

MITSUBISHI

Type SW2D5F-XMOP-E Monitoring Tool Operating Manual



Mitsubishi Programmable Logic Controller

• SAFETY INSTRUCTIONS •

(Always read these instructions before using this equipment.)

Before using this product, please read this manual and the relevant manuals introduced in this manual carefully and pay full attention to safety to handle the product correctly.

The instructions given in this manual are concerned with this product. For the safety instructions of the programmable controller system, please read the CPU module user's manual.

In this manual, the safety instructions are ranked as "DANGER" and "CAUTION".




DANGER

Indicates that incorrect handling may cause hazardous conditions, resulting in death or severe injury.



CAUTION

Indicates that incorrect handling may cause hazardous conditions, resulting in medium or slight personal injury or physical damage.

Note that the  CAUTION level may lead to a serious consequence according to the circumstances. Always follow the instructions of both levels because they are important to personal safety.

Please save this manual to make it accessible when required and always forward it to the end user.

[Design Instructions]



DANGER

- When data change is to be made from a peripheral device to the running PLC, configure up an interlock circuit in the outside of the PLC system to ensure that the whole system will always operate safely.
Also, determine corrective actions to be taken for the system when a communication error occurs due to a cable connection fault or the like in online operation performed from the peripheral device to the PLC CPU.



CAUTION

- Online operation performed with a peripheral device connected to the running CPU module (especially forced output) should be started after carefully reading the manual and fully ensuring safety.
Not doing so can cause machine damage or accident due to an operation mistake.

REVISIONS

* The manual number is given on the bottom left of the back cover.

Print Date	* Manual Number	Revision
Mar., 1999	IB (NA) 66896-A	First edition

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Operating Instructions

- (1) Starting the Tag management process
XMOP will not operate if the tag management process has not started.
- (2) Designing instructions
For designing, set the Tag management process to the "STOP" status.
You can make setting with the tag setup utility.
- (3) Reloading the Tag management process
During execution of created user applications, do not reload the tag management process.
- (4) Operation of XMOP
On any personal computer where XMOP is not installed, user applications using XMOP will not run.
- (5) Registering the XMOP custom controls
Up to 254 XMOP custom controls may be registered to one form.
However, when designing, register within 100 controls to one form in consideration of the practical use of loads, etc.
- (6) Monitoring the XMOP custom controls
When designing, more than 254 XMOP custom controls should not be monitored at once in consideration of the processing loads of XMOP and container application (VB).
The custom controls whose form status is Show are all monitored.
Monitoring will not be performed if you have set the tag where the form status is Hide and ordinary collection is not made.
- (7) Saving the picture file
When picture information is saved, it is not stored as data themselves but as a file pathname.
If you have changed the picture file saving folder or file name, reset the picture property.
- (8) When using Windows NT 4.0
When using Windows NT 4.0, XMOP may be installed and used only on the administrator's authority.

(9) About Ethernet communication

(a) When TCP/IP is used for Ethernet communication, there are the following restrictions.

1) During monitoring, write to the PLC CPUs of the same logical station number cannot be performed.

The following controls are restricted.

- XMBITOPR.OCX
- XMNUMDAT.OCX
- XMNUMBLK.OCX
- XMSTRDAT.OCX
- XMSTRBLK.OCX
- XMWRBIT.OCX *1
- XMWRWORD.OCX *1
- XMCLOCK.OCX (read not allowed, either)

*1 When using TCP/IP to perform write, provide more than one port number, give a logical station number to each of them, and use them for read/write.

2) XMOP (Tag management process) and the other process (e.g. device monitor utility, user application) cannot have simultaneous access to the PLC CPUs of the same logical station number.

(b) If the CPU goes down or the Ethernet module is reset during Ethernet communication, the communication loop will be cut off.

In that case, restart the personal computer.

(10) About computer link communication and RS-422 communication on Windows 95

On Windows 95, communication using the COM port, e.g. computer link communication or RS-422 communication, will cause a memory leak.

Therefore, do not perform continuous operation.

(11) About simultaneous use of XMOP and GPPW

When using GPPW and XMOP together on the same E71 module to make Ethernet communication, make the following settings.

- Set the protocol of the "Target" screen on the Ethernet utility of CSKP to "UDP/IP".
- Set SW2 of the communication condition setting switches of the E71 module to "OFF (binary)".

(12) About overwrite installation

When performing overwrite installation, install the software in the folder where it had already been installed.

(13) About the start menu

When you have uninstalled XMOP, the item may remain in the start menu.

In such a case, restart the personal computer.

(14) About reinstallation after uninstalling CSKP

If you uninstalled CSKP with XMOP installed and then you reinstalled CSKP, the communication setting information (information set with various utilities such as the computer link utility) will be lost.

At this time, you must make communication settings again.

(15) About the number of licenses

The number of licenses are set to XMOP.

Installation decreases the number of licenses by 1.

Conversely, uninstallation increases the number of licenses by 1.

Therefore, when deleting XMOP, always uninstall it.

Note that the number of licenses will not increase if the folder and files are deleted on Explorer or the like.

INTRODUCTION

Thank you for choosing Type SW2D5F-XMOP-E Monitoring Tool.

Before using Type SW2D5F-XMOP-E Monitoring Tool, please read this manual carefully to use the product to its optimum.

A copy of this manual should be forwarded to the end user.

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About Manuals

The following manuals are also related to this product.
In necessary, order them by quoting the details in the tables below.

Related Manuals

Manual Name	Manual Number (Model Code)
Type SW2D5F-CSKP-E Basic Communication Support Tool Operating Manual This manual describes how to set up and use each utility for communication. (Including in the product package)	IB-66888 (1LMS42)
Type SW2D5F-CSKP-E Basic Communication Support Tool Programming Manual Provides the programming procedure, detailed explanations, and error codes of the MELSEC data link library. (Including in the product package)	IB-66889 (1LMS43)
Type A70BDE-J71QLP23GE/A70BDE- J71QLP23/A70BDE-J71QBR13 MELSENET/10 Interface Board User's Manual (For SW2DNF-MNET10) Describes the features, specifications, part names and settings, and driver installation and uninstallation, etc. of the MELSENET/10 card. (Including in the product package)	IB-66894 (13JL81)
Type A80BDE-J61BT13 CC-Link Interface Board User's Manual (For SW2DNF-CCLINK) Describes the features, specifications, part names and settings, and driver installation and uninstallation, etc. of the CC-Link card. (Including in the product package)	IB-66895 (13JL82)

How to Use This Manual

"How to Use This Manual" is described by purposes of using XMOP.
Refer to the following and use this manual.

- (1) To know the features (Section 1.1)
Features are given in Section 1.1.
- (2) Custom control and utility lists (Sections 1.2 and 1.3)
The XMOP custom control list is provided in Section 1.2 and the utility list in Section 1.3.
- (3) To know the system configuration (Section 2.1)
This section provides system configurations available by use of XMOP.
- (4) To know XMOP's operating environment and usable PLC CPUs (Section 2.2)
XMOP's operating environment is given in Section 2.2.
Since usable PLC CPUs are the same as those of CSKP, refer to the CSKP Operating Manual.
- (5) To install or uninstall XMOP (Chapter 3)
Read Chapter 3 which describes how to install and uninstall XMOP.
- (6) To know the operation procedures of XMOP (Chapters 4 to 6)
Chapter 4 provides the operation procedures of XMOP, Chapter 5 deals with the way of creating a tag file necessary to use XMOP, and Chapter 6 gives simple operation procedures for communication by actually using XMOP.
- (7) To know the operation methods of the utilities (Chapters 7 and 8)
Chapter 7 provides operations common to the utilities, and Chapters 8 describes how to perform operation on a utility basis.
Read these chapters when using the utilities.
- (8) To use the custom controls (Chapters 9 to 15)
Chapters 9 to 15 give detailed explanations of the custom controls.
Read these chapters when using the custom controls.
- (9) To know the accessible devices and ranges
The CSKP Operating Manual provides the accessible devices and ranges.
Refer to the CSKP Operating Manual.

About the Generic Terms and Abbreviations

Unless otherwise specified, this manual uses the following generic terms and abbreviations to describe Type SW2D5F-XMOP-E Monitoring Tool.

Generic Term/Abbreviation	Description
XMOP	Abbreviation of Type SW2D5F-XMOP-E Monitoring Tool
CSKP	Abbreviation of Type SW2D5F-CSKP-E Basic Communication Support Tool
Windows NT 4.0	Abbreviation of Microsoft Windows NT Workstation 4.0
Windows 95	Abbreviation of Microsoft Windows 95
Windows 98	Abbreviation of Microsoft Windows 98
Windows	Generic Term of Microsoft Windows 95, Microsoft Windows 98 and Microsoft Windows NT Workstation 4.0
VB	Abbreviation of Microsoft Visual Basic 5.0
Personal computer	DOS/V-compatible personal computer of IBM PC/AT and its compatibles
CC-Link G4 module	Abbreviation of Type AJ65BT-G4 GPP function peripheral device connection module
GPPW	Abbreviation of GPP Function Software for Windows SW□D5C-GPPW-E/SW□D5F-GPPW-E
Ladder Logic Test Tool (LLT)	Abbreviation of Ladder Logic Test Function Tool Software for Windows SW□D5C-LLT-E/ SW□D5F-LLT-E
MELSECNET/10 card	Abbreviation of Type A70BDE-J71QLP23GE/A70BDE-J71QLP23/A70BDE-J71QBR13 MELSECNET/10 interface card
CC-Link card	Abbreviation of Type A80BDE-J61BT13 CC-Link interface card
AnNCP	Generic term of the A0J2HCPU, A1SCPU, A1SCPU-S1, A1SCPUC24-R2, A1SHCPU, A1SJCPU, A1SJCPU-S3, A1SJHCPU, A1SJHCPU-S8, A1NCP, A2CCPU, A2CCPUC24, A2CCPUC24-PRF, A2CJCPU, A2NCP, A2NCP-S1, A2SCPU, A2SCPU-S1, A2SHCPU, A2SHCPU-S1 and A1FXCPU
AnACPU	Generic term of the A2ACPU, A2ACPU-S1, A2ASCPUP21/R21, A2ACPUP21/R21-S1, A3ACPUP21/R21, A3NCP and A3ACPU
AnUCPU	Generic term of the A2UCPU, A2UCPU-S1, A2ASCPU, A2ASCPU-S1, A2ASCPU-S30, A3UCPU and A4UCPU
QnACPU	Generic term of the Q2ACPU, Q2ACPU-S1, Q2ASCPU, Q2ASCPU-S1, Q2ASHCPU, Q2ASHCPU-S1, Q3ACPU, Q4ACPU and Q4ARCPU
ACPU	Generic term of the AnNCP, AnACPU and AnUCPU
FXCPU	Generic term of the FX0, FX0S, FX0N, FX1, FX2, FX2C, FX2N and FX2NC series
C24	Generic term of the A1SCPUC24-R2, A1J71C24-PRF, A1SJ71C24-R2, A2CCPUC24, A2CCPUC24-PRF, AJ71C24-S6 and AJ71C24-S8
UC24	Generic term of the AJ71UC24, AJ71UC24-PRF, A1SJ71UC24-R2 and A1SJ71UC24-PRF
QC24	Generic term of the AJ71QC24, AJ71QC24-R2, AJ71QC24-R4, A1SJ71QC24, A1SJ71QC24-R2, AJ71QC24N, AJ71QC24N-R2, AJ71QC24N-R4, A1SJ71QC24N and A1SJ71QC24N-R2
E71	Generic term of the AJ71E71, AJ71E71-S3, A1SJ71E71-B2, A1SJ71E71-B5, A1SJ71E-B2-S3 and A1SJ71E71-B5-S3
QE71	Generic term of the AJ71QE71, AJ71QE71-B5, A1SJ71QE71-B2 and A1SJ71QE71-B5

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Ethernet is a registered trademark of XEROX CORPORATION.

Other company and product names herein are either trademarks or registered trademarks of their respective owners.

Meanings and Definitions of the Terms

The terms used in this manual have the following meanings and definitions.

(1) Container application

Application which can embed XMOP in its own data.(VB)

(2) Tag management process

Process which must have been started when using the custom controls of XMOP.

Normally, this process is started simultaneously with Windows.

For full information, refer to Section 8.2.2.

(3) Tag

Data table which contains a set of information necessary for communication with the PLC, e.g. communication settings, devices and data types.

For full information, refer to Section 5.1.

(4) Field

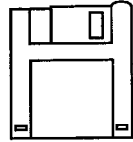
Device information created in a tag.

For full information, refer to Section 5.1.

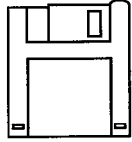
Product Makeup

XMOP consists of the following products.

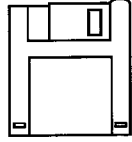
(1) Type SW2D5F-XMOP-E Monitoring Tool



(1 / 3)



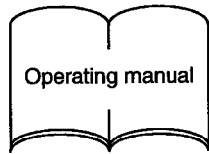
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(3 / 3)

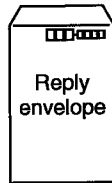
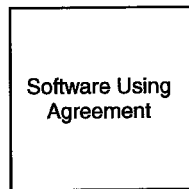
A total of three disks

(2) Manual



A total of one book

(3) Others

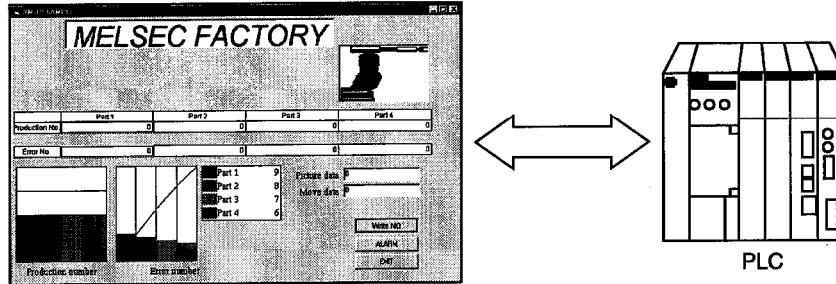


One each

1. OVERVIEW

Type SW2D5F-XMOP-E Monitoring Tool is designed to create monitor applications using the custom controls of Visual Basic.

You can create monitor applications by simply pasting input area, display area, check box, menu and other parts and pushbuttons and other controls and setting display conditions, etc. in a form window on VB.



XMOP screen

PLC

IMPORTANT

CSKP is required to create applications with XMOP.

When using created applications for monitoring, set the communication means with the CSKP utility.

For details, refer to the CSKP Operating Manual.

REMARKS

The screens given in this manual are those of Windows 95.

Therefore, they may be slightly different from those of Windows NT Workstation 4.0 and Windows 98.

1.1 Features

XMOP has the following features.

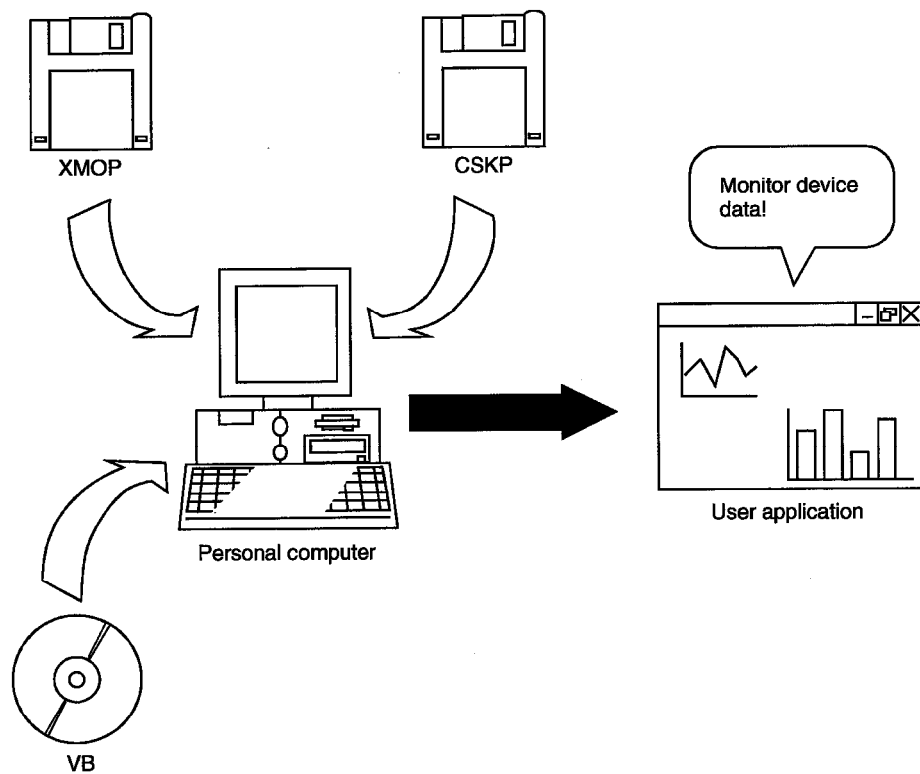
(1) User-friendly development environment

VB is a user-friendly programming language designed to create Windows application software easily.

XMOP is a kind of control (custom control OCX) of that VB and is operated in the same way as VB.

In addition, a wide variety of commercially available graphic tools for Windows can be utilized to draw a monitor screen.

User-friendly development environment is achieved by utilization of the tool you are accustomed to use.

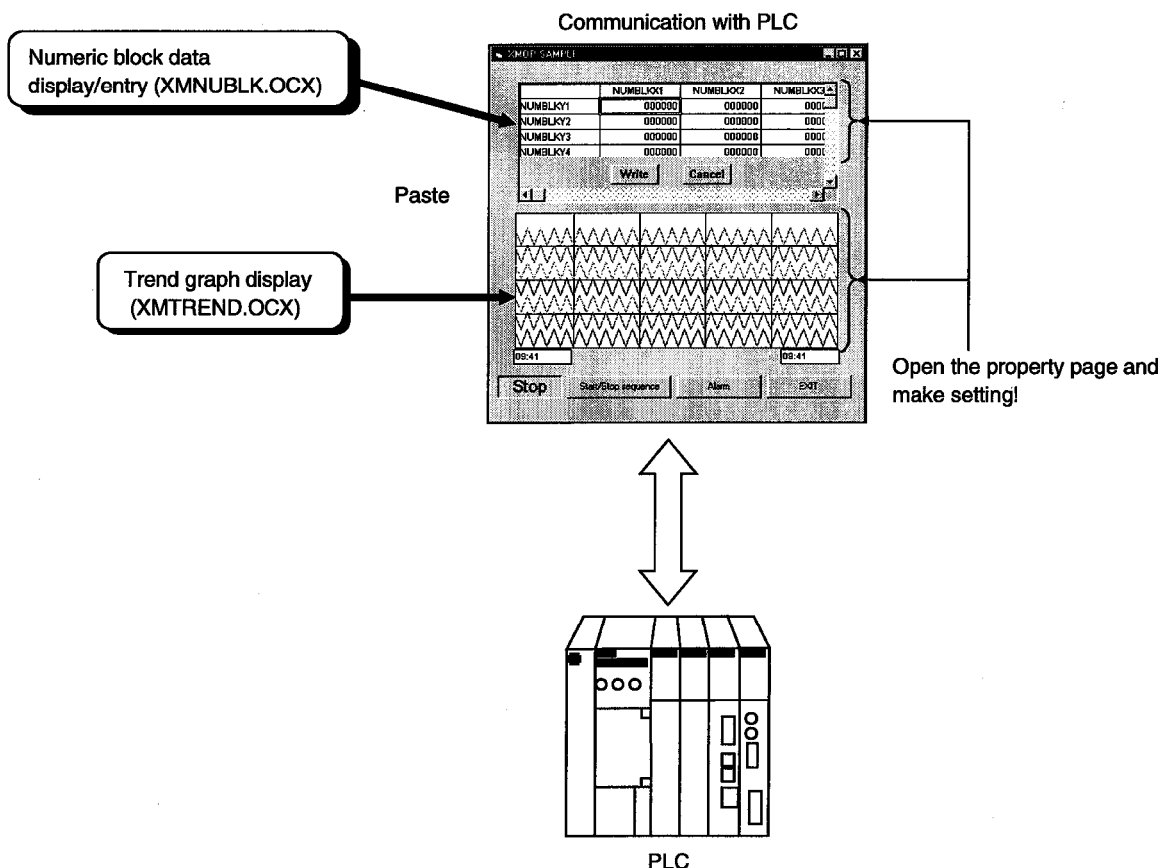


(2) Program-less run

XMOP is supplied with 23 different custom controls which are needed to monitor Factory Automation equipment, e.g. graphic display, numeric display, level display and trend graph.

Without any specific expertise, you can use them like the other standard controls to make communication with the PLC by merely pasting the necessary custom controls to a form and executing them.

(Note that property page setting is required.)



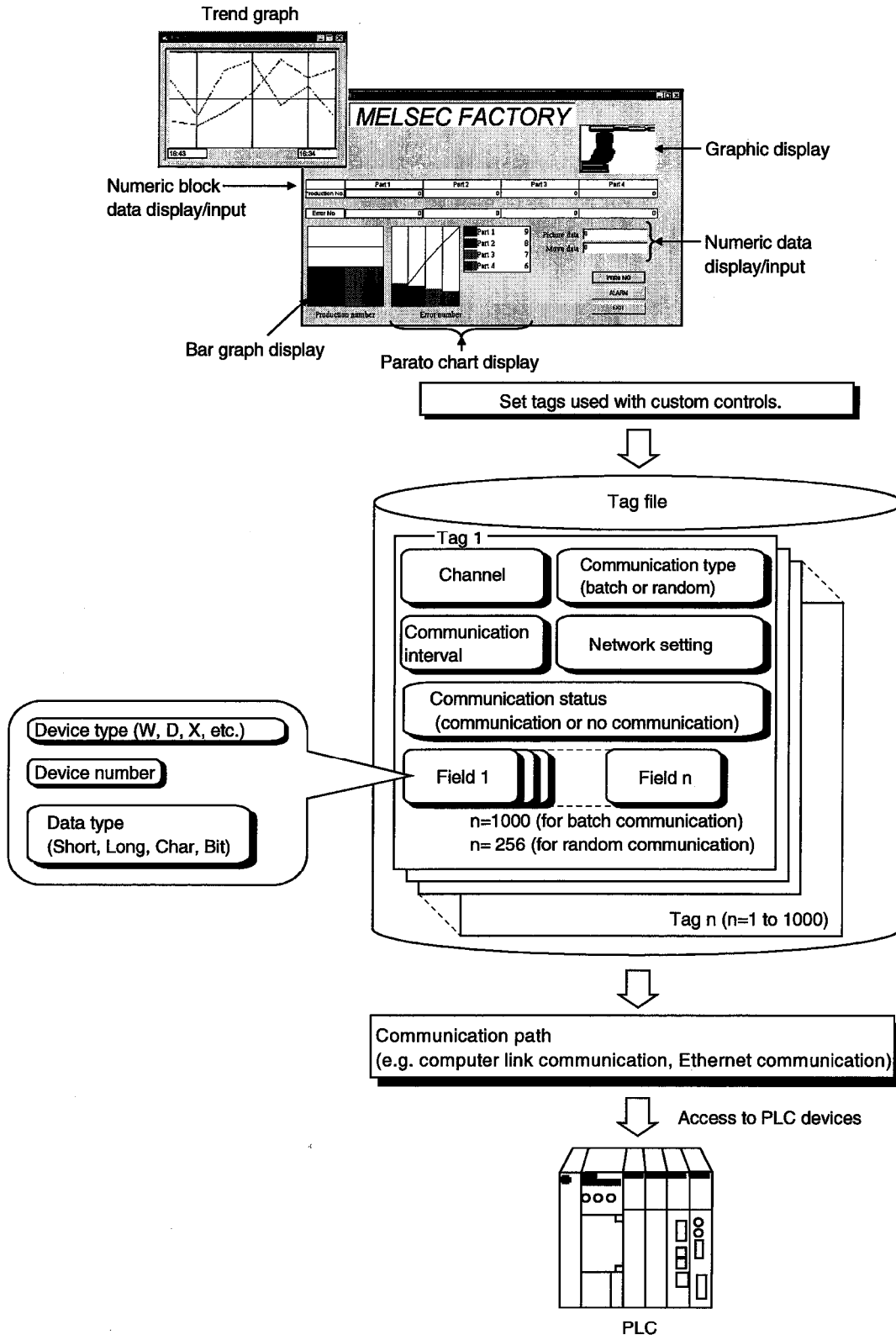
(3) Expansion of programmed processing

Since the moving image functions and custom controls have one-for-one correspondence on a monitor, programmed processing can be easily added later and monitor applications can be updated flexibly.

While maintaining compatibility with the conventional data, you can easily make modifications such as the addition of new functions.

(4) Simple communication using tags

When XMOP merely uses a tag having such information as the device types and device numbers in the environment where the tag management process is running, you can have easy access the devices set to the tag.



1.2 Custom Control List

The custom controls of XMOP are listed below.

	Function	File Name	Description
Parts display	Graphic display	XMPICTUR.OCX	Shows a graphic file with set values.
	Blink display	XMBLINK.OCX	Provides a blink display when the specified bit device is on.
	Comment display	XMCMNT.OCX	Shows a comment with the set device value.
Graph display	Level display	XMLEVEL.OCX	Shows a level.
	Line graph display	XMLINGRF.OCX	Shows a line graph.
	Trend graph display	XMTREND.OCX	Shows a trend graph.
	Bar graph display	XMBARGRF.OCX	Shows a bar graph.
	Pareto chart display	XMPALLET.OCX	Shows a Pareto chart.
	Historical trend graph display	XMHSTTRD.OCX	Shows a historical trend graph.
Block display/input	Numeric block data display/input	XMNUMBLK.OCX	Shows/enters numeric values in block.
	Character string block data display/input	XMSTRBLK.OCX	Shows/enters character strings in block.
Display/input	Numeric data display/input	XMNUMDAT.OCX	Shows/enters numeric value data.
	Character string data display/input	XMSTRDAT.OCX	Shows/enters character string data.
	Bit device operation (bit input)	XMBITOPR.OCX	Performs bit device operation.
Input	Word write	XMWRWORD.OCX	Writes data to a word device.
	Bit write	XMWRBIT.OCX	Writes data to a bit device.
Others	Event occurrence	XMEVENT.OCX	Causes an event at the specified timing.
	Snap shot	XMSNPSHT.OCX	Provides output, etc. to a printer.
	Alarm display	XMCAUTION.OCX	Shows an alarm on the screen on the basis of the set value.
	Alarm sound output	XMALARM.OCX	Provides an alarm sound on the basis of the set value.
	Alarm summary display	XMALMSMR.OCX	Shows an alarm summary.
	Error	XMERROR.OCX	Causes an error event.
	Clock display	XMCLOCK.OCX	Shows a clock on the screen.

1.3 Utility List

The XMOP utilities are listed below.

Utility Name	Description	Refer to
Environment setup utility	Used to set the environment when the tag management process starts.	Section 8.1
Tag setup utility	Used to set the tag file used by the tag management process.	Section 8.2
Comment setup utility	Used to set the comment file used for comment display (XMCMNT.OCX).	Section 8.3
Alarm summary setup utility	Used to set the alarm summary file used for alarm summary display (XMALMSMR.OCX).	Section 8.4

2. SYSTEM CONFIGURATION

This chapter deals with the system configuration, operating environment and usable CPU.

2.1 System Configuration

The system configuration for XMOP is similar to that for CSKP.
Refer to the CSKP Operating Manual.

2.2 Operating Environment

The operating environment of XMOP is indicated below.

Item	Description
Model	Personal computer on which Windows 95, Windows 98 or Windows NT Workstation 4.0 *1 operates
Operating System	Windows 95, Windows 98, Windows NT Workstation 4.0 *1
CPU	Pentium 100MHz or more (multiprocessor incompatible)
Display	Resolution 800×600 dots or more (recommended 1024×768 dots)
Required memory capacity	32MB or more
Hard disk free space	40MB or more
Disk drive	3.5 inch (1.44MB) floppy disk drive
Corresponding container application	Visual Basic 5.0

*1 Service Pack 3 or higher is required for use of Windows NT Workstation 4.0.

2.3 Usable PLC CPU

The PLC CPU usable with XMOP is the same as those with CSKP.
Refer to the CSKP Operating Manual.

CHAPTER 3 INSTALLATION AND UNINSTALLATION

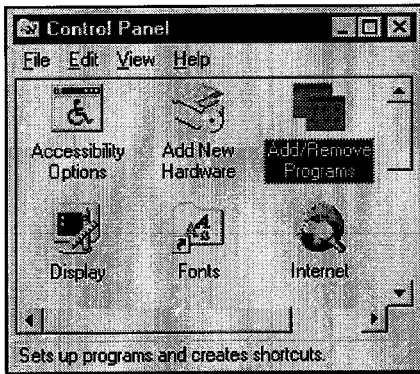
This chapter describes how to install and uninstall XMOP.

3.1 Installation

This section describes how to install XMOP.

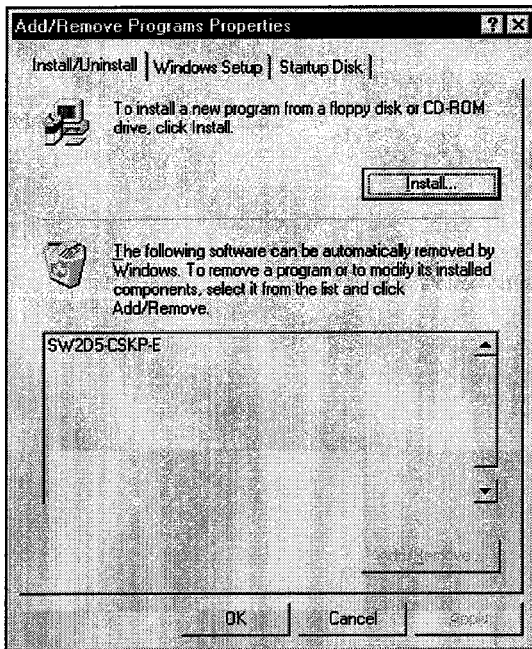
POINTS
(1) Installation decreases the number of licenses by one.
(2) When the OS is Windows NT 4.0, log on as a user who has an administrator attribute.
(3) Start installation after removing all applications included in Startup and restarting Windows.
(4) CSKP must have been installed.
(5) Make the first floppy disk write-enabled.

1. After powering on the personal computer, start Windows.
2. Choose [Start]-[Settings]-[Control Panel].
When the control panel has opened, choose "Add/Remove Programs".

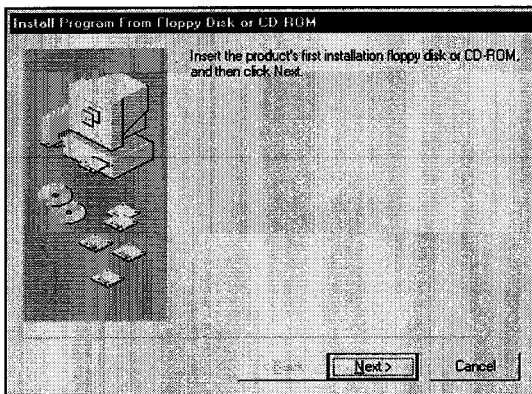


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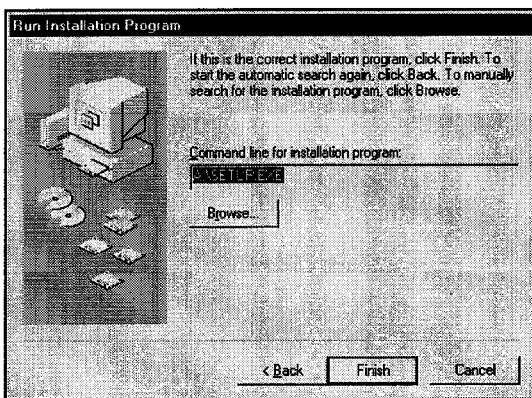
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3. Click the "Install..." button.



4. When the left screen has appeared, insert the first floppy disk into the FDD and click the "Next>" button..

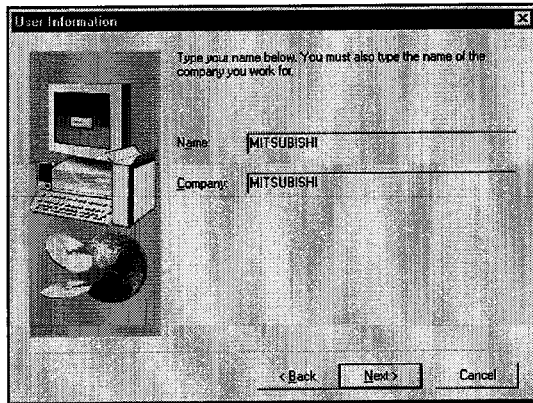
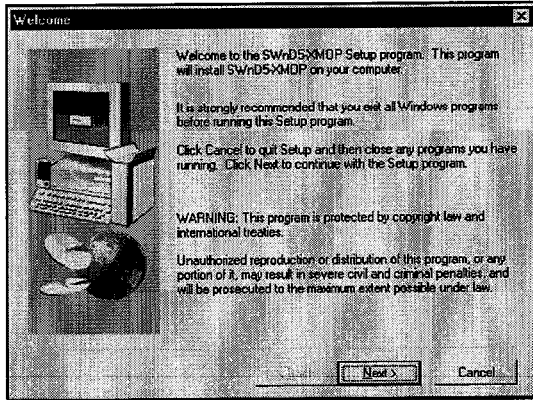
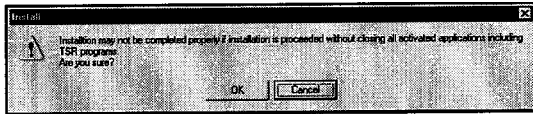
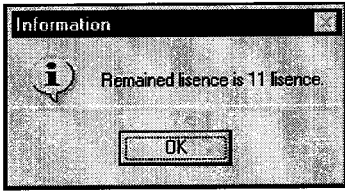


5. When the left screen has appeared, click the "Finish" button.
If "SETUP.EXE" could not be found, click the "Browse..." button to locate "SETUP.EXE" in the FDD.



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6. After a while, the screen as shown on the left will appear. Confirm the number of remaining licenses and click the "OK" button.

When there is no licenses left, installation cannot be performed.

*The actual number of licenses is the number of licenses plus a spare license.

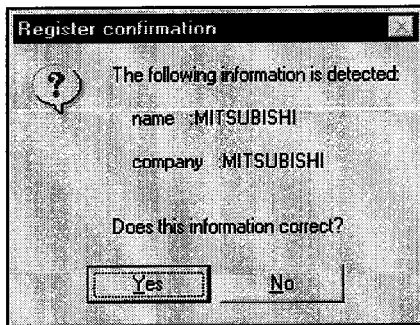
7. After making sure that all your running programs are closed, click the "OK" button.

If your programs are running, close all running programs.

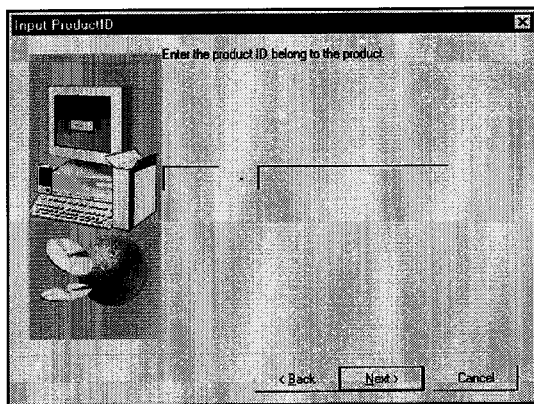
8. Confirm the instructions and click the "Next>" button.

9. Type your name and company name, and click the "Next>" button.

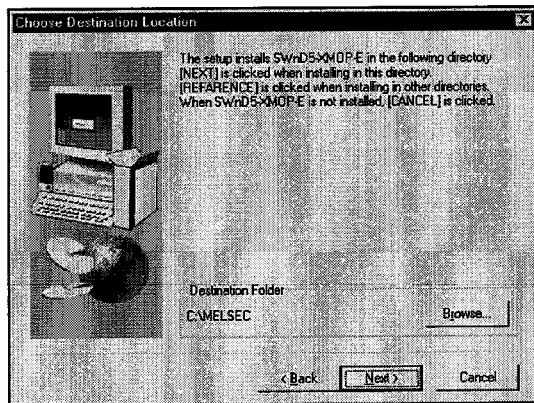
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- 10. Confirm your name and company name registered. If they are correct, click the "Yes" button. To change any name, click the "No" button. This returns to the preceding screen.



- 11. Enter the product ID and click the "Next>" button. The product ID is given in the "Software Registration Card" packed with the product.

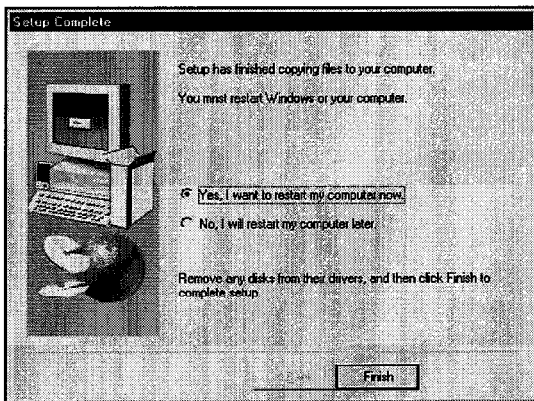
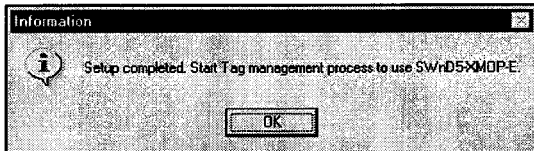
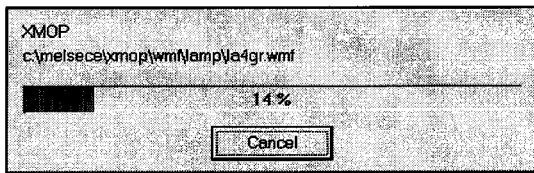


- 12. Specify the installation destination folder. The destination folder of XMOP defaults to "C:\MELSEC". To choose the default folder, click the "Next>" button. To change the destination folder, click the "Browse..." button and change the folder.



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13. As installation starts, exchange the floppy disks in order according to the prompt.

14. As the left screen appears, confirm the message, and then click the "OK" button.

15. When the left dialog box appears, installation is complete.
To restart, make sure that "Yes, I want to restart my computer now." is checked, and then click the "Finish" button.

To restart later, check "No, I will restart my computer later." and then click the "Finish" button.

* The number of licenses decreases by 1 on completion of installation.

POINT






If installation failed at any point in the above procedure and XMOP can be uninstalled, uninstall it.

The number of licenses will decrease by 1 if you do not uninstall XMOP.

3.2 Icons Registered

Installing XMOP registers the following icons in [Start]-[Programs]-[MELSEC APPLICATION]-[MONITORING TOOL (XMOP-E)].

(1) Tag management

- (a)  Alarm summary setup utility
Used to start the alarm summary setup utility.
- (b)  Comment setup utility
Used to start the comment setup utility.
- (c)  Tag management process
Used to start the Tag management process.
- (d)  Tag setup utility
Used to start the tag setup utility.
- (e)  Environment setup utility
Used to start the environment setup utility.

(2) XMOP Help

Used to show the help screen of XMOP.

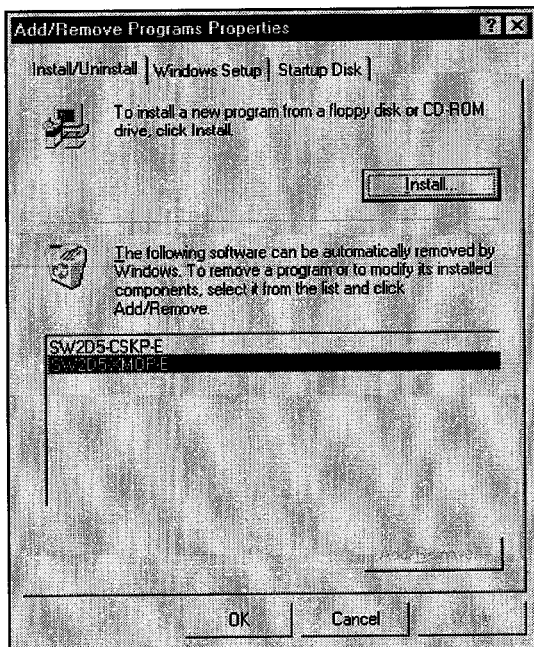
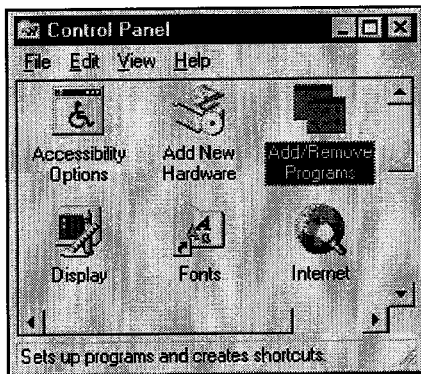
3.3 Uninstallation

This section provides how to uninstall XMOP.

POINTS

- (1) Always uninstall the program from the control panel.
Do not start installed "Uninstaller.exe" directly.
- (2) Uninstallation increases the number of licenses by 1.
Therefore, always uninstall the program when deleting XMOP.
The number of licenses will not return to the previous value if a folder or file is deleted by the user on Explorer or the like.
- (3) Make the first floppy disk write-enabled.

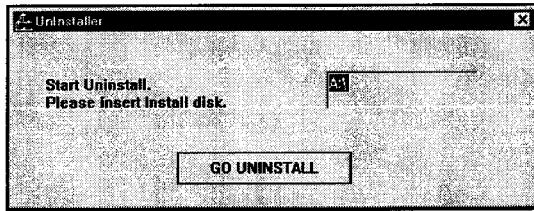
1. Choose the [Start]-[Settings]-[Control Panel] menu.
2. As the control panel appears, double-click "Add/Remove Programs".



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3. Choose "SW2D5-XMOP" and click the "Add/Remove..." button.

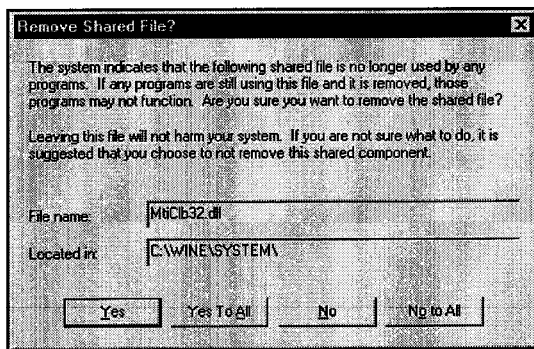
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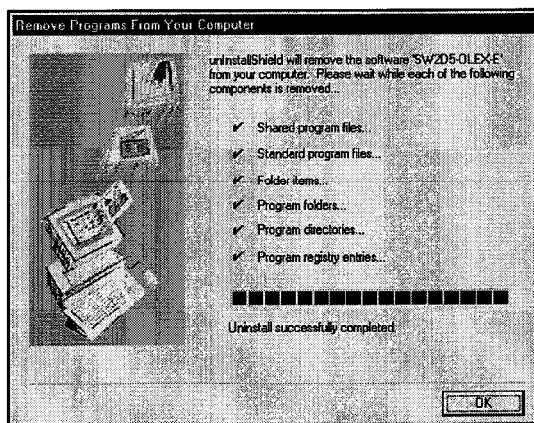
4. As the left screen appears, insert the first floppy disk into the floppy disk drive and click the "GO UNINSTALL" button.



5. Clicking the "OK" button starts uninstallation.



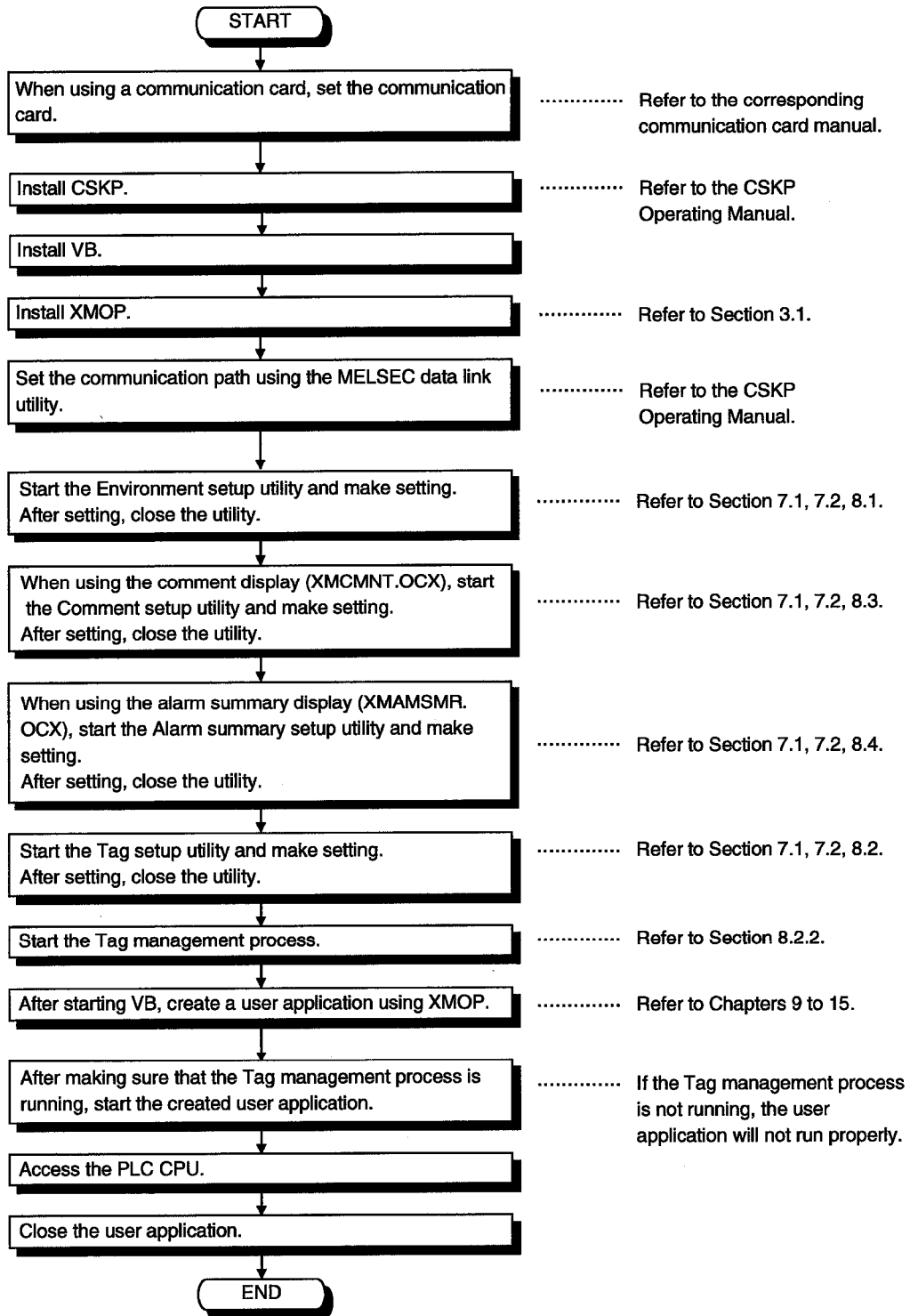
6. If the left screen has appeared, click the "No to All" button. If you click the "Yes" or "Yes to All" button, the shared file of the MELSEC software packages is removed and the other software packages may not start properly.



7. When uninstallation is completed, click the "OK" button. *The number of licenses increases by 1 on completion of uninstallation.

4. OPERATION PROCEDURE

This chapter gives the operation procedure of XMOP.

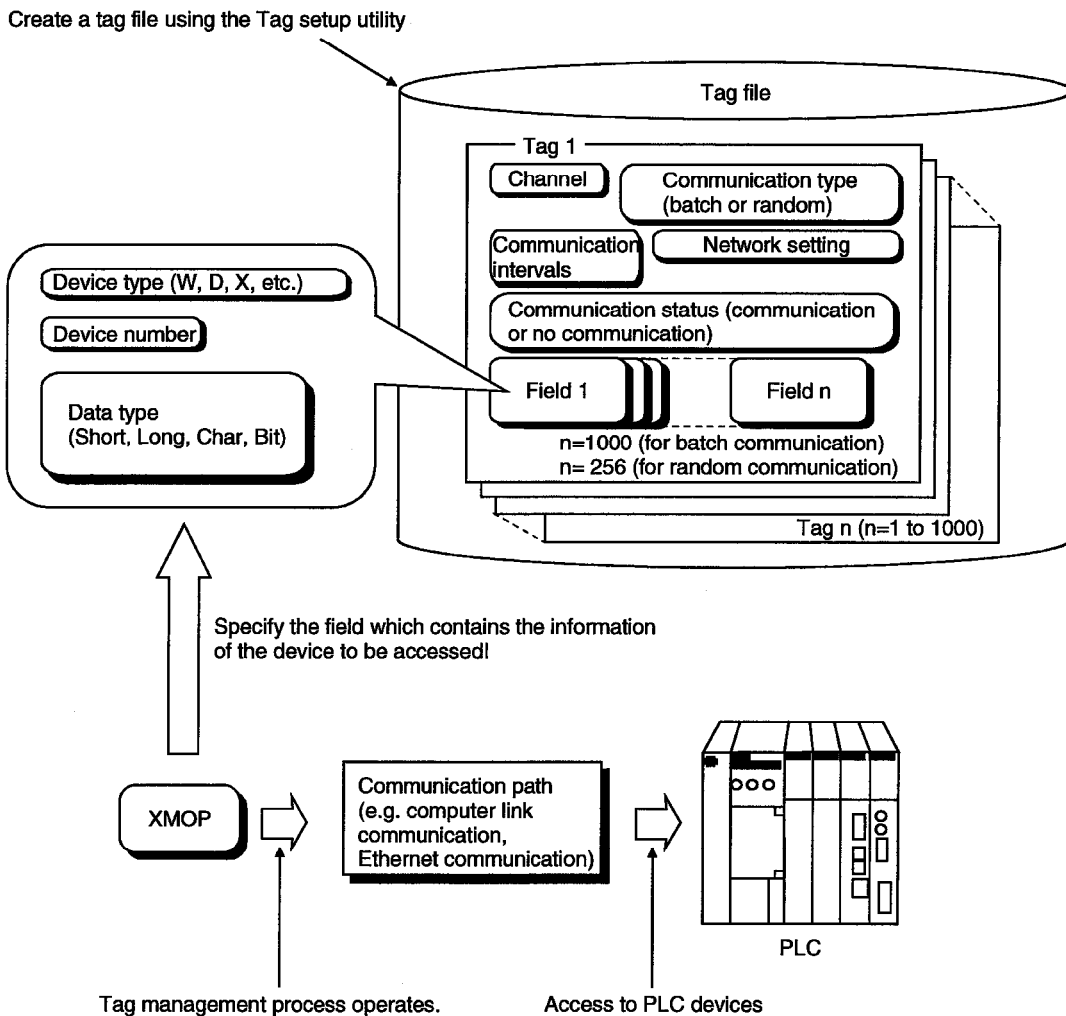


5. CREATING A TAG FILE

This chapter explains how to create a tag file which is utilized when using XMOP.

5.1 Getting Information on "Tag"

A tag is a data table which contains a set of information necessary for communication with the PLC CPU, e.g. communication setting, devices and data types. By specifying a tag, XMOP can access devices defined in the tag.

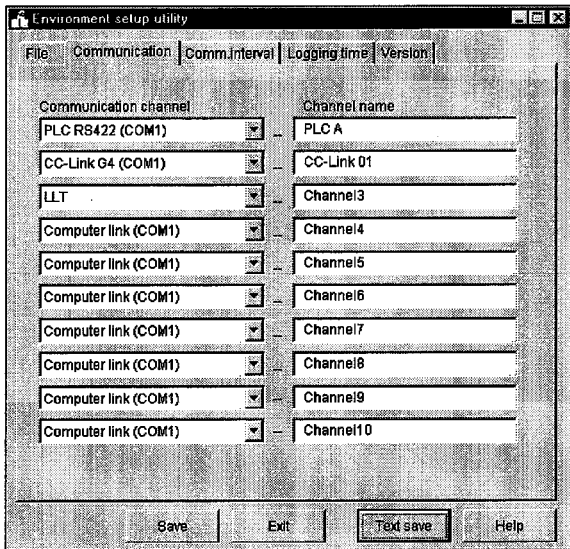
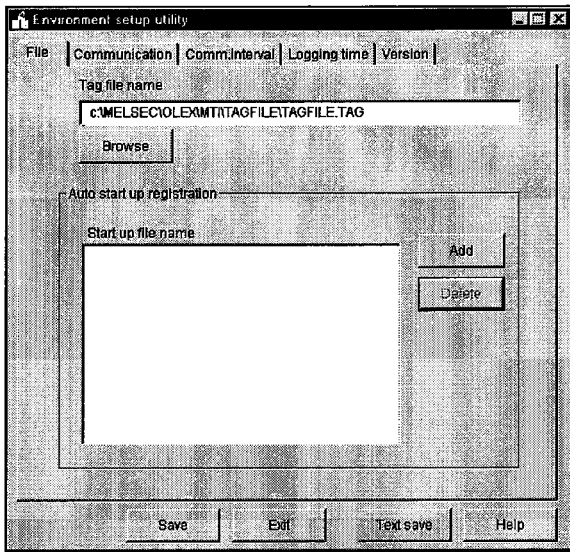


POINT
 When using a tag, the Tag management process must be running. For full information, refer to Section 8.2.2.

5.2 What Should Be Done First

This section describes the operation to be performed first when creating a tag file. Please read this section before creating the tag of any communication path.

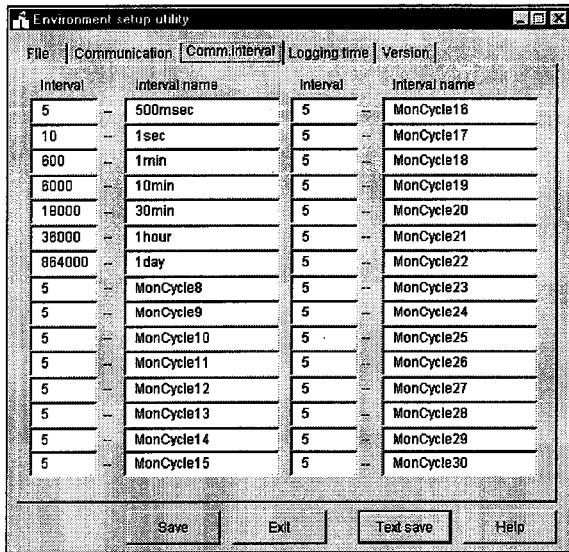
1. Set the corresponding utility according to the communication form used (e.g. computer link, Ethernet).
2. Start the Environment setup utility.
(Refer to Section 7.1.)
3. Open the "File" screen and set the tag file name used.
When creating a new tag, specify the name of the tag file you want to create.



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4. Open the "Communication" screen and set channel names (aliases) to the communication channels used. The channel names set here are reflected on the Tag setup utility.

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(To Section 7.3)

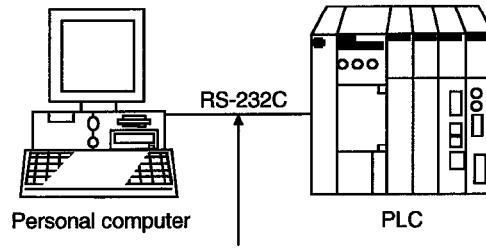
5. Open the "Comm. interval" screen and set communication interval names (aliases) to the communication intervals.
The communication interval names set here are reflected on the Tag setup utility.
6. Save the data and close the Environment setup utility.
(Refer to Section 7.2 and 7.3.)

5.3 Creating a Tag File

This section gives how to create a tag file when collecting the device information of the PLC CPU connected via a computer link module.

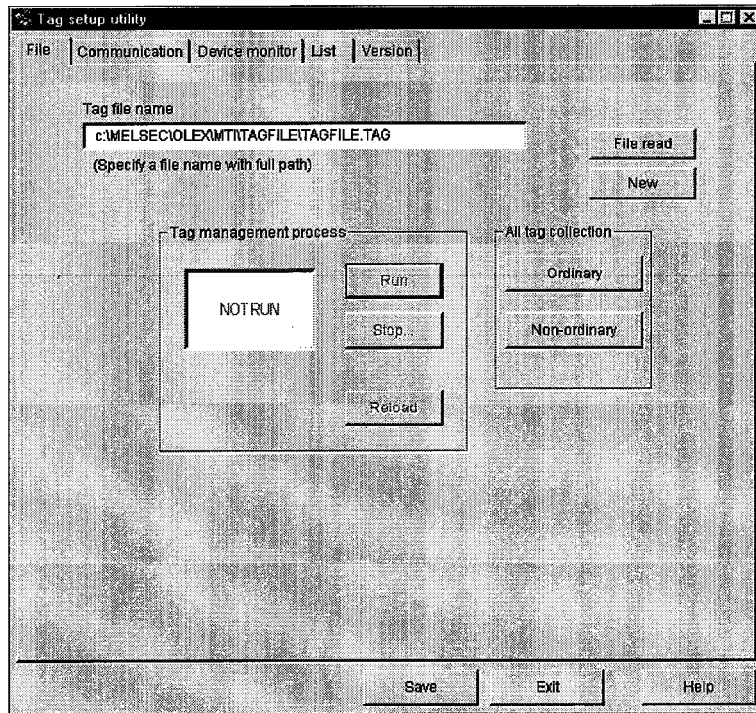
Please read Section 5.2 before making setting in this section.

Tag file name : C:\MELSEC\USER\SAMPLE2.TAG
 Specified devices : tag001 ... D0 to D15 (Short) (for 16 points)
 tag002 ... M100 (Bit), D200 (Long)
 Logical station number : 0 (set on the computer link utility)

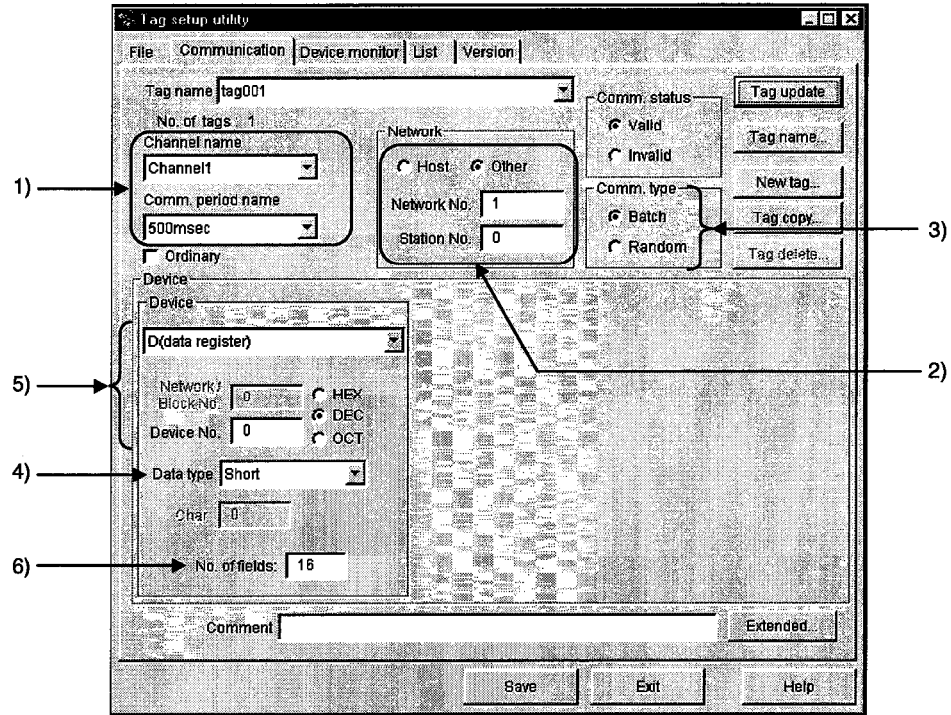


(1) Start the Tag setup utility.
 (Refer to Section 7.1.)

(2) Open the "File" screen and specify the tag file name to be set.
 If you had created no tag files, click the "New" button and create a tag file.

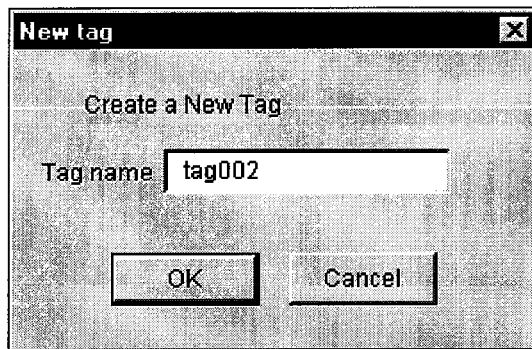


- (3) Open the "Communication" screen, make setting as shown on the screen below, and click the "Tag update" button.
(Set D0 to D15.)

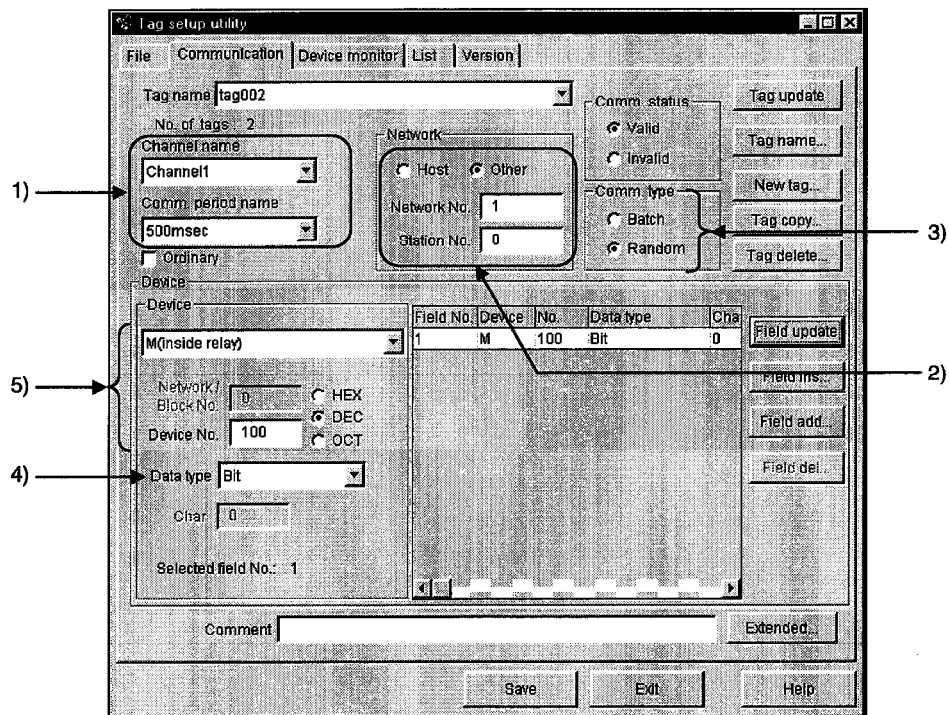


- 1) The data set on the Environment setup utility are reflected here.
Set the channel of the communication form used.
Here, set the channel name of the computer link communication.
- 2) Set the Network No. and Station No..
Here, set the logical station number in the Station No. box.
- 3) Since only D devices are set, specify Batch here.
When setting two or more devices, specify Random.
- 4) Set Short.
- 5) Set D0 in decimal.
When specifying bit devices, set a multiple of 8 (a multiple of 16 for Ethernet communication).
- 6) Set 16 points.
When specifying bit devices, set a multiple of 16.

- (4) Click the "New tag..." button and create a new tag.
Here, tag002 is created.



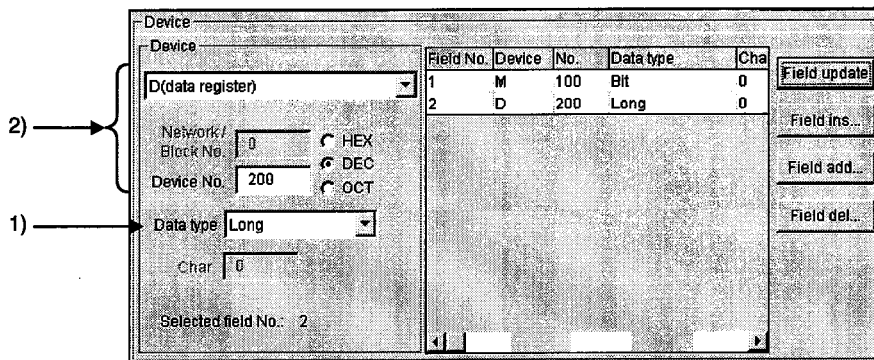
- (5) Make setting as shown on the screen below and click the "Field update" button.
(Set M100.)



- 1) The data set on the Environment setup utility is reflected here.
Here, set the channel name of the computer link communication.
- 2) Set the logical station number in the Station No. box.
Ignore the network number as it is not used.
- 3) Since two devices, M100 and D200, are specified, set Random.
- 4) Set Bit.
- 5) Set M100 in decimal.

(6) Click the "Field add..." button.

(7) Make setting as shown on the screen below and click the "Field update" button.
(Set D200.)



1) Set Long.

2) Set D200 in decimal.

(8) Click the "Tag update" button.

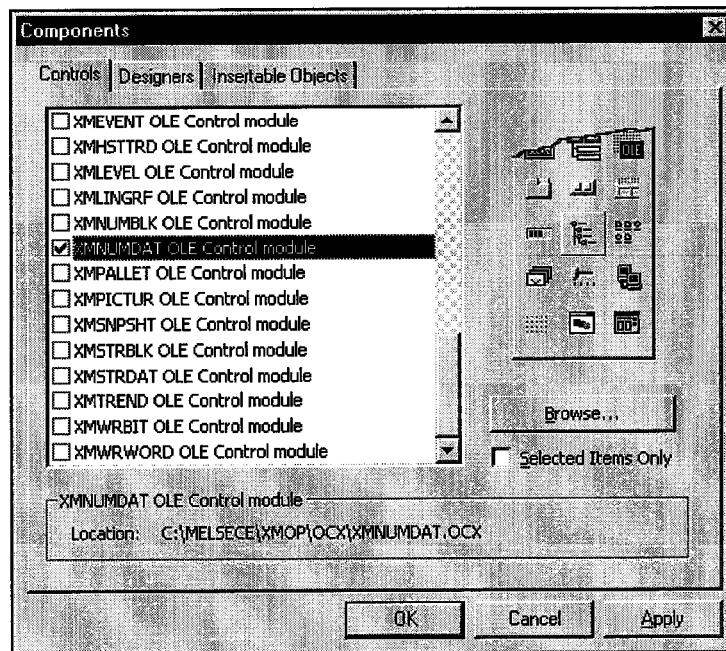
(9) After clicking the "Save" button, click the "Exit" button to close the Tag setup utility.

6. CREATING A MONITOR APPLICATION

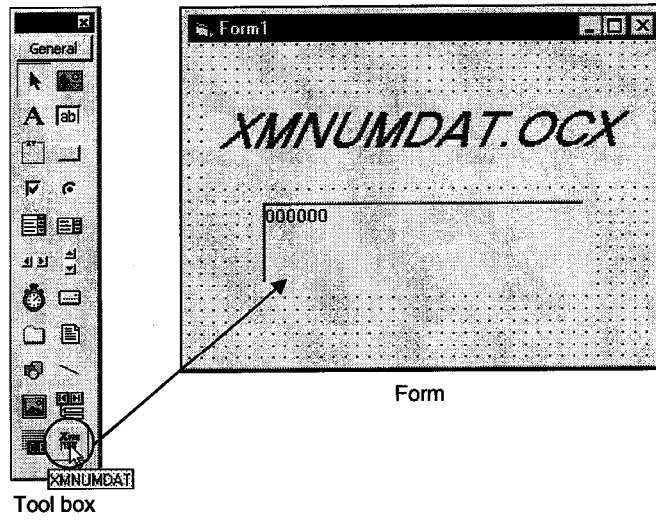
The following example explains a procedure to create a monitor application. For full information on the corresponding custom controls, refer to Chapters 9 to 15. Note that XMOP and CSKP should already have been installed.

Example: Creating an application which gathers the device data of the own station
 OCX used : XMNUMDAT.OCX
 Device from which data will be collected : W200

- (1) Create a tag file.
 Refer to Chapter 5 and Section 8.2 and create a tag file used to read W200.
- (2) Create figures and pictures used (BMP, WMF file)
 Using Paint or the like, create figures and pictures used with the custom control.
 (Not used in this example.)
- (3) Start Visual Basic 5.0.
- (4) Start the Tag management process.
 Refer to Section 8.2.2 and start the Tag management process.
- (5) Paste the custom control to a form.
 - (a) Choose [Project]-[Components...] on the menu bar to show the following screen, and register the custom control (XMNUMDAT.OCX).

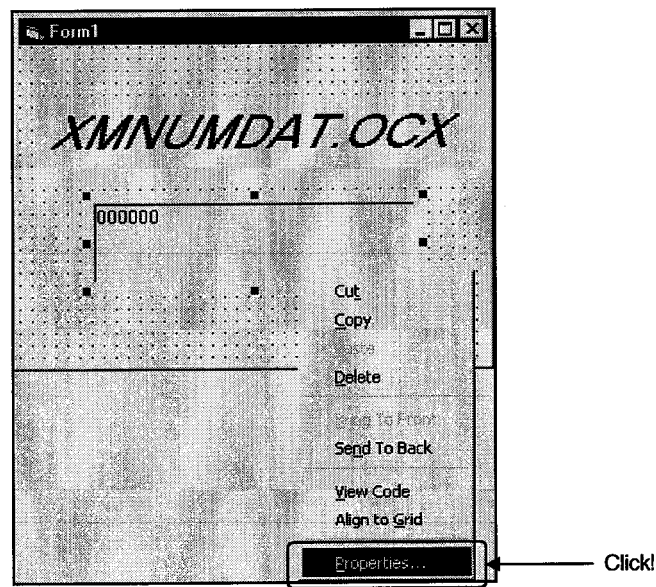


(b) Click the icon registered in the tool box to paste the custom control to a form.

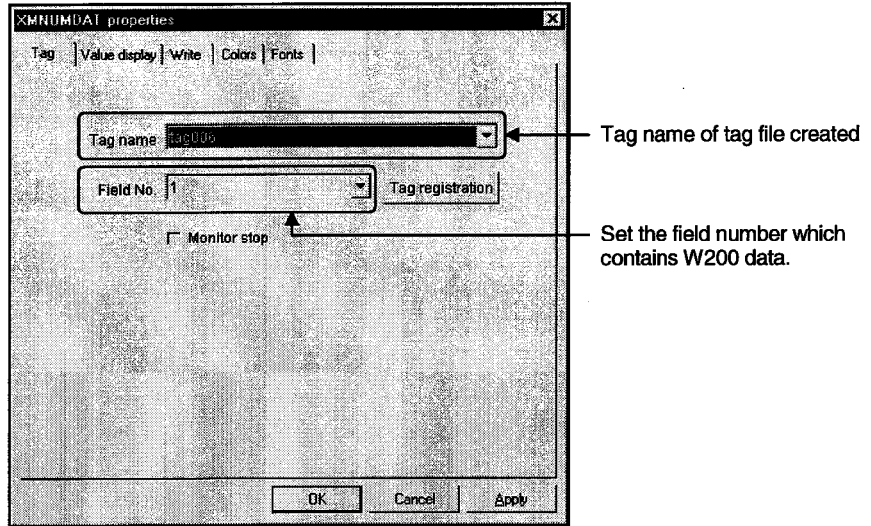


(6) Set the properties.

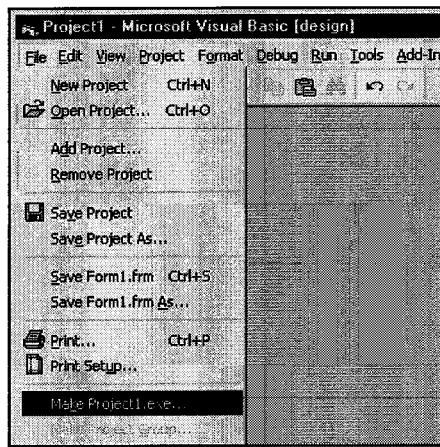
(a) Right-click on the pasted custom control and click [Properties...].



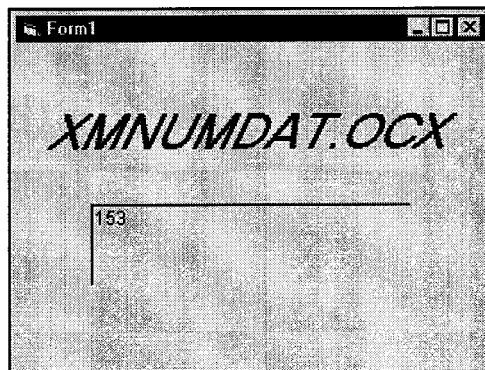
- (b) As the Properties page opens, set the tag name and field No. used.
 Device data can be collected without specific setting on the numeric display setting, write, color and font screens.
 (They are not set in this example.)



- (7) Create an application and monitor the device.
 - (a) Choose [File]-[Make*****.exe...] and create an EXE file.



- (b) Right-click on the pasted custom control and click [Properties...].

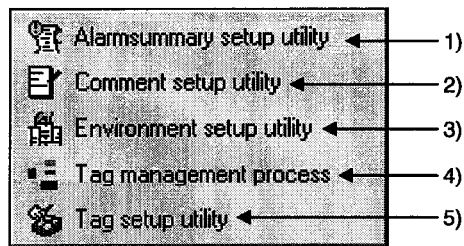


7. OPERATIONS COMMON TO THE UTILITIES

This chapter describes the operations common to the utilities.

7.1 Starting the Utility

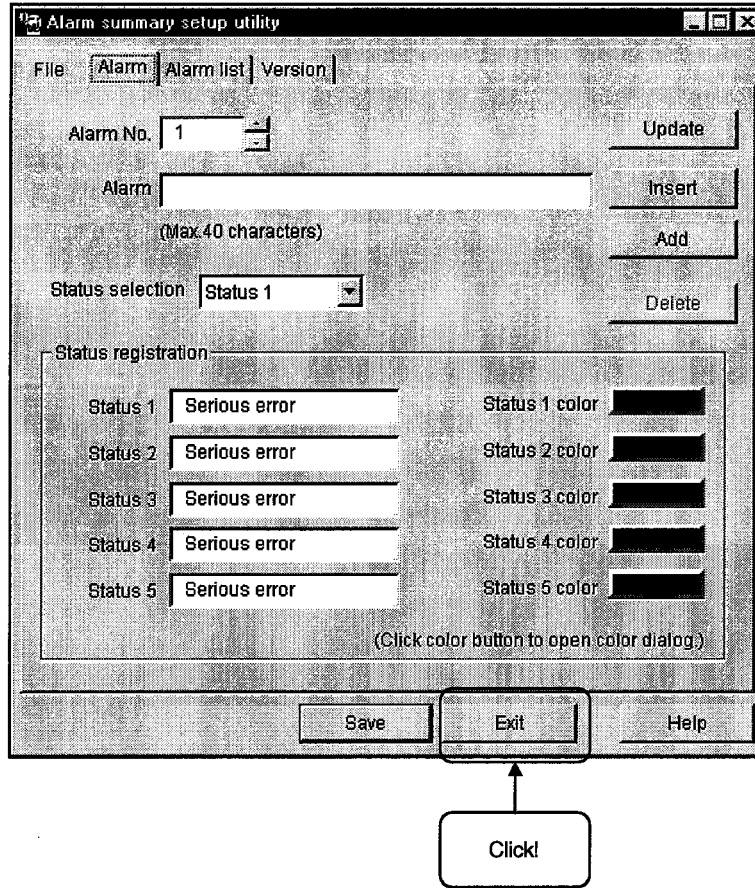
Any utility can be started by clicking the corresponding menu item among 1) to 5) shown below in the [Start]-[Programs]-[MELSEC APPLICATION]-[MONITORING TOOL (XMOP-E)]-[Tag Management] menu.



- 1) Start the Alarm summary setup utility.
- 2) Start the Comment setup utility.
- 3) Start the Environment setup utility.
- 4) Start the Tag management process.
(For details, refer to Section 8.2.2.)
- 5) Start the Tag setup utility.

7.2 Closing the Utility

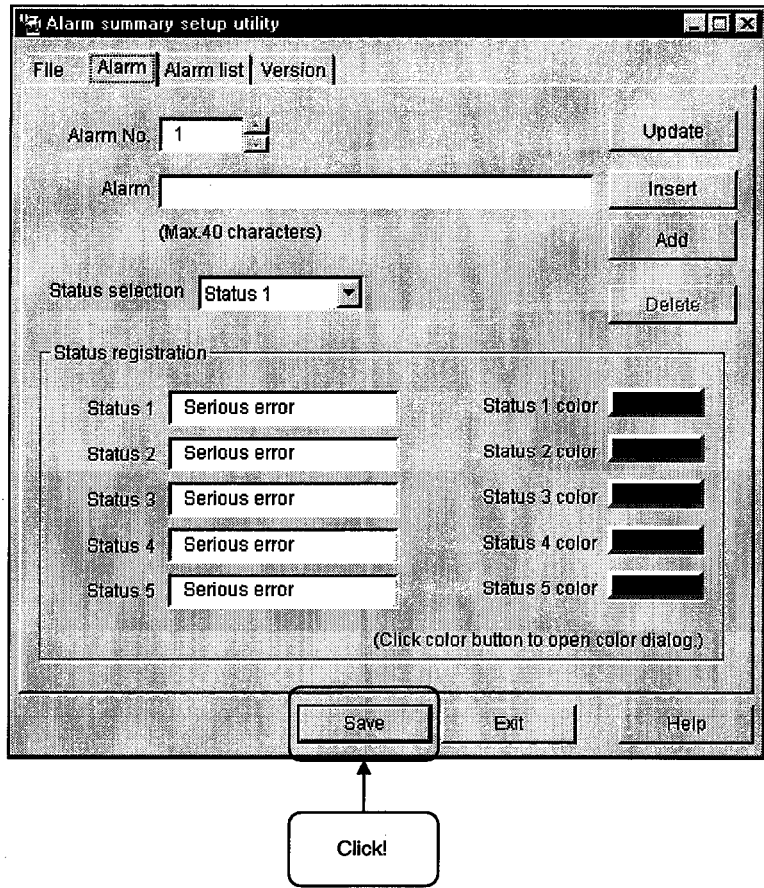
Any utility can be closed by clicking the "Exit" button at the bottom of the Utility screen.



7.3 Saving the Settings

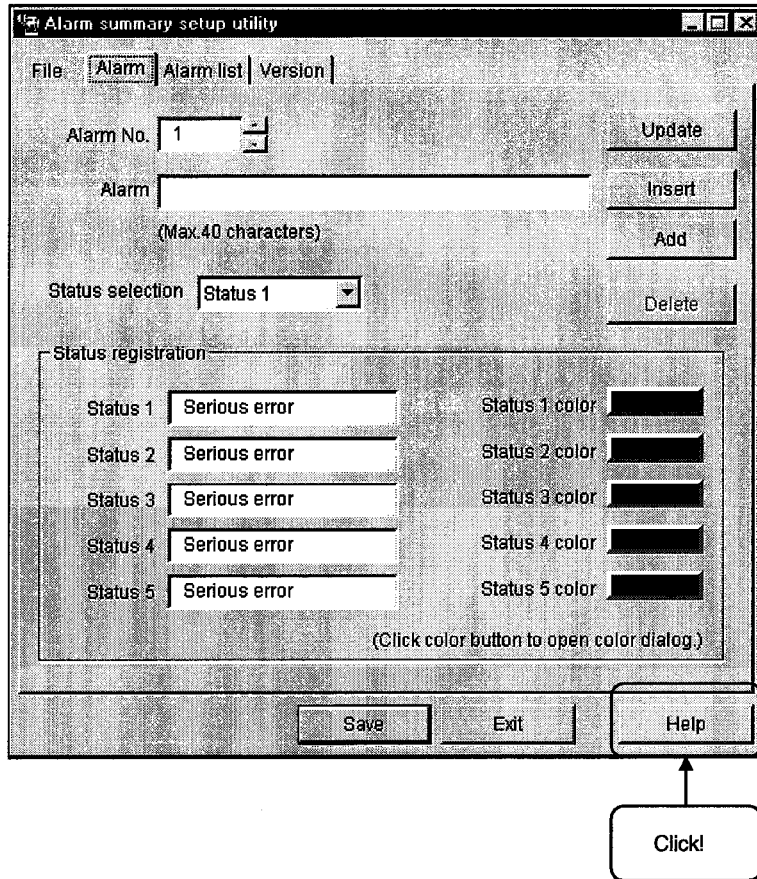
The settings made on the Utility can be saved by clicking the "Save" button at the bottom of the Utility screen.

The settings will not be saved if you close the Utility without clicking the "Save" button.



7.4 Displaying the Help Screen

The Utility help screen can be displayed by clicking the "Help" button at the bottom of the Utility screen.



7.5 Confirming the Version

The version of the Utility can be confirmed by clicking the "Version" tab.

