Side B

JY997D13201C

Side A JAPANESE / Side B ENGLISH

MITSUBISHI

Changes for the Better

PROGRAMMABLE CONTROLLERS
MELSEC-F

FX-USB-AW

USER'S MANUAL

Manual Number	JY997D13201
Revision	C
Date	June 2005

This manual describes the part names, dimensions, mounting, and specifications of the product. Before use, read this manual and manuals of relevant products fully to acquire proficiency in handling and operating the product. Make sure to learn all the product information, safety information, and precautions.
And, store this manual in a safe place so that you can take it out and read it whenever necessary. Always forward it to the end user.
Registration
The company name and the product name to be described in this manual are the registered trademarks or trademarks of each company.

Effective June 2005
Specifications are subject to change without notice.

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Safety Precaution (Read these precautions before use.)

This manual classify the safety precautions into two categories:

⚠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.

Depending on circumstances, procedures indicated by ⚠CAUTION may also be linked to serious results.
In any case, it is important to follow the directions for usage.

Associated Manuals

Manual name	Manual No.	Description
FX Series User's Manual - Data Communication Edition	JY997D16901 MODEL CODE: 09R715	Explains N:N link, parallel link, computer link, no protocol communication by RS instructions/FX2N-232IF.

How to obtain manuals
For the necessary product manuals or documents, consult with the Mitsubishi Electric dealer from where you purchase your product.

1. Outline

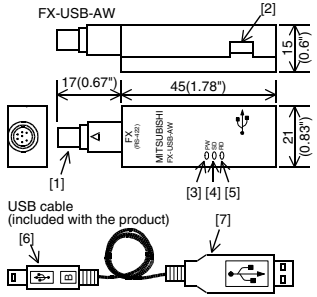
The FX-USB-AW is a RS-422/USB conversion interface unit to connect the FX series PLC to a personal computer.

1.1 Incorporated Items

Check if the following product and items are included in the package:

Product	FX-USB-AW type interface unit
Included items	USB driver software (CD-ROM) USB cable (3m (118.1")) User's Manual (this manual)

1.2 External Dimensions and Part Names



Unit: mm (inches)
[1]RS-422 Connector
MINI DIN 8Pin male
[2]USB Connector
MINI B plug female
[3]POWER LED:
Lighting while power is correctly supplied.
(LED color: green)
[4]SD LED:
Lighting while sending data.
(LED color: red)
[5]RD LED:
Lighting while receiving data.
(LED color: red)
[6]USB Connector
(To FX-USB-AW)
MINI B plug male
[7]USB Connector (To PC)
A plug male
MASS(Weight): 20g (0.05lbs)

2. Specification

INSTALLATION PRECAUTIONS ⚠CAUTION

- Use the product in the environment within the general specifications described in PLC main unit manual (Hardware Edition).
  Never use the product in areas with dust, oily smoke, conductive dusts, corrosive gas (salt air, Cl_2, H_2S, NH_3, SO_2, or NO_2), flammable gas, vibrations or impacts, or expose it to high temperature, condensation, or wind and rain.
  If the product is used in such a place described above, electrical shock, fire, malfunction, damage, or deterioration may be caused.

2.1 General Specifications

General specifications are the same as the PLC main unit.
For general specifications, refer to the PLC main unit manual.

2.2 Performance Specifications of FX-USB-AW

Current consumption		15mA / DC 5V (supplied by DC 5V power of programmable controller) 30mA / DC 5V (supplied by USB connector of personal computer)
Level Conversion		Bidirectional between RS-422 and USB
Baud Rate		115200 bits per second, maximum (The baud rate is different in PLC.)
Conforming standard		USB2.0 (For full speed)
Signal name (Port)	**To PLC**	RS-422 (MINI DIN 8Pin male)
	To a cable	USB (MINI B plug female)

2.3 USB Cable Specifications

Signal name (Port)	**To FX-USB-AW**	USB (MINI B plug male)
	To PC	USB (A plug male)
Length of cable		5m (196.9") at most (Included cable is 3m(118.1").)

2.4 System Requirements

OS	Microsoft® Windows®98, Windows®98SE Microsoft® Windows®Millennium Edition (Windows® Me) Microsoft® Windows®2000 Microsoft® Windows®XP
Software	GX Developer (SW□D5C-GPPW-J, SW□D5C-GPPW-E) FX-PCS/WIN*1, FX-PCS/WIN-E*2 FX-PCS-VPS/WIN, FX-PCS-VPS/WIN-E
Programmable controller	FX0, FX0S, FX0N, FX1S, FX1N, FX2N, FX3U, FX1NC*3, FX2NC, FX3UC*3, FX2N-10GM, FX2N-20GM, FX2N-1RM(-E)-SET

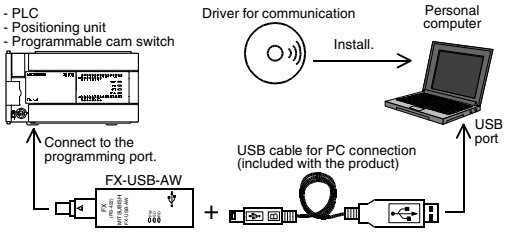
*1 For versions earlier than 4.30, the communication port setting can be selected from COM1-COM4.
For versions 4.30 or later, the communication port setting can be selected from COM1-COM9.

*2 For versions earlier than 3.30, the communication port setting can be selected from COM1-COM4.
For versions 3.30 or later, the communication port setting can be selected from COM1-COM9.

*3 Manual of FX1NC / FX3UC Series PLC specification details for I/O, wiring, installation, and maintenance can only be formal in the Japanese Manual.

3. System Configuration

Connected equipment and connected cable



Connected equipment		Baud rate	Cable for personal computer connection
Programmable controller	FX0, FX0S, FX0N, FX1S	9.6 kbps	USB cable of 5m (196.9") at most (Included cable is 3m (118.1"))
	FX1N, FX1NC*1	19.2 kbps or less	
	FX2N (Earlier than Ver.3.00), FX2NC(Earlier than Ver.3.00)	9.6 kbps	
	FX2N (Ver.3.00 or later), FX2NC(Ver.3.00 or later)	19.2 kbps or less	
	FX3U, FX3UC*1	115.2 kbps or less	
Positioning unit	FX2N-10GM, FX2N-20GM	9.6 kbps	
	FX-10GM,FX-20GM	9.6 kbps	
Programmable cam switch	FX2N-1RM-E-SET	9.6 kbps	

*1 FX1NC / FX3UC Series PLC specification details for I/O, wiring, installation, and maintenance can only be found in the Japanese Manual.

- Please refer to the specific PLC manual for a PLC not mentioned above.

4. Connecting Procedure

1) Power off the PLC.
2) Connect the USB (MINI B plug male) connector of the USB cable to the FX-USB-AW.
3) Connect the RS-422 (MINI DIN 8Pin male) connector of the FX-USB-AW to the PLC.
4) Connect the USB (A plug male) connector of the USB cable to the Personal computer.
5) Turn ON the power supply of the PLC.
6) Turn ON the power supply of the Personal computer.
7) Make sure the POWER lamp of the FX-USB-AW is lit.
   (The POWER lamp of FX-USB-AW lights when power is supplied normally by the personal computer.)

5. Driver Installation

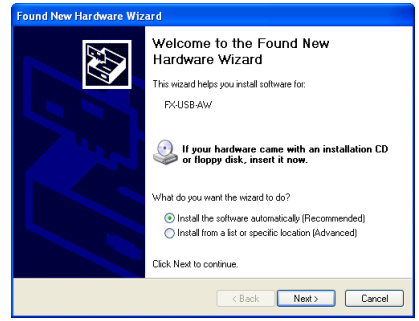
Procedure for installing the driver is explained below.
Windows® XP installation follows.

- Windows® 98, Windows® 98SE, Windows® Millennium Edition, and Windows® 2000, the installation method will vary.

Installation of the driver is canceled during the following process, the installation is not carried out correctly.
If the installation is canceled, uninstall the driver and install again.
Please refer to Chapter 7 for instructions on uninstalling the driver.

Please install the driver with the following procedure.

1) When the USB cable is connected to the personal computer, the following screen is displayed. (Installation of the software for FX-USB-AW)



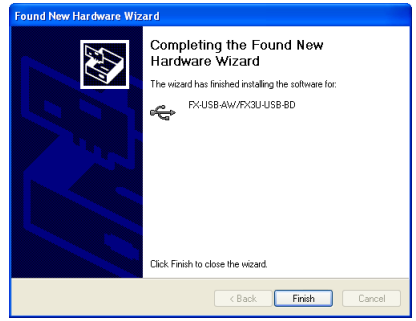
Insert the included CD-ROM into the personal computer's CD-ROM drive.
Click [Next >].
The installation of the FX-USB-AW software will begin.

- If using Windows® 98, Windows® 98SE, Windows® Millennium Edition, and Windows® 2000, A window to select the location of the installation files. Please select the CD-ROM drive.

2) The following screen is displayed. (Only in Windows® XP)

Click [Continue Anyway].

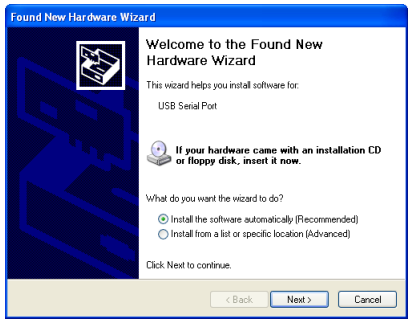
3) The following screen is displayed.



Click [Finish].
The installation of the FX-USB-AW software will finish.

- If Windows® 98, Windows® 98SE or Windows® Millennium Edition is used, installation of the USB Serial Port software begins, and ends automatically. The CD-ROM can be removed from the personal computer at this time.
- If using Windows® 2000 or Windows® XP, proceed to step 4).

4) The following screen is displayed.

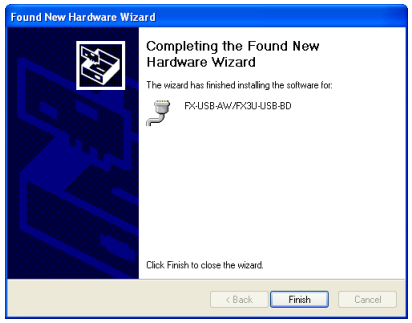


Click [Next >].
The installation of the USB Serial Port software will begin.

- If using Windows® 2000, a screen to select the location of the installation files is displayed.
  Please select the CD-ROM drive.

5) The screen of 2) is displayed. (Only in Windows® XP)
Click [Continue Anyway].

6) The following screen is displayed.

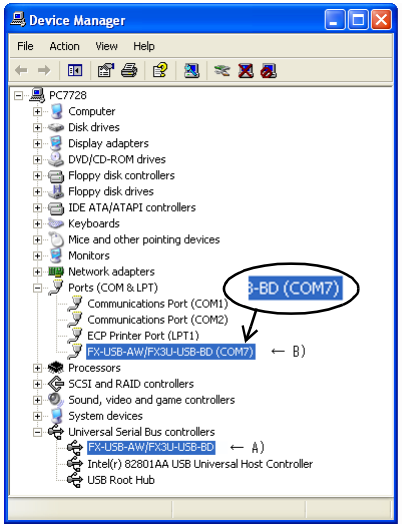


Click [Finish].
The installation of the USB Serial Port software will finish.
The CD-ROM (USB driver software) can be removed from the personal computer at this time.

6. Installation Confirmation of Driver

Procedure for confirming the installation of the driver is described below.
Windows® XP example follows.

- In Windows XP, click [Start] → [Control Panel] → [System] → [Hardware] → [Device Manager (D)] and the window below will be displayed.
  Please confirm the COM number to which the FX-USB-AW is allocated (COM and LPT).
- If using Windows® 98, Windows® 98SE, Windows® Millennium Edition or Windows® 2000
  A screen that is equivalent to the one below is displayed by clicking [My Computer] → [Control Panel] → [System] → [Device Manager] in the menu of the personal computer.

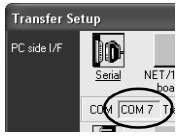


Check following:

- FX-USB-AW/FX3U-USB-BD is indicated at A).
- FX-USB-AW/FX3U-USB-BD (COM *) is indicated at B).
  * indicates the COM number used in FX-USB-AW.
- Install the driver again when ! is displayed.

Select the programming software COM number as the COM number currently assigned on the screen above.

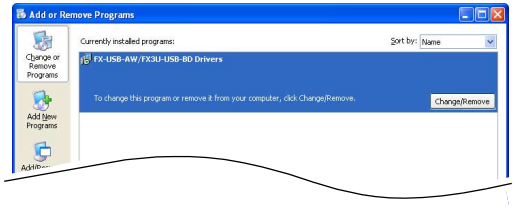
Setting GX Developer:
Double-click [Online] → [Transfer setup] → [Serial] of PC side I/F.
Select the same COM number as the COM number of the personal computer when the PC side I/F serial setting Dialog Box appears.
Click [OK] of [Connection Setup] screen to end.



7. Method for Uninstalling Driver

The procedure for uninstalling the driver is explained below.
A Windows XP example follows.
Please uninstall the driver by the procedure below.

1) Detach the USB cable from the personal computer.
   Click [Start] → [Control Panel] → [Add or Remove Programs] in the menu of the personal computer, the window below will be displayed.
   - In case of Windows Me of Windows 98 and Windows 98SE, Windows 2000
     A screen that is equivalent to the one below is displayed by clicking [My Computer] → [Control Panel] → [Add/Remove Programs] in the menu of the personal computer.

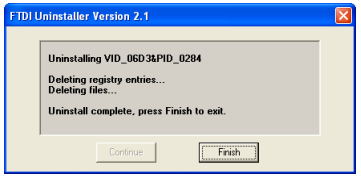


Click [Change/Remove].

2) The following screen is displayed.

Click [Continue].

3) The following screen is displayed.



Click [Finish].

8. Caution on Use

STARTUP AND MAINTENANCE PRECAUTIONS — ⚠DANGER

- Before a program or setting on-line or off-line change is performed, please read all relevant manuals and confirm safety aspects.
  Incorrect operation may damage the product or cause an accident.

STARTUP AND MAINTENANCE PRECAUTIONS — ⚠CAUTION

- Do not disassemble or modify the unit.
  Doing so may cause failure, malfunction or fire.
  * For repair, contact your local Mitsubishi Electric distributor.
- Since the FX-USB-AW case is made of resin, do not drop the product or do not exert strong impact.
  Doing so may cause damage.

DISPOSAL PRECAUTIONS — ⚠CAUTION

- Please contact a company certified in the disposal of electronic waste for environmentally safe recycling and disposal of the product.

TRANSPORT AND STORAGE PRECAUTIONS — ⚠CAUTION

- During transportation avoid any impact as the product is a precision instrument.
  Check the operation of the product after transportation.

- FX-USB-AW and a personal computer are connected and the PLC is turned on, and then an operations such as write, read, and monitor are tried for the first time using a programming tool, a communication error message may be displayed.
  In such a case, clear the message and try the operations again.
- If a communication error message is indicated while operating the programming tool (when executing 'Write to PLC', 'Read from PLC', or 'Monitor'), disconnect the USB cable once (from either the PC or the FX-USB-AW) and connect it again. Then clear the error message and choose Write, Read, or Monitor again.
- The programming tool may not be operated properly due to a contact failure at connectors or wire breakage.
  Make sure to save the program before transferring or changing it.

9. Troubleshooting

If communication cannot be established between the PLC (as well as a positioning unit or a programmable cam switch) and a PC using FX-USB-AW, confirm the following status by checking POWER LED, SD LED, and RD LED in FX-USB-AW.

State of POWER LED	Contents
POWER LED is lit.	The DC5V power supply from the personal computer is normally supplied. In case of no communication, check the status of SD LED and RD LED.
POWER LED is not lit.	The DC 5V power supply from the personal computer is not supplied. Check the items below. • Confirm that the specified cable is used to connect the FX-USB-AW and the personal computer. • Confirm whether the power supply is supplied to personal computer.

The status of SD LED and RD LED.		Contents
SD	Blinking	Communicating correctly
	Extinguished	• Confirm that the power is supplied to the personal computer. • Confirm the personal computer and the PLC are connected properly with the specified cable. • Confirm that the communication settings and connected PLC are correctly set in the software. Refer to the software manual.
RD	Blinking	Data receiving
	Extinguished	• Confirm that the power is supplied to PLC. • The PLC will not operate when a configuration that exceeds the DC 5V or DC 24V capacity is used. It will also be impossible to communicate normally. • Confirm that the specified cable is used to connect the personal computer and PLC. • Confirm that the communication settings and connected PLC are correctly set in the software. Refer to the software manual.

●Notification of CE marking●

This notification does not guarantee that an entire mechanical module produced in accordance with the contents of the notification comply with the following standards. Compliance to EMC standards of the entire mechanical module should be checked by the user / manufacturer.

Standards with which this product complies
Type: Programmable Controller (Open Type Equipment)
Models: Products manufactured from August 1st, 2004.

Electromagnetic Compatibility Standards (EMC)	Remark
EN61000-6-4:2001 Electromagnetic compatibility - Generic standards - Emission standard for Industrial environment	Compliance with all relevant aspects of the standard. (Radiated Emissions and Mains Terminal Voltage Emissions)
EN61131-2:2003 Programmable controllers -Equipment requirements and tests	Compliance with all relevant aspects of the standard.(RF Immunity, Fast Transients, ESD, Damped Oscillatory Wave, Conducted, Surge and Power Magnetic Fields)
EN61000-6-2:2001 Electromagnetic compatibility - Generic immunity standard Industrial environment	Compliance with all relevant aspects of the standard.(RF Immunity, Fast Transients, ESD, Voltage Dips, Voltage Interruptions, Conducted, Surge and Power Magnetic Fields)

Notes for compliance to EMC regulation.
It is necessary to install the (FX-USB-AW) in a shielded metal control panel.
For more details please contact the local Mitsubishi Electric sales site.

This manual confers no industrial property rights or any rights of any other kind, nor does it confer any patent licenses. Mitsubishi Electric Corporation cannot be held responsible for any problems involving industrial property rights which may occur as a result of using the contents noted in this manual.

Warranty
Mitsubishi will not be held liable for damage caused by factors found not to be the cause of Mitsubishi; machine damage or lost profits caused by faults in the Mitsubishi products; damage, secondary damage, accident compensation caused by special factors unpredictable by Mitsubishi; damages to products other than Mitsubishi products; and to other duties.

⚠ For safe use

- This product has been manufactured as a general-purpose part for general industries, and has not been designed or manufactured to be incorporated in a device or system used in purposes related to human life.
- Before using the product for special purposes such as nuclear power, electric power, aerospace, medicine or passenger movement vehicles, consult with Mitsubishi Electric.
- This product has been manufactured under strict quality control. However when installing the product where major accidents or losses could occur if the product fails, install appropriate backup or failsafe functions in the system.

MITSUBISHI ELECTRIC CORPORATION
HEAD OFFICE : MITSUBISHI DENKI BLDG MARUNOUTI TOKYO 100-8310
HIMEJI WORKS : 840, CHIYODA CHO, HIMEJI, JAPAN

Side **B**

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FX-USB-AW

USER'S MANUAL

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Included items	USB driver software (CD-ROM) USB cable (3m (118.1")) User's Manual (this manual)

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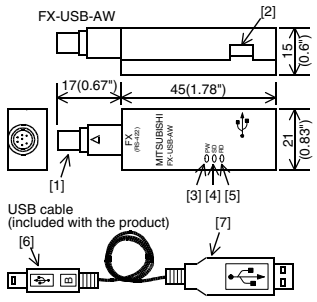

Unit: mm (inches)
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MINI DIN 8Pin male
[2]USB Connector
MINI B plug female
[3]POWER LED:
Lighting while power is correctly supplied.
(LED color: green)
[4]SD LED:
Lighting while sending data.
(LED color: red)
[5]RD LED:
Lighting while receiving data.
(LED color: red)
[6]USB Connector
(To FX-USB-AW)
MINI B plug male
[7]USB Connector (To PC)
A plug male
MASS(Weight): 20g (0.05lbs)

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- Use the product in the environment within the general specifications described in PLC main unit manual (Hardware Edition).
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Level Conversion		Bidirectional between RS-422 and USB
Baud Rate		115200 bits per second, maximum (The baud rate is different in PLC.)
Conforming standard		USB2.0 (For full speed)
Signal name (Port)	**To PLC**	RS-422 (MINI DIN 8Pin male)
	To a cable	USB (MINI B plug female)

2.3 USB Cable Specifications

Signal name (Port)	**To FX-USB-AW**	USB (MINI B plug male)
	To PC	USB (A plug male)
Length of cable		5m (196.9") at most (Included cable is 3m(118.1").)

2.4 System Requirements

OS	Microsoft® Windows®98, Windows®98SE Microsoft® Windows®Millennium Edition (Windows® Me) Microsoft® Windows®2000 Microsoft® Windows®XP
Software	GX Developer (SW□D5C-GPPW-J, SW□D5C-GPPW-E) FX-PCS/WIN*1, FX-PCS/WIN-E*2 FX-PCS-VPS/WIN, FX-PCS-VPS/WIN-E
Programmable controller	FX0, FX0S, FX0N, FX1S, FX1N, FX2N, FX3U, FX1NC*3, FX2NC, FX3UC*3, FX2N-10GM, FX2N-20GM, FX2N-1RM(-E)-SET

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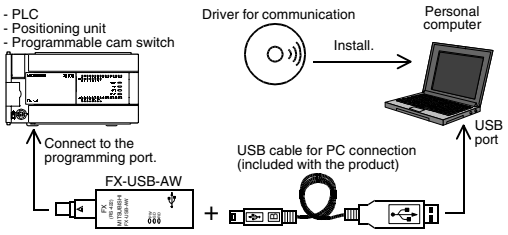

Connected equipment		Baud rate	Cable for personal computer connection
Programmable controller	FX0, FX0S, FX0N, FX1S	9.6 kbps	USB cable of 5m (196.9") at most (Included cable is 3m (118.1"))
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	FX2N (Earlier than Ver.3.00), FX2NC(Earlier than Ver.3.00)	9.6 kbps	
	FX2N (Ver.3.00 or later), FX2NC(Ver.3.00 or later)	19.2 kbps or less	
	FX3U, FX3UC*1	115.2 kbps or less	
Positioning unit	FX2N-10GM, FX2N-20GM	9.6 kbps	
	FX-10GM,FX-20GM	9.6 kbps	
Programmable cam switch	FX2N-1RM-E-SET	9.6 kbps	

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1) Power off the PLC.
2) Connect the USB (MINI B plug male) connector of the USB cable to the FX-USB-AW.
3) Connect the RS-422 (MINI DIN 8Pin male) connector of the FX-USB-AW to the PLC.
4) Connect the USB (A plug male) connector of the USB cable to the Personal computer.
5) Turn ON the power supply of the PLC.
6) Turn ON the power supply of the Personal computer.
7) Make sure the POWER lamp of the FX-USB-AW is lit.
   (The POWER lamp of FX-USB-AW lights when power is supplied normally by the personal computer.)

5. Driver Installation

Procedure for installing the driver is explained below.
Windows® XP installation follows.

- Windows® 98, Windows® 98SE, Windows® Millennium Edition, and Windows® 2000, the installation method will vary.

Installation of the driver is canceled during the following process, the installation is not carried out correctly.
If the installation is canceled, uninstall the driver and install again.
Please refer to Chapter 7 for instructions on uninstalling the driver.

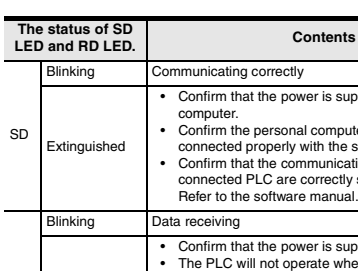
Please install the driver with the following procedure.

1) When the USB cable is connected to the personal computer, the following screen is displayed. (Installation of the software for FX-USB-AW)

Insert the included CD-ROM into the personal computer's CD-ROM drive.
Click [Next >].
The installation of the FX-USB-AW software will begin.

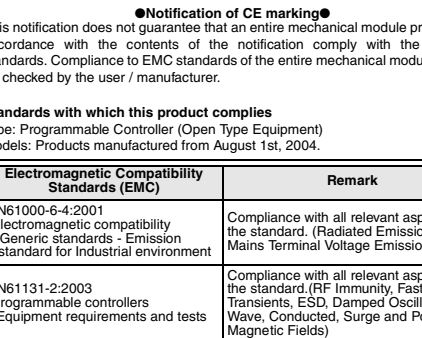
- If using Windows® 98, Windows® 98SE, Windows® Millennium Edition, and Windows® 2000, A window to select the location of the installation files.
  Please select the CD-ROM drive.

2) The following screen is displayed. (Only in Windows® XP)



Click [Continue Anyway].

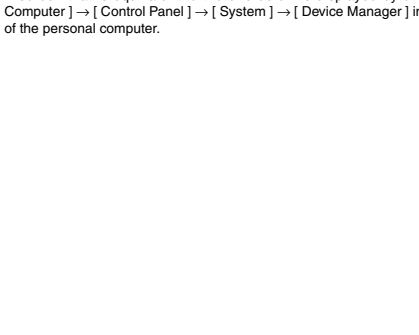
3) The following screen is displayed.



Click [Finish].
The installation of the FX-USB-AW software will finish.

- If Windows® 98, Windows® 98SE or Windows® Millennium Edition is used, installation of the USB Serial Port software begins, and ends automatically. The CD-ROM can be removed from the personal computer at this time.
- If using Windows® 2000 or Windows® XP, proceed to step 4).

4) The following screen is displayed.



Click [Next >].
The installation of the USB Serial Port software will begin.

- If using Windows® 2000, a screen to select the location of the installation files is displayed.
  Please select the CD-ROM drive.

5) The screen of 2) is displayed. (Only in Windows® XP)
Click [Continue Anyway].

6) The following screen is displayed.

Click [Finish].
The installation of the USB Serial Port software will finish.
The CD-ROM (USB driver software) can be removed from the personal computer at this time.

6. Installation Confirmation of Driver

Procedure for confirming the installation of the driver is described below.
Windows® XP example follows.

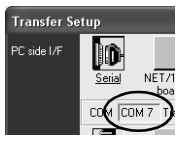
- In Windows XP, click [Start] → [Control Panel] → [System] → [Hardware] → [Device Manager (D)] and the window below will be displayed.
  Please confirm the COM number to which the FX-USB-AW is allocated (COM and LPT).
- If using Windows® 98, Windows® 98SE, Windows® Millennium Edition or Windows® 2000
  A screen that is equivalent to the one below is displayed by clicking [My Computer] → [Control Panel] → [System] → [Device Manager] in the menu of the personal computer.

Check following:

- FX-USB-AW/FX3U-USB-BD is indicated at A).
- FX-USB-AW/FX3U-USB-BD (COM *) is indicated at B).
  * indicates the COM number used in FX-USB-AW.
- Install the driver again when ! is displayed.

Select the programming software COM number as the COM number currently assigned on the screen above.

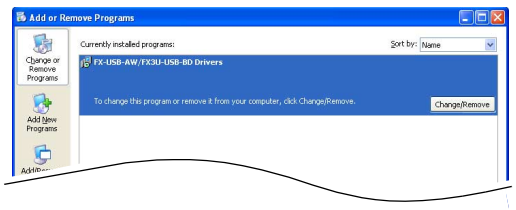
Setting GX Developer:
Double-click [Online] → [Transfer setup] → [Serial] of PC side I/F.
Select the same COM number as the COM number of the personal computer when the PC side I/F serial setting Dialog Box appears.
Click [OK] of [Connection Setup] screen to end.



7. Method for Uninstalling Driver

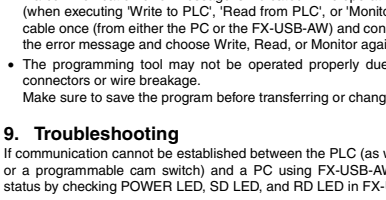
The procedure for uninstalling the driver is explained below.
A Windows XP example follows.
Please uninstall the driver by the procedure below.

1) Detach the USB cable from the personal computer.
   Click [Start] → [Control Panel] → [Add or Remove Programs] in the menu of the personal computer, the window below will be displayed.
   - In case of Windows Me of Windows 98 and Windows 98SE, Windows 2000
     A screen that is equivalent to the one below is displayed by clicking [My Computer] → [Control Panel] → [Add/Remove Programs] in the menu of the personal computer.



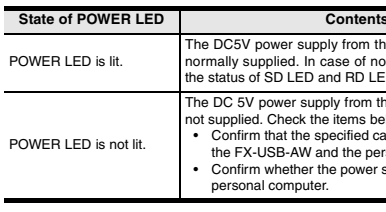
Click [Change/Remove].

2) The following screen is displayed.



Click [Continue].

3) The following screen is displayed.



Click [Finish].

8. Caution on Use

STARTUP AND MAINTENANCE PRECAUTIONS ⚠DANGER

- Before a program or setting on-line or off-line change is performed, please read all relevant manuals and confirm safety aspects.
  Incorrect operation may damage the product or cause an accident.

STARTUP AND MAINTENANCE PRECAUTIONS ⚠CAUTION

- Do not disassemble or modify the unit.
  Doing so may cause failure, malfunction or fire.
  * For repair, contact your local Mitsubishi Electric distributor.
- Since the FX-USB-AW case is made of resin, do not drop the product or do not exert strong impact.
  Doing so may cause damage.

DISPOSAL PRECAUTIONS ⚠CAUTION

- Please contact a company certified in the disposal of electronic waste for environmentally safe recycling and disposal of the product.

TRANSPORT AND STORAGE PRECAUTIONS ⚠CAUTION

- During transportation avoid any impact as the product is a precision instrument.
  Check the operation of the product after transportation.

- FX-USB-AW and a personal computer are connected and the PLC is turned on, and then an operations such as write, read, and monitor are tried for the first time using a programming tool, a communication error message may be displayed.
  In such a case, clear the message and try the operations again.
- If a communication error message is indicated while operating the programming tool (when executing 'Write to PLC', 'Read from PLC', or 'Monitor'), disconnect the USB cable once (from either the PC or the FX-USB-AW) and connect it again. Then clear the error message and choose Write, Read, or Monitor again.
- The programming tool may not be operated properly due to a contact failure at connectors or wire breakage.
  Make sure to save the program before transferring or changing it.

9. Troubleshooting

If communication cannot be established between the PLC (as well as a positioning unit or a programmable cam switch) and a PC using FX-USB-AW, confirm the following status by checking POWER LED, SD LED, and RD LED in FX-USB-AW.

State of POWER LED	Contents
POWER LED is lit.	The DC5V power supply from the personal computer is normally supplied. In case of no communication, check the status of SD LED and RD LED.
POWER LED is not lit.	The DC 5V power supply from the personal computer is not supplied. Check the items below. • Confirm that the specified cable is used to connect the FX-USB-AW and the personal computer. • Confirm whether the power supply is supplied to personal computer.

The status of SD LED and RD LED.		Contents
SD	Blinking	Communicating correctly
	Extinguished	• Confirm that the power is supplied to the personal computer. • Confirm the personal computer and the PLC are connected properly with the specified cable. • Confirm that the communication settings and connected PLC are correctly set in the software. Refer to the software manual.
RD	Blinking	Data receiving
	Extinguished	• Confirm that the power is supplied to PLC. • The PLC will not operate when a configuration that exceeds the DC 5V or DC 24V capacity is used. It will also be impossible to communicate normally. • Confirm that the specified cable is used to connect the personal computer and PLC. • Confirm that the communication settings and connected PLC are correctly set in the software. Refer to the software manual.

●Notification of CE marking●
This notification does not guarantee that an entire mechanical module produced in accordance with the contents of the notification comply with the following standards. Compliance to EMC standards of the entire mechanical module should be checked by the user / manufacturer.

Standards with which this product complies
Type: Programmable Controller (Open Type Equipment)
Models: Products manufactured from August 1st, 2004.

Electromagnetic Compatibility Standards (EMC)	Remark
EN61000-6-4:2001 Electromagnetic compatibility - Generic standards - Emission standard for Industrial environment	Compliance with all relevant aspects of the standard. (Radiated Emissions and Mains Terminal Voltage Emissions)
EN61131-2:2003 Programmable controllers -Equipment requirements and tests	Compliance with all relevant aspects of the standard.(RF Immunity, Fast Transients, ESD, Damped Oscillatory Wave, Conducted, Surge and Power Magnetic Fields)
EN61000-6-2:2001 Electromagnetic compatibility - Generic immunity standard Industrial environment	Compliance with all relevant aspects of the standard.(RF Immunity, Fast Transients, ESD, Voltage Dips, Voltage Interruptions, Conducted, Surge and Power Magnetic Fields)

Notes for compliance to EMC regulation.
It is necessary to install the (FX-USB-AW) in a shielded metal control panel.
For more details please contact the local Mitsubishi Electric sales site.

This manual confers no industrial property rights or any rights of any other kind, nor does it confer any patent licenses. Mitsubishi Electric Corporation cannot be held responsible for any problems involving industrial property rights which may occur as a result of using the contents noted in this manual.

Warranty
Mitsubishi will not be held liable for damage caused by factors found not to be the cause of Mitsubishi; machine damage or lost profits caused by faults in the Mitsubishi products; damage, secondary damage, accident compensation caused by special factors unpredictable by Mitsubishi; damages to products other than Mitsubishi products; and to other duties.

⚠ For safe use

- This product has been manufactured as a general-purpose part for general industries, and has not been designed or manufactured to be incorporated in a device or system used in purposes related to human life.
- Before using the product for special purposes such as nuclear power, electric power, aerospace, medicine or passenger movement vehicles, consult with Mitsubishi Electric.
- This product has been manufactured under strict quality control. However when installing the product where major accidents or losses could occur if the product fails, install appropriate backup or failsafe functions in the system.

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