MELSOFT

MITSUBISHI ELECTRIC

Engineering Software

MELSOFT FieldDeviceConfigurator Operating Manual

SAFETY PRECAUTIONS

(Read these precautions before using this product.)

Before using this product, please read this manual carefully and pay full attention to safety to handle the product correctly. If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.

The precautions given in this manual are concerned with this product only. For the safety precautions of the programmable controller system, refer to the user's manual for the module used and the MELSEC iQ-R Module Configuration Manual.

In this manual, the safety precautions are classified into two levels: "⚠ WARNING" and "⚠ CAUTION".

⚠ **WARNING**	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 minor or moderate injury or property damage.

Under some circumstances, failure to observe the precautions given under "⚠ CAUTION" may lead to serious consequences.

Observe the precautions of both levels because they are important for personal and system safety.

Make sure that the end users read this manual and then keep the manual in a safe place for future reference.

[Security Precautions]

⚠ WARNING

- To maintain the security (confidentiality, integrity, and availability) of the programmable controller and the system against unauthorized access, denial-of-service (DoS) attacks, computer viruses, and other cyberattacks from external devices via the network, take appropriate measures such as firewalls, virtual private networks (VPNs), and antivirus solutions.

CONDITIONS OF USE FOR THE PRODUCT

(1) MELSEC programmable controller ("the PRODUCT") shall be used in conditions;
i) where any problem, fault or failure occurring in the PRODUCT, if any, shall not lead to any major or serious accident; and
ii) where the backup and fail-safe function are systematically or automatically provided outside of the PRODUCT for the case of any problem, fault or failure occurring in the PRODUCT.

(2) The PRODUCT has been designed and manufactured for the purpose of being used in general industries.
MITSUBISHI ELECTRIC SHALL HAVE NO RESPONSIBILITY OR LIABILITY (INCLUDING, BUT NOT LIMITED TO ANY AND ALL RESPONSIBILITY OR LIABILITY BASED ON CONTRACT, WARRANTY, TORT, PRODUCT LIABILITY) FOR ANY INJURY OR DEATH TO PERSONS OR LOSS OR DAMAGE TO PROPERTY CAUSED BY the PRODUCT THAT ARE OPERATED OR USED IN APPLICATION NOT INTENDED OR EXCLUDED BY INSTRUCTIONS, PRECAUTIONS, OR WARNING CONTAINED IN MITSUBISHI ELECTRIC USER'S, INSTRUCTION AND/OR SAFETY MANUALS, TECHNICAL BULLETINS AND GUIDELINES FOR the PRODUCT.
("Prohibited Application")
Prohibited Applications include, but not limited to, the use of the PRODUCT in;
- Nuclear Power Plants and any other power plants operated by Power companies, and/or any other cases in which the public could be affected if any problem or fault occurs in the PRODUCT.
- Railway companies or Public service purposes, and/or any other cases in which establishment of a special quality assurance system is required by the Purchaser or End User.
- Aircraft or Aerospace, Medical applications, Train equipment, transport equipment such as Elevator and Escalator, Incineration and Fuel devices, Vehicles, Manned transportation, Equipment for Recreation and Amusement, and Safety devices, handling of Nuclear or Hazardous Materials or Chemicals, Mining and Drilling, and/or other applications where there is a significant risk of injury to the public or property.

Notwithstanding the above restrictions, Mitsubishi Electric may in its sole discretion, authorize use of the PRODUCT in one or more of the Prohibited Applications, provided that the usage of the PRODUCT is limited only for the specific applications agreed to by Mitsubishi Electric and provided further that no special quality assurance or fail-safe, redundant or other safety features which exceed the general specifications of the PRODUCTs are required. For details, please contact the Mitsubishi Electric representative in your region.

(3) Mitsubishi Electric shall have no responsibility or liability for any problems involving programmable controller trouble and system trouble caused by DoS attacks, unauthorized access, computer viruses, and other cyberattacks.

INTRODUCTION

Thank you for purchasing the engineering software, MELSOFT series.
This manual describes the functions provided by MELSOFT FieldDeviceConfigurator.
Before using this product, please read this manual carefully, and develop familiarity with the functions and performance of MELSOFT FieldDeviceConfigurator to handle the product correctly.
Note that the menu names and operating procedures may differ depending on an operating system in use and its version.
When reading this manual, replace the names and procedures with the applicable ones as necessary.

MEMO

CONTENTS

SAFETY PRECAUTIONS 1
CONDITIONS OF USE FOR THE PRODUCT 2
INTRODUCTION 3
RELEVANT MANUALS 6
TERMS 6
GENERIC TERMS AND ABBREVIATIONS 6

CHAPTER 1 OVERVIEW 7

CHAPTER 2 SYSTEM CONFIGURATION 9

CHAPTER 3 SCREEN CONFIGURATION AND BASIC OPERATIONS 11

3.1 Screen Configuration 11
3.2 Menu List 12
3.3 How To Obtain FDC 13
3.4 Start and End 13
Start 13
End 13
3.5 Project Management 14
Creating a project 14
Opening a project 14
Saving a project 14
Closing a project 14
Deleting a project 14
3.6 Basic Operations 15
Operations in the Project view 15
Operations in the DTM UI view 16
Operations in the DTM catalog view 17
3.7 Operation Phase Setting 18
3.8 Import/Export of DTM Configurations 18
Import 18
Export 19

APPENDIX 20

Appendix 1 Additions and Changes from Previous Version 20
Version 1.01B 20
Version 1.02C 20
Version 1.04E 20
Appendix 2 Using a Project in a Different Version 21
Appendix 3 Resolution 22
REVISIONS 23
INFORMATION AND SERVICES 24
TRADEMARKS 24

RELEVANT MANUALS

The following manuals are relevant to this product.

Manual name [manual number]	Description
MELSOFT FieldDeviceConfigurator Operating Manual [SH-081945ENG] (this manual)	Functions and methods for operating MELSOFT FieldDeviceConfigurator

TERMS

Unless otherwise specified, this manual uses the following terms.

Term	Description
CommDTM (Communication DTM)	A software module used to configure the communication setting required for communications between a personal computer and field devices via the master device
Device DTM	A software module used to configure the parameter settings of field devices or monitor field devices
FDT frame application	A generic term for applications to use a DTM. An FDT frame application complies with the FDT/DTM open standard
MELSOFT FieldDeviceConfigurator	Configuration Tool, which is developed by Mitsubishi Electric Corporation. MELSOFT FieldDeviceConfigurator complies with the FDT/DTM open standard and is used for parameter settings, maintenance, and adjustment of field devices as an FDT frame application.

GENERIC TERMS AND ABBREVIATIONS

Unless otherwise specified, this manual uses the following generic terms and abbreviations.

Generic term/abbreviation	Description
FDC	An abbreviation for the MELSOFT FieldDeviceConfigurator

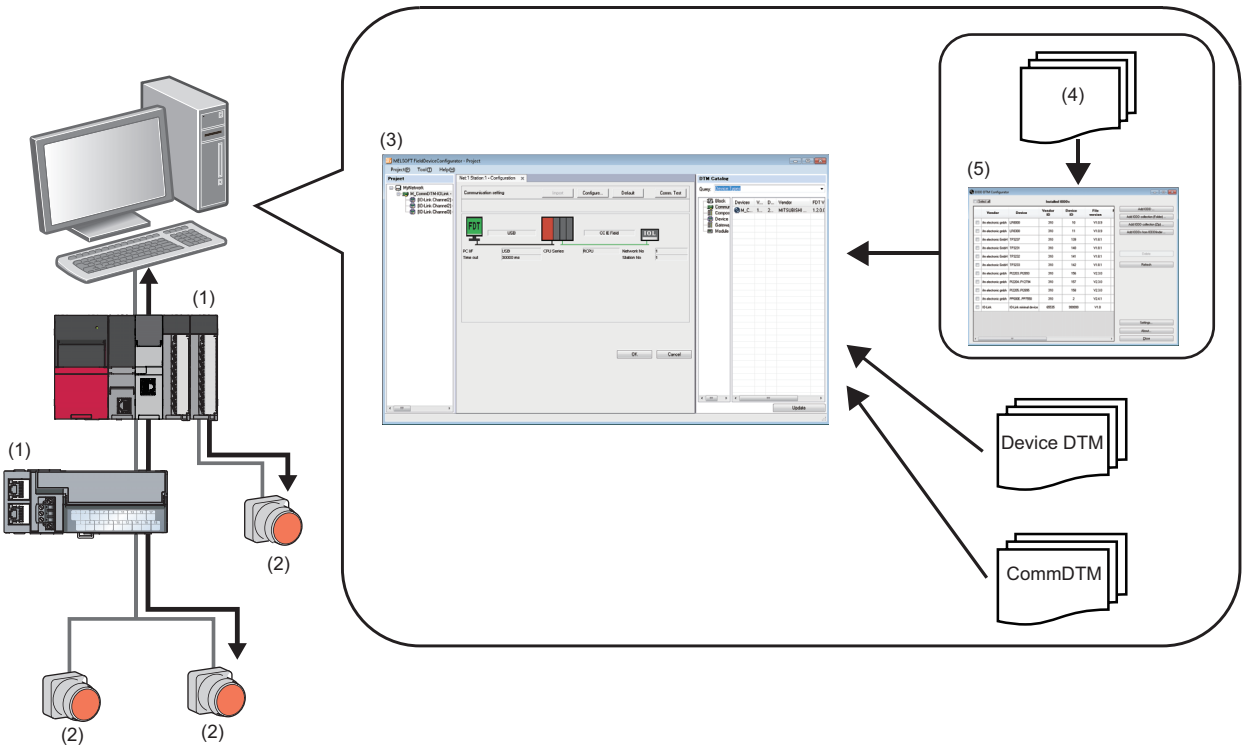
1 OVERVIEW

MELSOFT FieldDeviceConfigurator (abbreviated as FDC below) is Mitsubishi Electric's FDT frame application which complies with the open standard, FDT/DTM. It provides configuration, maintenance, and adjustment for field devices. For FDT specifications, obtain them from the FDT Group website (www.fdtgroup.org).

MEMO

2 SYSTEM CONFIGURATION

In FDC, configuration, maintenance, and adjustment of field devices can be performed by using DTM modules (CommDTM and Device DTM), which are used for communication settings and parameter settings for field devices.
The information of CommDTM and Device DTM can be displayed in FDC by installing CommDTM and Device DTM, and importing them to FDC.
For information on obtaining DTMs, refer to the manual of each product.



No.	Item	Description
(1)	Master	A master of field devices.
(2)	Slave	A slave of field devices.
(3)	FDC	A tool for setting, maintaining, and adjusting field devices.
(4)	IODD file	An XML file including information of IO-Link sensors.
(5)	IODD DTM Configurator	A software module for setting parameters and monitoring field devices by importing an IODD. The operation is the same as a Device DTM.

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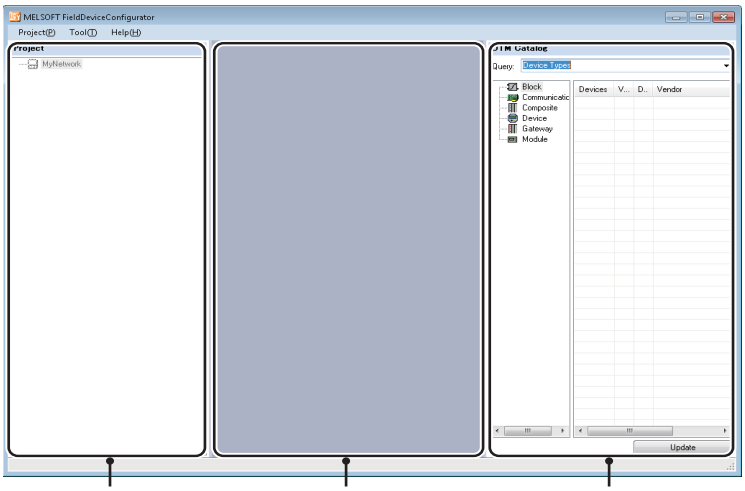
3 SCREEN CONFIGURATION AND BASIC OPERATIONS

This chapter explains the screen configuration and basic operations of FDC.

3.1 Screen Configuration

This section explains the screen configuration of FDC.

Window



Displayed items

No.	Item	Description	Reference
(1)	Project view	Displays the configuration of the DTM.	Page 15 Operations in the Project view
(2)	DTM UI view	Displays the details of the DTM selected in the Project view. The display contents vary depending on the DTM. For details, refer to the manual for each product.	Page 16 Operations in the DTM UI view
(3)	DTM catalog view	Displays a list of installed DTMs.	Page 17 Operations in the DTM catalog view

3.2 Menu List

The following show the lists of menus.

[Project]	Description	Reference
⇨ [New]	To create a new project.	Page 14 Creating a project
⇨ [Open]	To open an existing project.	Page 14 Opening a project
⇨ [Save]	To overwrite an existing project.	Page 14 Saving a project
⇨ [Close]	To close the open project.	Page 14 Closing a project
⇨ [Delete]	To delete an existing project.	Page 14 Deleting a project
⇨ [Import DTM configuration]	To import DTM configurations into a project.	Page 18 Import
⇨ [Export DTM configuration]	To export DTM configurations included in a project.	Page 19 Export
⇨ [Exit]	To end the application.	Page 13 End

[Tool]	Description	Reference
⇨ [Option]	To set an operation phase.	Page 18 Operation Phase Setting

[Help]	Description	Reference
⇨ [Manual]	To start e-Manual Viewer and display the manual.	—
⇨ [About]	To display the version information of FDC.	—

3.3 How To Obtain FDC

For information on how to obtain an FDC, please contact your local Mitsubishi Electric sales office or representative.

3.4 Start and End

This section explains the methods for starting and ending FDC.

Start

Operating procedure

Start MELSOFT FieldDeviceConfigurator from "MELSOFT" in Windows® Start.

Point

- FDC can be started by double-clicking a device station displayed in a CC IE Field configuration in an engineering tool. FDC can be started by only a device module that can activate FDC from the CC IE Field configuration.
  When FDC is started from an engineering tool, the start I/O numbers and network numbers of the master station, the station numbers of device stations, and connection destination setting information set in the CC IE Field configuration can be applied to a CommDTM by the DTM function.
- Connection destination setting information can be applied only when FDC is started from MELSOFT Navigator or GX Works3.
- If the DTM catalog has not been updated since DTMs have been installed, the catalog will be updated when FDC starts.

End

Operating procedure

Select [Project] ⇨ [Exit].

3.5 Project Management

Creating a project

Create a new project.

Operating procedure

1. Select [Project] ⇨ [New]
2. Enter a project name in the "New Project" screen, and click the [OK] button.

Opening a project

Open an existing project.

Operating procedure

1. Select [Project] ⇨ [Open].
2. Select a project to open, and click the [Open] button in the "Open Project" screen.

Saving a project

Overwrite an existing project.

Operating procedure

Select [Project] ⇨ [Save].

Closing a project

Close the open project.

Operating procedure

Select [Project] ⇨ [Close].

Deleting a project

Delete an existing project.

Operating procedure

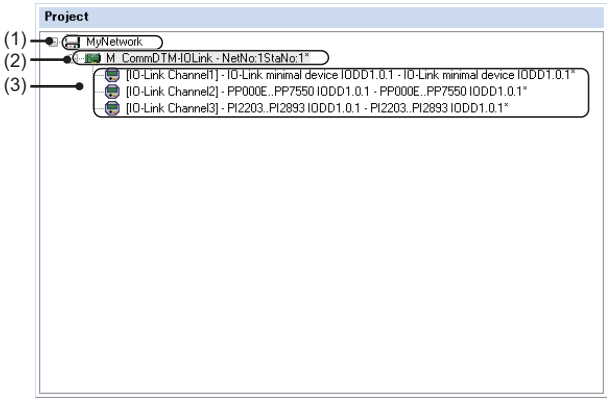
1. Select [Project] ⇨ [Delete].
2. Select a project to delete, and click the [Delete] button in the "Delete Project" screen.

3.6 Basic Operations

Operations in the Project view

This section explains the operations in the Project view.
DTM operations can be performed by selecting and right-clicking a DTM in the Project view.
A DTM can be added to/deleted from/changed in the Project view.

Window



Displayed items

No.	Item	Description
(1)	MyNetwork	Displays the configuration of the DTM.
(2)	DTM	Displays a CommDTM added to the project.
(3)	Block	Displays a Device DTM added to the project.

Right-click menus

The following shows the shortcut menus displayed by right-clicking an item under "MyNetwork" in the Project view.

Menu name	Description
⇨ [Add DTM]	To make the "Add" screen appear. Add a DTM selected in the "Add" screen to the Project view.
⇨ [Properties]	To display project information.

The following shows the menus displayed by right-clicking a DTM or Block in the Project view.

Menu name	Description
⇨ [Add DTM/Block]	To make the "Add" screen appear. Add a DTM or Block selected in the "Add" screen to the Project view.
⇨ [Remove DTM/Block]	To delete a selected DTM.
⇨ [Change DTM/Block]	To make the "Change" screen appear. Change a DTM or Block to the one selected in the "Add" screen.
⇨ [Edit TAG]	To edit the name of a selected DTM or Block.
⇨ [Detect Now] ⇨ [Execute to All Channels]	To detect all the connected devices, and automatically add DTMs for the detected devices to the Project view. If multiple DTMs for a detected device are detected, a DTM which is different from the actual one may be displayed.
⇨ [Detect Now] ⇨ [Execute to Selected Channels]	To detect devices connected to the channel selected in the "Execute after specify the channel" screen, and automatically add DTMs for the detected devices to the Project view. If multiple DTMs for a detected device are detected, a DTM which is different from the actual one may be displayed.
⇨ [(DTM function menu)]	A menu name differs depending on the specification of the DTM. For details, refer to the manual for each product.
⇨ [Properties]	To display the property information of a DTM. The version of FDT can be checked.

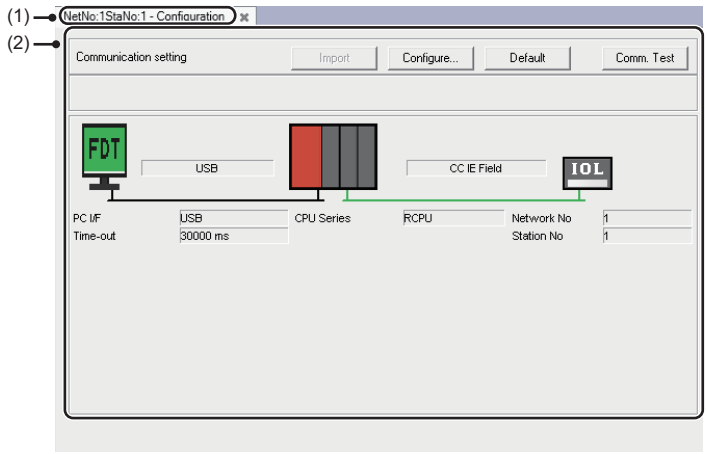
Point

For details on the error message displayed when a DTM function is performed, please contact the manufacturer.

Operations in the DTM UI view

The UI of a DTM can be displayed by double-clicking a DTM in the Project view.
The display contents differ depending on the specification of the DTM.
For the DTM specification, refer to the manual for each product.

Window



Displayed items

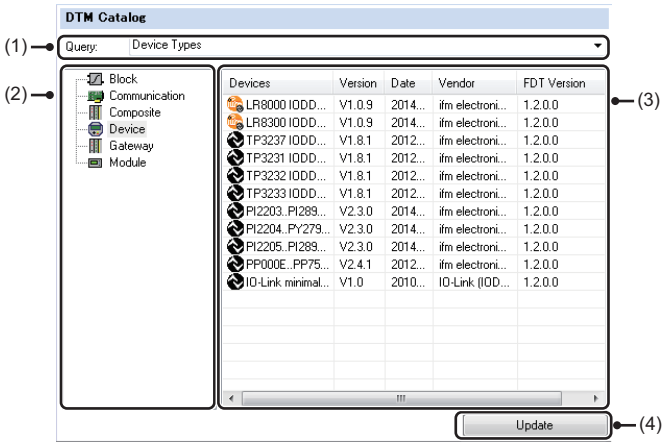
No.	Item	Description
(1)	Tab	Displays the name set in the DTM and a menu name for executing a DTM function.
(2)	DTM UI display area	Displays the setting contents of the DTM.

Operations in the DTM catalog view

A list of installed DTMs can be displayed.

A DTM can be added in the Project view by dragging and dropping a DTM from the DTM list to the Project view.

Window



Displayed items

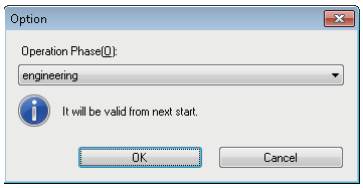
No.	Item	Description
(1)	Query	Select a display format in the type list.
(2)	Type list	Displays the types of the DTM in a list format.
(3)	DTM list	Displays the DTMs of the type selected in the type list in a list format.
(4)	[Update] button	Click this button to update the DTM catalog.

3.7 Operation Phase Setting

Set an operation phase.
The 'operation phase' indicates 'Operation Phase' in FDT specifications.
For the specifications of Operation Phase, refer to FDT specifications.
For FDT specifications, obtain them from the FDT Group website (www.fdtgroup.org).
Depending on a DTM, some functions become available by setting a specific operation phase.
Set the operation phase as necessary.

Window

[Tool] ⇨ [Option]



Operating procedure

1. Set "Operation Phase" in the "Option" screen and click the [OK] button.
2. End FDC and start it again.

3.8 Import/Export of DTM Configurations

Export DTM configurations which are included in a project to a file (.dtmx) and import the configurations from the file.
Up to 200 DTM configurations can be imported/exported.

Import

Import the exported DTM configurations into a project.

Operating procedure

1. Select [Project] ⇨ [Import DTM configuration].
2. Select a target file in the "Import DTM configuration" screen and click the [Open] button.

Point

If a DTM configuration in a file to import has the same name as the one in the project, the DTM configuration will be added under the one with the same name.

Precautions

The following shows the causes of failure when importing DTM configurations and their corrective actions.

Cause	Corrective action
The file to be imported is corrupted.	Export DTM configurations to a file using FDC and import the DTM configurations from the output file.
The DTM included in the file to be imported is not installed.	Install the import target DTM.
The DTM catalog is not updated.	Click the [Update] button in the DTM catalog view to update the DTM catalog.

Export

Export DTM configurations included in a project.

Operating procedure

1. Select [Project] ⇨ [Export DTM configuration].
2. Specify a save destination and a file name and click the [Save] button in the "Export DTM configuration" screen.

Precautions

The following shows the causes of failure when exporting DTM configurations and their corrective actions.

Cause	Corrective action
The export target DTM is not installed.	Install the export target DTM.
The file specified as an export destination is used in another application.	Specify another file as an export destination.

APPENDIX

In this manual, the FDT version 2.0 released in April 2013 or later is referred to as 'new 2.0 DTM', and the one released in April 2013 or earlier is referred to as 'previous 2.0 DTM'.

Appendix 1 Additions and Changes from Previous Version

This section shows the additions and changes with upgrade.

Version 1.01B

Item	Description	Reference
Japanese version	Japanese version is released.	—

Version 1.02C

Item	Description	Reference
Startup from a CC IE Field configuration	FDC can be started from a CC IE Field configuration in an engineering tool.	Page 13 Start
Automatic detection of connected devices	After detecting all connected devices, DTMs for the detected devices can automatically be set.	Page 15 Right-click menus
New 2.0 DTM	New 2.0 DTMs are supported by FDC.	Page 21 Using a project in an earlier version

Version 1.04E

Item	Description	Reference
Import/export of DTM configurations	DTM configurations included in a project can be exported and imported into another project.	Page 18 Import/Export of DTM Configurations
Operation phase setting	An operation phase can be set.	Page 18 Operation Phase Setting
Updating the DTM catalog	The DTM catalog can be updated when FDC starts.	Page 13 Start

Appendix 2 Using a Project in a Different Version

This section explains the considerations for using a project in a different version of FDC from the one with which the project was created. Note the following contents to use a project.

Using a project in a later version

A project saved in a previous version can be used in a new version.

Using a project in an earlier version

■Using a project, which was created in version 1.02C or later, in version 1.01B or earlier

Item	Considerations
New 2.0 DTM	A project using a new 2.0 DTM is not supported.

■Using a project, which was created in version 1.04E or later, in version 1.03D or earlier

Item	Considerations
Project	When downgrading FDC to version 1.03D or earlier, the project data created in version 1.04E or later is deleted.

■Using a project, which was created in version 1.06G or later, in version 1.05F or earlier

Item	Considerations
Project	A project created in version 1.06G or later is not supported. A file, which was exported in version 1.06G or later and then imported in version 1.05F or earlier, is not supported as well.

Appendix 3 Resolution

The following lists the setting values for "Scale" in "Display" and the recommended display resolution for each setting value.

Setting value	Resolution
100%	1024 × 768 dots or more
125%	1900 × 1200 dots or more
150%	
175%	2880 × 1620 dots or more
200%	
225%	3840 × 2160 dots or more
250%	

REVISIONS

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

Revision date	*Manual number	Description
April 2018	SH(NA)-081945ENG-A	First edition
November 2018	SH(NA)-081945ENG-B	■Added or modified parts Chapter 2, Section 3.6
November 2019	SH(NA)-081945ENG-C	■Added or modified parts Section 3.2, Section 3.4, Section 3.7, Section 3.8, Appendix 1, Appendix 2
May 2021	SH(NA)-081945ENG-D	■Added or modified parts SAFETY PRECAUTIONS, CONDITIONS OF USE FOR THE PRODUCT, TERMS, GENERIC TERMS AND ABBREVIATIONS, Appendix 2
May 2023	SH(NA)-081945ENG-E	■Added or modified parts SAFETY PRECAUTIONS, Appendix 3
May 2024	SH(NA)-081945ENG-F	■Added or modified part RELEVANT MANUALS
November 2025	SH(NA)-081945ENG-G	■Added or modified part Appendix 3

Japanese manual number: SH-081944-G

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TRANSLATION OF THE ORIGINAL INSTRUCTIONS

SH(NA)-081945ENG-G(2511)
MODEL: FDC-O-E

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