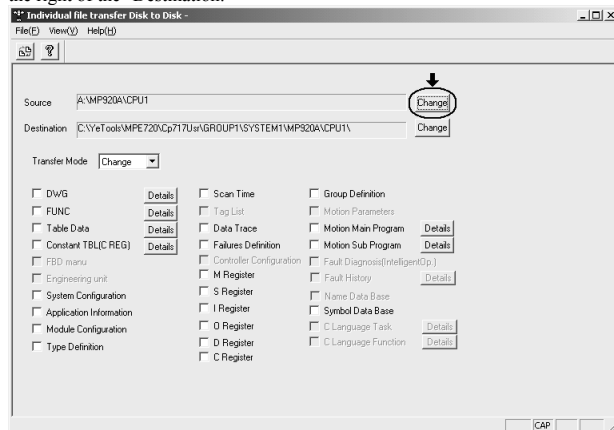
4. After login, right-click to select "File Transfer (T)" - "Individual File Transfer (I)" - "Individual Program File Transfer [Other Media -> HD (T)]."



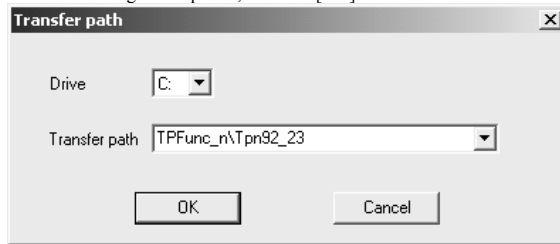
5. The dialog box "No floppy (optical) disk is in the drive" appears. Click the [Cancel] button.



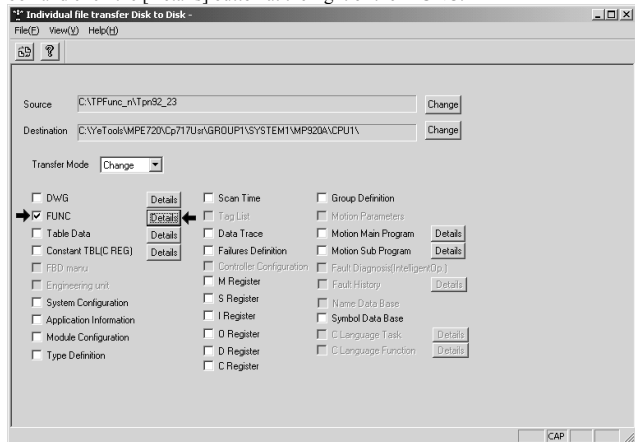
6. The display concerning the contents of transfer appears. Click the [Change] button at the right of the "Destination."



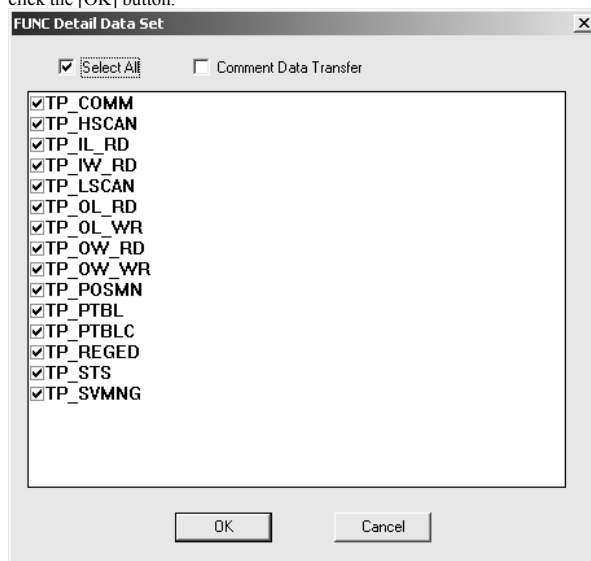
7. When the setting display appears concerning the path of the transfer source, make the settings. For "Drive," select the drive where the TP functions have been copied.  
For "Transfer path," input the folder name of the TP functions to be installed.
8. When the setting is completed, click the [OK] button.



9. The display concerning the contents of transfer appears again. Make the "FUNC" check box and click the [Details] button at the right of the "FUNC."

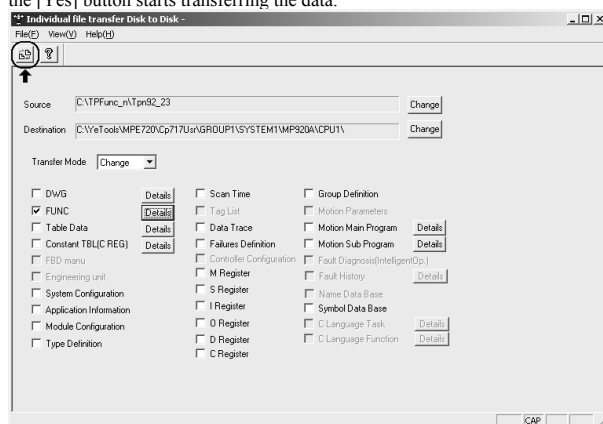


10. The list of transfer data items is displayed. Mark the "Select All" check box and click the [OK] button.

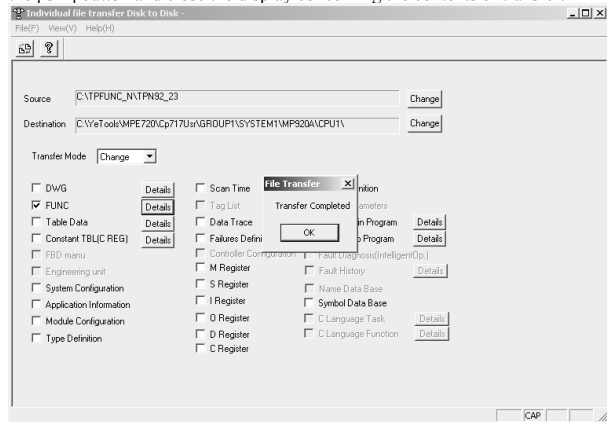


If a TP function file is set to "Read-only" or the path of the folder specified for the transfer source is incorrect, the list of data files is not displayed.

11. The display concerning the contents of transfer appears again. Click the "transfer" icon at the left of the display. The dialog box, "Start transferring. OK?" appears. Clicking the [Yes] button starts transferring the data.



12. When transfer is completed, the dialog box, "Transfer Completed" is displayed. Click the [OK] button and close the display concerning the contents of transfer.



## 5.2 Changing Module Configuration Definition

Change the module configuration definition as follows:

- For “Automatically Reception,” mark the “Disable” check box for MP930, and “Enable” for MP920.
- For “Readout/Write-in of Coil,” set “10000” as “Head REG,” and “800” as “WD Size.”
- For “Readout/Write-in of Hold Register,” set “10000” as “Head REG,” and “800” as “WD Size.”

The screenshot shows the 'Generic Serial' configuration window. The title bar indicates the path 'GROUP1\SYSTEM1 MP920A\CP...'. The window is divided into two tabs: 'PT#:- CPU#:-' and 'CIR#01 CIR#02'. The 'CIR#01' tab is active.

Configuration parameters for CIR#01:

- Transmission Protocol: MEMOBUS
- master / Slave: Slave
- Device Address: 1 (Master=0, Slave=1 ~ 63)
- Serial I/F: RS-232
- Transmission Mode: RTU
- Data Length: 8Bit
- Parity Bit: even
- Stop Bit: 1Stop
- Baud Rate: 9600
- Sending: ☒ Disable, ☐ Enable (0 ~ 100ms)
- Automatically Reception: ☐ Disable, ☒ Enable

Slave I/F Register Settings:

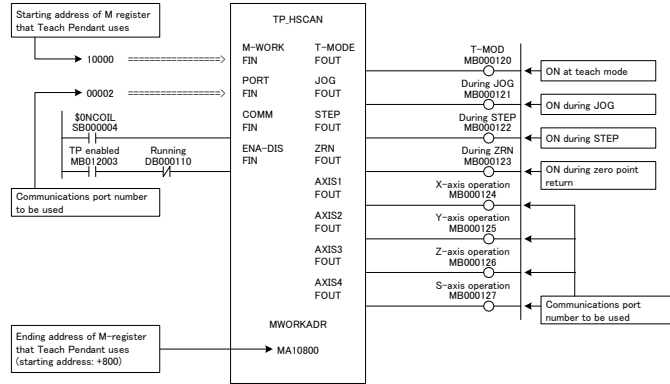
	Head REG	WD Size
Readout of Input Relay	IW0000	5120
Readout of Input Register	IW0000	5120
Readout / Write -in of Coil	MW00000	800
Readout / Write -in of Hold Register	MW00000	800
Write -in width of Coil / Hold Register	LO: MW00000 HI: MW32767	

### 5.3 Changing Ladder Program (in Case of Conventional Ladder Editor)

#### ■ H Drawing

Set COMM and ENA-DIS of the TP\_HSCAN functions.

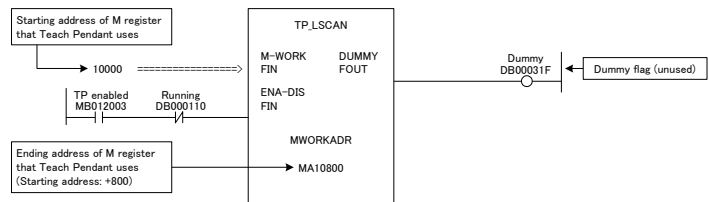
- COMM = Communications port enabled (MP930) / disabled (MP920)
- ENA-DIS = TP enabled / disabled



#### ■ L Drawing

Set ENA-DIS of the TP\_LSCAN.

ENA-DIS = TP enabled/disabled







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■ Difference of Usage between MP930 and MP920

- When MP920 CPU Module port is used  
Validate automatic reception.  
Turn OFF the function "COMM" input. (MSG-RCV in the function will be invalid.)
- When MP930 or MP920/217IF is used  
Setting of automatic reception is disregarded.  
Turn ON the function "COMM" input. (MSG-RCV in the function will be invalid.)

■ Reason for Difference of Usage

Since the MP920 CPU Module serial port has the automatic receiving function, it receives the data sent from the Teach Pendant.

(Communications by automatic receiving function is performed by L-scan processing. Therefore, setting the L-scan setting time longer affects the response. It must be approximately 100 ms or less.)

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# Machine Controller MP900/MP2000 Series

## プログラミング装置用 ソフトウェア PROGRAMMING PANEL SOFTWARE

### MPE720 MPE720

# 取扱説明書 INSTRUCTIONS

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