Serial Flash Programmer

S550-SFWv3

Operation Manual

Sunny Giken Inc.

Serial Flash Programmer
S550-SFWv3

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We, Sunny Giken Inc. shall not be responsible for any damages and/or losses caused
by using this product and/or the software attached to this product claimed by users
and/or any intermediaries.
Specifications of this product and/or the software attached to this product may be
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trademarks of each manufacturer. The captions of the TM and (R) are not mentioned in this manual.

Table of Contents

1. Outline

1.1. Precautions

Thank you for purchasing our product.
Please read this operation manual carefully to understand the functions of this product for effective and stable operations. Please beware that Sunny Giken Inc. shall have no liability for any damages and/or troubles caused by misuse or careless handling of this product.

i) General Cautions
Please observe the following points to avoid hazards such as fire, burns, electric shock, and/or injures:
   - Use this product under proper environment.
   - Never use this product placed up side down or vertically.
   - Handle this product with care to avoid high impact caused by fall and/or physical shock.
   - Never disassemble and/or modify this product by yourself.

ii) Operating Environment
   - Do not use this product in environments described below:
        Dusty places
        Places where there is the presence of corrosive gases
        Places exposed to direct sunlight
        Places surrounded by equipments that could become sources of noises
        Places with severe mechanical shock and/or constant mechanical vibration
   - Operational ambient temperature 0°C to 40°C Humidity below 80% (non condensing)
   - Preventing electrostatic buildup for handling this product and devices is highly recommended.

iii) Storage
   - If you do not plan to use this product for a long time, put this product in the packing box in which the product had been delivered, and store it in the shade with the ambient temperature of -10°C to +40°C and below 80% of humidity (non-condensing).

iv) Transportation
   - When transporting this product, be sure to use the packing box in which the product had been delivered.

v) Cleaning
Wipe this product with soft and clean fabric when it needs cleaning. Never use any sort of organic solvent such as benzene that may cause this product to deteriorate.

The version of Windows is not unified in regard to the figures in this operation manual.

1.2. System Configuration

The entire system configuration of the Serial Flash Programmer S550-SFWv3 is illustrated below.

Target board
Prepared by user

Target Connecting Cable

Use with Vcc =
from 3.3V±5%
Up to 5V±5%

Vcc

External
Power Supply

S550-SFWv3

Windows PC

SFWv3 Control
Software

USB Cable
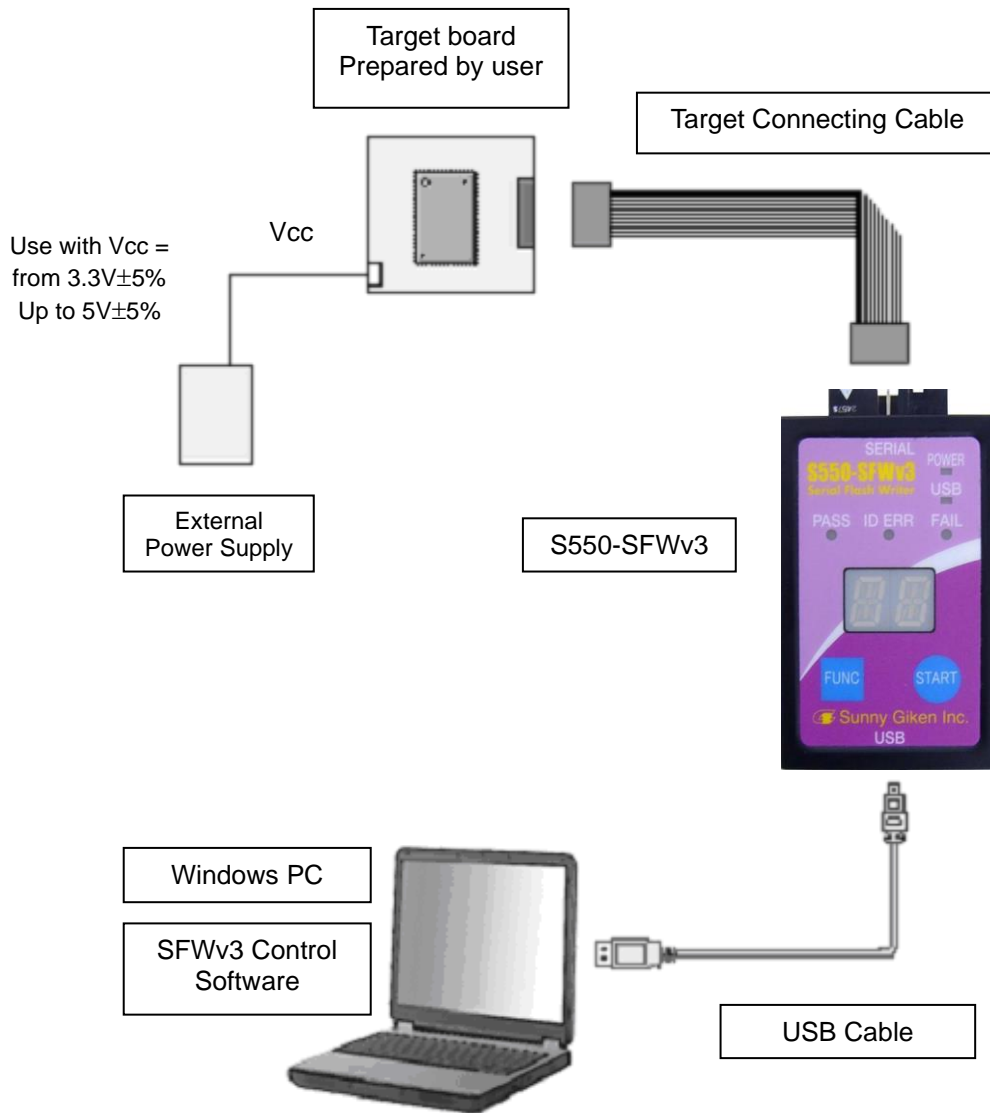
* For details on connection according to functions, see "4. Connections".

2. Specifications

2.1. Specifications

Operating Environment	Ambient temperature : 0°C to 40°C Humidity: below 80% (non-condensing)
Storage Environment	Ambient temperature: -10°C to +40°C Humidity: below 80% (non-condensing)
Operating voltage	3.3V plus/minus 5% or 5V plus/minus 5%

Electricity consumption	Power saving mode Max. 40mA (Stand-alone, operating voltage at 3.3V)
	                            Max. 50mA (Stand-alone, operating voltage at 5.0V)
	Normal mode Max. 90mA, Average 70mA (Stand-alone, operating voltage at 3.3V)
	                            Max. 120mA, Average 90mA (Stand-alone, operating voltage at 5.0V)

Dimensions	Approx. 48(W) x 74(H) x 14(D)mm (Excluding connector projection part)
Weight	Approx. 50g
International standards	CE Mark Obtained (EMI:EN55011 Group1 ClassA, EMS:EN61000-6-2)
	FCC Compliance This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions; (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

2.2. Function Specifications

Programmable MCU	Built-in Flash Memory Microcomputer * For details, see the [S550-SFWv3 Device List].
Operation Mode	Clock-synchronous serial I/O Clock-synchronous serial I/O[No handshake] Single wire Clock-asynchronous serial I/O Clock-asynchronous serial I/O
Programming mode	Serial Programming
Data Mode	Following data mode can be selected: -Single Data Mode: One program data can be set. -Multi Data Mode: One to four program data can be set.
Channel Mode	Following channel mode can be selected: -Single CH Mode: Only one S550-SFWv3 can be used for programming. -Multi CH Mode: Maximum of ten S550-SFWv3 can be used for programming. * One channel means one S550-SFWv3. * "Multi Data Mode" and "Multi CH Mode" cannot be set at the same time.
FA Mode	The FA equipment can control remotely by controlling I/O of the S550-SFWv3. * For details, see the [S550-SFWv3 FA Mode Operation Manual].

2.3. System Requirements

Host Machine	IBM PC/AT Compatible machine
CPU	Pentium200MHz or higher
Memory	64Mbyte or higher
HDD	Minimum of 10Mbyte available disk space
CRT	800 x 600 dots or better, minimum of 16 bits (24 bits or more recommended)
Others	USB 2.0 compliant USB port x 1 to 10 (It is possible to substitute with self-powered USB hub.)
OS	Microsoft Windows 10, 8.1, 7, Vista, XP, 2000

2.4. Programmable Device

    Refer to the file "S550-SFWv3 Device List" about the programmable devices. Some devices are under evaluation or not programmable.
    Please contact us for the latest information.

2.5. S550-SFWv3 External Appearance

The external appearance of S550-SFWv3 is shown below with descriptions of switches, LEDs, connectors and accessories.

● Front View

LED / Switch		Functions
POWER	POWER	Lights up when power is supplied to S550-SFWv3.
USB	USB	Lights up when PC and S550-SFWv3 are connected through USB, and blinks while accessing. *Stay lighted while updating.
PASS	PASS	Lights up when programming to the target finished successfully.
ID ERR	ID ERR	Lights up when "ID Error" occurs while programming to the target.
FAIL	FAIL	Lights up when an error other than "ID Error" occurs while programming to the target.
	Center Display	14SEG LED. Displays user program checksum, device information, and error information.
START	START Switch	Switches displays on the center display, and start initializing and programming to the target.
FUNC	FUNC Switch	Use this switch to switch display on the center display.

● Top Side View

Connector	Function
SERIAL	Cable connector for connecting the target.

● Bottom Side View

Connector	Function
USB	USB (mini B) communication connector (for connecting with PC)

Accessory	Function
Ring for a carry-along strap	Put on a strap for carry-along. *No strap is included in the product package.

2.6. Connector Pins Specifications

- Connector Pins (S550-SFWv3 Main unit)

- Model : XG4C-1434　OMRON Corporation

- Pin Assignment (S550-SFWv3 Main unit)

*Note that signal names and directions are the ones seen from the programmer side.
Especially the signals for 5:RXD and 11:TXD would be other way around when seen from the target side.

Pin Number#	Signal	Contents	Direction
1	CLK	Clock signal output for serial programming	Output
2	GND	Signal ground	-
3	CNVss	CNVss (Vpp) signal output for serial programming	Output
4	EPM	EPM output for serial programming	Output
5	RXD	Received data for serial programming	Input
6	GND	Signal ground	-
7	CE	CE output for serial programming	Output
8	Vcc	Power supply for serial programming	-
9	BUSY	BUSY input for serial programming	Input
10	GND	Signal ground	-
11	TXD	Transmission data for serial programming	Output
12	GND	Signal ground	-
13	RESET	RESET output for serial programming	Output
14	GND	Signal ground	-
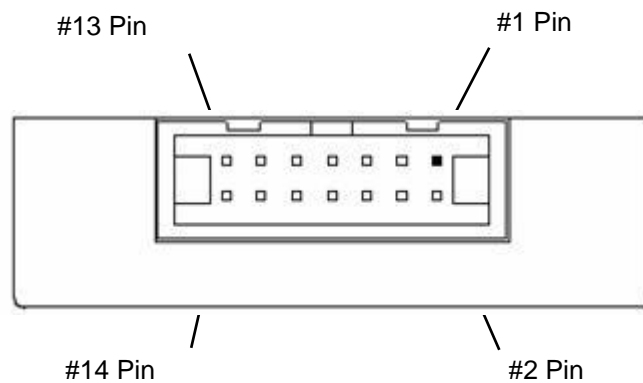
2.7. Target Connecting Cable

2.7.1.　14 – 14 Standard Cable

The attached connecting cable is a straight cable. In case the connector specifications of the board you use are different, or you wish to adjust the cable length, prepare a cable that matches the above pin assignment. The length of the cable shall be 500mm or shorter.

S550-SFWv3 side
(with Lock)

Your
Target board side

Connector model: XG4M-1430-U
OMRON Corp.

Connector model: XG4M-1430-T
OMRON Corp.
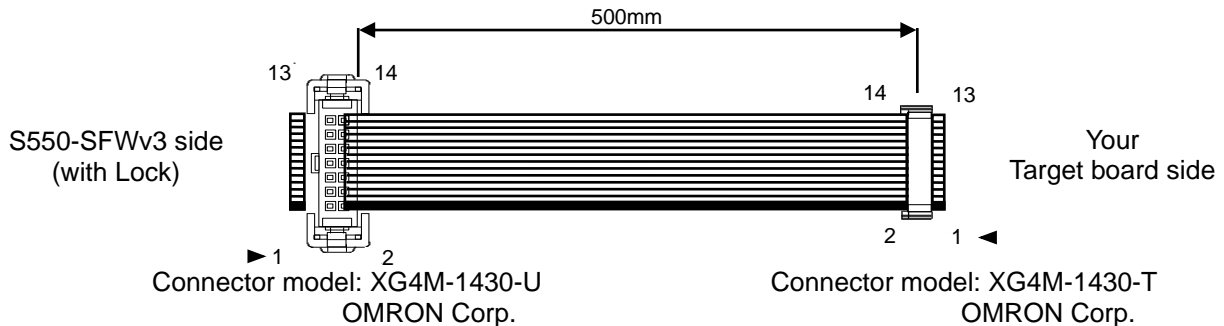
2.7.2.　14 – 10 Standard Cable

The attached connecting cable converts 14pin connector to 10pin(Applicable for M16C Family/　Standard serial I/O mode 1). You can use this cable to connect S550-SFWv3 and the target board that has 10pin connector. When using this product, refer to the file "S550-SFWv3 Examples of circuit for serial programming". This cable can be used only when the pin assignment of the 10pin connector side is the same.

S550-SFWv3 side
(with Lock)

Your
Target board side

Connector model: XG4M-1430-U
OMRON Corp.

Connector model: HIF3BA-10D-2.54C
HIROSE Electric
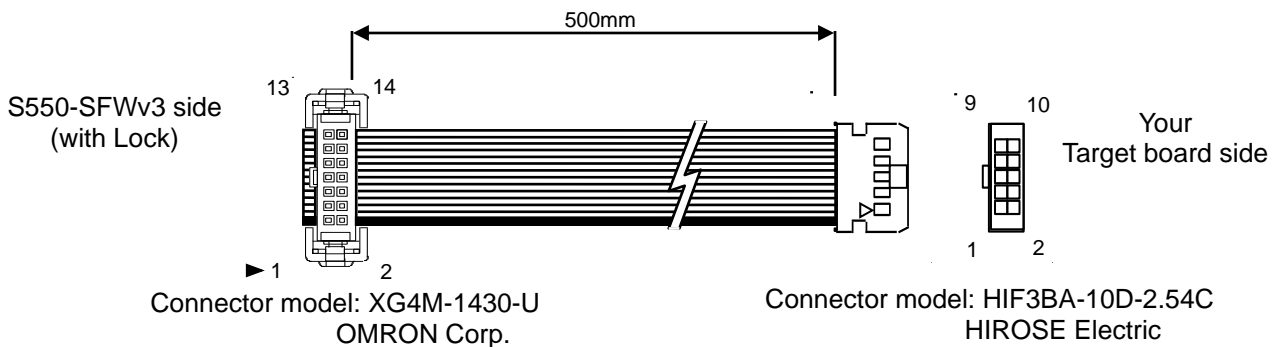
2.7.3.　14 – 20 Custom1 Cable(model: S550-SFW-CB1)

The optional connecting cable converts 14pin connector to 20pin(Applicable for RX,H8SX,H8S,SuperH Family / Generic BOOT).You can use this cable to connect S550-SFWv3 and the target board that has 20pin connector. When using this product, refer to the file "S550-SFWv3 Examples of circuit for serial programming". This cable can be used only when the pin assignment of the 20pin connector side is the same.

S550-SFWv3 side
(with Lock)

Your
Target board side

Connector model: XG4M-1430-U
OMRON Corp.

Connector model: HIF3BA-20D-2.54C
HIROSE Electric
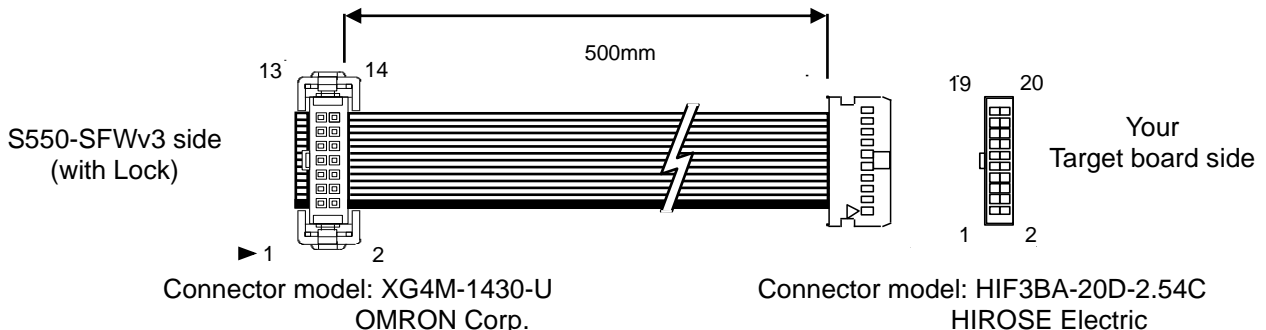
2.7.4.   14 – 14 Custom2 Cable(model: S550-SFW-CB2)

The optional connecting cable converts 14pin connector to 14pin(Applicable for RX Family(except RX610 group) / Generic BOOT).You can use this cable to connect S550-SFWv3 and the target board that has E1 compatible connector. When using this product, refer to the file "S550-SFWv3 Examples of circuit for serial programming". This cable can be used only when the pin assignment of the 14pin connector side is the same.

13   14   500mm   13   14

S550-SFWv3 side   Your
(with Lock)   Target board side

► 1   2   1   2

Connector model: XG4M-1430-U   Connector model: HIF3BA－14D－2.54C
OMRON Corp.   HIROSE Electric

2.7.5.   14 – 14 Custom3 Cable(model: S550-SFW-CB3)

The optional connecting cable converts 14pin connector to 14pin(Applicable for M16C Family/   Standard serial I/O mode 3).You can use this cable to connect S550-SFWv3 and the target board that has E8a compatible connector. When using this product, refer to the file "S550-SFWv3 Examples of circuit for serial programming". This cable can be used only when the pin assignment of the 14pin connector side is the same.
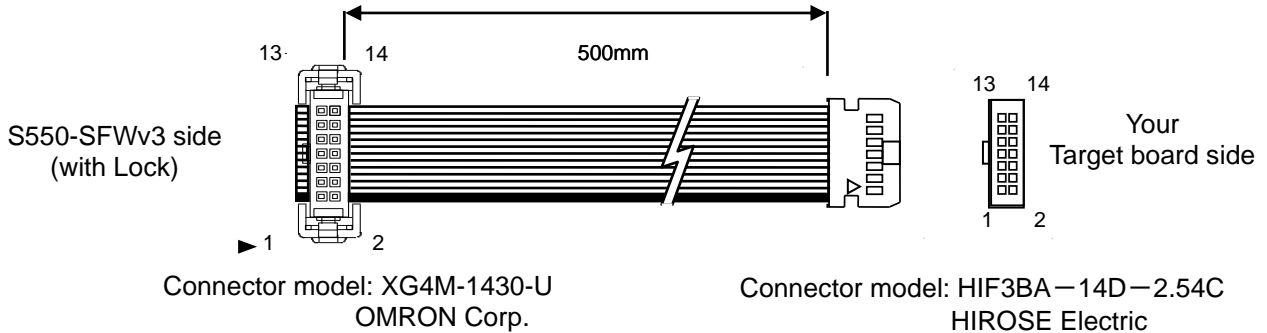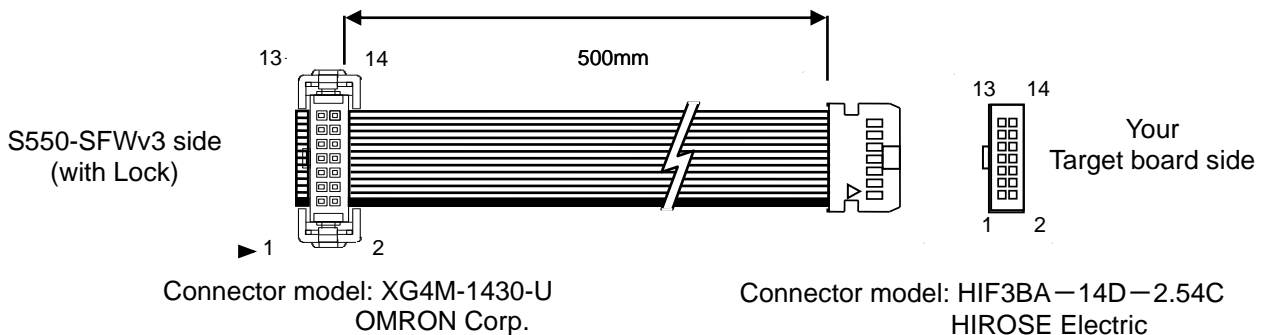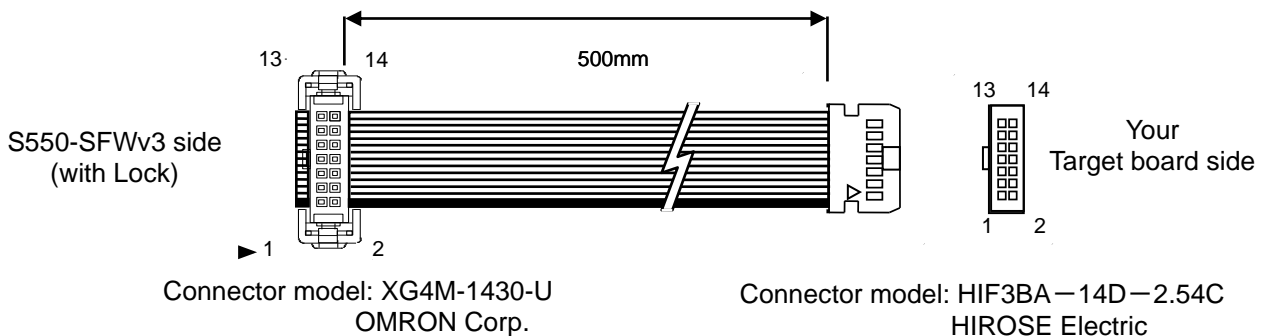
13   14   500mm   13   14

S550-SFWv3 side   Your
(with Lock)   Target board side

► 1   2   1   2

Connector model: XG4M-1430-U   Connector model: HIF3BA－14D－2.54C
OMRON Corp.   HIROSE Electric

2.7.6.   14 – 14 Custom4 Cable(model: S550-SFW-CB4)

The optional connecting cable converts 14pin connector to 14pin(Applicable for RL78 Family/ Single wire Clock-asynchronous serial I/O).You can use this cable to connect S550-SFWv3 and the target board that has E1 compatible connector. When using this product, refer to the file "S550-SFWv3 Examples of circuit for serial programming". This cable can be used only when the pin assignment of the 14pin connector side is the same.

13   14   500mm   13   14

S550-SFWv3 side   Your
(with Lock)   Target board side

► 1   2   1   2

Connector model: XG4M-1430-U   Connector model: HIF3BA－14D－2.54C
OMRON Corp.   HIROSE Electric

3. Circuitry Examples

Refer to the file "S550-SFWv3 Examples of circuit for serial programming".

4. Connections

S550-SFWv3 has following types of connections:

1）　Connection for downloading / uploading / initializing
This is a connection for downloading program data to S550-SFWv3, uploading data from S550-SFWv3, or initializing S550-SFWv3, using the control software.

2）　Connection for stand-alone programming / stand-alone initializing
This is a connection for programming the target board from S550-SFWv3.

3）　Connection for remote programming
This is a connection for programming the target board from the control software through S550-SFWv3.

### 4.1. Connection for Downloading / Uploading / Initializing

The connection when you download data to S550-SFWv3 from the PC, upload data from S550-SFWv3, or initialize S550-SFWv3 using the control software is illustrated below.
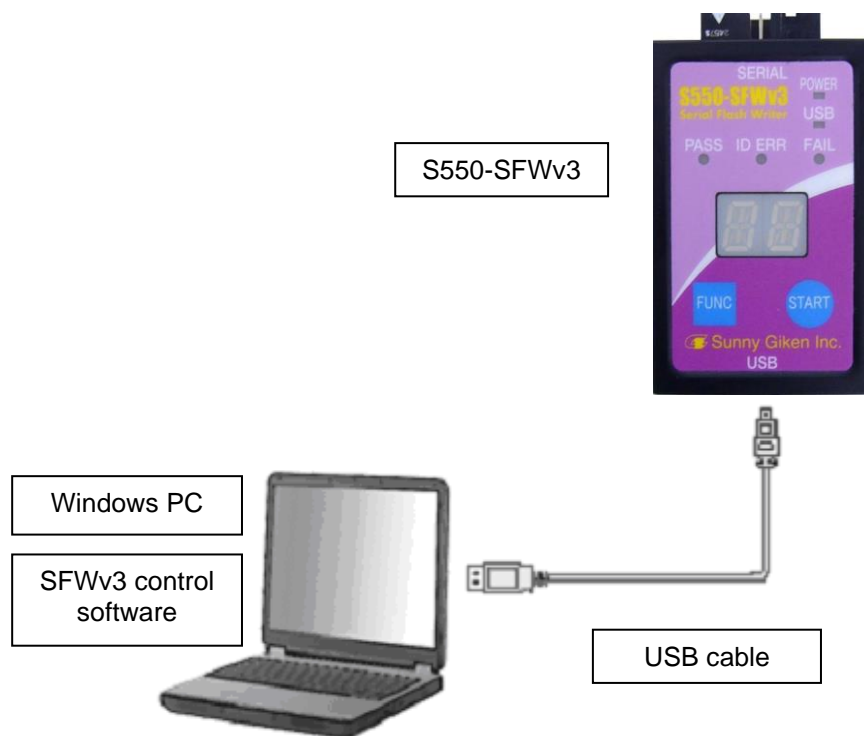
* Turning ON/OFF the power of S550-SFWv3 is done by plugging/unplugging the USB cable.
* Do not unplug the USB cable during the communication with the control software.

4.2. Connection for Stand-alone Programming / Stand-alone Initializing

The connection when you program from the lone S550-SFWv3 to the target (stand-alone programming) or initialize S550-SFWv3 (stand-alone initializing) is illustrated below.
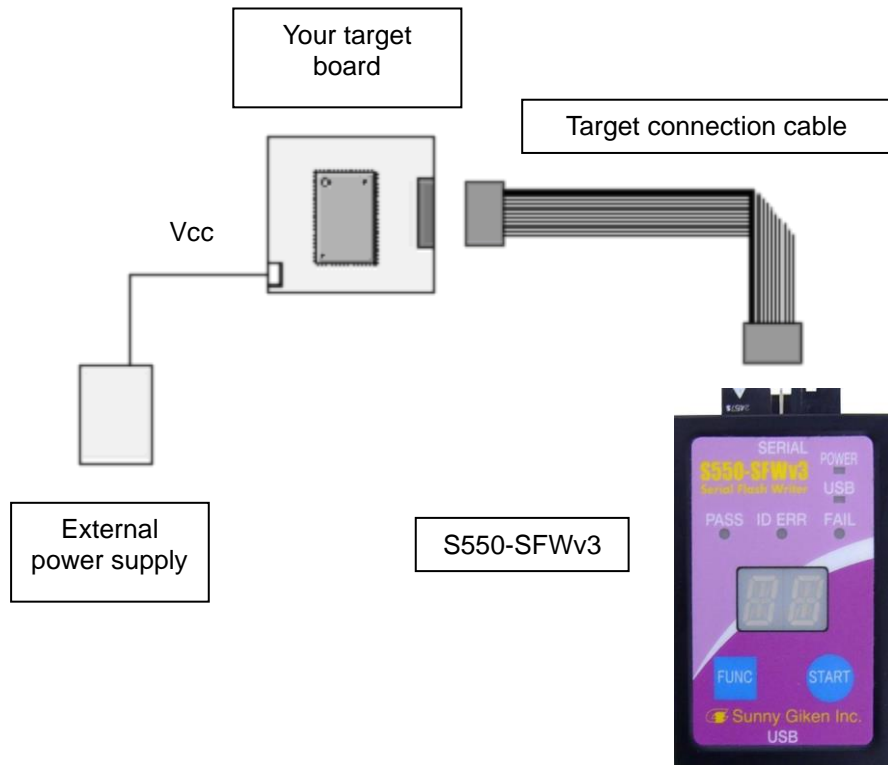
* Turning ON/OFF the power of S550-SFWv3 is done by turning ON/OFF the power supply for the board.
* For the voltage(VCC) supplied to S550-SFWv3 from the external power supply, the range shall be 3.3V plus/minus 5% up to 5V plus/minus 5%, and the power supply capacity shall be the total capacity of the target board and S550-SFWv3 (see "2.1 Specifications").

4.3. Connection for Remote Programming

The connection when you program remotely to the target from the PC using the control software though S550-SFWv3 is illustrated below.

The power may be supplied externally or by S550-SFWv3. For power supply method, see "6.2.1 Device Setting Screen".

* When the consumption current of the target board exceeds 200mA, supply from an external power supply.

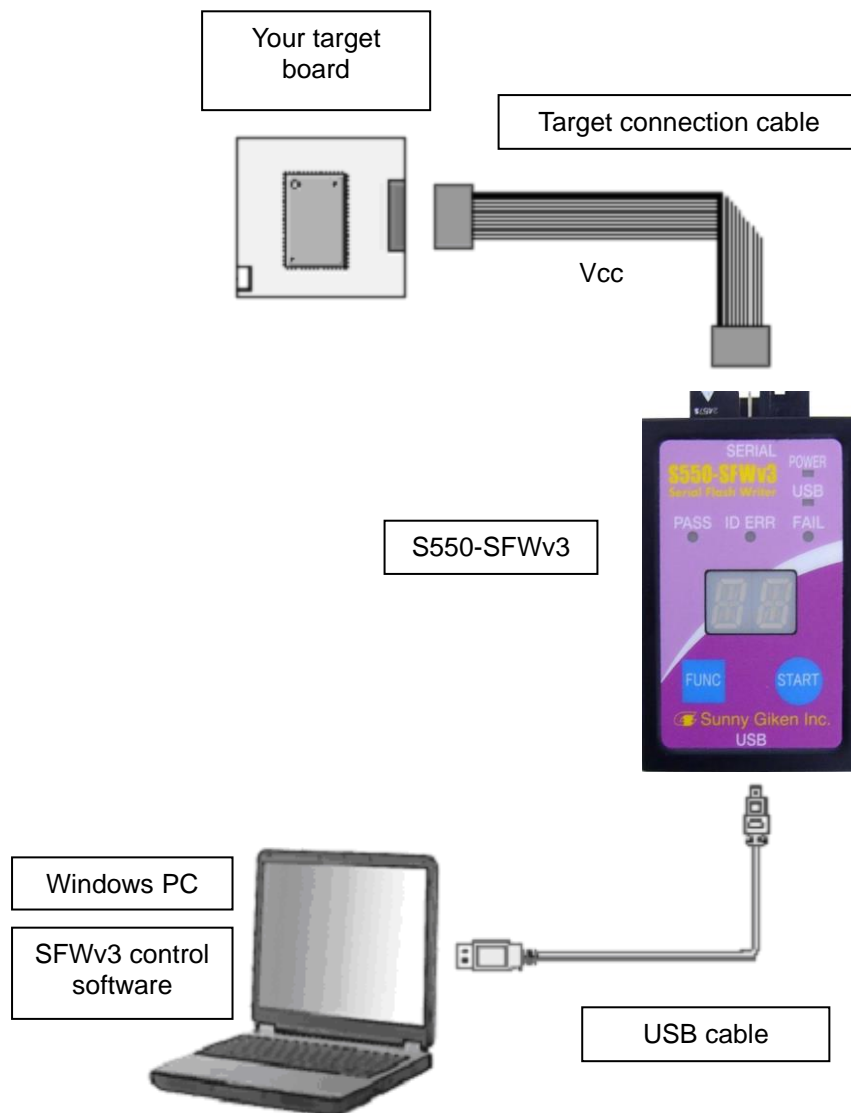■ (When supplying voltage to the target board using an external power supply – Single CH Mode)
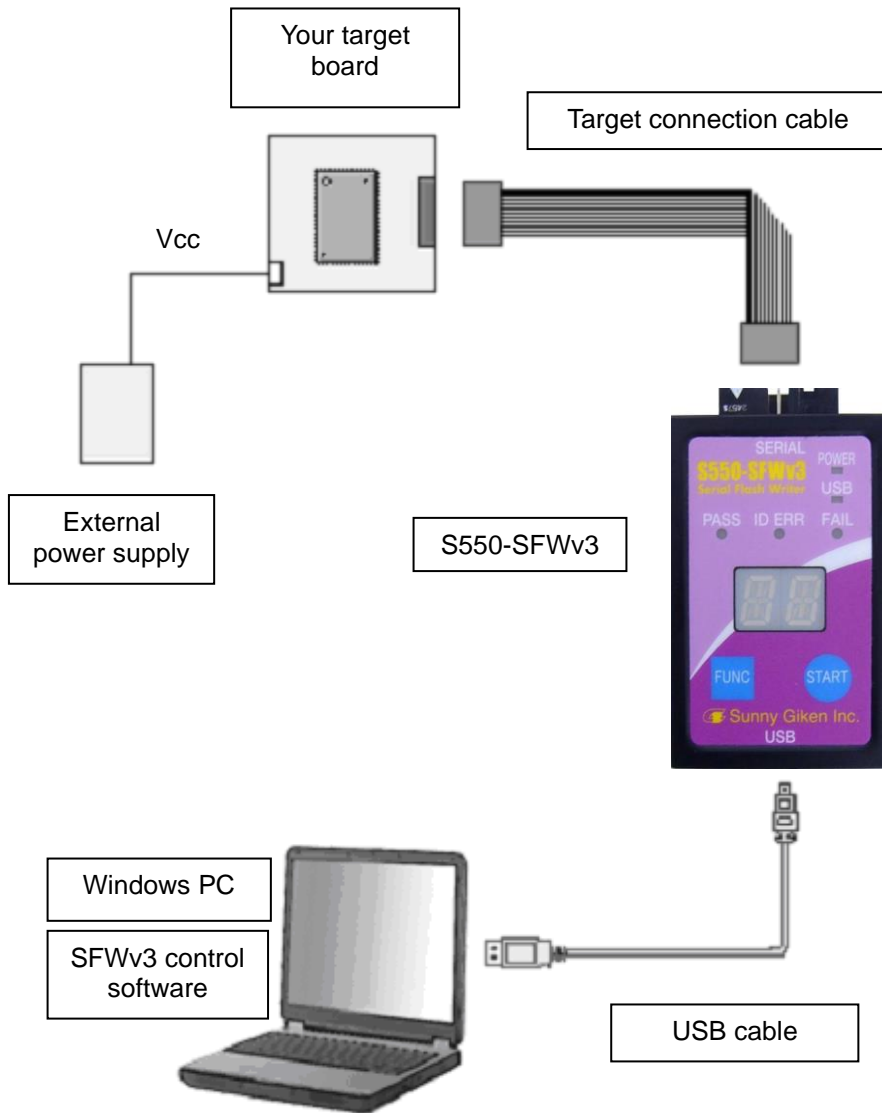
* Turning ON/OFF the power of S550-SFWv3 is done by plugging/unplugging the USB cable.
* Turn on the external power supply after connecting the USB cable.
* Do not unplug the USB cable during the communication with the control software.
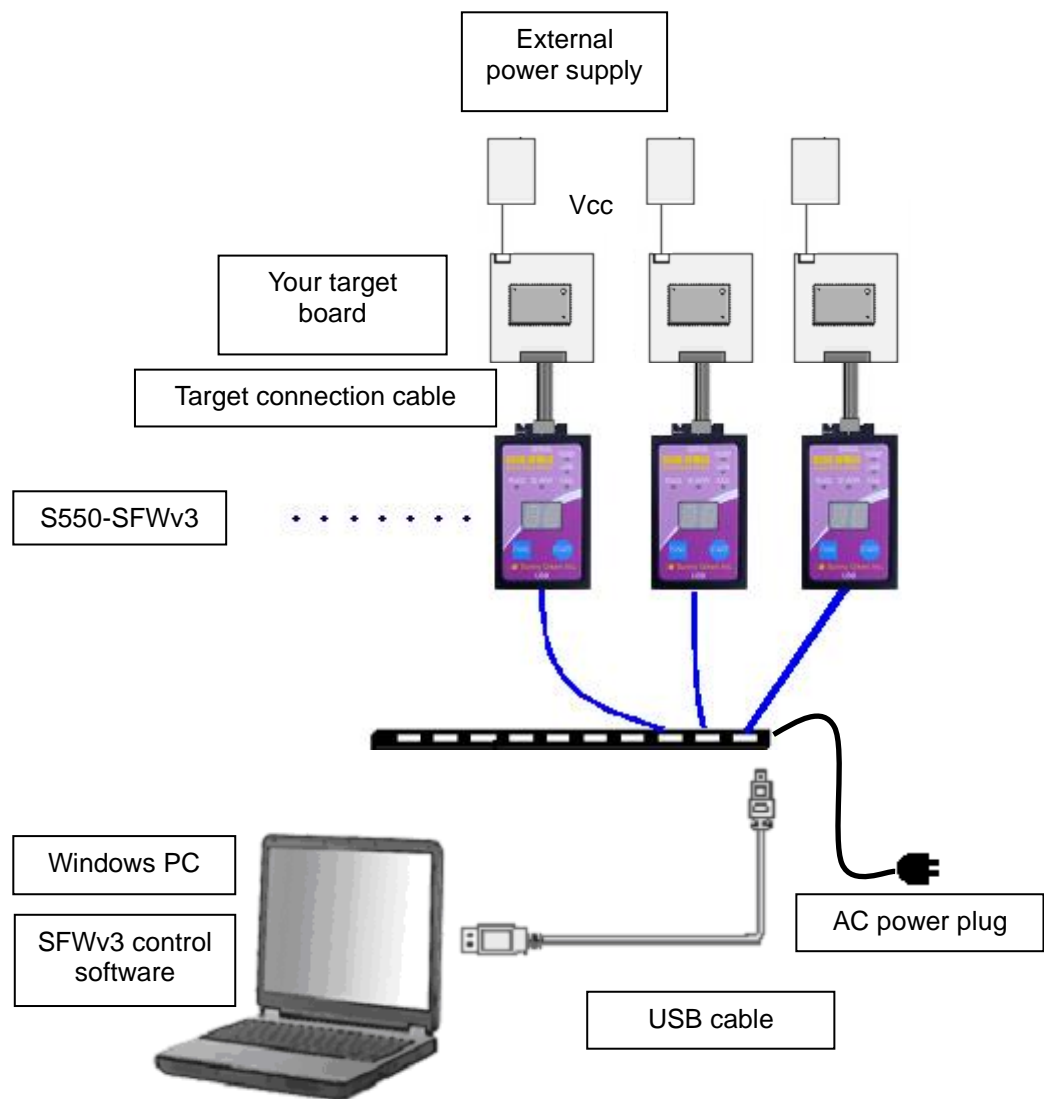
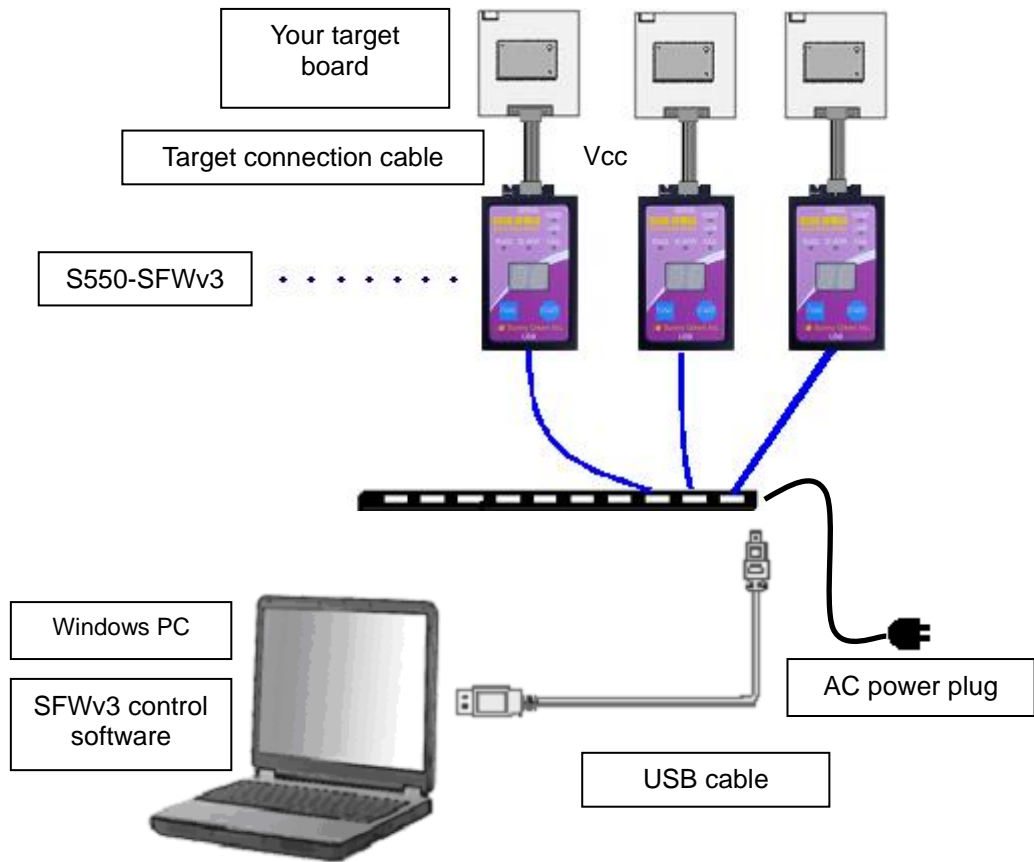■ (When supplying voltage to the target board from S550-SFWv3 – Single CH Mode)

* Turning ON/OFF the power of S550-SFWv3 is done by plugging/unplugging the USB cable.
* Do not unplug the USB cable during the communication with the control software.
* The voltage supplied to the target can be selected from 5V plus/minus 5% or 3.3V plus/minus 5%.
* The voltage is supplied to the target board while programming only.

■ (When supplying voltage to the target board using an external power supply - Multi CH Mode)

External power supply

Vcc

Your target board

Target connection cable

S550-SFWv3

Windows PC

SFWv3 control software

AC power plug

USB cable

* Turning ON/OFF the power of S550-SFWv3 is done by plugging/unplugging the USB cable.
* Turn on the external power supply after connecting the USB cable.
* Do not unplug the USB cable during the communication with the control software.
* Please use self-power when using USB hub.

■ (When supplying voltage to the target board from S550-SFWv3 - Multi CH Mode)

* Turning ON/OFF the power of S550-SFWv3 is done by plugging/unplugging the USB cable.
* Do not unplug the USB cable during the communication with the control software.
* The voltage supplied to the target can be selected from 5V plus/minus 5% or 3.3V plus/minus 5%.
* The voltage is supplied to the target board while programming only.
* Please use self-power when using USB hub.
* Action might become unstable as that the power supply falls down. In that case, please supply voltage to the target board by using an external power supply.
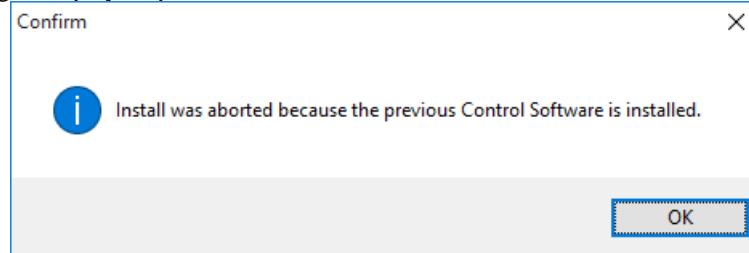
5. Setting Up

S550-SFWv3 requires installing Control Software and USB Driver on Windows PC.

5.1. Installing

The procedure described in this manual is for Windows 10, 8.1 or 7.
Please refer "Supplemental Manual for Setting Up" for Windows Vista, XP or 2000.

If the USB Driver of old version (Ver.3.2.0.0 or older) is installed, please uninstall USB Driver in advance.
If the following dialog is displayed, please uninstall Control Software of old version in advance.

Please refer "Supplemental Manual for Setting Up" for uninstalling USB Driver of old version or Control Software of old version.

Please install Control Software and USB Driver by the user with administrative privileges.

Please execute "SFWv3Setup.exe" in root folder.
After this, the following dialog is displayed.

The functions of buttons are following.

Buttons	Descriptions
Read Me	Open Readme file.
User's Manual	Open Operation Manual (this manual). The software for PDF files is required. (ex. Adobe Reader)
Quick Install	Install Control Software and USB Driver automatically. Please refer "5.1.1.Quick Install".
GUI Application	Install Control Software only. Please refer "5.1.2.Custom Install (Control Software)".
S550-SFWv3 USB Driver	Install USB Driver only. Please refer "5.1.3.Custom Install (USB Driver)".
Sunny Giken Inc. Website	Open the website of our company. (Top Page) It is same applies to click the logo of our company.
Exit	Terminate the Installer.

There are two procedures for installing ("Quick Install" or "Custom Install"). Each features are following.

Items	Quick Install	Custom Install
Outline	Install Control Software and USB Driver automatically.	Install Control Software or USB Driver individually.
Target user of Start Menu	You may not select it. (Only "Just me")	You may select "Just me" or "Everyone".
Procedures	Click "Quick Install" button to install Control Software and USB driver.	1) Click "GUI Application" button to install Control Software. (*1) 2) Click "S550-SFWv3 USB Driver" button to install USB Driver. (*1)
Purpose	You want to install Control Software and USB Driver first-time.	You want to upgrade Control Software or USB Driver. You want to register the Start Menu of Control Software for everyone.

(*1) Please do them as you think proper depending on the status of install.
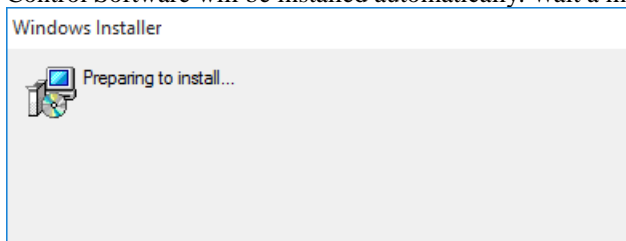
5.1.1. Quick Install

In the case of "Quick Install", Control Software and USB Driver are installed automatically.
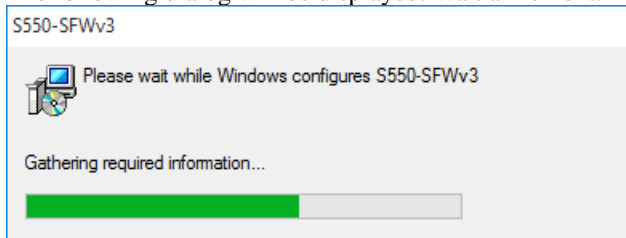Install user of Control Software is "Just me".

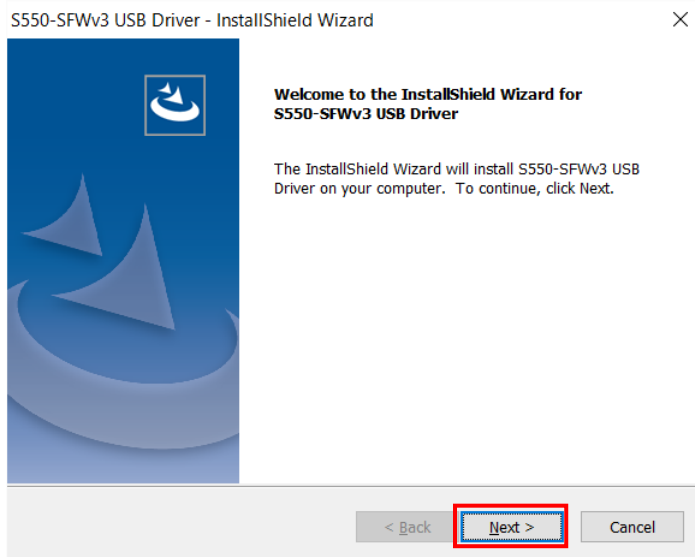i) Installer dialog will be displayed. Click "Quick Install" button.

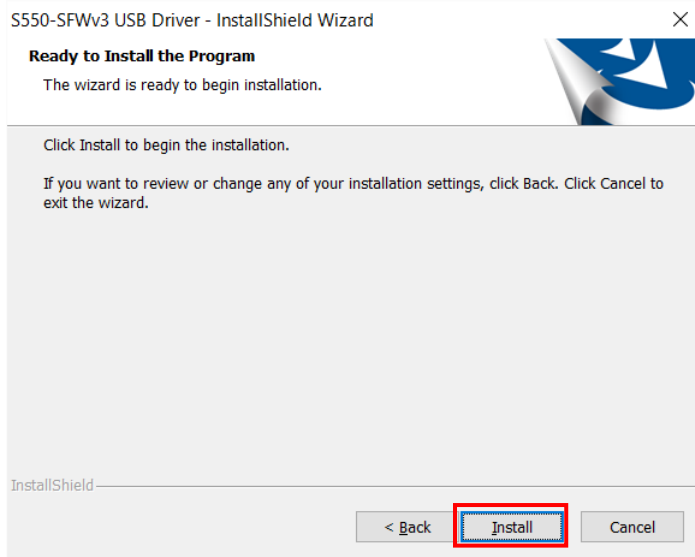ii) Control Software will be installed automatically. Wait a moment.

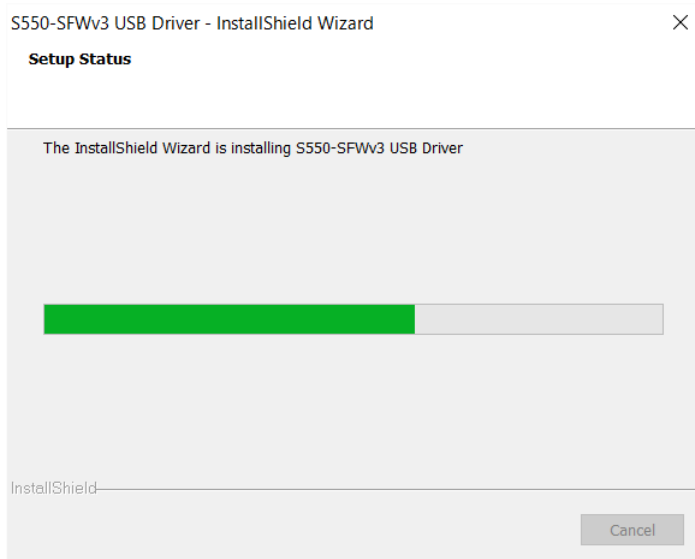iii) The following dialog will be displayed. Wait a moment.

iv) The following dialog will be displayed. Click "Next" button.

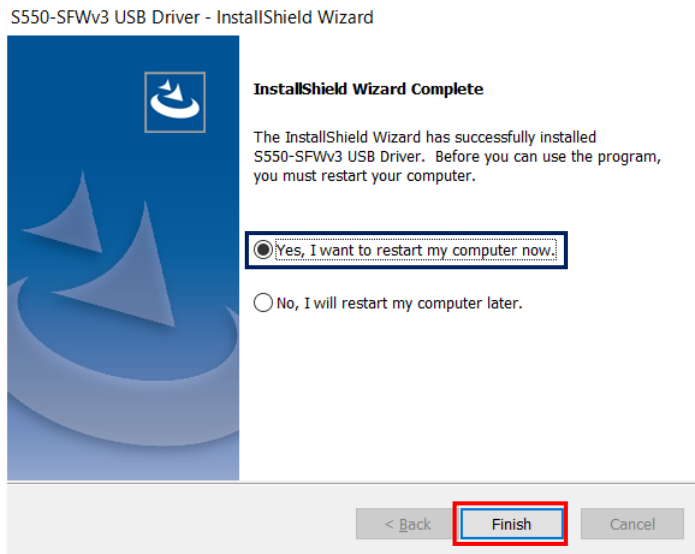v) The following dialog will be displayed. Click "Install" button.

vi) USB Driver will be installed. Wait a moment.

vii) The following dialog will be displayed. Click "Yes, I want to restart my computer now." radio button and click "Finish" button to reboot the PC.
In the case of Windows 7, radio buttons will not be displayed because you will not require to reboot the PC.

In the case of Windows 10 or 8.1, the PC will not be rebooted after clicking "Finish" button if you click "No, I will restart my computer later." radio button.
But, the reboot is required to complete installing USB Driver. Reboot the PC before connecting [S550-SFWv3] to the PC certainly.

viii) Please check the Start Menu of Windows that "Programs" - "S550-SFWv3" - "S550-SFWv3 Ver.X.XX" is registered.
("Ver.X.XX" means the Product Version displayed Installer dialog.)

If Control Software or USB Driver are installed, they will be clobbered.

5.1.2. Custom Install (Control Software)

In the case of installing Control Software by "Custom Install", you may select install directory and install user.
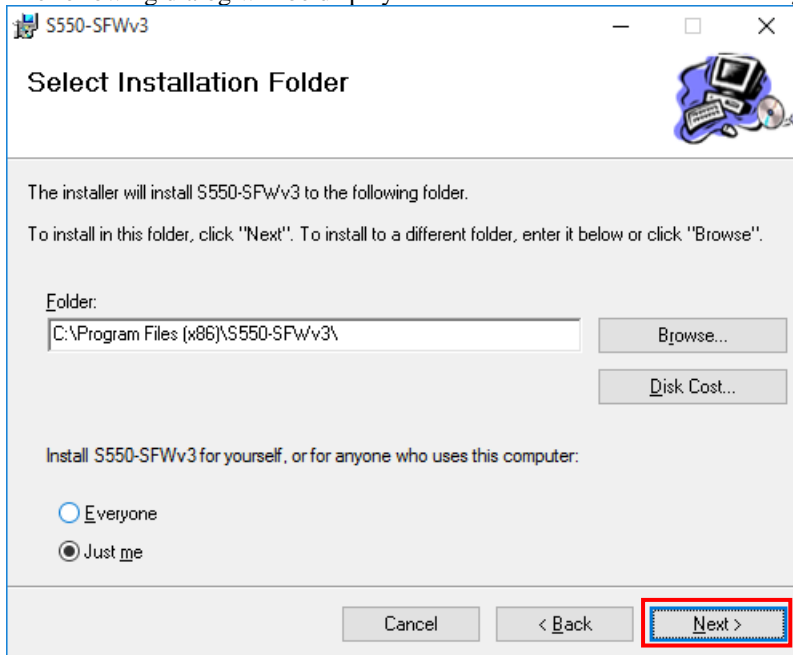
i) Installer dialog will be displayed. Click "GUI Application" button.

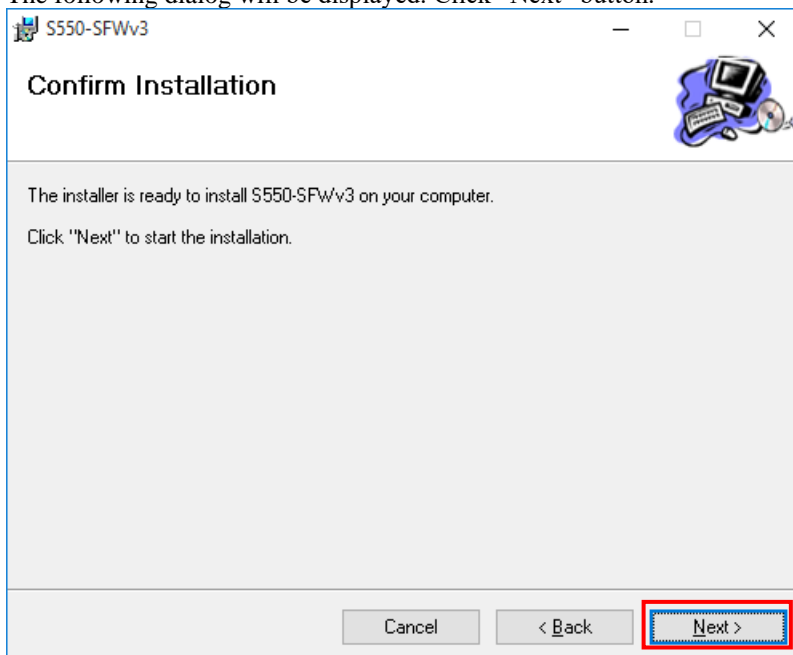ii) The following dialog will be displayed. Click "Next" button.

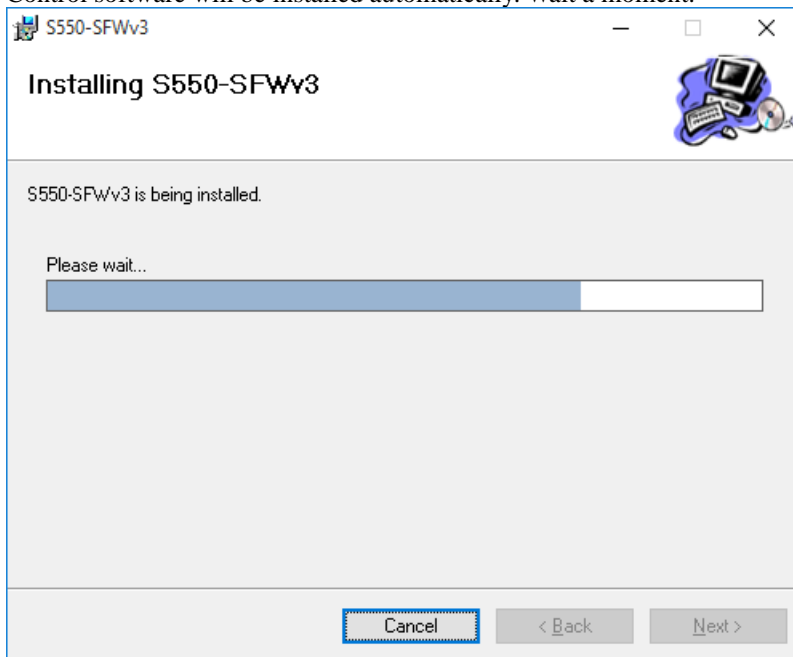iii) The following dialog will be displayed. Click "Next" button after selecting folder and install user.

If you select "Everyone", Start menu is registered for all users.
If you select "Just me", Start menu is registered for the user installed Control Software.
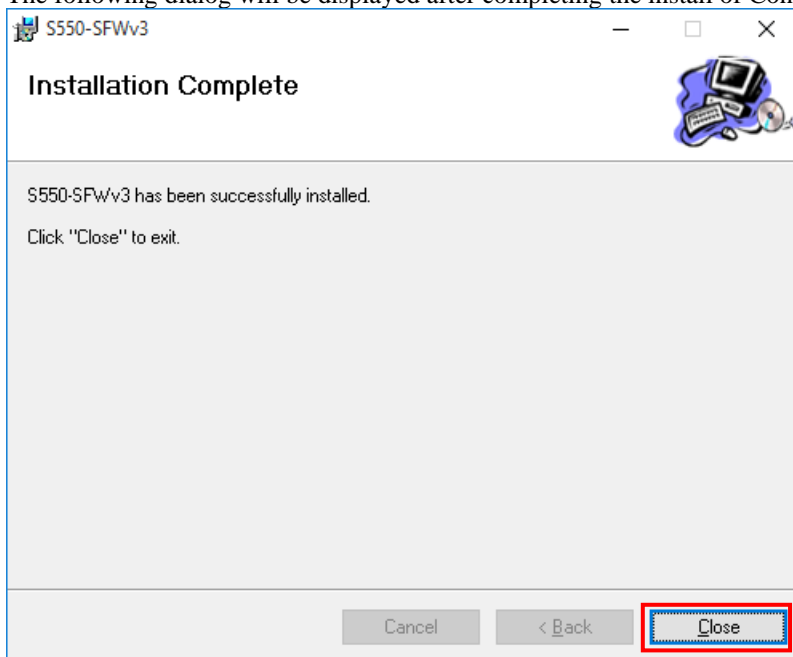
iv) The following dialog will be displayed. Click "Next" button.

v) Control software will be installed automatically. Wait a moment.

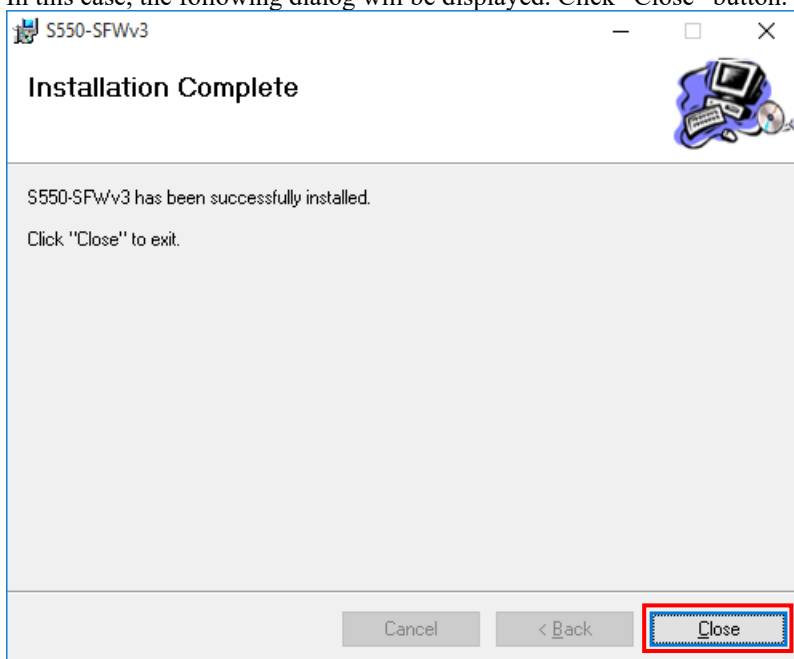vi) The following dialog will be displayed after completing the install of Control Software. Click "Close" button.

vii) Please check the Start Menu of Windows that "Programs" - "S550-SFWv3" - "S550-SFWv3 Ver.X.XX" is registered.
("Ver.X.XX" means the Product Version displayed Installer dialog.)

If Control Software is installed, the following dialog will be displayed on procedure ii).
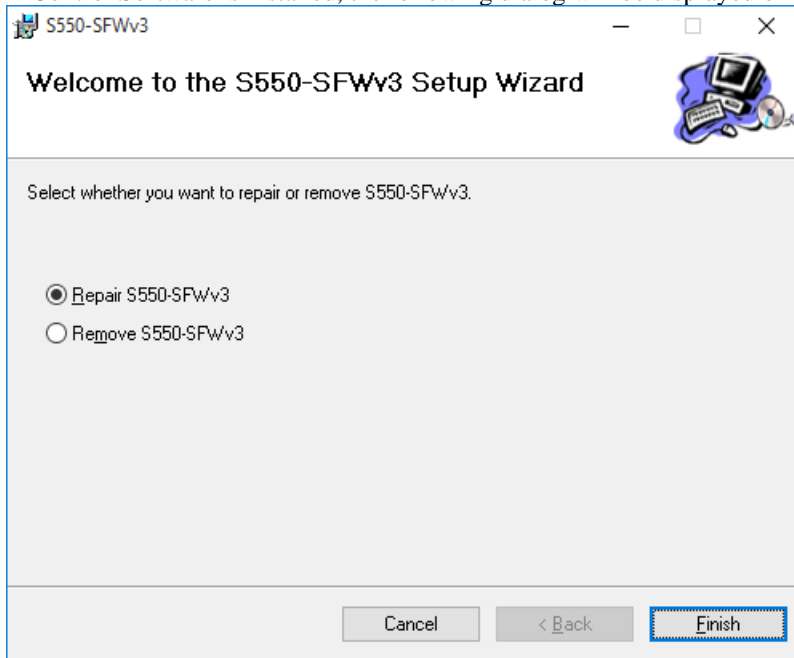
If you click "Repair S550-SFWv3" radio button and click "Finish" button, Control Software will be clobbered.
In this case, the following dialog will be displayed. Click "Close" button.

If you click "delete" radio button and click "Finish" button, Control Software will be uninstalled.
In this case, the following dialog will be displayed. Click "Close" button.
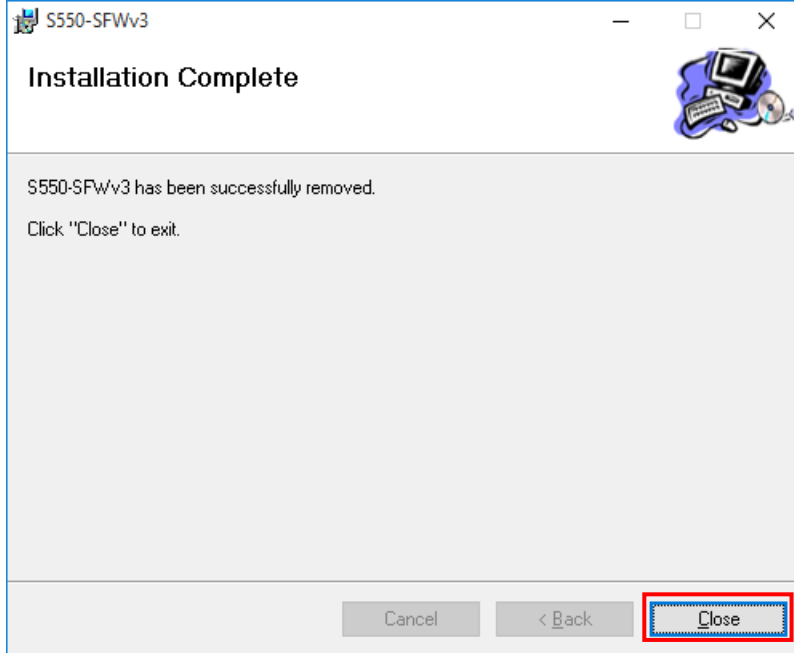
If you change install user, please uninstall Control Software in advance.
After this, please install Control Software once again.

5.1.3. Custom Install (USB Driver)

In the case of installing USB Driver by "Custom Install", click "USB Driver" button on Installer dialog.

The procedure after this is same as "Quick Install." Please refer from procedures iii) to procedure vii) in "5.1.1.Quick Install".
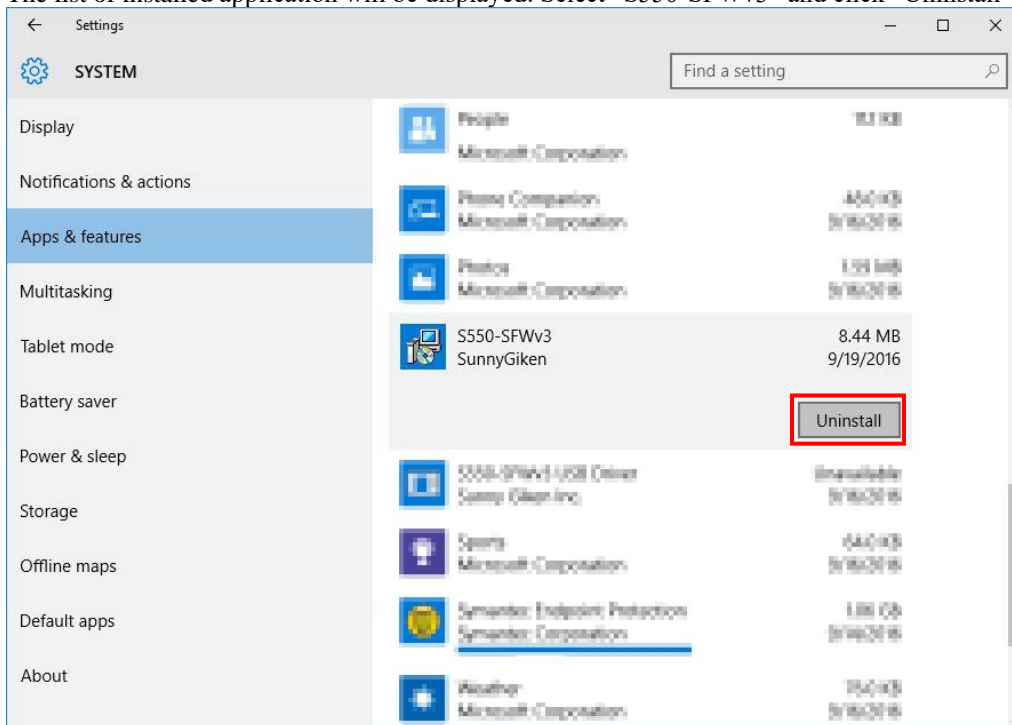
5.2. Uninstalling
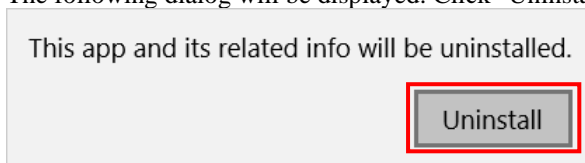
5.2.1.　　Uninstalling Control Software

i)　Select following depending on Windows version.

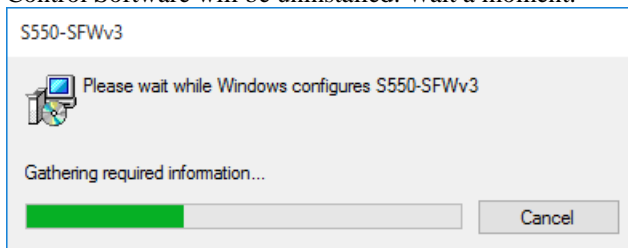| Windows Version	Selecting
Windows 10	"Apps & features" in "Apps" (or "System") from "Settings"
Windows 8	"Uninstall" in "Programs" from "Control Panel"
Windows 7 or Vista	"Uninstall a program" in "Programs" from "Control Panel"
Windows XP	"Add or Remove Programs" from "Control Panel"
Windows 2000	"Add/Remove Programs" from "Control Panel"

ii)　The list of installed application will be displayed. Select "S550-SFWv3" and click "Uninstall" button.

iii)　The following dialog will be displayed. Click "Uninstall" button.

iv)　Control Software will be uninstalled. Wait a moment.

v)　Check that "S550-SFWv3" was not displayed in the list of installed application.

5.2.2. Uninstalling USB Driver

The procedure described in this manual is for Windows 10, 8.1 or 7.
Please refer "Supplemental Manual for Setting Up" for Windows Vista, XP or 2000.

i) Select following depending on Windows version.

Windows Version	Selecting
Windows 10	"Apps & features" in "Apps" (or "System") from "Settings"
Windows 8	"Uninstall" in "Programs" from "Control Panel"
Windows 7	"Uninstall a program" in "Programs" from "Control Panel"

ii) The list of installed application will be displayed. Select "S550-SFWv3 USB Driver" and click "Uninstall" button.
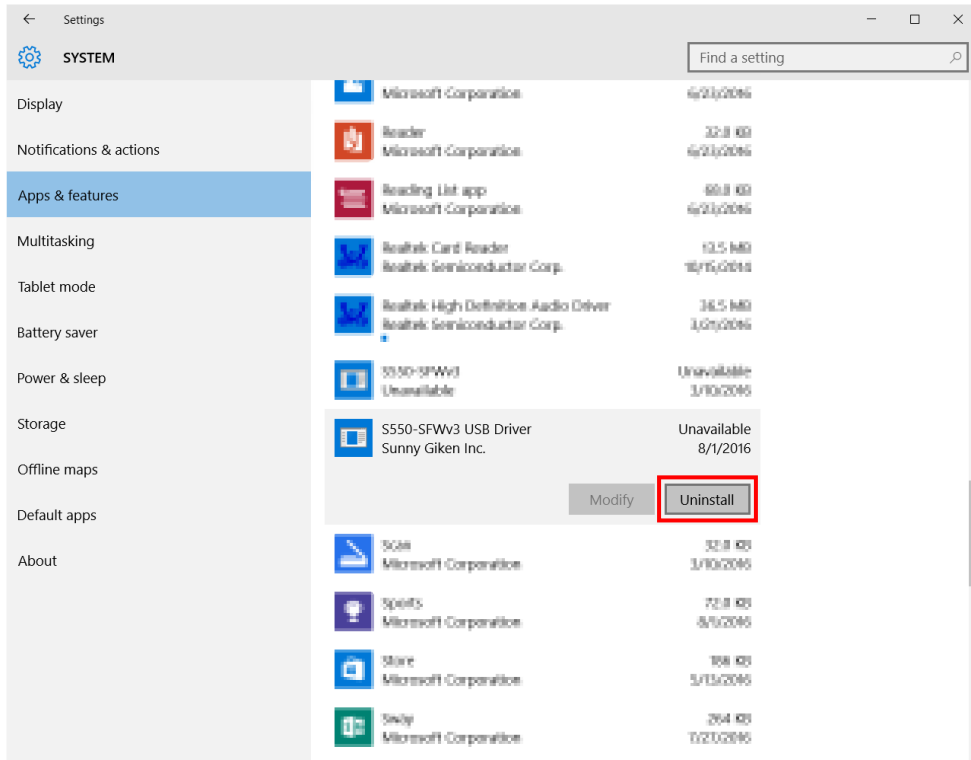
iii) The following dialog will be displayed. Click "Uninstall" button.
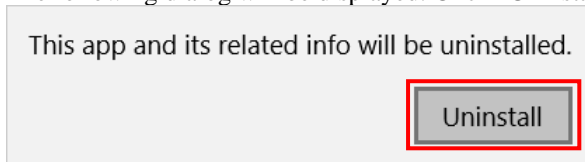
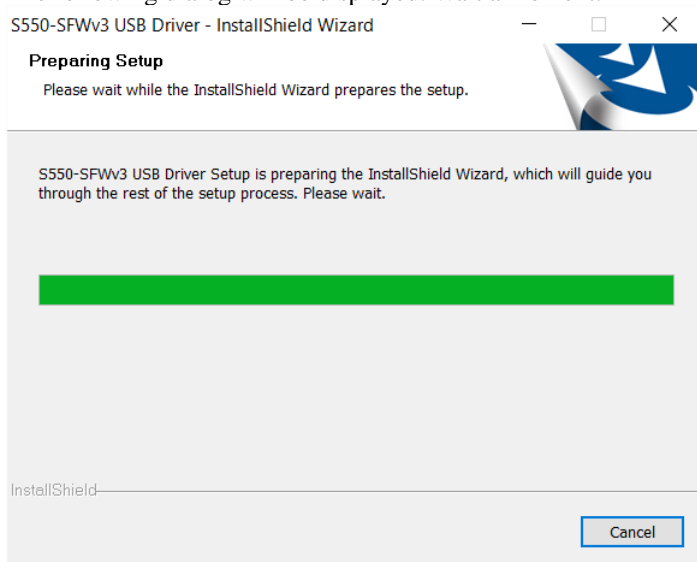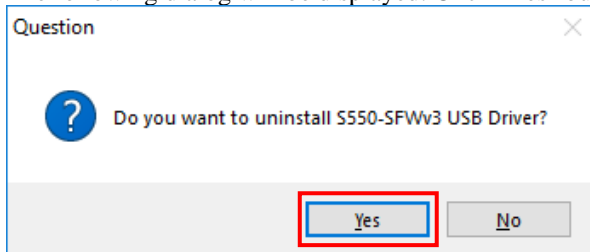iv) The following dialog will be displayed. Wait a moment.

v) The following dialog will be displayed. Click "Yes" button.

vi) USB Driver will be uninstalled. Wait a moment.
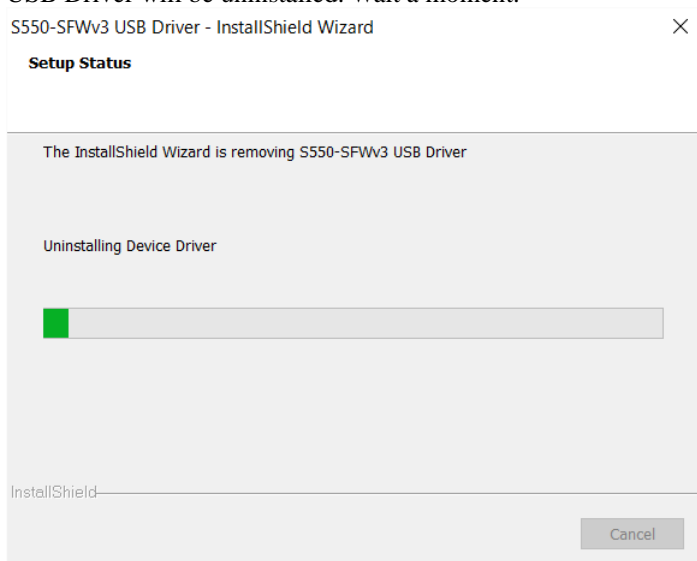
vii) The following dialog will be displayed. Click "Yes, I want to restart my computer now." radio button and click "Finish" button to reboot the PC.
In the case of Windows 7, radio buttons will not be displayed because you will not require to reboot the PC.
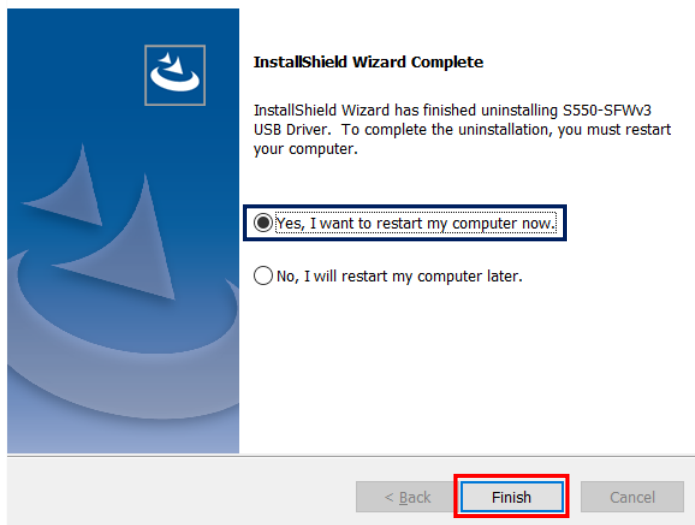
In the case of Windows 10 or 8.1, the PC will not be rebooted after clicking "Finish" button if you click "No, I will restart my computer later." radio button.
But, the reboot is required to complete uninstalling USB Driver. Reboot the PC certainly.

6. Control Software

6.1. Main Screen

6.1.1. Main Screen

(Single Data Mode, or Single CH Mode)

(Multi Data Mode)

For "Multi Data Mode", see "6.3.1 Maintenance Initial Setting Screen".

(Multi CH Mode)
For "Multi CH Mode", see "6.3.1 Maintenance Initial Setting Screen".

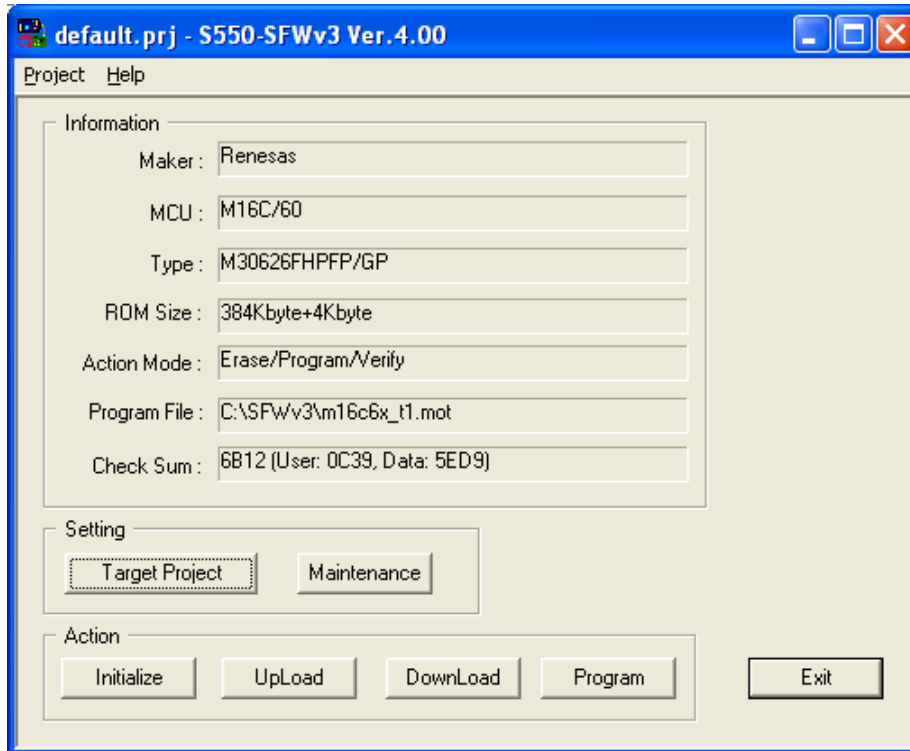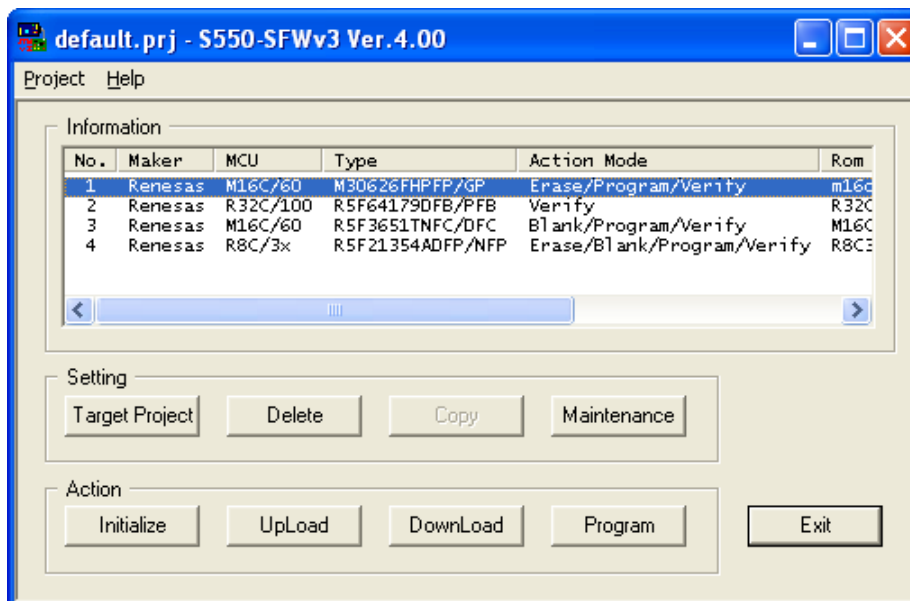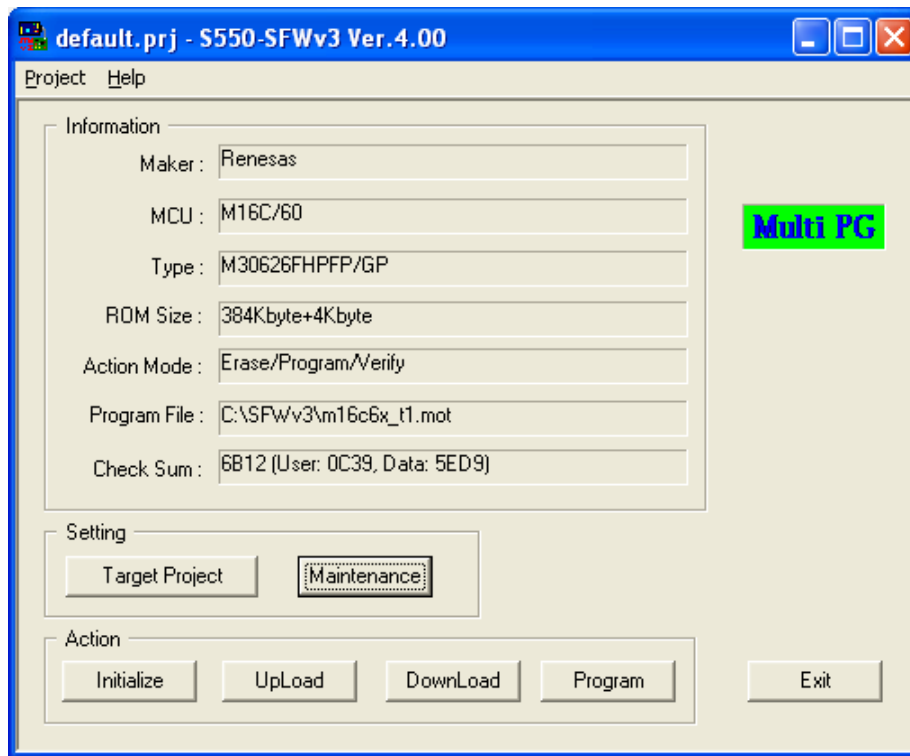**<Information section>**

Items	Descriptions
Maker :	Shows MCU manufacture.
MCU :	Shows MCU series.
Type :	Shows MCU model. * The device displayed "(ECC)" after the device name can write the E2 data flash in [ECC Available]. * The device displayed "(NO ECC)" after the device name can write the E2 data flash in [No ECC]. * The device displayed "(Little)" after the device name can write the user's program in little endian. * The device displayed "(Big)" after the device name can write the user's program in big endian.
ROM Size :	Shows total ROM block size.
Action Mode :	Shows the process executed.
Program File :	Shows the user's program name with the path.
Check Sum :	Shows the check sum of all areas, user area and data area in the user's program. (Lower 2 bytes of the data after all data is summed up by every byte are shown. The addresses not included in the user's program are calculated as FFh.) * The user area check sum indicates the check sum of the User area. The data area check sum indicates the check sum of other areas.

<Setting section>

Items	Descriptions
Target Project	Moves to device setting screen. (See "6.2.1 Device Setting Screen".)
Maintenance	Moves to maintenance screen. (See "6.3.1 Maintenance Initial Setting Screen".)
Delete	Deletes each data in "Multi Data Mode".
Copy	Copies one data onto another arbitrary data in "Multi Data Mode".

<Action section>

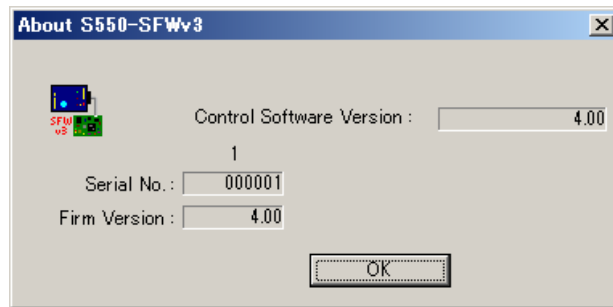| Items	Descriptions
Initialize	Initializes all S550-SFWv3 internal memory. * Pressing the start button on S550-SFWv3 for 5 seconds executes the same operation.
UpLoad	Uploads the program data stored in S550-SFWv3 to the control software.
DownLoad	Downloads the set program data to S550-SFWv3. * When the program data on S550-SFWv3 and the data on the control software match, downloading will not be executed.
Program	Stores the set program data on S550-SFWv3 and moves to the execution screen (Program).
Exit	Exits the control software.

<Project menu>

Items	Descriptions
Project New Ctrl+N Open... Ctrl+O Save As... Ctrl+S 1 default.prj Exit Alt+F4	"New": Discards the current settings and starts new setting.
	"Open...": Opens a project file.
	"Save As...": Saves a project file with a new name.
	"Recent File": Shows project files recently used.
	"Exit": Exits the control software.

<Help menu>

Items	Descriptions
Help About S550-SFWv3 Manual	"About S550-SFWv3": Opens About screen. (See "6.1.2 About screen")
	"Manual": Shows S550-SFWv3 user's manual (this document).

6.1.2. About Screen

(Single CH Mode)
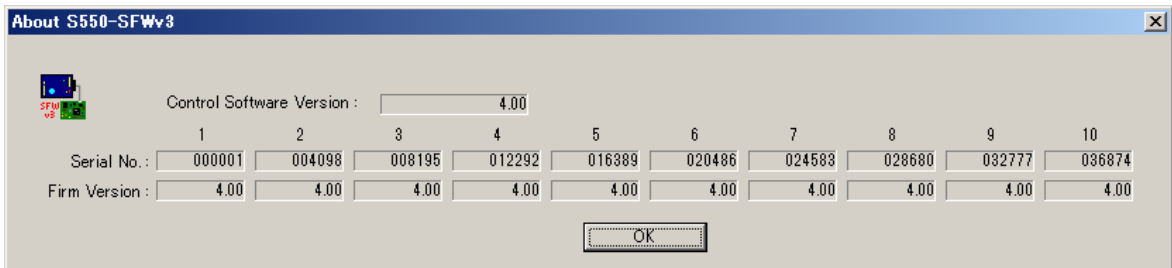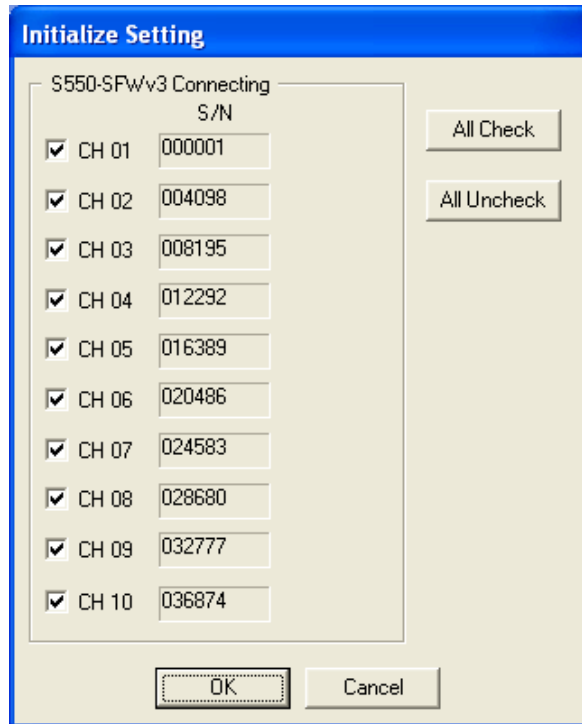

(Multi CH Mode)

Items	Descriptions
Control Software Version :	Shows the control software version.
Serial No. :	Shows S550-SFWv3 serial number. * It queues up in order of the serial number in the "Multi CH Mode".
Firm Version :	Shows S550-SFWv3 firm version.
OK	Closes the screen.

6.1.3.   Initialize Setting Screen

The following screen is displayed only in the "Multi CH Mode".

<<S550-SFWv3 Connecting section>>

Items	Descriptions
☐ CH 01	Selects channels that will be initialized.
S/N	Shows S550-SFWv3 serial number. * It queues up in order of the serial number in the "Multi CH Mode".
All Check	All channels will be initialized.
All Uncheck	All channels will not be initialized.
OK	Closes the screen. * After closing the screen, initialize all selected S550-SFWv3 internal memory.
Cancel	Closes the screen.

6.1.4.   UpLoad Setting Screen

The following screen is displayed only in the "Multi CH Mode".

<<S550-SFWv3 Connecting section>>
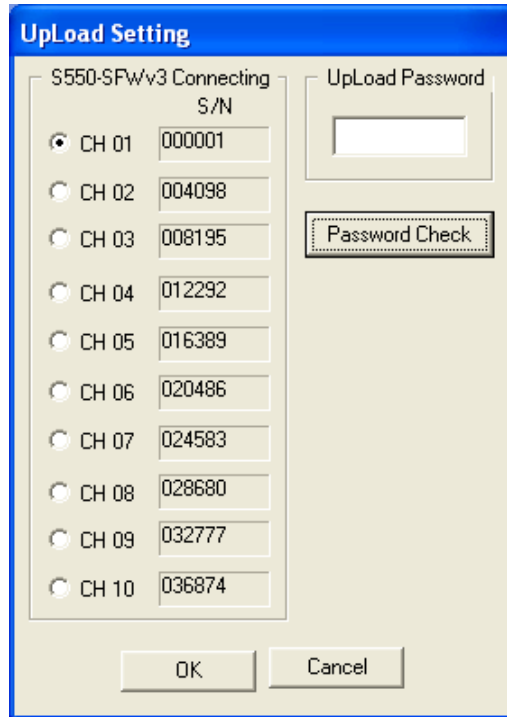
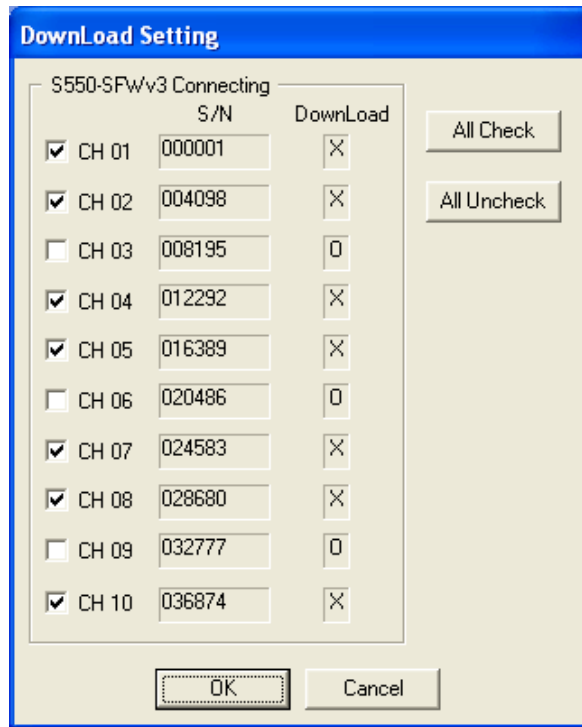| Items	Descriptions
○ CH 01	Selects channel that will be uploaded.
S/N	Shows S550-SFWv3 serial number. * It queues up in order of the serial number in the "Multi CH Mode".
OK	Closes the screen. * After closing the screen, upload the program data stored in the selected S550-SFWv3 to the control software.
Cancel	Closes the screen.

<<UpLoad Password section>>

Items	Descriptions
UpLoad Password	Inputs a password. Maximum of 8 single byte characters can be inputed.
Password Check	After inputing password to the "UpLoad Password" text box and clicking the "Password Check" button, The channel for which password is suitable will become effective.

6.1.5.   DownLoad Setting Screen

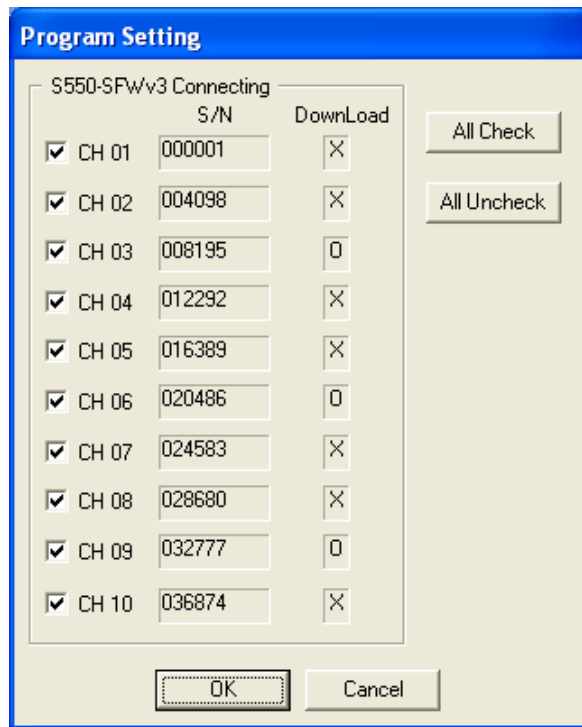The following screen is displayed only in the "Multi CH Mode".

<<S550-SFWv3 Connecting section>>

Items	Descriptions
☐ CH 01	Selects channels that will be downloaded.
S/N	Shows S550-SFWv3 serial number. * It queues up in order of the serial number in the "Multi CH Mode".
DownLoad	Shows the status of download. In the "DownLoad" list, the item of "o" means that the channel is downloaded completely, and the item of "x" means that the channel is not yet downloaded.
All Check	All channels will be downloaded.
All Uncheck	All channels will not be downloaded.
OK	Closes the screen. * After closing the screen, download the set program data to the selected S550-SFWv3. When the program data on the selected S550-SFWv3 and the data on the control software match, downloading will not be executed.
Cancel	Closes the screen.

6.1.6.　Program Setting Screen

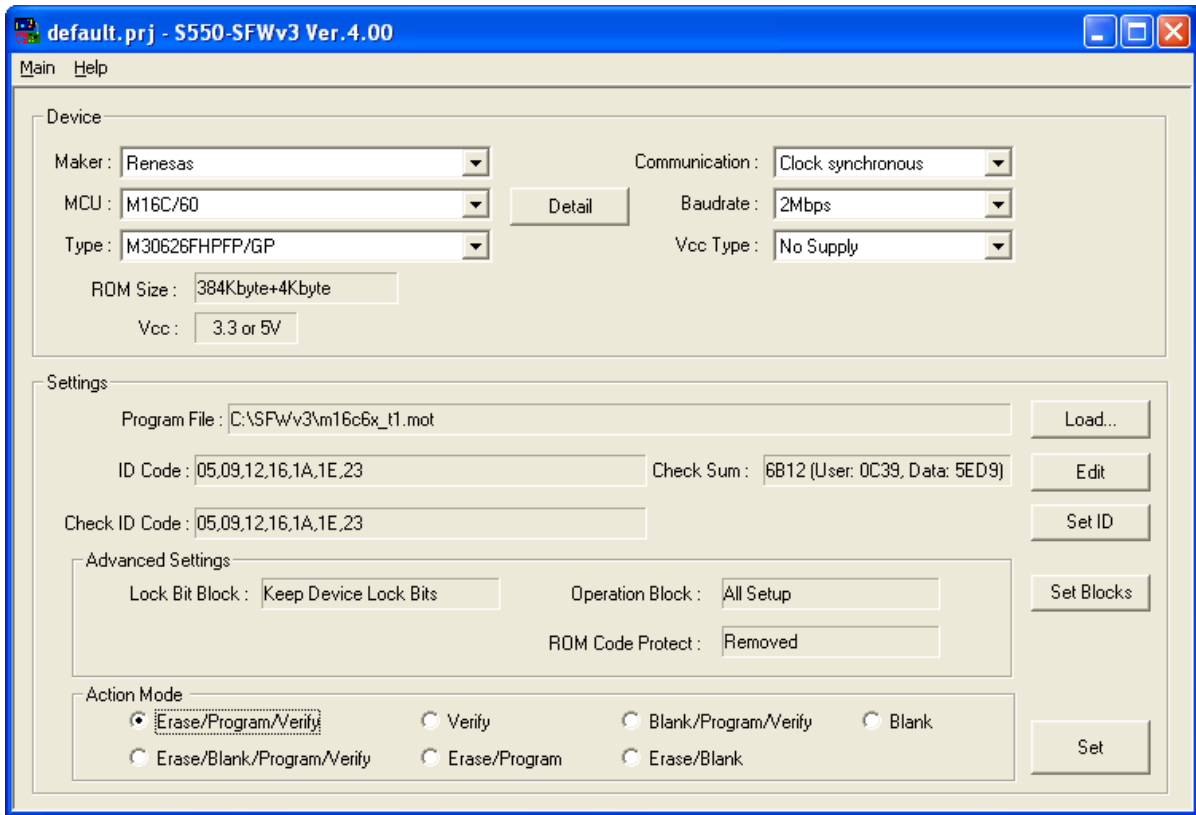The following screen is displayed only in the "Multi CH Mode".

<<S550-SFWv3 Connecting section>>

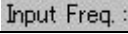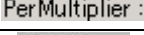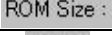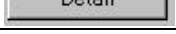| Items	Descriptions
☐ CH 01	Selects channels that will be programmed.
S/N	Shows S550-SFWv3 serial number. * It queues up in order of the serial number in the "Multi CH Mode".
DownLoad	Shows the status of download. In the "DownLoad" list, the item of "o" means that the channel is downloaded completely, and the item of "x" means that the channel is not yet downloaded.
All Check	All channels will be programmed.
All Uncheck	All channels will not be programmed.
OK	Closes the screen. * After closing the screen, store the set program data on the selected S550-SFWv3 and moves to the execution screen (Program).
Cancel	Closes the screen.

6.2. Device Setting Screen

Some items are not displayed or not required to set depending on the particular device.

6.2.1. Device Setting Screen

<<Device section>>
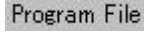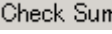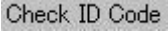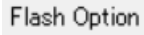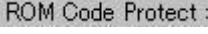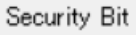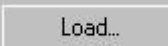
Items	Descriptions
Maker :	Select MCU manufacturer.
MCU :	Select MCU series.
Type :	Select MCU model.
Communication :	Shows communication method. ・Single-wire: Single wire Clock-asynchronous serial I/O ・Clock synchronous: Clock-synchronous serial I/O ・Clock synchronous(NO HS): Clock-synchronous serial I/O (No handshake) ・UART: Clock-asynchronous serial I/O 　　*Communication will differ depending on the target.
Baudrate :	Select baudrate. ・Single-wire: 　9.6Kbps - 460.8Kbps ・Clock synchronous: 　125Kbps - 4Mbps ・UART: 　9.6Kbps - 460.8Kbps 　*Baudrate will differ depending on the target clock, etc.
Vcc Type :	Select voltage supplied from S550-SFWv3. ・No Supply: Select this option when supplying voltage from external power source to the target board. *The voltage will not be supplied from S550-SFWv3. ・3.3V/5V: Select either when supplying voltage from S550-SFWv3 to the target board.

Items	Descriptions
Set Vcc	Opens the input vcc setting screen. (See "6.2.12 Input Vcc Setting Screen".)
Input Freq. :	Shows clock frequency.
Set Freq.	Opens the clock frequency setting screen. (See "6.2.3 Clock Frequency Setting Screen".)
Main Multiplier :	Shows main clock frequency.
PerMultiplier :	Shows peripheral clock frequency.
ROM Size :	Shows total block size of the ROM.
Vcc :	Shows voltage required for the device to operate.
Detail	Opens the device detail display screen. (See "6.2.2 Device Detail Display Screen".)

<<Settings section>>

Items	Descriptions
Program File :	Shows the user's program name with the path.
Check Sum :	Shows the check sum of all areas, user area and data area in the user's program. (Lower 2 bytes of the data after all data is summed up by every byte are shown. The addresses not included in the user's program are calculated as FFh.) * The user area check sum indicates the check sum of the User area. The data area check sum indicates the check sum of other areas.
ID Code :	Shows the ID code of the user program.
Check ID Code :	Shows the ID code for device identification. * By loading the user program file, the ID code of the user program is set in little endian. In case of big endian, change the ID code for device identification setting. (See "6.2.9 ID Code for Device Identification Setting Screen".)
Lock Bit Block :	Shows the lock bit block setting.
Operation Block :	Shows the operation block (block to program) setting.
Flash Option :	Shows the flash option setting. You may change this setting on ROM protection setting screen. (See "6.2.11 ROM Protection Setting Screen".)
ROM Code Protect :	Shows the ROM code protection setting.
Security Bit :	Shows the security bit setting. You may change this setting on ROM protection setting screen. (See "6.2.11 ROM Protection Setting Screen".)
Load...	Opens a user program file. (See "6.2.4 User Program File Load Screen".)
Edit	Opens the user program edit screen. (See "6.2.5 User Program Edit Screen".)
Set ID	Opens the ID code for device identification setting screen. (See "6.2.9 ID Code for Device Identification Setting Screen".)
Set Blocks	Opens ROM area block information setting screen. (See "6.2.10 ROM Area Block Information Setting Screen".)
Set Protect	Opens ROM protection setting screen. (See "6.2.11 ROM Protection Setting Screen".) *This item is displayed when selecting R32C/100 from the MCU list.
Erase/Program/Verify	Selects erase, program and verify check execution process.
Verify	Selects verify check execution process.
Blank/Program/Verify	Selects blank, program and verify check execution process. This item is selectable in extended operation mode.
Erase/Blank/Program/Verify	Selects erase, blank, program and verify check execution process. This item is selectable in extended operation mode.
Erase/Program	Selects erase and program execution process. This item is selectable in extended operation mode.
Erase/Blank	Selects erase and blank check execution process. This item is selectable in extended operation mode.

Items	Descriptions
⊙ Blank	Selects blank check execution process. This item is selectable in extended operation mode.
⊙ Chip Erase	Selects chip erase execution process. This item is selectable in extended operation mode.
⊙ Read	Selects read execution process. This item is selectable in extended operation mode.
Set	Moves to Main screen.

<<Main menu>>

Items	Descriptions
Main	"Main": Moves to Main screen. *After a confirmation message, setting contents will be discarded.

<<Help menu>>

Items	Descriptions
Help About S550-SFWv3 Manual	"About S550-SFWv3": Opens About screen. (See "6.1.2 About screen") "Manual": Shows S550-SFWv3 user's manual (this document).

6.2.2. Device Detail Display Screen
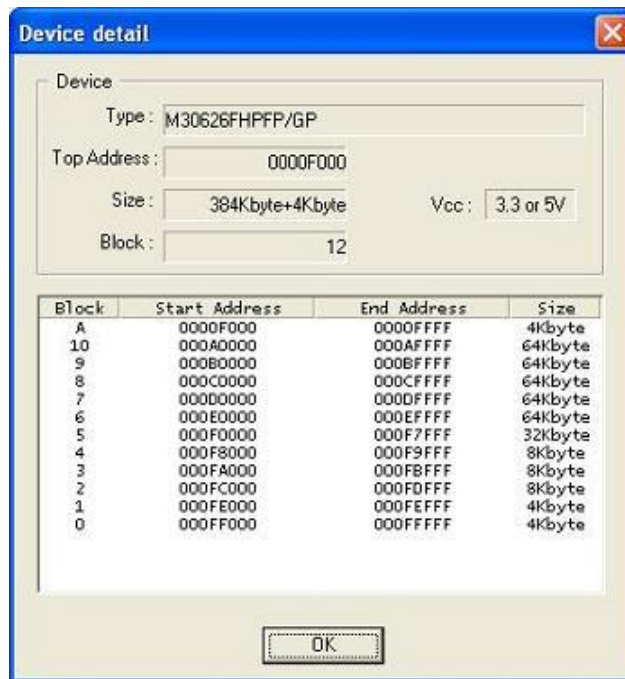
Items	Descriptions
Type :	Shows MCU model.
Top Address :	Shows the minimum value of the ROM block address.
Size :	Shows total ROM block size.
Block :	Shows the total number of blocks.
Vcc :	Shows Vcc supply voltage.
OK	Closes the screen.

6.2.3. Clock Frequency Setting Screen
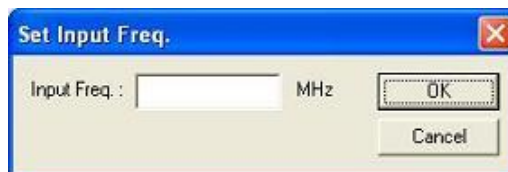
Items	Descriptions
Input Freq. :	Input clock frequency.
OK	Saves edited contents and exits editing. *The contents of the file will not be changed.
Cancel	Discards edited contents and exits editing. *If there is any change made in edited contents, a confirmation message will be displayed to save edited result.

6.2.4. User Program File Load Screen
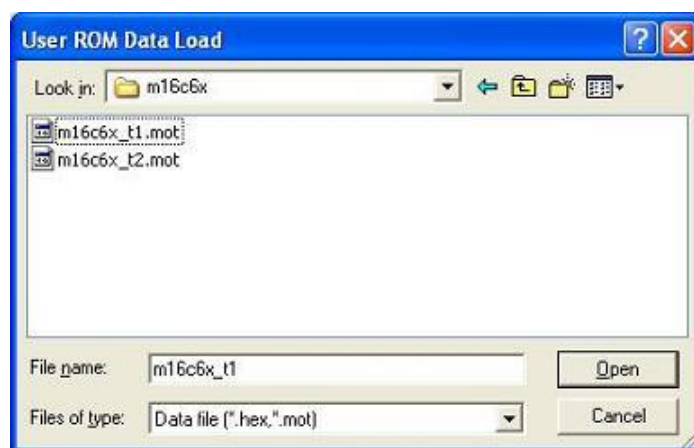
Select a user program file to load and press "Open".
When the file is loaded successfully, the file name will be shown in path in "Program File" of "Device Setting Screen".

* File formats shall be Intel HEX format (*.hex) or Motorola S format (*.mot) for a file to be loaded.

6.2.5.   User Program Edit Screen
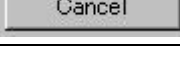
Items	Descriptions
Type :	Shows MCU model.
Program File :	Shows the user's program name with the path.
ROM Size :	Shows total ROM block size.
Size ⊙ Byte ○ Word ○ Dword	Select "Byte" to change data units to bytes.
	Select "Word" to change data units to words.
	Select "Dword" to change data units to Dwords.
Format ⊙ Hex ○ Signed ○ Unsigned	Select "Hex" to change data display format to Hex format.
	Select "Signed" to change data display format to Signed format.
	Select "Unsigned" to change data display format to Unsigned format.

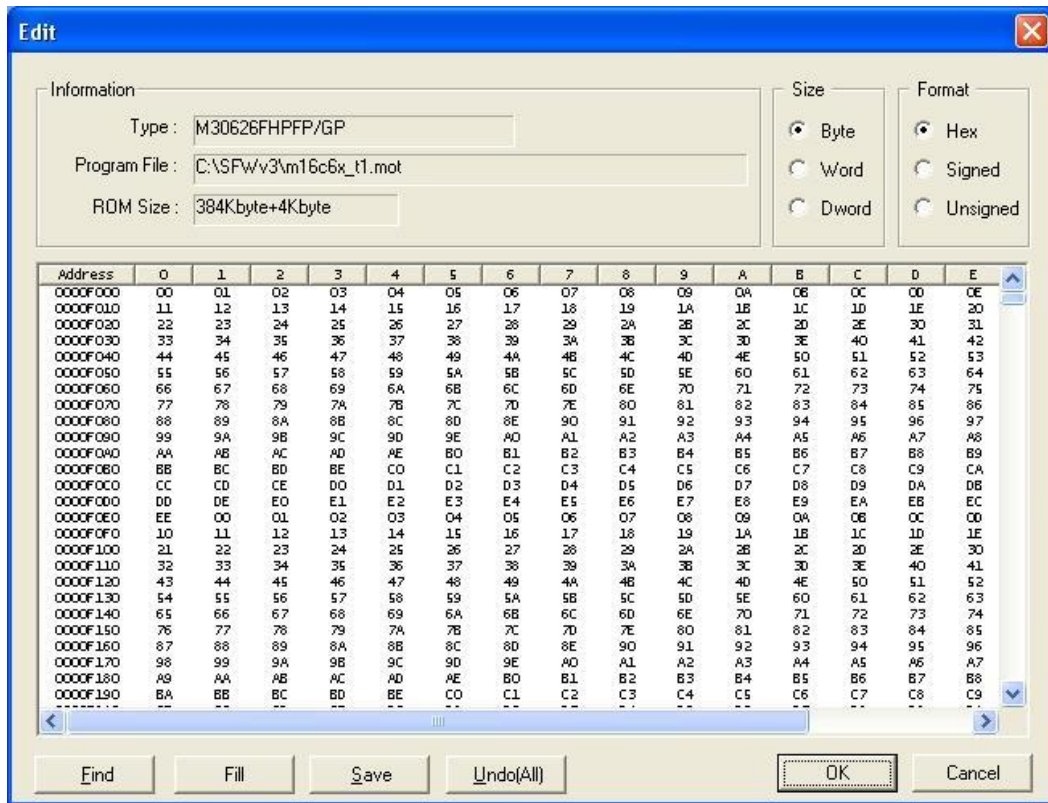| Items	Descriptions
Find	Searches user's program data or address. (See "6.2.6 User's Program Data Search Screen".)
Fill	Fills the selected area with the identical data. (See "6.2.7 User's Program Data Setting Screen".)
Save	Saves (overwrites) current edit data as a file. (See "6.2.8 User's Program Data Saving Screen".)
Undo(All)	Returns to the original status before editing.
OK	Saves edited contents and exits editing. *The contents of the file will not be changed.
Cancel	Discards edited contents and exits editing. *If there is any change made in edited contents, a confirmation message will be displayed to save edited result.
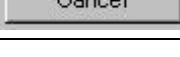
6.2.6.   User's Program Data Search Screen

Items	Descriptions
⊙ Address	Input address to search. *An error message appears when inputting non-existing address.
⊙ Data(Hex)	Input data to search. *Maximum of 8 digits.
OK	Starts search and closes the screen.
Cancel	Closes the screen without searching.

6.2.7.   User's Program Data Setting Screen
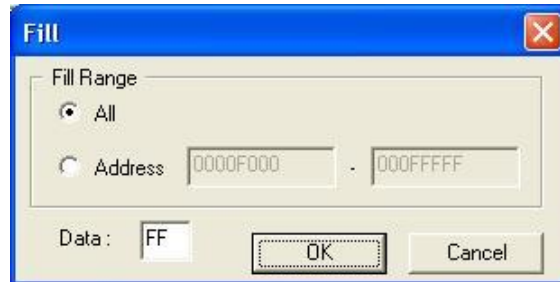
Items	Descriptions
⊙ All	Selects all area for setting the data.
⊙ Address	Selects address range for setting the data. Input the address range in the text box. *An error message appears when inputting non-existing address.
Data :	Input data to set.
OK	Sets the data and closes the screen.
Cancel	Closes the data without setting the data.

6.2.8. User's Program Data Saving Screen

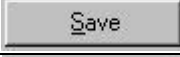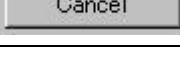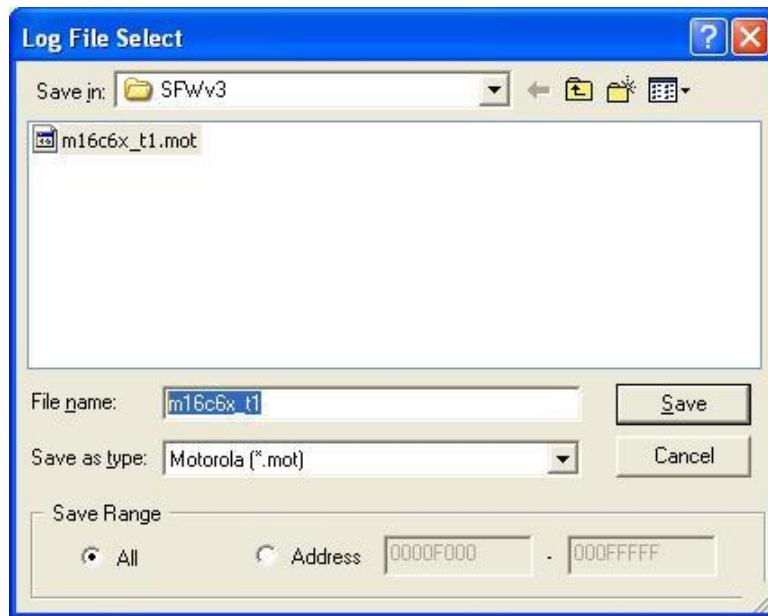| Items	Descriptions
⊙ All	Selects all area for saving.
⊙ Address	Selects address range for saving. Input the address range in the text box. *An error message appears when inputting non-existing address.

* File formats shall be Intel HEX format (*.hex) or Motorola S format (*.mot) for a file to be saved.
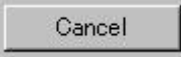
6.2.9. ID Code for Device Identification Setting Screen

(TXZ3 Series)

Items	Descriptions
ID0 ID1 [05] [09]	Input the device's ID code. Blank means 00h.
ID Size (PLEN)	Input the ID code length (bytes).
ID Size Address (PNSA)	Input the address of ID code length in device's ROM area. Refer to the device's hardware manual about the input address.
ID Code Address (PCSA)	Input the address of ID code in device's ROM area. Refer to the device's hardware manual about the input address.
OK	Reflects the setting content and closes the screen.
Cancel	Discards the setting content and closes the screen.

(Except TXZ3 Series)
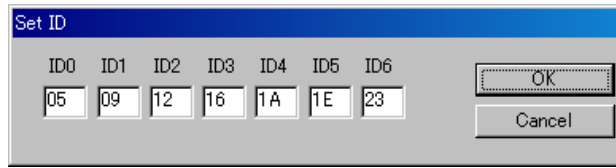
Items	Descriptions
	Input the device's ID code. Blank means 00h. *The length of ID code depends on the device.
	Reflects the setting content and closes the screen.
	Discards the setting content and closes the screen.

* By loading the user program file, the ID code of the user program is set in little endian. In case of big endian, change the ID code for device identification as following.

6.2.10.   ROM Area Block Information Setting Screen
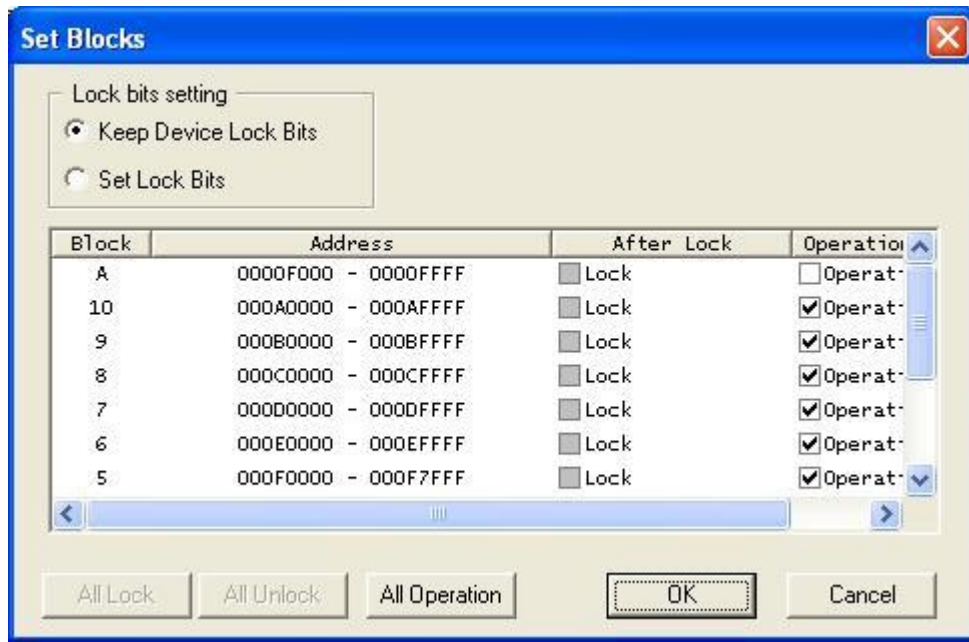
Items	Descriptions
⊙ Keep Device Lock Bits	Selects "Keep Device Lock Bits" for lock bit processing method. Previous lock status will be maintained.
⊙ Set Lock Bits	Selects "Set Lock Bits" for lock bit processing method. New lock bit settings will be done with the "Lock Block" check box.
All Lock	Checks all of the Lock Block check boxes in the list.
All Unlock	Unchecks all of the Lock Block check boxes in the list.
All Operation	Checks all of the Operation Block check boxes in the list.
☐ Lock	Sets whether to lock for each block.
☑ Operation	Sets whether to program for each block. *Data area (with English capitalized block names), program ROM2 area (with block name "ROM2"), user boot mat area (with block name "BOOT") and E2 data flash area (with block name "E2D") are not set in the initial setting.
OK	Reflects the setting content and closes the screen.
Cancel	Discards the setting content and closes the screen.

6.2.11. ROM Protection Setting Screen

(R32C/100 Series)
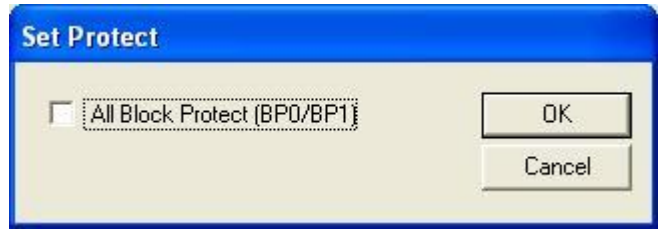
Items	Descriptions
☐ All Block Protect (BP0/BP1)	Sets whether or not to execute BP Bit Program for all BP0 and BP1.
OK	Reflects the setting content and closes the screen.
Cancel	Discards the setting content and closes the screen.

(TXZ3 Series)

Items	Descriptions
☐ Security bit	Sets whether or not to enable security.
OK	Reflects the setting content and closes the screen.
Cancel	Discards the setting content and closes the screen.
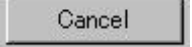
(78K Family, RL78 Family or RX100 Series)

Items	Description
☐ Flash Option	Sets whether or not to execute Flash Option.
☐ Disable Chip Erase	Execution of the chip erase command is disabled.
☐ Disable Block Erase	Execution of the block erase command is disabled.
☐ Disable Program	Execution of the write command is disabled.
☐ Disable Read	Execution of the read command is disabled.
☐ Disable Boot Block Cluster Programming	Writing to the boot area is disabled.
☐ Enable Flash Shield	Flash shield window is enabled.
Start of Flash Shield Block Number :	Select the start block of the flash shield window.
End of Flash Shield Block Number :	Select the end block of the flash shield window.
End of Boot Block Number :	Select the end block of the boot area.
Reset Vector Address :	Input the reset vector address of the microcontroller.
OCD Security ID :	Input the on-chip debug security ID.
OPBT0 :	Input the option byte.
OK	Reflects the setting content and closes the screen.
Cancel	Discards the setting content and closes the screen.

6.2.12. Input Vcc Setting Screen
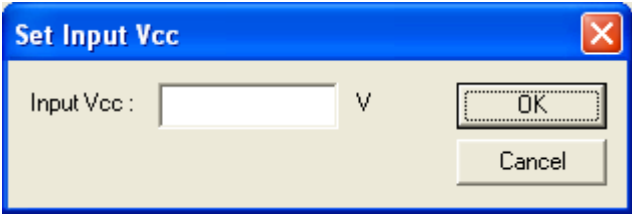
Items	Descriptions
	Input vcc.
	Reflects the setting content and closes the screen.
	Discards the setting content and closes the screen.
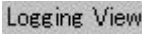
6.3. Maintenance Setting Screen

6.3.1. Maintenance Initial Setting Screen

<Initial Setting section>

Items	Descriptions
Ena ☐	Enables saving the action log (operation execution log).
Save Directry C:¥SFWv3¥ C:¥SFWv3¥	Set saving destination for the action log (operation execution log), and project (device setting) file.
☐ Mute	Mutes S550-SFWv3 main unit's buzzer sound.
☐ Enable	Enables a password for S550-SFWv3 main unit. Uploading data to program will require the password when the password is enabled for security protection. *The password can be set in the password setting screen. (See "6.3.2 Password Setting Screen")
Password Change	Opens the password setting screen. (See "6.3.2 Password Setting Screen")
☐ Enable Expansion Action Mode	Enables extended operation mode. *Standard operation mode will be enabled when this box is unchecked. ・Standard operation mode: "Erase/Program/Verify" and

	"Verify" and be selected in the device setting screen. ・Extended operation mode: In addition to the standard operation mode, "Blank/Program/Verify", "Erase/Blank/Program/Verify","Erase/Program", "Erase/Blank", "Blank", "Chip Erase" and "Read" can be selected in the device setting screen. "Chip Erase" or "Read" cannot be selected depending on the particular device.
☐ Enable Power Save Mode	Enables power saving for S550-SFWv3 main unit.
☐ Enable Multi Data Mode	Enables "Multi Data Mode". ・Multi Data Mode: Maximum of 4 data can be set/downloaded in the main screen. * Cannot be used in combination with "Multi CH Mode". When you enable "Multi Data Mode", "Multi CH Mode" is automatically disabled.
☐ Enable FA Mode	Enables FA mode. * For details, see the [S550-SFWv3 FA Mode Operation Manual].
☐ Enable Multi CH Mode	Enables "Multi CH Mode". * For details, see the "7.2 Multi CH Mode". * Cannot be used in combination with "Multi Data Mode". When you enable "Multi CH Mode", "Multi Data Mode" is automatically disabled.
☐ Enable Standalone	Enables switch operation on S550-SFWv3 main unit while the control software is running. It is possible to program in Stand-alone Mode or FA mode while checking the device setting with the control software. * When this check box is unchecked, switch operation on S550-SFWv3 main unit is disabled while the control software is running. * When "Execution Screen" is displayed, switch operation on S550-SFWv3 main unit is disabled even if this check box is checked. It is enabled by going back to "Main Screen".
OK	Reflects the setting content and closes the screen. * The setting content of ☐ Enable Standalone is not reflected when the screen is closed. To reflect the setting content, save the project file and restart the control software.
Cancel	Discards the setting content and closes the screen.
Logging View	Moves to Execution operation log display screen. (See 6.3.3 Execution Operation Log Display Screen".)

6.3.2. Password Setting Screen

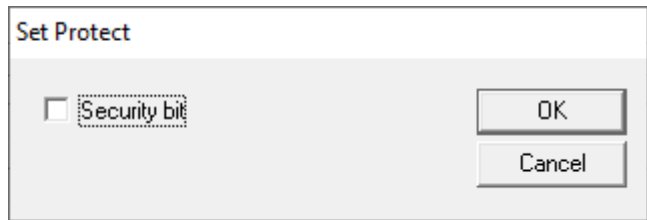| Items	Descriptions
New Password:	Sets a password. Maximum of 8 single byte characters can be set. *The password is reflected when "Enable" check box is checked in the maintenance screen and download is executed.
New Password Check:	Reenter the password.
OK	Reflects the setting content and closes the screen.
Cancel	Discards the setting content and closes the screen.

* About the password setting function
- Password is set to S550-SFWv3 main unit. Uploading data to program will require the password when the password is enabled for security protection. Maximum of 8 single byte characters can be set for a password.
- To set a password, check the "Enable" check box in the main screen, set a password in the password setting screen and download the data to program.
- You cannot delete the password only. In case you forgot the password, set a new password and download the data to program.

6.3.3. Execution Operation Log Display Screen

<Logging section>
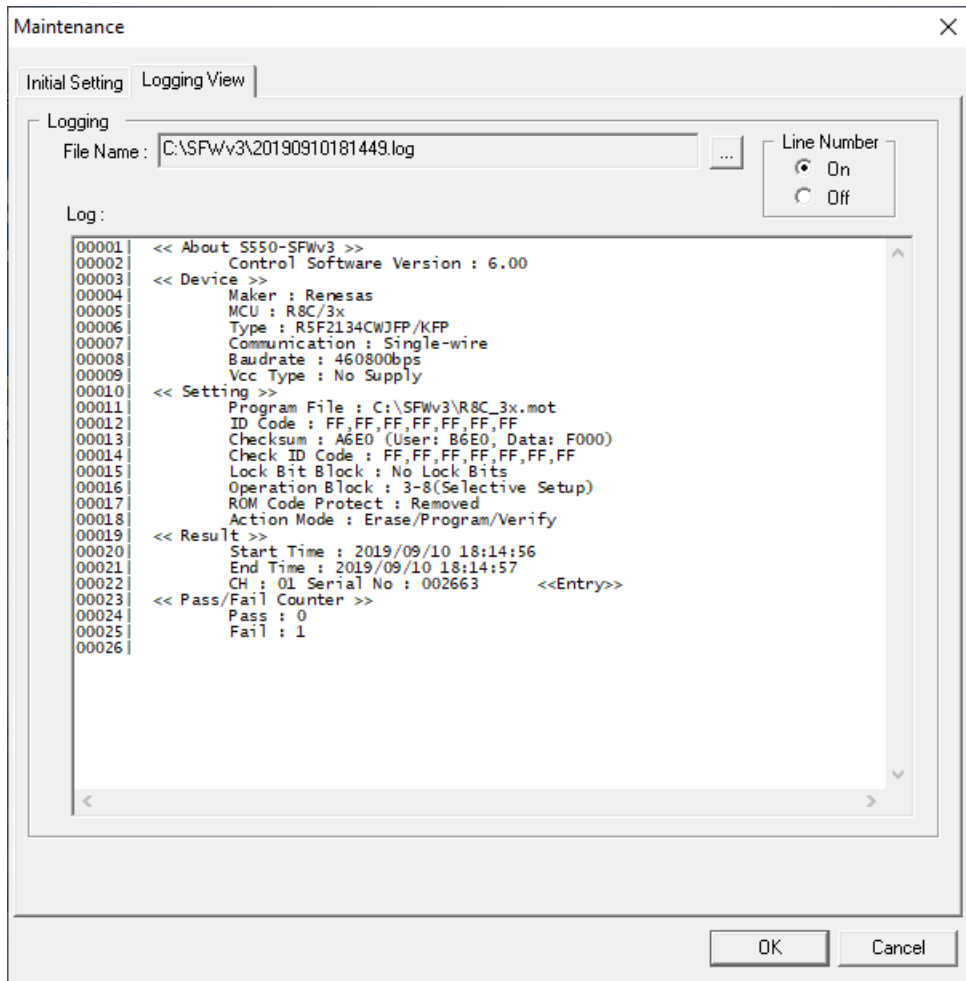
Items	Descriptions
File Name : C:¥SFWv3	Select a log file to display contents.
Line Number ◉ On ○ Off	Show/hide line numbers.
Log :	Shows the operation execution log data. For details, see the "6.3.3.1 Details of Execution Operation Log".
OK	Reflects the setting content and closes the screen.
Cancel	Discards the setting content and closes the screen.
Initial Setting	Moves to the maintenance screen. (See "6.3.1 Maintenance Setting Screen".)

6.3.3.1.   Details of Execution Operation Log

<< About S550-SFWv3 >>

Items	Descriptions
Control Software Version	Shows the version of control software.

<< Device >>

Items	Descriptions
Maker	Shows MCU manufacturer.
MCU	Shows MCU series.
Type	Shows MCU model.
Communication	Shows communication method.
Baudrate	Shows baudrate.
Vcc Type	Select voltage supplied from S550-SFWv3.

<< Settings >>

Items	Descriptions
Program File	Shows the user program name with the path.
ID Code	Shows the ID code of the user program.
Check Sum	Shows the check sum of the user program.
Check ID Code	Shows the ID code for device identification.
Lock Bit Block	Shows the lock bit block setting.
Operation Block	Shows the operation block (block to program) setting.
ROM Code Protect	Shows the ROM code protection setting.
Security Bit	Shows the security bit setting.
Action Mode	Shows the execution process.

<< Flash Option Setting >>

Items	Descriptions
< Security Setting >	Shows when security setting is enabled.
< Protect Setting >	Shows the setting of flash shield window.

< Security Setting >

Items	Descriptions
Disable Block Erase	Shows when execution of the block erase command is disabled.
Disable Program	Shows when execution of the write command is disabled.
Disable Boot Block Cluster Programming	Shows when writing to the boot area is disabled.

< Protect Setting >

Items	Descriptions
Start of Flash Shield Block Number	Shows the start block of the flash shield window. Shows "None" when the flash shield window is disabled.
End of Flash Shield Block Number	Shows the end block of the flash shield window. Shows "None" when the flash shield window is disabled.
End of Boot Block Number	Shows the end block of the boot area when the flash shield window is enabled.

<< Result >>

Items	Descriptions
Start Time	Shows the date of starting execution process.
End Time	Shows the date of ending execution process.
CH	Shows the channel number.
Serial No	Shows S550-SFWv3 serial number.
<<xxx>>	Shows the execution result at "xxx". See "Execution Detail Screen" in the "9.5 List of Center Display and Execution Detail Screen" about execution result. The followings are the displayed strings. - "Err" is left out if the strings of "Execution Detail Screen" includes "Err". For example, "ID" is displayed when checking the ID code failed. - "Entry" is displayed when mode entry failed.

<< Pass/Fail Counter >>

Items	Descriptions
Pass	Shows the success count of execution process.
Fail	Shows the failure count of execution process.

6.4. Execution Screen

6.4.1. Execution Screen

(Single CH Mode)

(Multi CH Mode)

<<Information section>>

Items	Descriptions
Maker :	Shows MCU manufacturer.
MCU :	Shows MCU series.
Type :	Shows MCU model.
ROM Size :	Shows total block size of the ROM.
Action Mode :	Shows execution processing.
Program File :	Shows the user's program name with the path.
Check Sum :	Shows the check sum of all areas, user area and data area in the user's program. (Lower 2 bytes of the data after all data is summed up by every byte are shown. The addresses not included in the user's program are calculated as FFh.) * The user area check sum indicates the check sum of the User area. The data area check sum indicates the check sum of other areas.

<<Pass/Fail Counter section>>

Items	Descriptions
Pass: [0]	Shows the number of successful programming.
Fail: [0]	Shows the number of programming errors.

Items	Descriptions
Start	Starts programming.

<<Result section>>

Items	Descriptions
□ Detail view	Enables the "Result" switch.
(green bar)	Shows programming result. *Yellow-Green means Pass. Red means Fail. Gray means cancel or before operation. Click to open the operation result detail screen when "Detail view" check box is checked.
Serial No. : 000001	Shows S550-SFWv3 serial number.
2007/10/25 14:13:16 Pass: 1 , Fail: 0	Shows execution operation log.

<<Stop menu>>

Items	Descriptions
Stop Main Exit Alt+F4	"Main": Stops operation and move to the main screen.
	"Exit": Shows a confirmation message and exit the application.

<<Counter menu>>

Items	Descriptions
Counter Clear	"Counter Clear": Shows a confirmation message and clears the number of successes and failures in the execution screen.

<<Help menu>>

Items	Descriptions
Help Manual	"Manual": Shows S550-SFWv3 user's manual (this document).

7. Remote Mode

7.1. Single CH Mode

7.1.1. Remote Programming

7.1.1.1. Process Flow up to Programming

The following section describes the operations from setting the programming data on the control software to actually programming the target.

Maintenance setting	Set maintenance setting (buzzer, password) in the control software.
Data setting	Set program data setting (device, data, block) on the control software.
Download	Store data set on the control software in SFWv3.
Programming	Connect the target board with the PC connected (USB), and click the "Start" button of the control software to start programming.
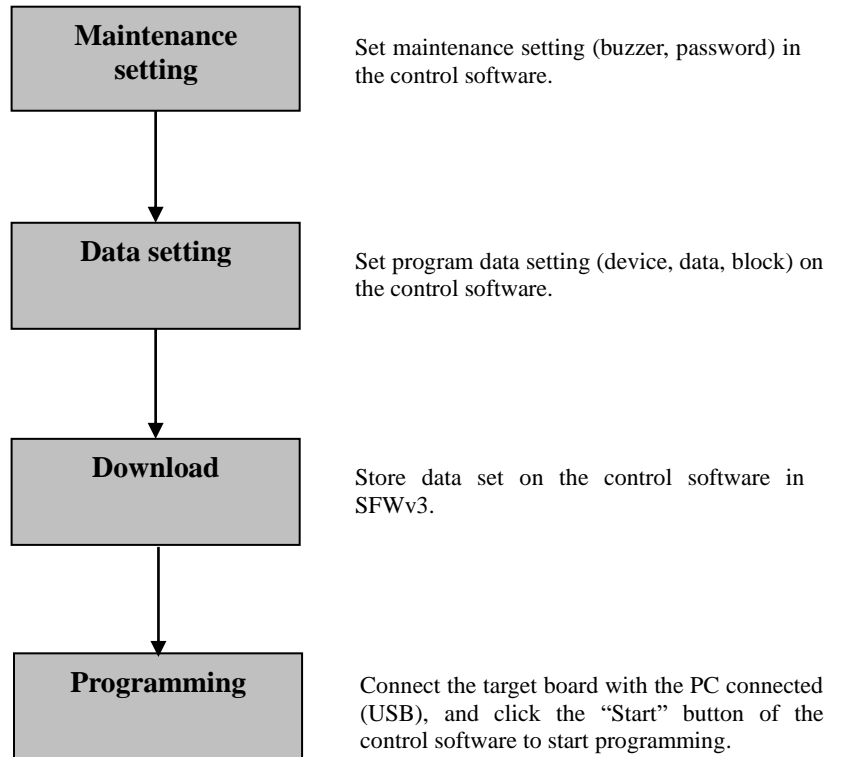
7.1.1.2.   Maintenance Settings

With the control software, you can change S550-SFWv3 main unit setting.
The following illustrates an example of the maintenance setting.

① Go to the maintenance setting screen
  - Click the "Maintenance" button and move to the maintenance screen.
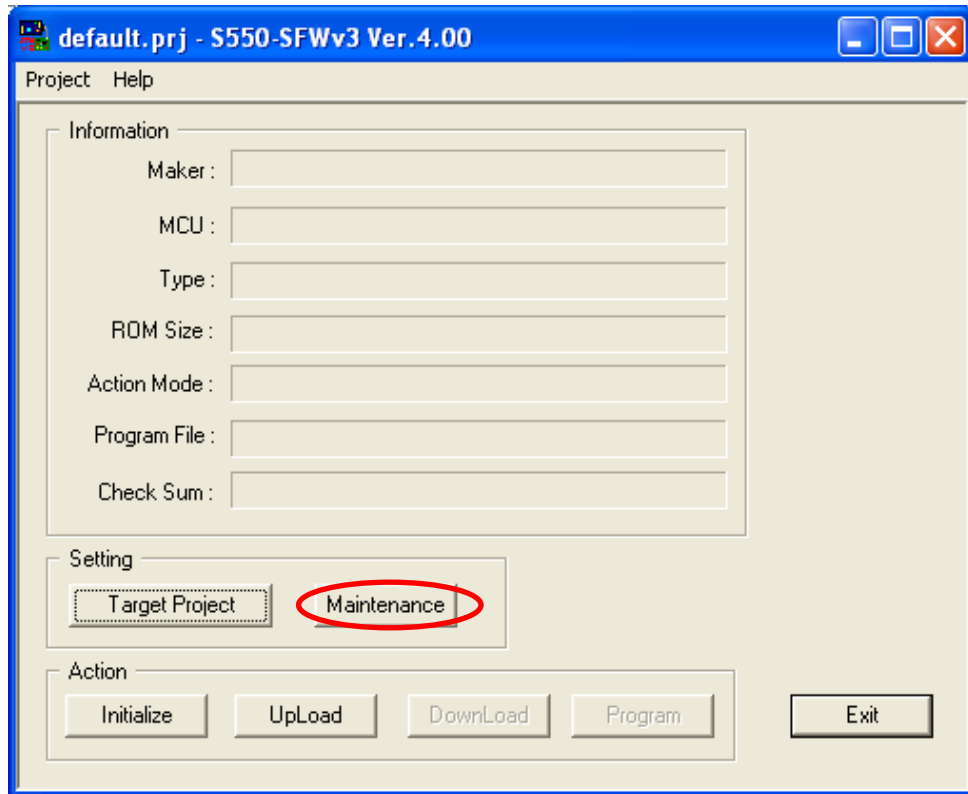
② Save execution operation log
- Check the "Ena" check box to save execution operation log.
- To select the saving destination for execution operation log, click the "Save Directory" button and select the destination in the open file dialog.
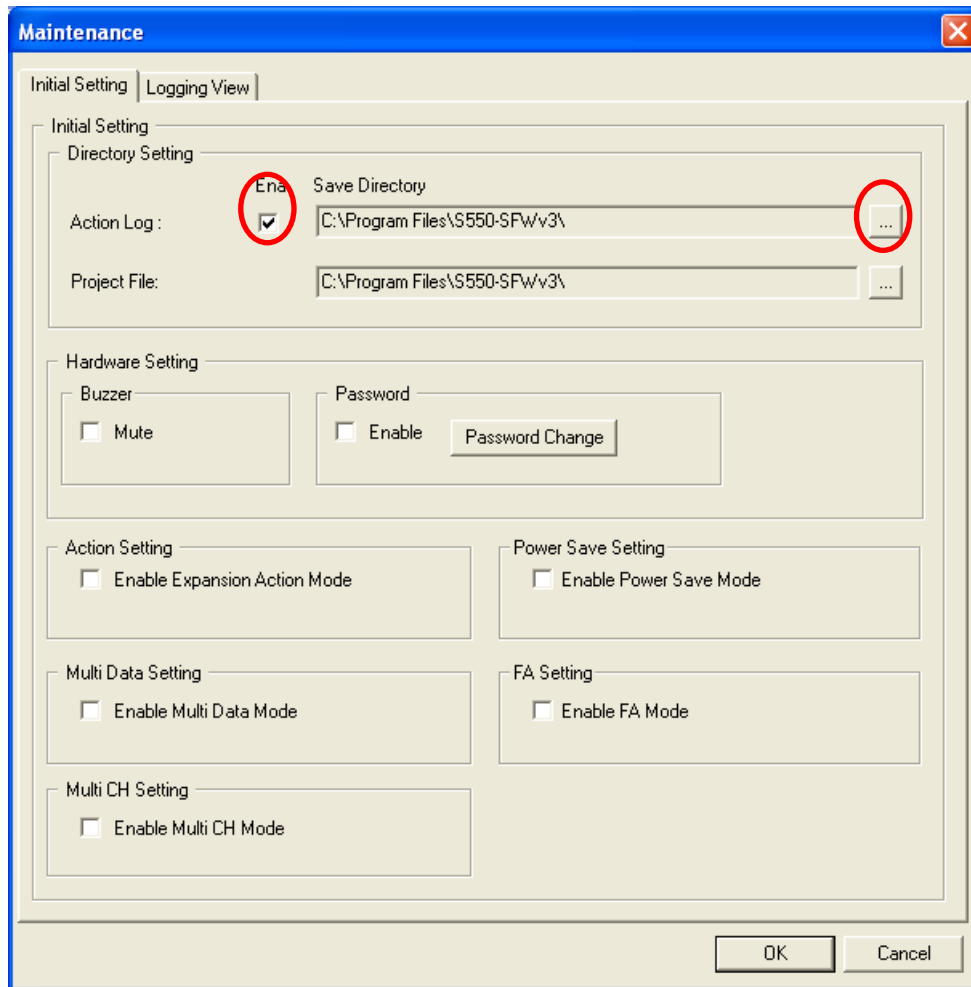
③ Save device setting file
- To select the saving destination for the device setting file, click the "Save Directory" button and select the destination in the open file dialog.
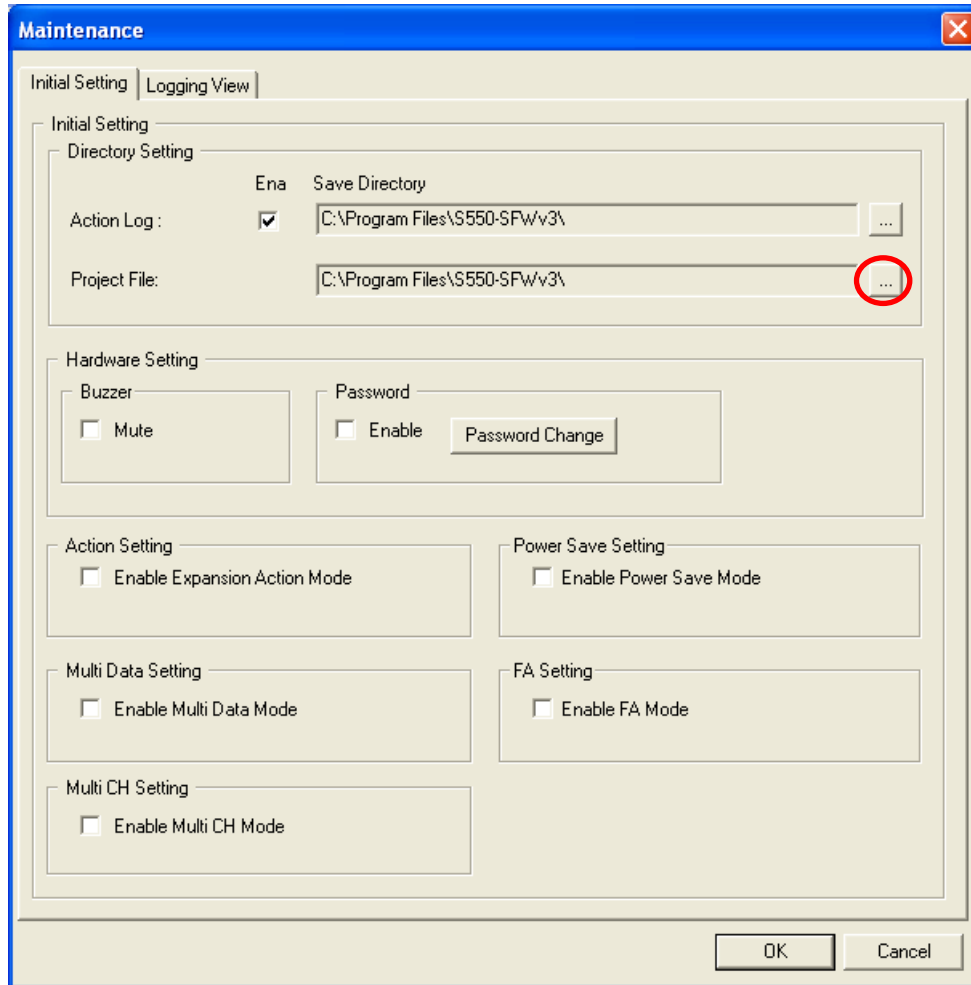
④ Set password
- Check the "Enable" check box to set a password to S550-SFWv3 main unit. Uploading data to program will require the password when the password is enabled for security protection.
- To set a password, click "Password Change" to open the password setting screen, and a password can be set in the password setting screen.
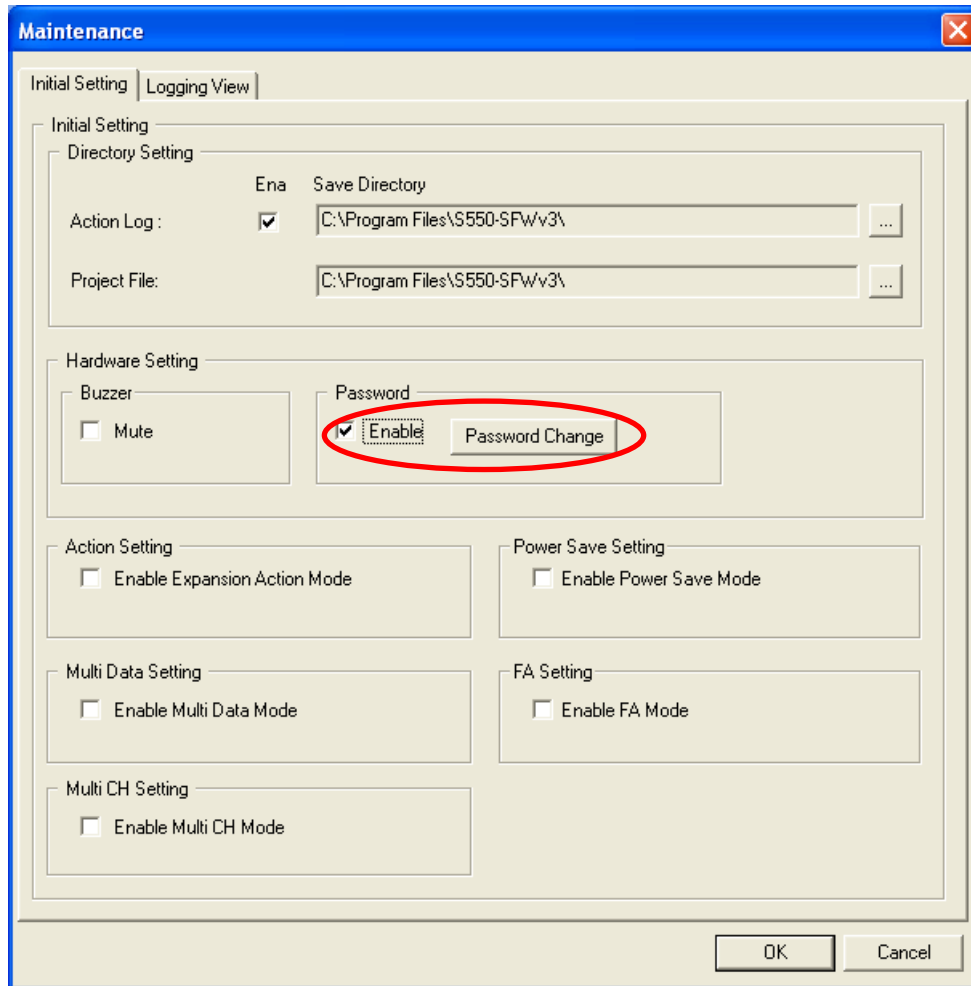
⑤ Select extended operation mode
- Check the "Enable Expansion Action Mode" check box to select the extended operation mode. Standard operation mode will be enabled when this box is unchecked.
- Standard operation mode: "Erase/Program/Verify" and "Verify" can be selected in the device setting screen.
- Extended operation mode: In addition to the standard operation mode, "Blank/Program/Verify", "Erase/Blank/Program/Verify", "Erase/Program", "Erase/Blank", "Blank", "Chip Erase" and "Read" can be selected in the device setting screen. "Chip Erase" or "Read" cannot be selected depending on the particular device.

.
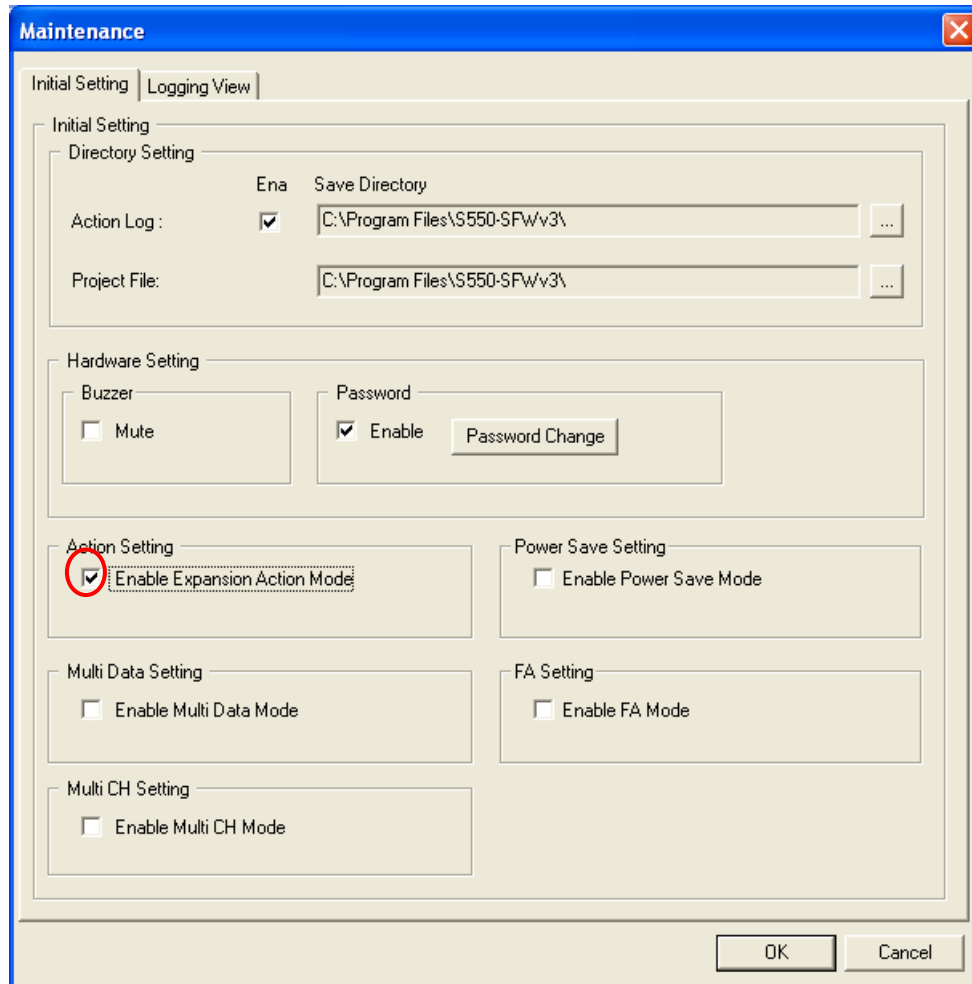
"Device Setting Screen" in Standard operation mode
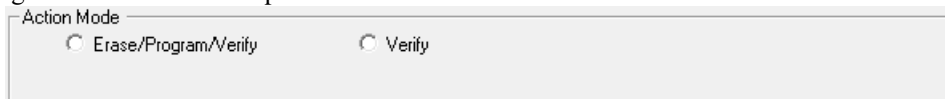
"Device Setting Screen" in Extended operation mode
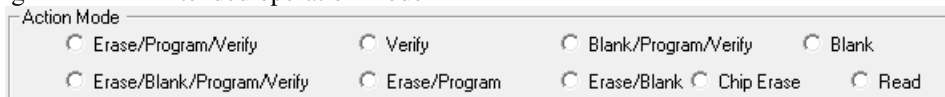
⑥ Select power saving mode
　・ Check the "Enable Power Save Mode" check box to set power saving mode of the S550-SFWv3 main
　　unit.
　　*When power saving mode is set, programming duration, download duration will be longer, but the consumption current will be
　　lower than the standard mode. In the power saving mode, the center display of the S550-SFWv3 will be off and [FUNC] switch
　　will be disabled.
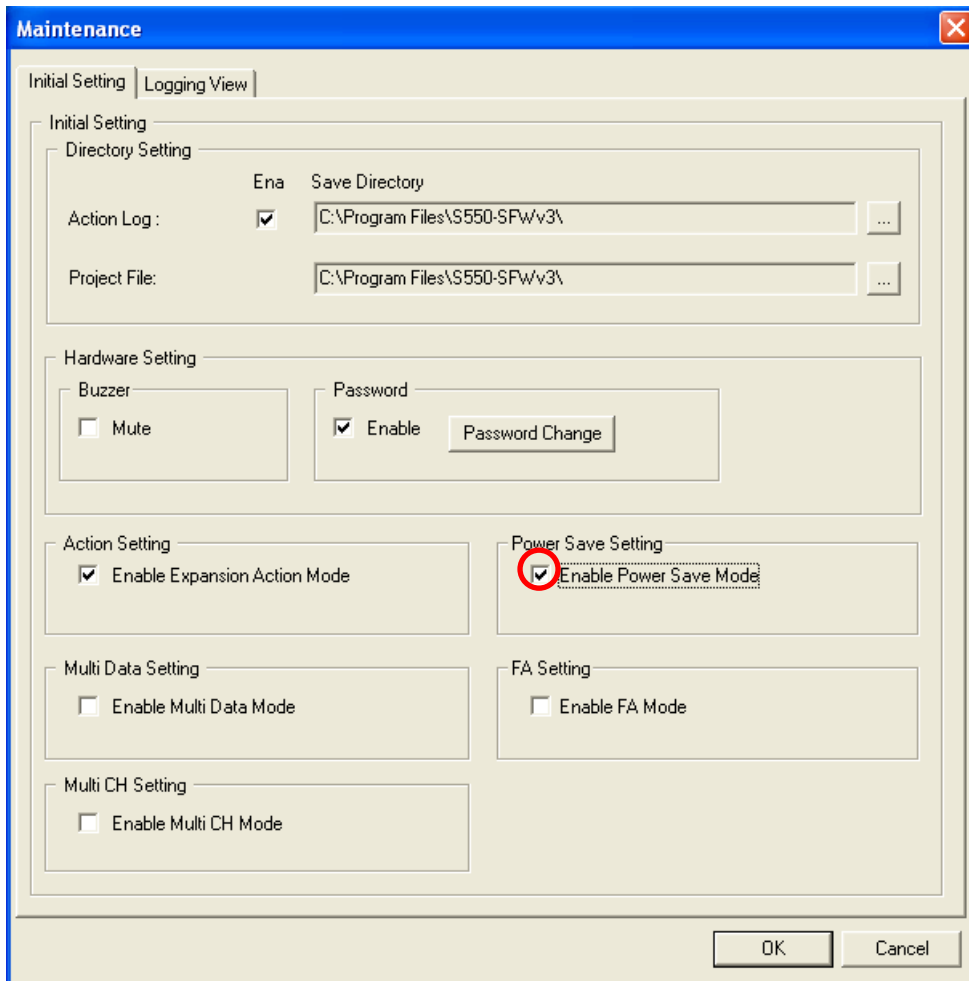
⑦ Select mute
　・ Check the "Mute" check box to mute S550-SFWv3 main unit's buzzer sound.
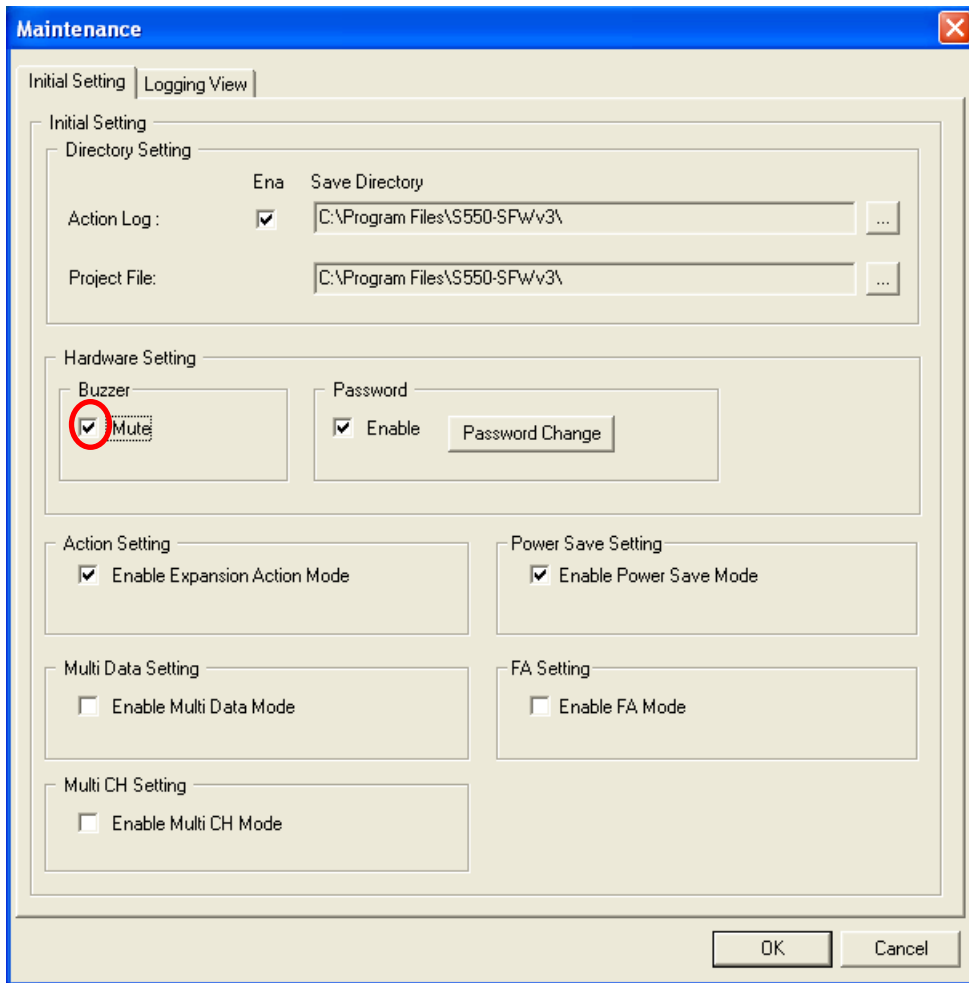
⑧ Select "Multi Data Mode"
   ・ Check the "Enable Multi Data Mode" check box to set the "Multi Data Mode".
   ・ Maximum of 4 data can be set or downloaded in the main screen in the "Multi Data Mode".
       When the power saving mode is set, the center display of the S550-SFWv3 will be off and [FUNC]
       switch will be disabled. Therefore, the data with the smallest data number only can be programmed with
       the stand alone programming.
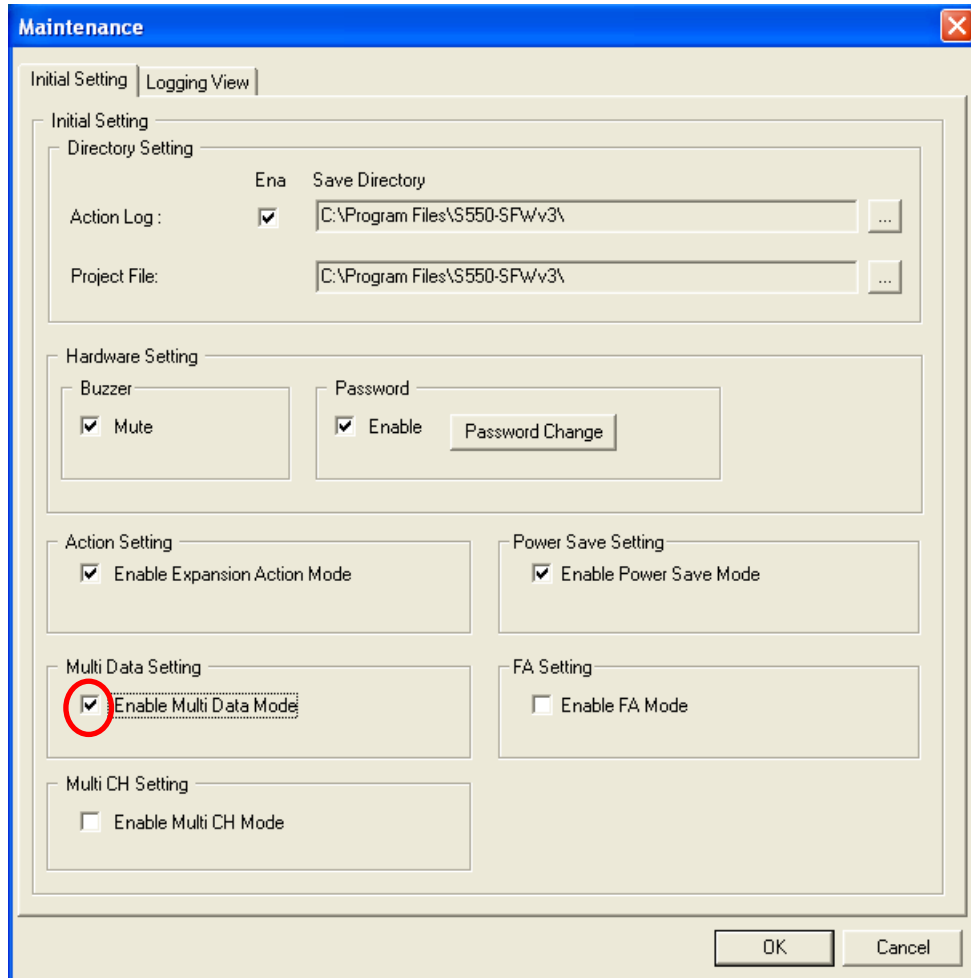
⑨ Select "Multi CH Mode"
・ Check the "Enable Multi CH Mode" check box to set the "Multi CH Mode".
Please see "7.2.1.2 Maintenance Settings" for details.
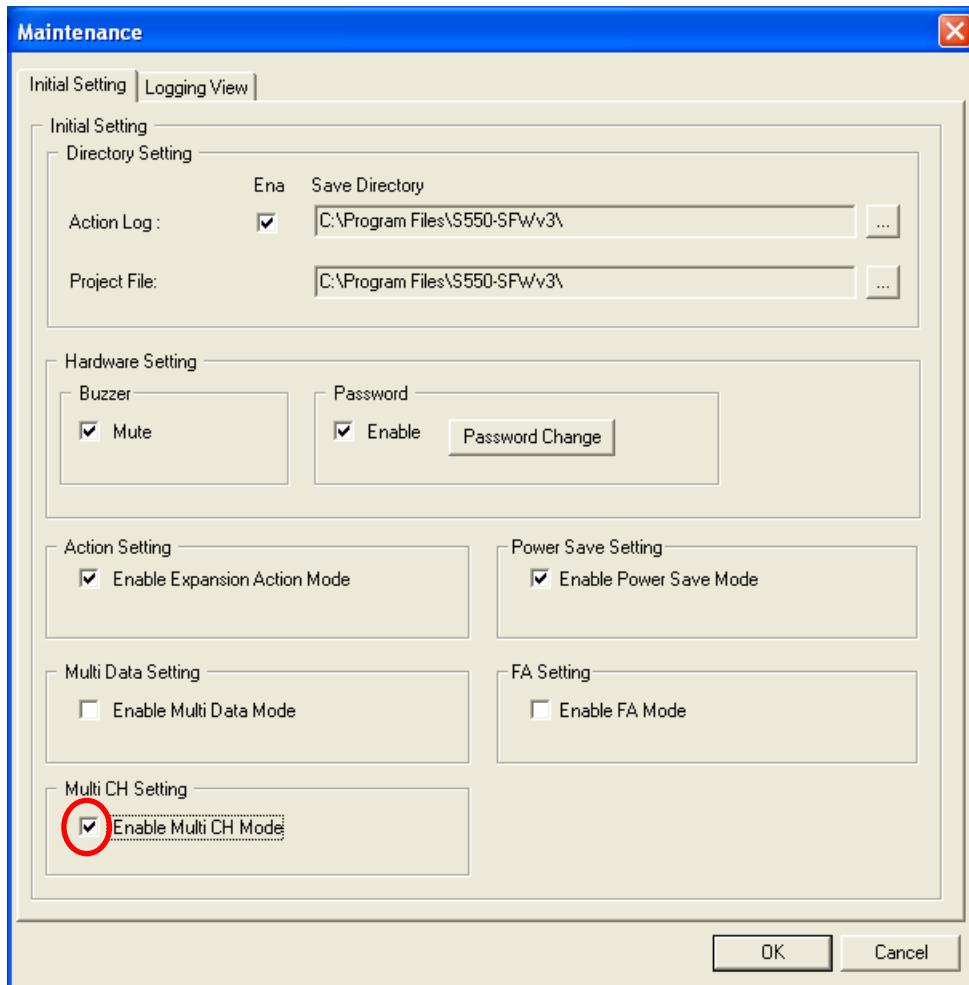
7.1.1.3. Data Settings

With the control software, you can set the data to program.
The following illustrates an example of the programming data setting.

① Start up control software
  ・ Start S550-SFWv3 control software.

② Go to the device setting screen
    (Single Data Mode)
      ・ Click the "Target Project" button and move to the device setting screen.
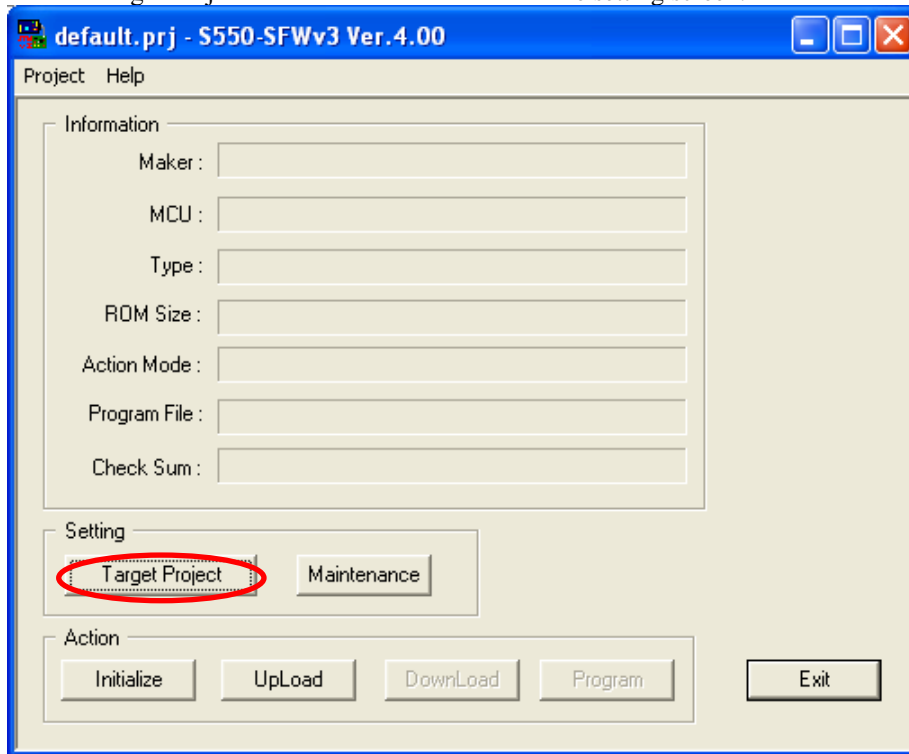
    (Multi Data Mode)
      ・ Select data #1-#4 and click the "Target Project" button and move to the device setting screen of the data selected.
      ・ The data displayed "NO USE" cannot be selected as the area is used for the previous data.
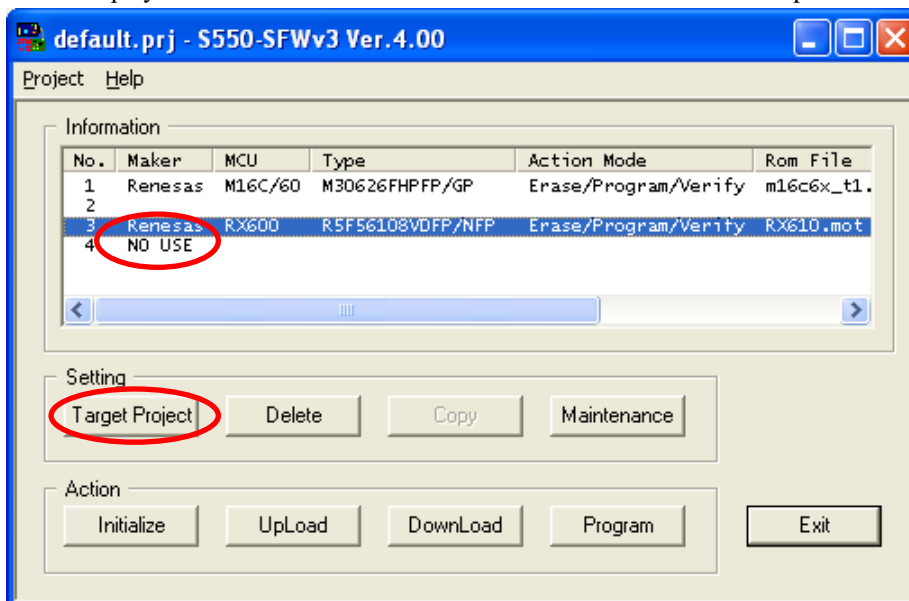
③ Select a device
・ Select the target device from "Maker" list, "MCU" list and "Type" list.
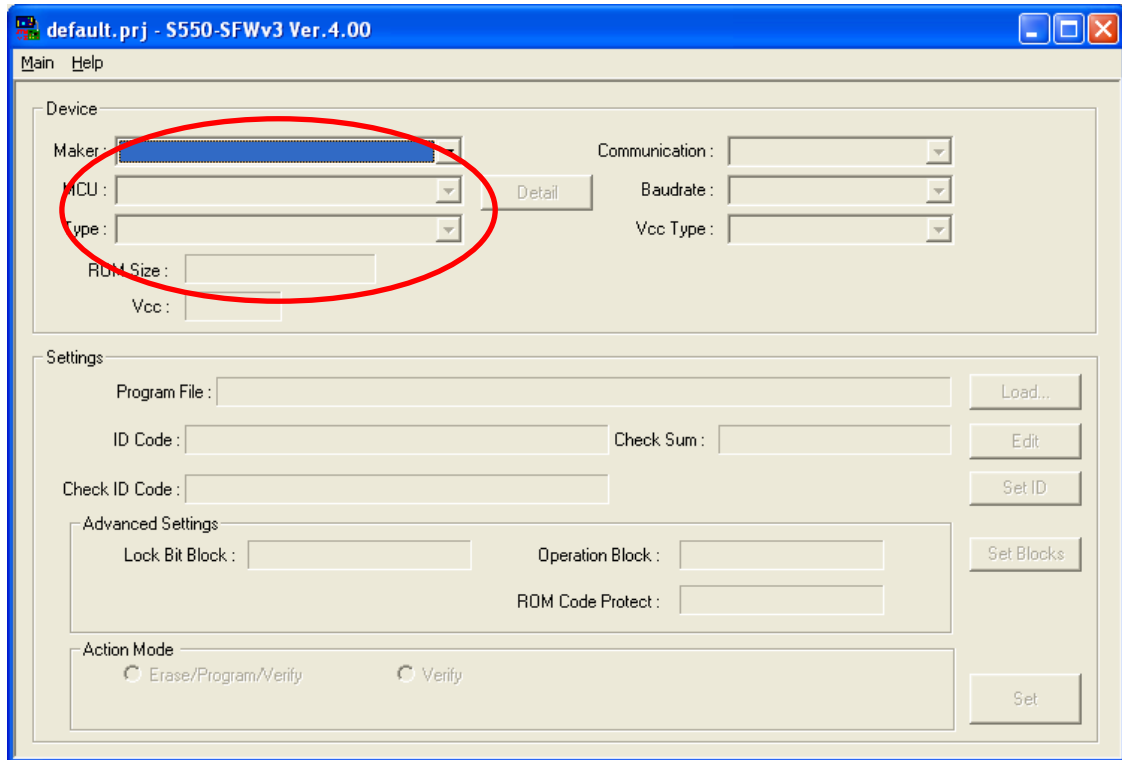
④ Select communication method, baudrate and power supply
・ Select your communication method from the "Communication" list, baudrate from "Baudrate" list, and power supply from the S550-SFWv3 main unit from the "Vcc Type" list.
*When supplying voltage from an external power source to the target board, select "No Supply" in the "VCC Type" list, and when supplying voltage from S550-SFWv3, select "3.3V" or "5V". When display "Set Vcc" button, input vcc.
*For stand-alone programming, select "No Supply" in the "Vcc Type" list.
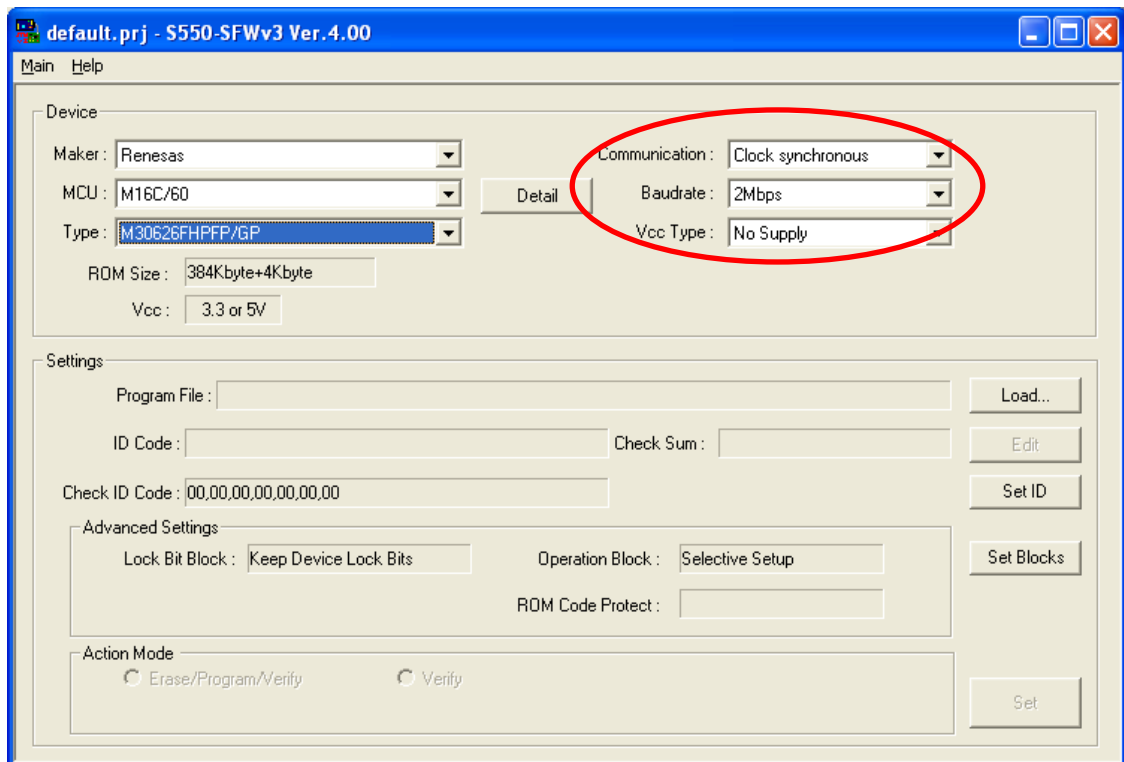
⑤ Select clock frequency
· Click "Set Freq" button, input the clock frequency of the target board and select the clock multiplying rate from the "Main Multiplier" and "PerMultiplier" list.
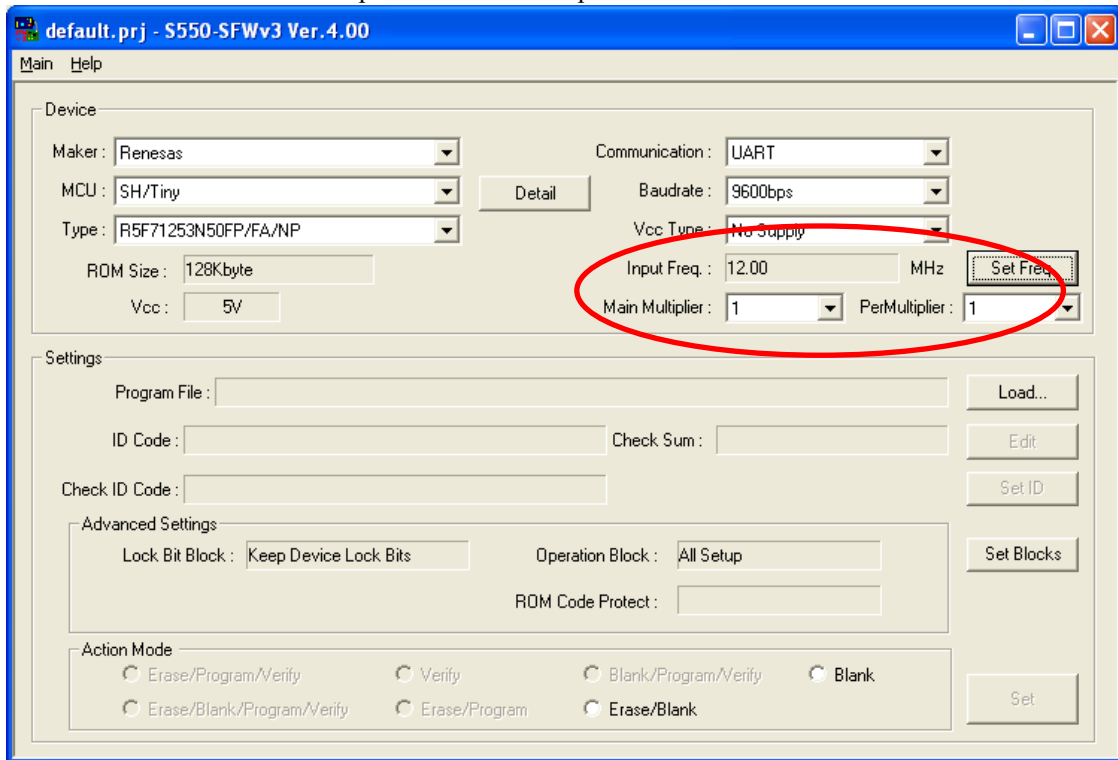
⑥ Select user program file
· Click the "Load" button and select a program file (*.mot, *.s, *.hex) in the open file dialog.
*Selecting user program file is not required when you select "Erase/Blank", "Blank", "Chip Erase" or "Read" as "Action Mode".
*By selecting the user program file, the ID code of the user program is set in little endian to "ID Code" and "Check ID Code". In case of big endian, change "Check ID Code". (See "⑦ Edit data".)
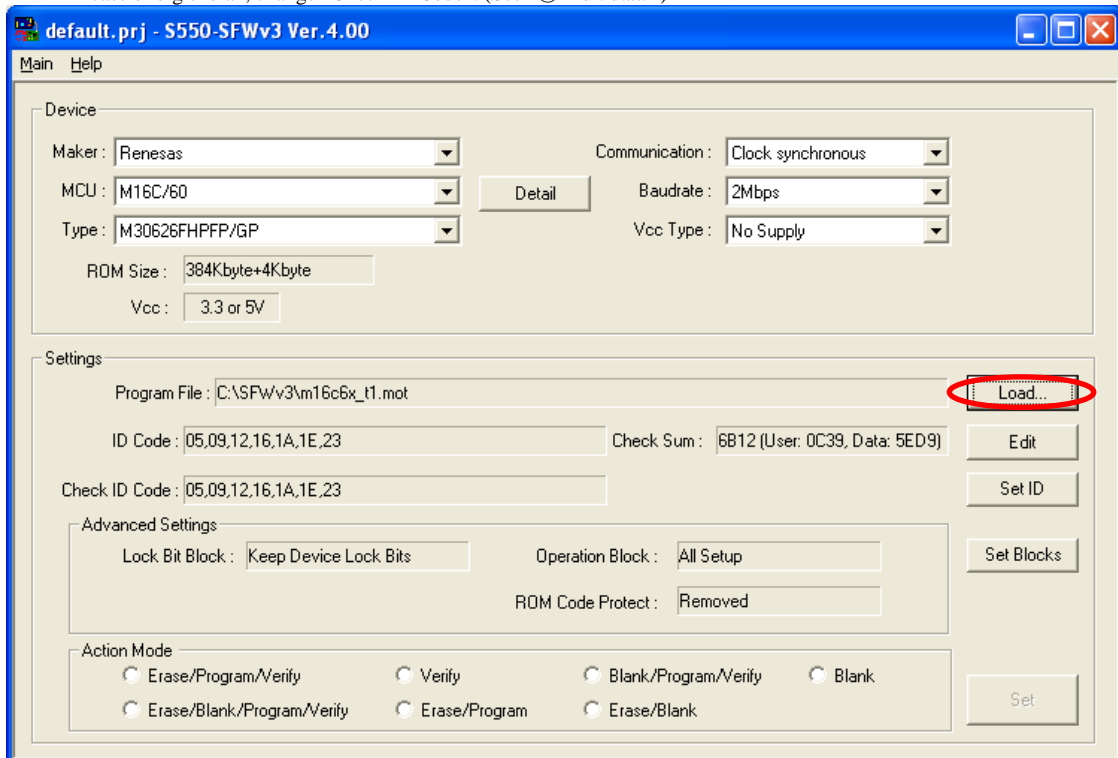
⑦ Edit data
・ Data is editable by clicking the "Edit" button, "Set ID" button, "Set Block" button" and/or "Set Protect" button.
  *For Editing, see "6.2.5 User Program Edit Screen", "6.2.9 ID Code for Device Identification Setting Screen", "6.2.10 ROM Area Block Information Setting Screen", and "6.2.11 ROM Protection Setting Screen".
  *With the default setting, DATA area, program ROM2 area, user boot mat area and E2 data flash area are not set.
  *Edited contents are saved in the project file. For the project file, see "⑩ Save project (device setting) file".
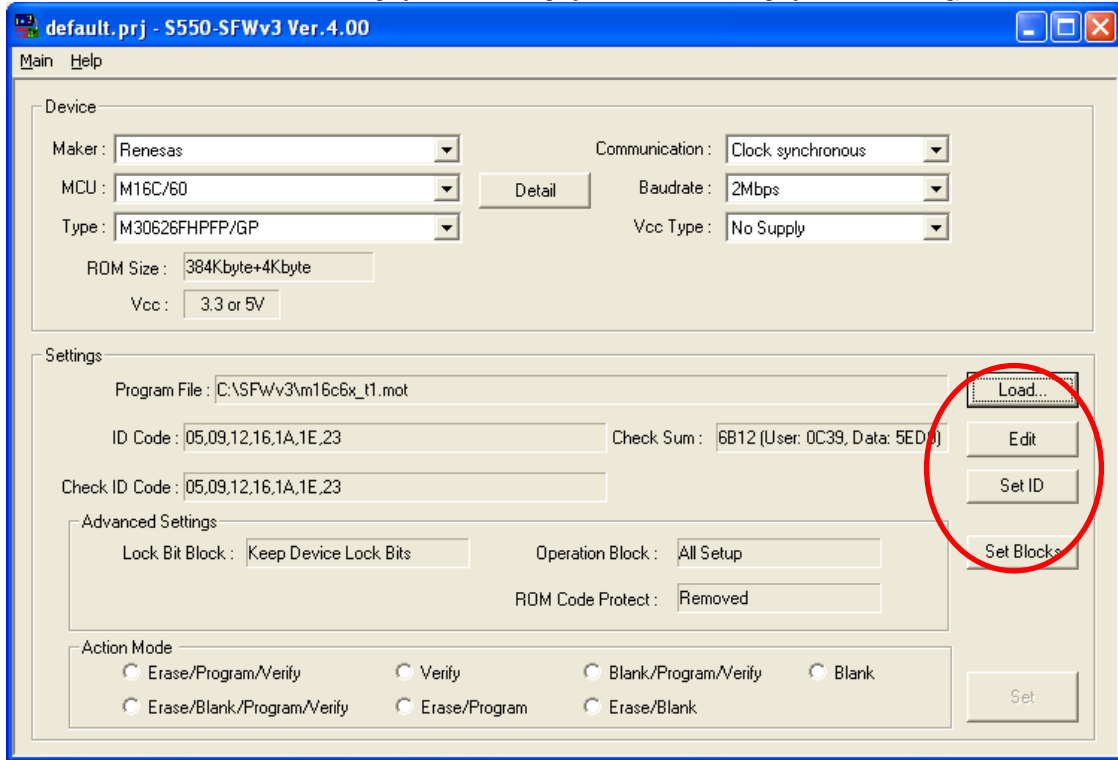
⑧ Select execution process

・ Select an execution process from the "Action Mode" radio buttons.

*With the default setting, no process is selected.
*To select "Blank/Program/Verify", "Erase/Blank/Program/Verify", "Erase/Program", "Erase/Blank", "Blank", "Chip Erase" or "Read", check the "Enable Expansion Action Mode" check box in the maintenance screen. "Chip Erase" or "Read" cannot be selected depending on the particular device.
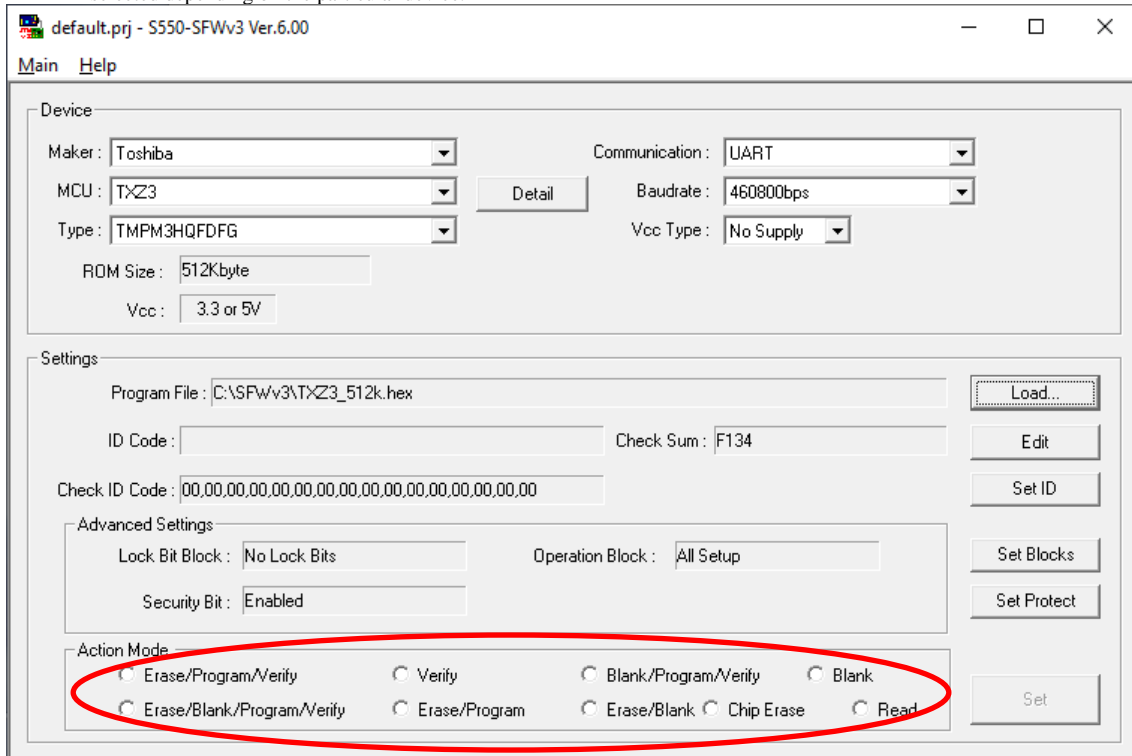
⑨ Confirm data

・ Confirm whether programming data is correct.
・ After checking, click the "Set" button and move to the main screen.
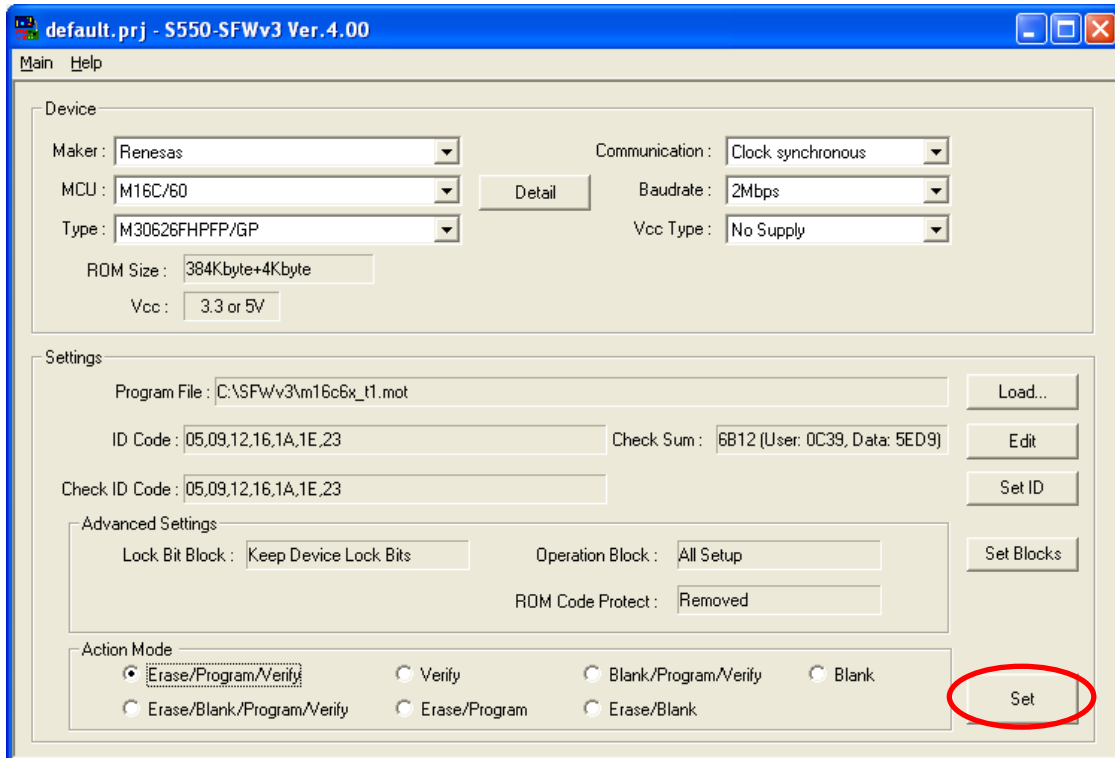
⑩ Save project (device setting) file

(Single Data Mode)
- ・ You can save the contents set in the device setting screen and maintenance screen as a project file.
- ・ Select "Save As" from the "Project" menu to save a project file.
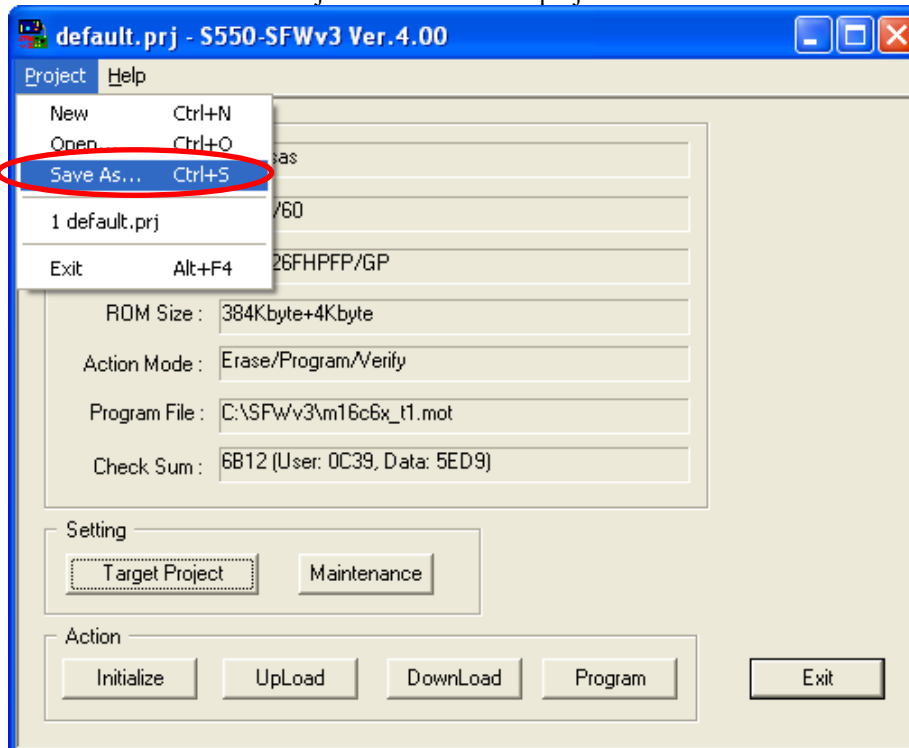
(Multi Data Mode)
- ・ You can save the contents set in the device setting screen and maintenance screen as a project file.
- ・ Select "Save As" from the "Project" menu to save a project file.
- ・ The contents set for the data 1 through 4 will be saved as a single project file.
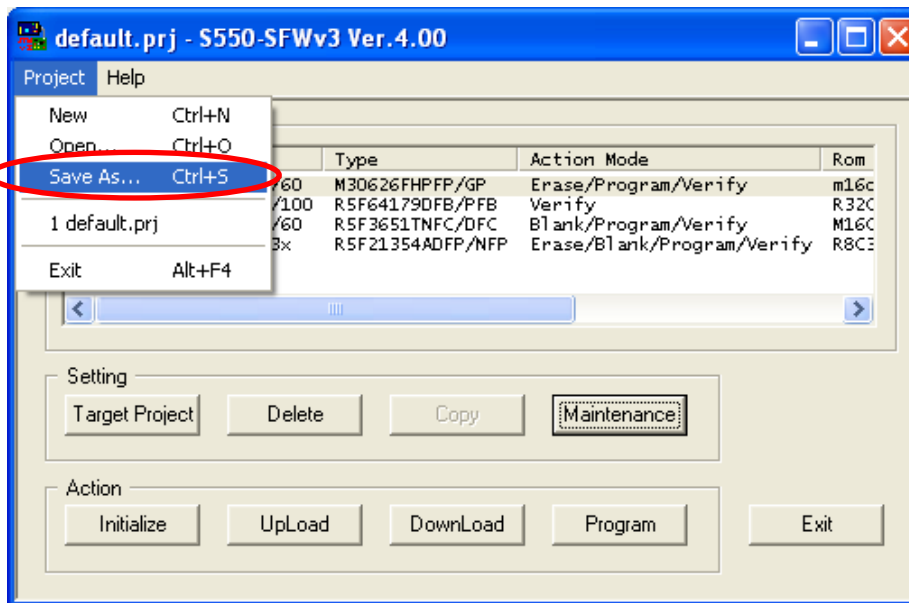
⑪ Load a project file
   ・ Load the project file (device setting information and maintenance screen information) saved with the operation10 described above.
   ・ Select "Open" from the "Project" menu to load a project file.
      *The previously saved project file will be loaded when starting up the control software.
   ・ The "Single Data Mode" main screen opens when a project file saved in the "Single Data Mode" is loaded, and the "Multi Data Mode" main screen opens when a project file saved in the "Multi Data Mode" is loaded.
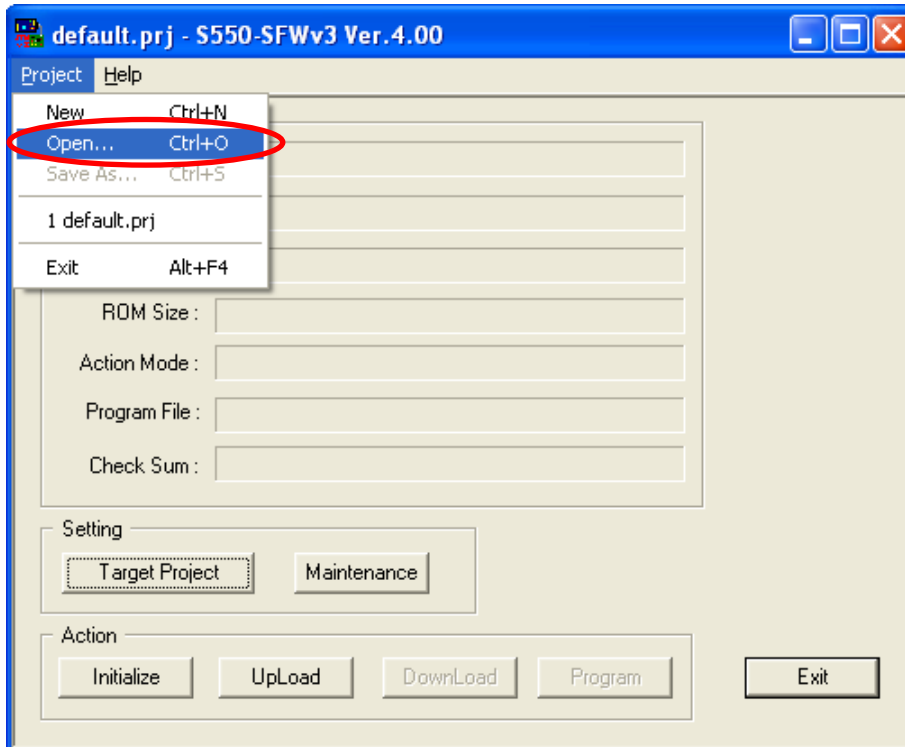
⑫ Discard device setting
(Single Data Mode)
・ You can discard the contents set in the device setting screen.
・ Select "New" from the "Project" menu to discard the device setting.
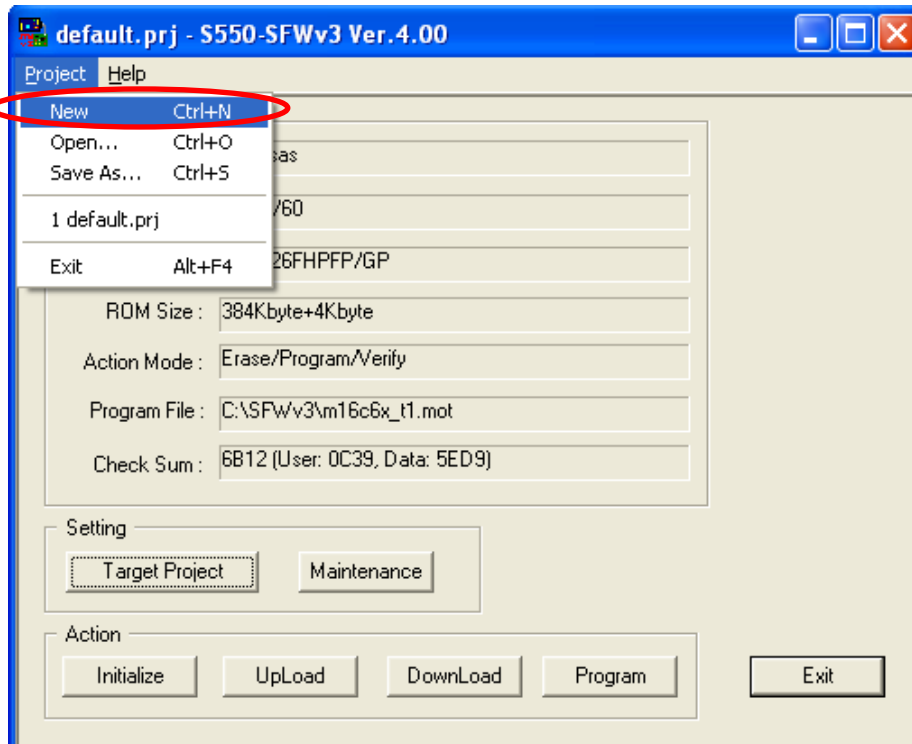
(Multi Data Mode)
・ Select "New" from the "Project" menu to discard all the device settings.
・ For discarding each device setting, select the data 1-4 and click the "Delete" button.
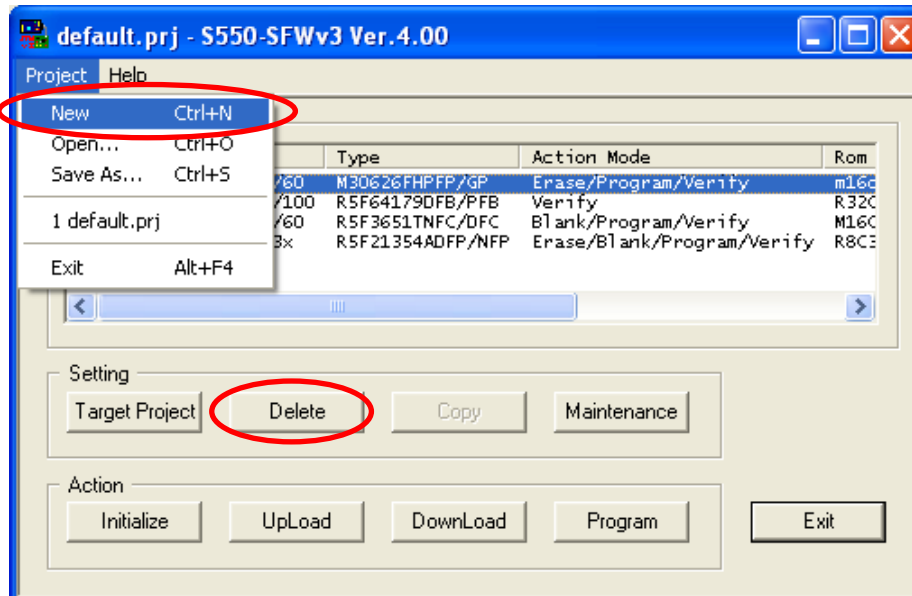
⑬ Copy device setting (Only in the "Multi Data Mode")
- Select data of the copy origin and click the "Copy" button and move to the "Copy Information" screen.
- Select number of the copy destination and click the "OK" button.

7.1.1.4. Remote Programming

The following procedures show how to program the programming data stored in S550-SFWv3 to the target (Program).

① Connect PC, S550-SFWv3 main unit and the target board
  ・ Connect PC and S550-SFWv3 with USB, and S550-SFWv3 and the target board with the target connecting cable.
    *For connection in remote programming mode, see "Connection for Remote Programming".

② Confirm S550-SFWv3 start up
  ・ For the LED and buzzer status at the startup, see "9.2 Buzzer Sound List" and "9.3 LED Status List".

③ Start downloading
・ Click the "DownLoad" button.
・ The progress bar will show the downloading progress status.
・ Click "Cancel" to cancel downloading in midstream.

*If the firmware of the S550-SFWv3 is not the latest version, the confirmation dialog asking, "Would you like to update firmware?" appears. Click the "OK" button to update. If the firmware is not updated, downloading will not be proceeded. Note that when the firmware is updated, the data in S550-SFWv3 main unit will be initialized automatically.

*If the data in the S550-SFWv3 main unit and the data in the control software are identical, downloading will not be processed with the message "It is not necessary to download." (When the control software is closed once, the data will be downloaded even if it is identical to the one in the main unit.)

*If S550-SFWv3 is note connected, downloading will not be processed with the message "Please set 1 machine. Number of the machine you can is 0".

④ Downloading complete
・ Downloading is complete when the execution screen appears.

⑤ Start programming
・ Click the "Start" button to start programming.
・ The dialog will show the programming progress status.
・ Click "Cancel" to cancel programming in midstream.

⑥ Programming complete
・ When the "Result" area is yellow-green, programming is complete. When the area is in red, error occurred in programming.

⑦ Check execution result detail
   ・ Check the "Detail view" check box and click the "Result" area to see the execution result detail screen.
       *You can check the errors in this execution result detail screen (see "9.5 List of execution result on Center Display, Execution Screen and Execution Detail Screen") and S550-SFWv3 main unit LED indication (see "9.3 LED Status List").
       *When "Action Mode" is "Read", the programming data read from target MCU is stored in S550-SFWv3. If you want to upload this programming data to the control software (UpLoad), back to Main Screen and operate the procedure of "7.1.2 Uploading".

7.1.2. Uploading

You can upload the programming data stored in S550-SFWv3 to the control software **(UpLoad)**. The following procedures show how to upload.

① Connect your PC and S550-SFWv3 main unit
  ・ For the connection when uploading, see "4.1 Connection for Downloading / Uploading / Initializing"

② Confirm S550-SFWv3 start up
  ・ For the LED and buzzer status at the startup, see "9.2 Buzzer Sound List" and "9.3 LED Status List".

③ Enter Password
  ・ Click the "UpLoad" button.
  ・ The Password input dialog appears. To upload, enter your password in the "Password" box and click the "OK" button, or to cancel, click the "Cancel" button.
      *When the password is not set for downloading, this dialog does not appear.
      *When no character was input in the password setting dialog, click the "OK" button without entering a character in the box.

④ Start Uploading
  ・ The progress bar will show the uploading progress status.
  ・ Click "Cancel" to cancel uploading in midstream.

*If the firmware version of the S550-SFWv3 is different, uploading will not be processed with the message "**Firmware Version is different**".

*If the password you enter and the password set for the S550-SFWv3 do not match, uploading will not be processed with the message "**UpLoad password erro**r".

*If there is no programming data downloaded to S550-SFWv3, uploading will not be processed with the message "**There is no data**".

⑤ Uploading complete
  ・ When the dialog "**UpLoad Complete**" appears, uploading is complete.

*When you upload the programming data read from target MCU, "** Read Data **" is displayed at "Program Files" on Main Screen or Device Setting Screen.

(Multi Data Mode)

e.g.) Uploading 4th data stored in S550-SFWv3 to the 3rd data

(i) Select uploading destination data number (1 through 4). Click the "UpLoad" button.
   *Entering a password is required when the password is set.
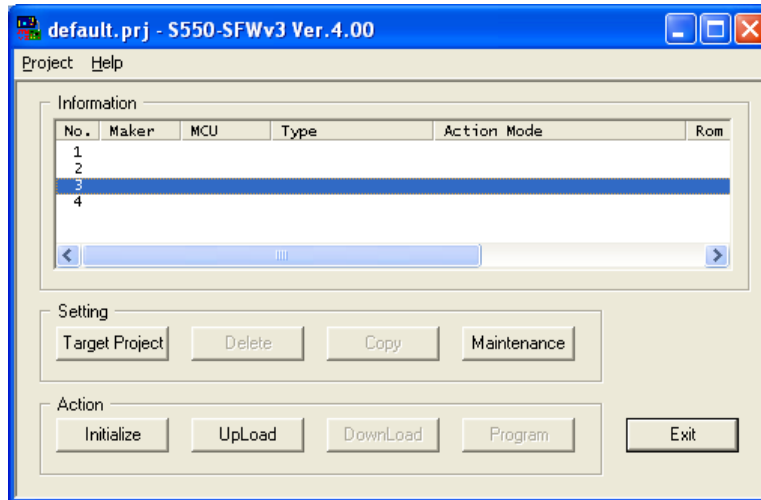
(ii) The data stored in S550-SFWv3 main unit is shown.
   Select the data to upload. Click the "OK" button to execute uploading, or click the "Cancel" button to cancel the procedure.
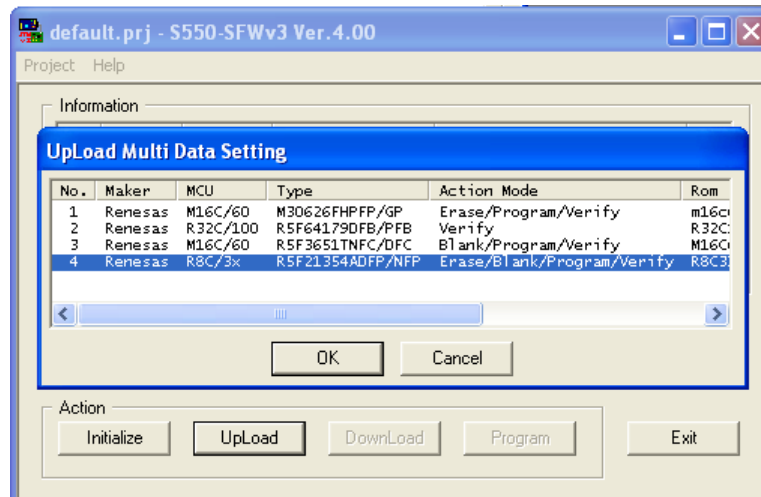
(iii) The selected data will be uploaded.

7.1.3. Initialization

You can initialize data that is stored in the S550-SFWv3 internal memory on unit basis for security purposes. The followings are the procedures for initialization.
*For initialized settings (factory settings), see "9.6 Initialized Settings (factory setting) List".
*Initialization takes 1 to 2 minutes.

① Connect PC and S550-SFWv3 main unit with USB.
・ For the connection when initializing, see "4.1 Connection for Downloading / Uploading / Initializing".

② Confirm S550-SFWv3 start up
・ The start up is complete when the "USB" LED is lit after, "Power" LED on, "Pass", "ID Err", "Fail" LEDs are lit in order one time each then the buzzer sounds.

　*If the "Pass" and "ID Err" LEDs are lit and the lower 1byte of the user program checksum is displayed on the center display after the buzzer sound, the programming data has been downloaded to the S550-SFWv3.

③ Start Initializing
・ Click the "Initialize" button and the confirmation dialog asking, **"Do you want to initialize?"** Click the "OK" button to start initializing.

・ The progress bar will show the initializing progress status.
　Click "Cancel" to cancel initializing in midstream.
　*If cancelled, data to program is deleted partially, and programming and uploading cannot be executed.
・ All LEDs turns off and center display turns off when initialization is started.

　*If the firmware version of the S550-SFWv3 is different, initializing will not be processed with the message "**Firmware Version is different**".

④ Initializing complete
・ When a message "**Initialize Complete**" appears, initializing is complete.
・ "_","_" is displayed on the center display when initializing is complete.
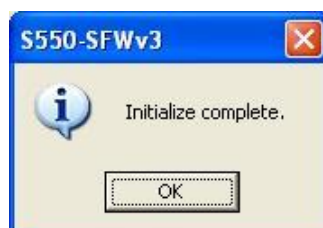
7.2. Multi CH Mode

7.2.1. Remote Programming

7.2.1.1. Process Flow up to Programming

The following section describes the operations from setting the programming data on the control software to actually programming the target.

Maintenance setting	Set maintenance setting (buzzer, password) in the control software.
Data setting	Set program data setting (device, data, block) on the control software.
Download	Store data set on the control software in SFWv3.
Programming	Connect the target board with the PC connected (USB), and click the "Start" button of the control software to start programming.
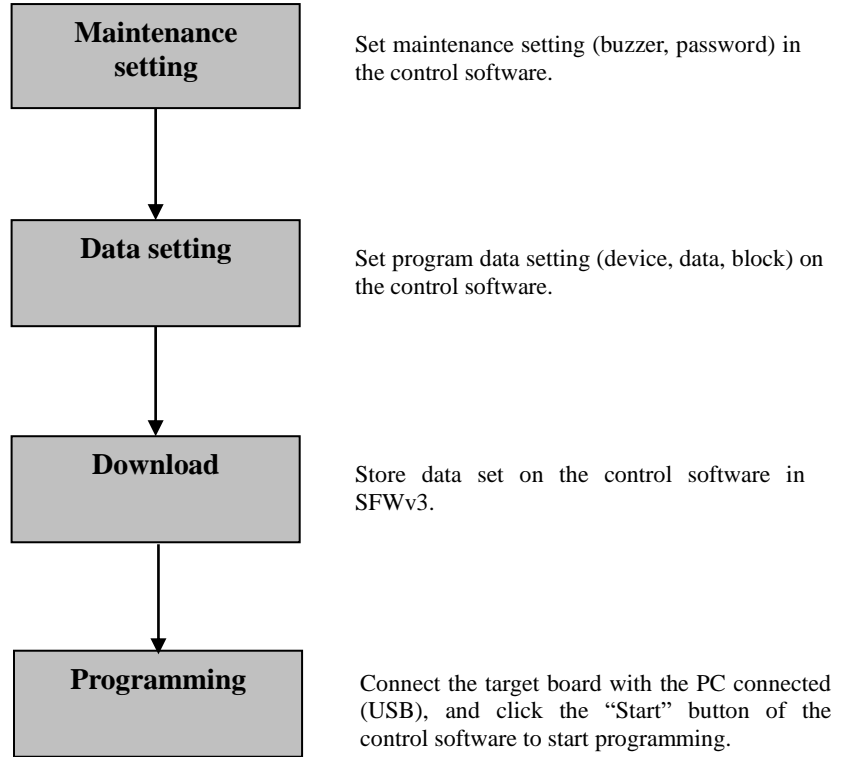
7.2.1.2.   Maintenance Settings

With the control software, you can change S550-SFWv3 main unit setting.
The following illustrates an example of the maintenance setting.

① Go to the maintenance setting screen
  - Click the "Maintenance" button and move to the maintenance screen.
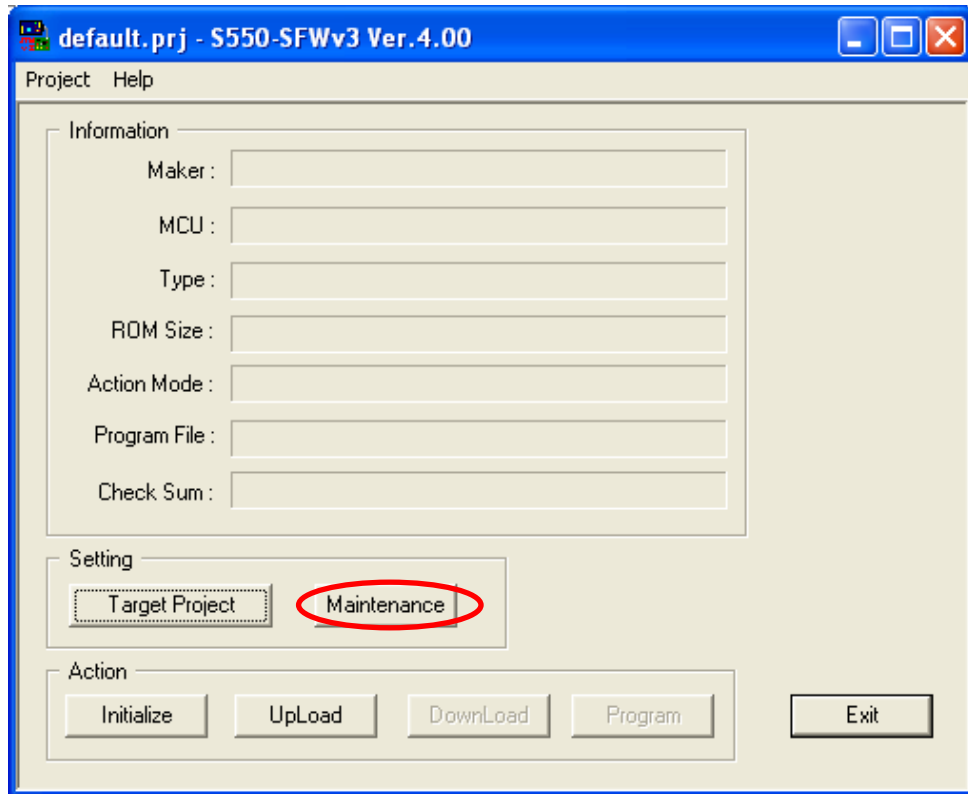
② Select Multi CH Mode
- Check the "Enable Multi CH Mode" check box to set the "Multi CH Mode".
- It is possible to Initialize/Upload/Download/Program by using maximum of ten S550-SFWv3 at the same time. But "Multi Data Mode" and "Multi CH Mode" cannot be set at the same time. Moreover, it cannot be used for programmed when "Multi CH Mode" and "FA Mode" are all set.
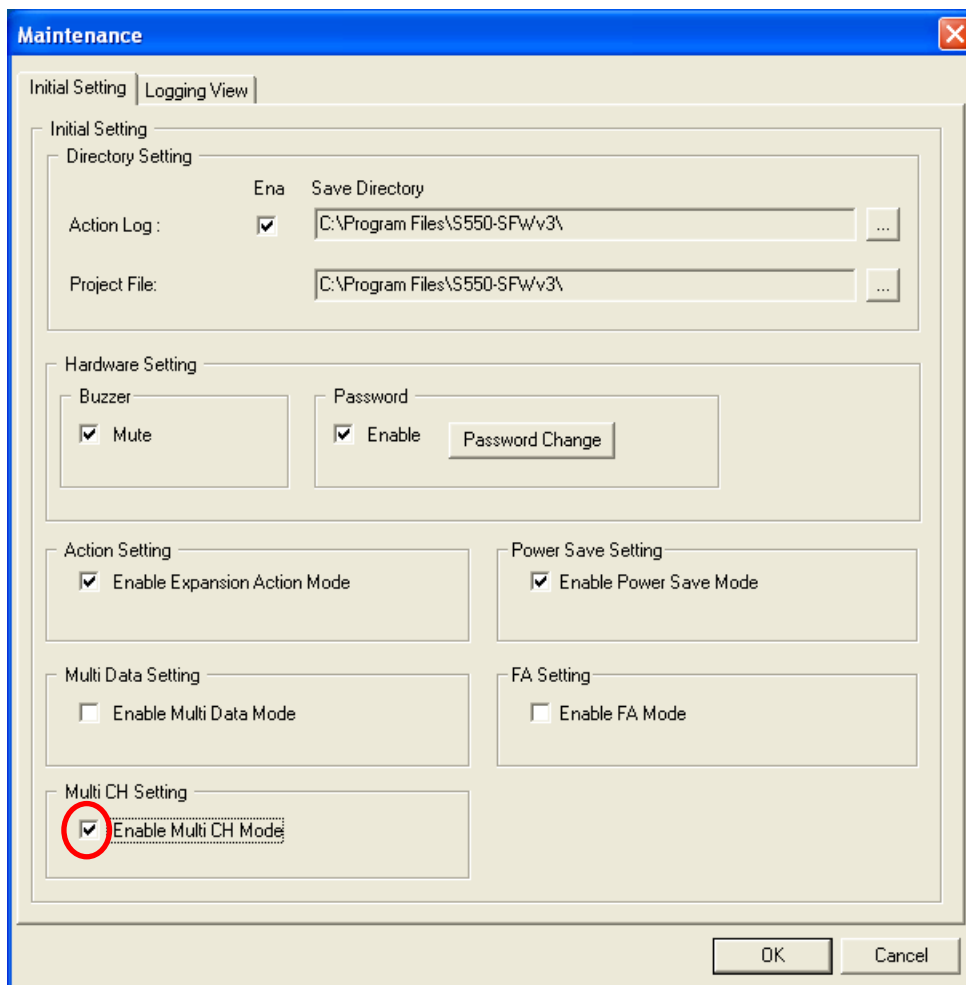
③ Other Settings

- Please see "7.1.1.2 Maintenance Settings" for other settings.

7.2.1.3.   Data Settings

Please see "7.1.1.3 Data Settings" for other settings.

7.2.1.4.   Remote Programming

The following procedures show how to program the programming data stored in S550-SFWv3 to the target (Program).

① Connect PC, S550-SFWv3 main unit and the target board
   ・ Connect PC and S550-SFWv3 with USB, and S550-SFWv3 and the target board with the target connecting cable.
      *For connection in remote programming mode, see "Connection for Remote Programming".

② Confirm S550-SFWv3 start up
   ・ For the LED and buzzer status at the startup, see "9.2 Buzzer Sound List" and "9.3 LED Status List".

③ Start downloading
   ・ Click the "Program" button.
   ・ Select channels and click "OK" button.
     * In the "DownLoad" list, the item of "o" means that the channel is downloaded completely, and the item of "x" means that the channel is not yet downloaded.

Program Setting

S550-SFWv3 Connecting

	S/N	DownLoad
☑ CH 01	000001	X
☑ CH 02	004098	X
☑ CH 03	008195	O
☑ CH 04	012292	X
☑ CH 05	016389	X
☑ CH 06	020486	O
☑ CH 07	024583	X
☑ CH 08	028680	X
☑ CH 09	032777	O
☑ CH 10	036874	X

All Check
All Uncheck

OK   Cancel

   ・ The progress bar will show the downloading progress status.
   ・ Click "Cancel" to cancel downloading in midstream.

DownLoad

DownLoad...

Cancel

*If the firmware of the S550-SFWv3 is not the latest version, the confirmation dialog asking, "Would you like to update firmware?" appears. Click the "OK" button to update. If the firmware is not updated, downloading will not be proceeded. Note that when the firmware is updated, the data in S550-SFWv3 main unit will be initialized automatically.

S550-SFWv3

ℹ Would you like to update firmware?

OK   Cancel

Initialize

Initialize...

Cancel

*If the data in the S550-SFWv3 main unit and the data in the control software are identical, downloading will not be processed with the message "It is not necessary to download." (When the control software is closed once, the data will be downloaded even if it is identical to the one in the main unit.)

*If S550-SFWv3 is note connected, downloading will not be processed with the message "Please set 1 machine. Number of the machine you can is 0".

④ Downloading complete
・ Downloading is complete when the execution screen appears.

⑤ Start programming
・ Click the "Start" button to start programming.
・ The dialog will show the programming progress status.
・ Click "Cancel" to cancel programming in midstream.

⑥ Programming complete
  ・ When the "Result" area is yellow-green, programming is complete. When the area is in red, error occurred in programming.

⑦ Check execution result detail
・ Check the "Detail view" check box and click the "Result" area to see the execution result detail screen.
*You can check the errors in this execution result detail screen (see "9.5 List of execution result on Center Display, Execution Screen and Execution Detail Screen") and S550-SFWv3 main unit LED indication (see "9.3 LED Status List").
*When "Action Mode" is"Read", the programming data read from target MCU is stored in S550-SFWv3. If you want to upload this programming data to the control software (UpLoad), back to Main Screen and operate the procedure of "7.2.2 Uploading".
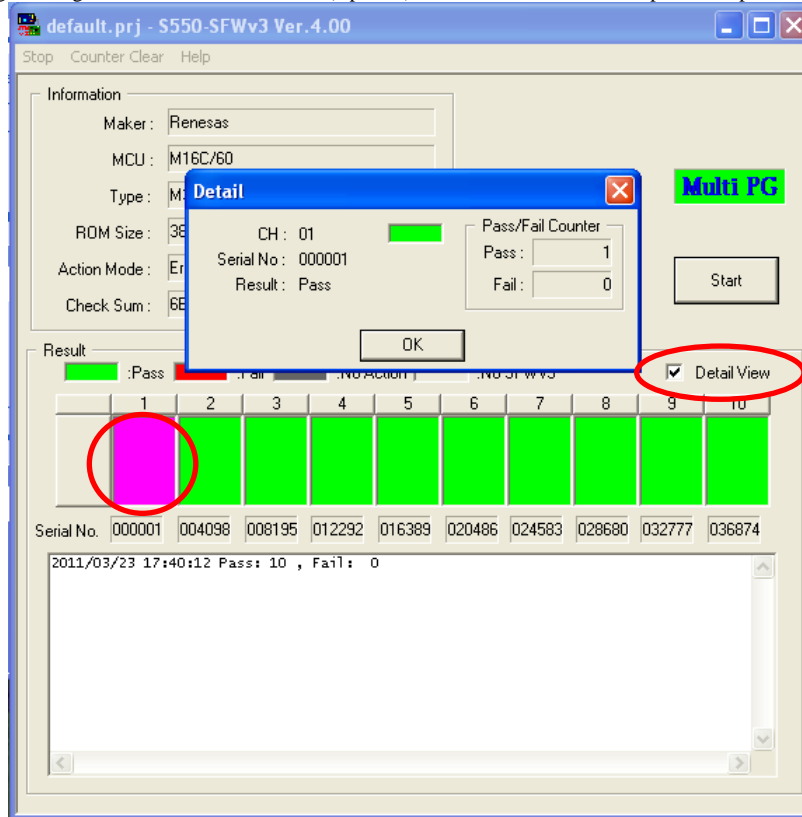
7.2.2. Uploading

You can upload the programming data stored in S550-SFWv3 to the control software **(UpLoad)**. The following procedures show how to upload.

① Connect your PC and S550-SFWv3 main unit
  ・ For the connection when uploading, see "4.1 Connection for Downloading / Uploading / Initializing"

② Confirm S550-SFWv3 start up
  ・ For the LED and buzzer status at the startup, see "9.2 Buzzer Sound List" and "9.3 LED Status List".
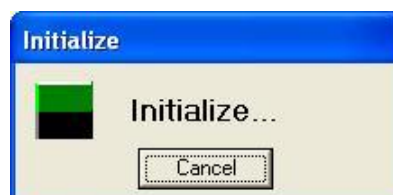
③ Enter Password
  ・ Click the "UpLoad" button.
  ・ The "UpLoad Setting" dialog is displayed. The channel which was not set password when downloading is effective, and the channel set password is invalid. Input password to the "UpLoad Password" text box and click the "Password Check" button, the channel for which password is suitable will become effective. Select channels and click "OK" button.

④ Start Uploading
- ・ The progress bar will show the uploading progress status.
- ・ Click "Cancel" to cancel uploading in midstream.

*If the firmware version of the S550-SFWv3 is different, uploading will not be processed with the message "**Firmware Version is different**".

*If the password you enter and the password set for the S550-SFWv3 do not match, uploading will not be processed with the message "**UpLoad password erro**r".

*If there is no programming data downloaded to S550-SFWv3, uploading will not be processed with the message "**There is no data**".

⑤ Uploading complete
- ・ When the dialog "**UpLoad Complete**" appears, uploading is complete.

*When you upload the programming data read from target MCU, "** Read Data **" is displayed at "Program Files" on Main Screen or Device Setting Screen.

7.2.3. Initialization

You can initialize data that is stored in the S550-SFWv3 internal memory on unit basis for security purposes. The followings are the procedures for initialization.
*For initialized settings (factory settings), see "9.6 Initialized Settings (factory setting) List".
*Initialization takes 1 to 2 minutes.

① Connect PC and S550-SFWv3 main unit with USB.
・ For the connection when initializing, see "4.1 Connection for Downloading / Uploading / Initializing".

② Confirm S550-SFWv3 start up
・ The start up is complete when the "USB" LED is lit after, "Power" LED on, "Pass", "ID Err", "Fail" LEDs are lit in order one time each then the buzzer sounds.

  *If the "Pass" and "ID Err" LEDs are lit and the lower 1byte of the user program checksum is displayed on the center display after the buzzer sound, the programming data has been downloaded to the S550-SFWv3.

③ Select initialized channel
・ Click the "Initialize" button.
・ The "Initialize Setting" dialog is displayed. Select channels and click "OK" button.
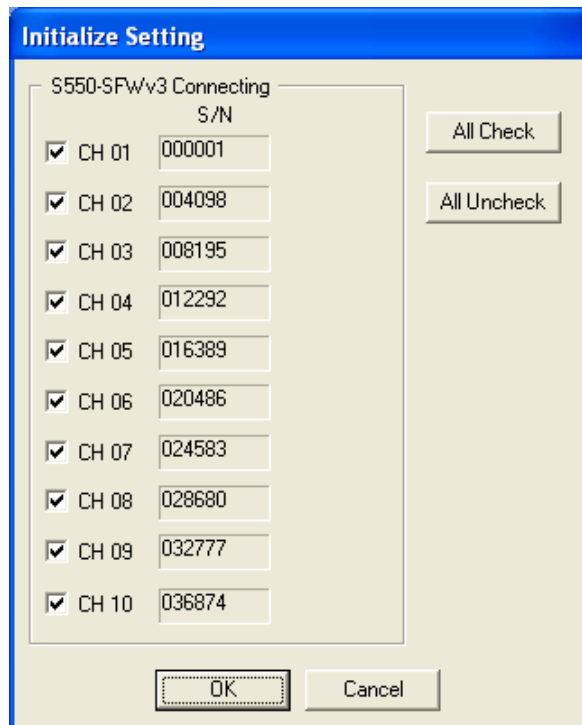
④ Start Initializing
・ Click the "Initialize" button and the confirmation dialog asking, **"Do you want to initialize?"** Click the "OK" button to start initializing.

・ The progress bar will show the initializing progress status.
  Click "Cancel" to cancel initializing in midstream.
    *If cancelled, data to program is deleted partially, and programming and uploading cannot be executed.
・ All LEDs turns off and center display turns off when initialization is started.

   *If the firmware version of the S550-SFWv3 is different, initializing will not be processed with the message "**Firmware Version is different**".

⑤ Initializing complete
・ When a message "**Initialize Complete**" appears, initializing is complete.
・ "_","_" is displayed on the center display when initializing is complete.

8. Stand-alone Mode

8.1. Stand-alone Programming

8.1.1. Process Flow up to Programming

The following section describes the operations from setting the programming data on the control software to actually programming the target.

There are two ways of programming for you to choose from according to your operating environment:
- Stand-alone programming (Directly programming the target by S550-SFWv3)
- Remote programming (Programming the target from the control software via S550-SFWv3)

Maintenance setting	Set maintenance setting (buzzer, password) in the control software.
↓	
Data setting	Set program data setting (device, data, block) on the control software.
↓	
Download	Store data set on the control software in SFWv3.
↓	
Stand-alone programming	After disconnecting (USB) from the PC and connecting the target board, press the "Start" switch on the main unit to start programming.

8.1.2. Downloading

You can store the data set with the control software in the S550-SFWv3 main unit (Download). The following procedure shows how to download.

① Connect your PC and S550-SFWv3 main unit
    ・ For the connection when downloading, see "4.1 Connection for Downloading / Uploading / Initializing".

② Confirm S550-SFWv3 start up
    ・ For the LED and buzzer status at the startup, see "9.2 Buzzer Sound List" and "9.3 LED Status List".

③ Start Downloading
  ・ Click the "DownLoad" button.
  ・ The progress bar will show the downloading progress status.
  ・ Click "Cancel" to cancel downloading in midstream.
    *Download again before programming if you cancel the procedure.

*If the firmware of the S550-SFWv3 is not the latest version, the confirmation dialog asking, "**Would you like to update firmware?**" appears. Click the "OK" button to update. If the firmware is not updated, downloading will not be proceeded. Note that when the firmware is updated, the data in S550-SFWv3 main unit will be initialized automatically.

*If the data in the S550-SFWv3 main unit and the data in the control software are identical, downloading will not be processed with the message "**It is not necessary to download.**" (When the control software is closed once, the data will be downloaded even if it is identical to the one in the main unit.)

*If S550-SFWv3 is note connected, downloading will not be processed with the message "**Please set 1 machine. Number of the machine you can is 0**".

④ Complete Downloading
   ・ When the dialog **"DownLoad Complete"** appears, downloading is complete.
   ・ In "Multi Data Mode", the data with the smallest data number will be selected for the S550-SFWv3.

8.1.3. Programming

①　Download
　　　・　Download programming data to S550-SFWv3.
　　　　*The programming data shall be downloaded to the main unit for stand-alone programming. (For downloading, see "8.1.2 Downloading".)

②　Connect the S550-SFWv3 main unit and target board
　　　・　Connect S550-SFWv3 and the target board with the target connecting cable.
　　　　*For connection in stand-alone mode, see "4.2 Connection for Stand-alone Programming / Stand-alone Initializing".

③　Power ON
　　　・　Turn on the target board.

④　Confirm S550-SFWv3 start up
　　　・　For the LED and buzzer status at the startup, see "9.2 Buzzer Sound List" and "9.3 LED Status List".

⑤　Start programming
　　　・　Press the "START" switch and the programming will start.

⑥　Programming complete
　　　・　Execution result will be output with the LED and buzzer.
　　　(See "9.2 Buzzer Sound List" and "9.3 LED Status List")
　　　・　Check the execution detail result with the error information display on the center display.
　　　(See "8.3.5 Error Information Display")
　　　*When "Action Mode" is"Read", the programming data read from target MCU is stored in S550-SFWv3. You may upload this programming data to the control software (UpLoad) on Remote Mode. If you want to do so, operate the procedure of "7.1.2 Uploading" (or "7.2.2 Uploading").

⑦　Power OFF
　　　・　Turn off the target board and disconnect the S550-SFWv3 and the target board.

To continue programming the same data, repeat the procedures 2 through 6 again.

8.2. Stand-alone Initialization

You can initialize data that is stored in the S550-SFWv3 internal memory on unit basis for security purposes. The followings are the procedures for initialization.
*For initialized settings (factory settings), see "9.6 Initialized Settings (factory setting) List".
*Initialization takes 1 to 2 minutes.

① Connect the S550-SFWv3 main unit and target board
・ Connect S550-SFWv3 and the target board with the target connecting cable.
    *For connection in stand-alone mode, see "4.2 Connection for Stand-alone Programming / Stand-alone Initializing".

② Power ON
・ Turn on the target board.

③ Confirm S550-SFWv3 start up
・ For the buzzer and LED status at the startup, see "9.2 Buzzer Sound List" and "9.3 LED Status List".

④ Start Initializing
・ Press the "START" switch and hold it for 5 seconds to start initializing.
・ When initialization is started, all LEDs will be turned off, center display will be off and a series of short beeps ("pip, pip, pip, pip...) sounds.

⑤ Initializing complete
・ After a beep "peep" sounds once, "_","_" is displayed on the center display when initializing is complete.

8.3. Center Display Modes

8.3.1. Mode Transition Diagram

Following illustrates mode transitions of S550-SFWv3 center display.

(Single Data Mode)
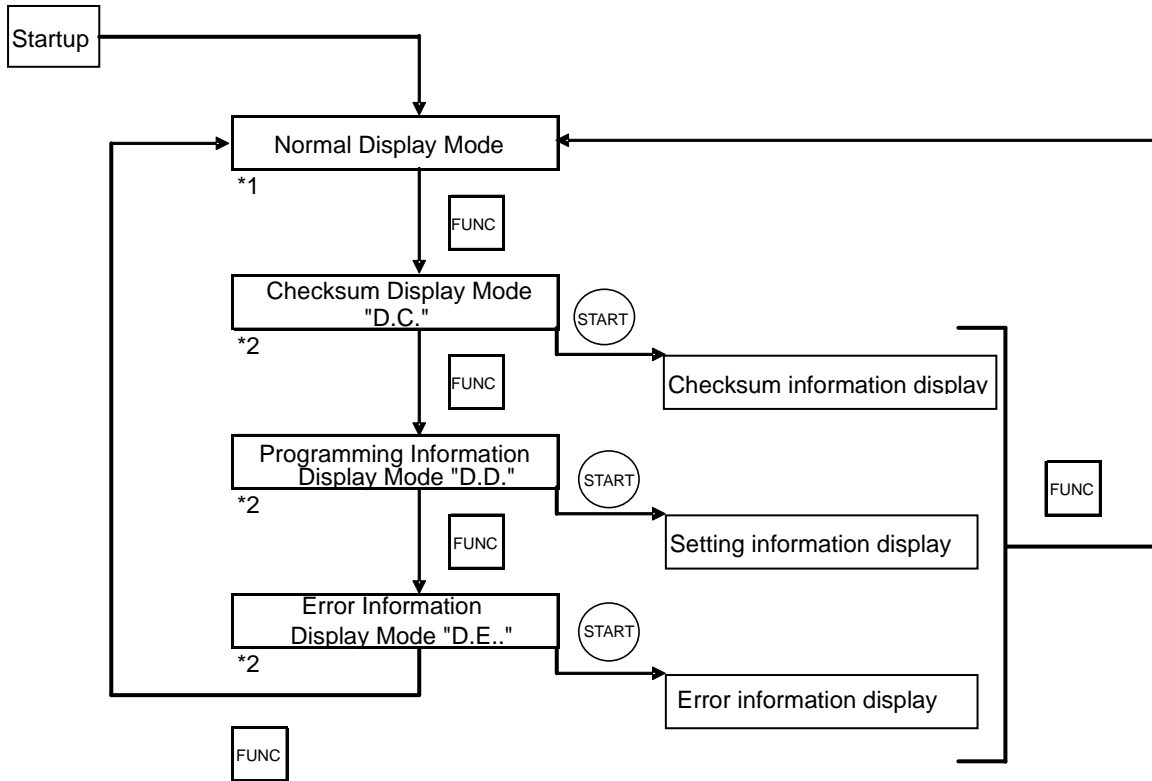
FUNC Press the "FUNC" switch on the SFWv3 once.

START Press the "START" switch on the SFWv3 once.

("D"(Left)=Display, "C"=Checksum, "D"(Right)=Setting information, "E"=Error information)

*1 Display the user program checksum lower 1byte.
*2 Move to normal display mode after 3 seconds.

(Multi Data Mode)


```
Startup ──▶ "P.1."〜""P.4."
              *1
```

Normal Display Mode
*2

│ FUNC

Checksum Display Mode "1.C." ──(START)──▶ Checksum information display
*3

│ FUNC

Programming Information Display Mode "1.D." ──(START)──▶ Setting information display
*3

│ FUNC

Error Information Display Mode "1.E." ──(START)──▶ Error information display
*3

│ FUNC

Data Switch Display Mode "S.P." ──(START)──▶ (Selected data display)
*3

(Selected data display)
"P.1". │ FUNC
"P.2". │ FUNC
"P.3". │ FUNC
"P.4".
*3, *4
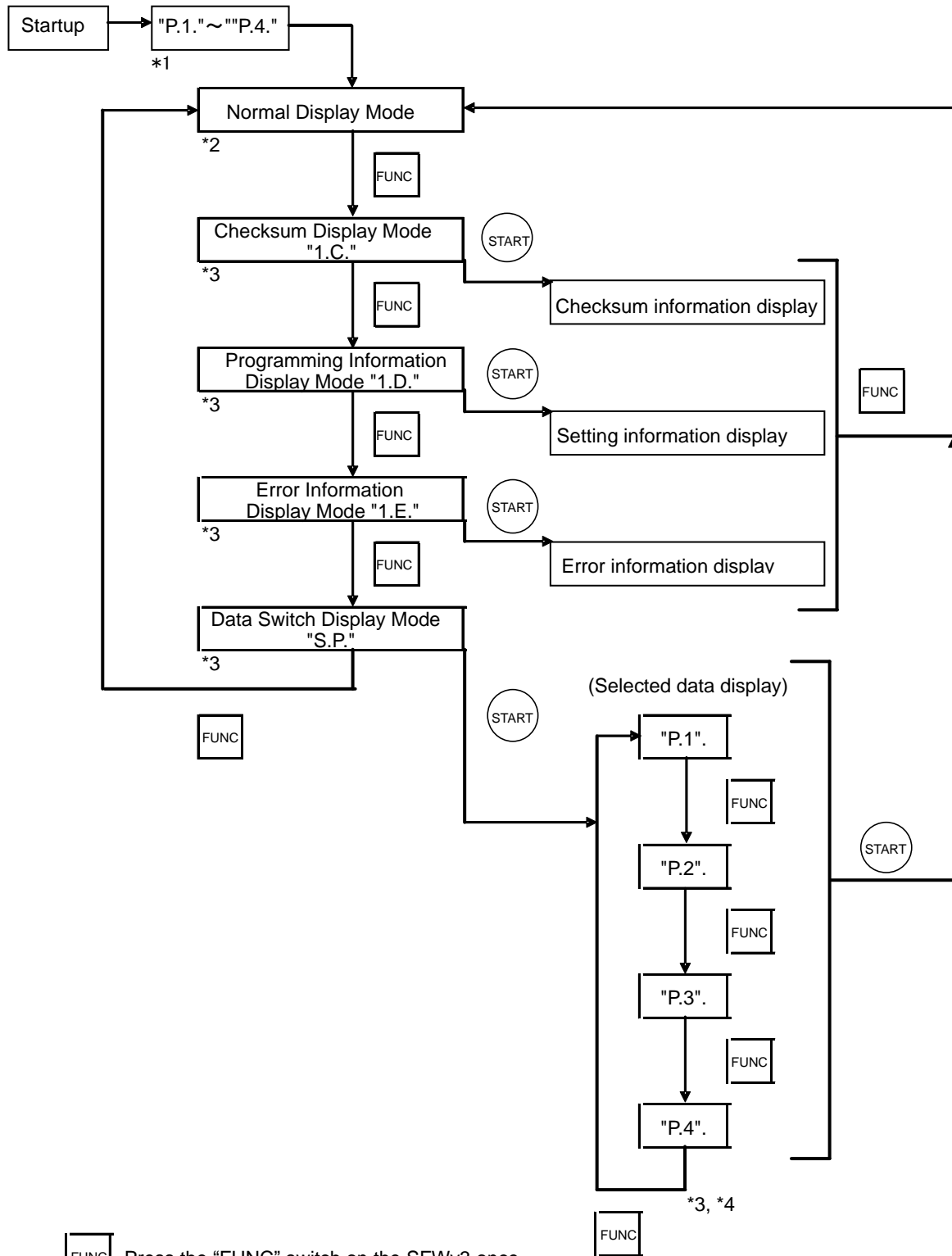
│ FUNC

FUNC Press the "FUNC" switch on the SFWv3 once.

(START) Press the "START" switch on the SFWv3 once.

("1"=Table number, "C"=Checksum, "D"=Setting information, "E"=Error information, "P"=Program, "S"=Select)

*1 Display the selected data number. (retained by the set data)
*2 Display the user program checksum lower 1byte.
*3 Move to normal display mode after 3 seconds.
*4 Show the set data only.

8.3.2. Normal Display Mode

This is the screen when power is turned on. The S550-SFWv3 displays the checksum lower 1 byte of the data stored in the internal memory of the main unit on the center display.
  *The user's program checksum is the data summed up by every byte. The addresses not included in the user's program are calculated as FFh.
  *When there is no data downloaded to the internal memory, "_","_" is displayed and the programming to the target board cannot be executed.

8.3.3. Checksum Display Mode

The S550-SFWv3 displays the checksum lower 2 byte of the data stored in the internal memory of the main unit on the center display. Following shows how to see the information.
  *When there is no data downloaded to the internal memory, the display does not change to "**Checksum Display Mode**". Also, when the S550-SFWv3 main unit is in energy saving mode, the display does not change to "**Checksum Display Mode**".

① Move to "**Checksum Display Mode**"
  ・ When center display is in the "**Normal Display Mode**", press the "FUNC" switch on S550-SFWv3 once, and "**D**","**C**" appear on the center display.

② Display checksum
  ・ After "**D.**","**C.**" are displayed on the center display, press the "START" switch on S550-SFWv3 once, and the checksum is displayed.
    *"When there is no operation for 3 seconds after "**D.**","**C.**" are displayed, the center display goes back to the "**Normal Display Mode**".
      ・The checksum is automatically scrolled.

③ Exit "**Checksum Display Mode**"
  ・ Press the "FUNC" switch on S550-SFWv3 once to go back to the "**Normal Display Mode**".

  (Multi Data Mode)
  "**Checksum Display Mode**" shows "**1.**","**C.**" through "**4.**","**C.**" on the center display.

8.3.4. Programming Information Display

The S550-SFWv3 displays the programming information of the data stored in the internal memory of the main unit on the center display. Following shows how to see the information.

*When there is no data downloaded to the internal memory, the display does not change to "**Programming Information Display Mode**". Also, when the S550-SFWv3 main unit is in energy saving mode, the display does not change to "**Programming Information Display Mode**".

① Move to "**Programming Information Display Mode**"
- ・ When center display is in the "**Checksum Display Mode**", press the "FUNC" switch on S550-SFWv3 once, and "**D.**","**D.**" appear on the center display.

② Show programming information
- ・ After "**D.**","**D.**" are displayed on the center display, press the "START" switch on S550-SFWv3 once, and the MCU, TYPE, and Action Mode are displayed.
  - *"When there is no operation for 3 seconds after "**D.**","**D.**" are displayed, the center display goes back to the "**Normal Display Mode**".
    - ・The checksum is automatically scrolled.

③ Exit "**Programming Information Display Mode**"
- ・ Press the "FUNC" switch on S550-SFWv3 once to go back to the "**Normal Display Mode**".

  (Multi Data Mode)
  "Programming Information Display Mode" shows "**1.**","**D.**" through "**4.**","**D.**" on the center display.

8.3.5. Error Information Display

The S550-SFWv3 displays the previous programming error information on the center display. Following shows how to see the information.

*When there is no data downloaded to the internal memory, the display does not change to "**Error Information Display Mode**". Also, when the S550-SFWv3 main unit is in energy saving mode, the display does not change to "**Error Information Display Mode**".

① Move to "**Error Information Display Mode**"
- ・ When center display is in the "**Programming Information Display Mode**", press the "FUNC" switch on S550-SFWv3 once, and "**D.**"," **E.**" appear on the center display.

② Shows error information
- ・ Within 3 seconds after "**D.**","**E.**" are displayed on the center display, press the "START" switch on S550-SFWv3 once, and the error information is displayed.
  - *When there is no operation for 3 seconds after "**D.**","**E.**" are displayed, the center display goes back to the default screen.
  - *For details of error information, check the error information details (See "9.5 List of execution result on Center Display, Execution Screen and Execution Detail Screen")

③ Exit "**Error Information Display Mode**"
- ・ Press the "FUNC" switch on S550-SFWv3 once to go back to the default screen.

  (Multi Data Mode)
  "Error Information Display Mode" shows "**1.**","**E.**" through "**4.**","**E.**" on the center display.

8.3.6. Data Switch Display

    With the "Multi Data Mode", you can select programming data on S550-SFWv3. Following shows how to select the data.

    *When there is no data downloaded to the internal memory, the display does not change to "**Data Switch Display Mode**". Also, when the S550-SFWv3 main unit is in energy saving mode, the display does not change to "**Data Switch Display Mode**"

① Move to "**Data Switch Display Mode**"
  - ・ When center display is in the "**Error Information Display Mode**", press the "FUNC" switch on S550-SFWv3 once, and "**S.**"," **P.**" appear on the center display. Within 3 seconds after "**S.**","**P.**" are displayed on the center display, press the "START" switch on S550-SFWv3 once, then you can select data.

② Switch data
  - ・ Press the "FUNC" switch on S550-SFWv3 and "**P**","**1.**" Through "**P**","**4.**" appear, you can switch data.
    - * Selected data is displayed initially.
    - *When there is no operation for 3 seconds after "**P**","**1.**" through "**P**","**4.**" are displayed, the center display goes back to the default screen.

③ Exit "**Data Switch Display Mode**"
  - ・ Press the "START" switch on S550-SFWv3 once to select the data and go back to the default screen.
    If there is no operation for 3 seconds, the data is not selected and the screen goes back to the default screen.
    - * When a data is selected, buzzer sounds.

9. Messages and Warnings

9.1. Message Dialogs

Display	Contents
S550-SFWv3 already started.	Displayed when trying to start up the control software while The control software has been started already.
There is not enough space to start S550-SFWv3.	Displayed when the free disk space is less than 1M byte while trying to start up the control software.
Do you really want to exit?	Displayed while trying to exit from the control software.
Do you really want to exit?(discard your settings)	Displayed when the settings have not been saved while trying to exit from the control software.
Users Manual open error.	Displayed when the manual cannot be opened.
Users Manual not found.	Displayed when the manual does not exist.
Device definition file 'xxx' not found.	Displayed when the device definition file does not exist.
Device definition file 'xxx' open error.	Displayed when the device definition file cannot be opened.
Device definition file 'xxx' format error.	Displayed when the device definition file format is invalid.
This file includes data addressing non-ROM area of the selected device. Does it continue as it is?	Displayed while trying to load a program file that contains data in the data area when the target device does not have any data area.
Please click "Set ID" button for setting "Check ID Code".	Displayed when you select TXZ3 series and load a program file. You have to set "Check ID Code" manually for this device.
ROM file open error.	Displayed when the program file could not be loaded.
ROM file format error.	Displayed when the program file format is invalid.
System memory error.	Displayed when the temporary memory used during loading the program file could not be ensured.
ROM file invalid address contained error.	Displayed when a program file that contains an invalid address data is loaded.
ROM file write error.	Displayed when a programming error occurred while saving the loaded program data to a file.
Project file 'xxx' not found.	Displayed when the project file could not be loaded.
Device definition file 'xxx' format error.	Displayed when the project file format is invalid.
Device selected not found. Do you want to make new project?	Displayed when the project file does not exist or the device in the project file does not exist in the device definition file while starting up the control software.
Do you want to initialize?	Displayed when initializing device setting information.
Would you like to update firmware?	Displayed when the firmware needs to be updated.
System memory error.	Displayed when the required memory could not be obtained.
Please input hex value.	Displayed when a value other than hexadecimal value is entered while a hexadecimal value is required for the item.
Invalid address contained error. Please address value in the range of blocks.	Displayed when specifying an address other than valid ROM area for the set device.
Invalid address range error. Please set end address value that is larger than start address.	Displayed when specified end address value is smaller than the value of the start address.
Do you want to replace modified file?	Confirmation whether to validate the edited contents or not.
Do you want to move main view?	Confirmation whether to go back to the main screen,

Display	Contents
Do you want to move main view?(discard your settings)	Confirmation whether to discard the settings and go back to the main screen.
Some Maintenance setting items has been edited. Do you want to replace the existing items?	Confirmation whether to validate the edited contents or not.
Data can't find.	Displayed when data to be searched does not exist.
Invalid log save directory.	Displayed when the directory for the log specified in the maintenance screen does not exist.
Invalid new password.	Displayed when invalid password has been entered.
Do you really want to clear counters?	Displayed when clearing the input results.
Invalid range error.	Displayed when the value out of range has been set for the clock frequency.
Please set %d machine. Number of the machine you can use is %d.	Displayed when the communication between the GUI and the firmware has failed.
Firmware file 'xxx' not found.	Displayed when the downloadable firmware is not available while auto-downloading the firmware in trying to match the versions of the control software and the firmware.
Firmware file 'xxx' format error.	Displayed when the file format of the mot file for the firmware is invalid.
Firmware Version is different.	Displayed when the firmware of the required version does not exist while auto-downloading the firmware in trying to match the version of the GUI and the firmware.
Communication error.	Displayed when the communication between the GUI and the firmware has failed.
CRC error.	Displayed when CRC error occurs during the communication between the control software and the firmware.
Memory error.	Displayed when the firmware internal memory has been damaged.
UpLoad password error.	Displayed when the password for uploading does not match.
MCU disagreement error.	Displayed when invalid data information is contained while uploading.
There is no data.	Displayed when there is no data on S550-SFWv3 while uploading.
There is not enough space in the selected directory to write an action log.	Displayed when there is not enough hard disk space while saving a log file.
There is the same name action log file. Rename or Overwrite? Yes...Rename No...Overwrite	Displayed when overwriting the log file.
Could not save the action log file. Retry or Rename? Yes...Retry No...Rename	Displayed when saving the log file has been failed..
Communication Err. Stop(OK/CANCEL)?	Displayed when the communication between the GUI and the firmware has failed.
No device Err. Program Stop(OK/CANCEL)?	Displayed when there is a spot with no device during the first device check by the firmware.
It is not necessary to download.	Displayed when settings do not need to be downloaded.
Initialize complete.	Displayed when initialization has been complete.
DownLoad complete.	Displayed when downloading has been complete.
UpLoad complete.	Displayed when uploading has been complete.
DownLoad...	Displayed while downloading.
Download stop?	Confirmation to cancel downloading.
Update...	Displayed while updating.
Update stop?	Confirmation to cancel firmware updating.
UpLoad...	Displayed while uploading.
Upload stop?	Confirmation to cancel uploading.
Action Start...	Displayed when programming has been started.
Action stop?	Confirmation to cancel programming.
Initialize stop?	Confirmation to cancel initialization.

Display	Contents
Initialize Start...	Displayed when initialization has been started.
Initialize...	Displayed while initializing.
Finish	Displayed when programming has been complete.
Initialize Stop...	Displayed when initialization has been canceled.
There is no machine. Please move to main view.	There is no machine to communicate at the "Execution Screen".
It does not download ROM data in this action mode.	Click "Set" button When loading program file and select "Erase/Blank"," Blank" or "Chip Erase" mode.
The data in the flash memory will be erased when ID Code Protect is not set. Does it continue as it is?	Displayed when the following device is selected. ·There is a security specification that the flash memory is automatically erased. ·ID Code Protect is not set.
The written data in the flash memory will be erased when ID Code Protect is not set. Does it continue as it is?	Displayed when the following device is selected. ·There is a security specification that the flash memory is automatically erased. ·ID Code Protect is not set. ·Only a part of blocks are selected.
The written data in the flash memory will be erased. Does it continue as it is?	Displayed when the following device is selected. ·There is a security specification that the flash memory is automatically erased. ·Only a part of blocks are selected.
When 'Flash Option' is disable, all of the flash option settings are not functioned.	Displayed when 'Flash Option' is disable.
When 'Chip Erase' is disable, chip cannot be erased and programmed any more.	Displayed when 'Chip Erase' is disable.
If 'Disable Block Erase' is specified and a security command is executed, the Security Release command cannot be executed and the target security setting cannot be cleared again.	Displayed when 'Block Erase' is disable and RL78 Family is selected.
When 'Boot Block Cluster Programming' is disable, boot block cannot be erased and programmed any more.	Displayed when 'Boot Block Cluster Programming' is disable.
The baudrate of the opened project file is not correct. Do you want to change it into a default value?	Displayed when the baudrate of the opened project file is not correct.
The baudrate of the selected project file is not correct. Do you want to change it into a default value?	Displayed when the baudrate of the selected project file is not correct.

9.2. Buzzer Sound List

Operation	Condition	Buzzer
Power ON	Settings made by PC	After LED process, "Pip"
Programming	Stand-alone Programming operation	"Pip"
	PASS	"Pee"
	ID error	"Pipee"
	Mode entry error	"Pipee"
	Internal memory is damaged	"Pipipee"
	Other programming error	"Pipee"
Initializing main unit memory	Stand-alone Initializing main unit memory	"Pip, Pip, Pip, Pip, …"
	Stand-alone On completing main unit memory initialization	"Pee"

9.3. LED Status List
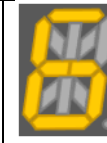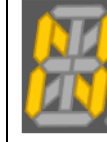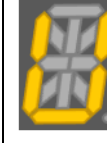
Operation	Condition	LED Status					
		POWER	USB	PASS	ID ERR	FAIL	Center Display
Power ON	No settings mode by PC	●	●	-	-	-	"_","_"(underscore)
	Settings mode by PC	●	●	●	●	-	checksum lower 1 byte
	Internal memory is damaged	●	●	●	●	-	"M","E"
Programming	Executing programming	●	○	○	-	-	-
	PASS	●	●	●	-	-	checksum lower 1 byte
	ID Error	●	●	-	●	-	checksum lower 1 byte
	Mode Entry Error	●	●	-	●	●	checksum lower 1 byte
	Internal memory is damaged	●	●	●	●	●	"M","E"
	Other programming error	●	●	-	-	●	checksum lower 1 byte
Downloading	Executing main unit downloading	●	○	-	-	-	-
	Main unit downloading complete	●	●	●	●	-	checksum lower 1 byte
Main unit memory initializing	Main unit memory initializing	●	○	○	-	○	-
	Main unit memory initialization complete	●	●	-	-	-	"_","_" (underscore)
Firmware updating	Firmware updating	●	-	-	-	-	-
	Main unit memory initializing	●	○	○	-	○	-
	Firmware updating complete	●	●	-	-	-	"_","_" (underscore)
Others	Firmware Error	●	-	-	-	-	-
	Malfunction	-	-	-	-	-	-

●:Lighting, ○:Blink, -:Extinction

*If the USB is not connected, USB LED does not light or blink.
*When you select "Erase/Blank", "Blank", "Chip Erase" or "Read", Center Display shows "≡" instead of the checksum.

9.4. List of Center Display

0	1	2	3	4	5	6	7
8	9	A	B	C	D	E	F
G	H	I	J	K	L	M	N
O	P	Q	R	S	T	U	V
W	X	Y	Z	period	hyphen	underscore	slash
No Data							

*Letters and periods may be displayed at the same time.
*When you select "Erase/Blank", "Blank ", "Chip Erase" or "Read", "No Data" is displayed.

Center Display	Execution Screen	Execution Detail Screen	Descriptions
"0","0"	Gray	(None)	These are displayed after starting up S550-SFWv3, or when programming is canceled.
"0","1"	Yellow-Green	Pass	These are displayed when programming completed successfully.
"0","2"	Red (0002)	Mode Entry Err	These are displayed when mode entry before programming failed. Execution Detail Screen displays the following additional information. - Error factor in "Factor"
"0","3"	Red (0003)	ID Err	These are displayed when checking security ID failed. Execution Detail Screen displays the following additional information. - Error factor in "Factor"
"0","4"	Red (0004)	Erase Err	These are displayed when erasing failed. Execution Detail Screen displays the following additional information. - Error factor in "Factor" - Erase method in "Erase Type" - Erase block number in "Block No"
"0","5"	Red (0005)	Program Err	These are displayed when programming failed. Execution Detail Screen displays the following additional information. - Error factor in "Factor" - Program execution address in "Address"
"0","6"	Red (0006)	Verify Err	These are displayed when verifying failed. Execution Detail Screen displays the following additional information. - Error factor in "Factor" - Verify execution address in "Address" - Expectation data in "Write Data" - Actual data (read value) in "Read Data"
"0","7"	Red (0007)	Blank Err	These are displayed when blank check failed. Execution Detail Screen displays the following additional information. - Error factor in "Factor"
"0","8"	Red (0008)	Protect Err	These are displayed when protection setting failed. Execution Detail Screen displays the following additional information. - Error factor in "Factor"
"0","9"	Red (0009)	Read Err	These are displayed when reading failed. Execution Detail Screen displays the following additional information. - Error factor in "Factor" - Read execution address in "Address"

* "Execution Screen" shows displayed color of operation result and error code (in parentheses).
* "Execution Detail Screen" shows displayed string of operation result at "Result".

9.6. Initialized Settings (factory setting) List

Items	Default status (Factory setting)
Programming data	Data set in the device setting screen is initialized. (See "6.2.1 Device Setting Screen".)
Buzzer sound Mute setting	Mute is not set. (See "6.3.1 Maintenance Initial Setting Screen".) *With buzzer sound.
Power saving mode setting	Normal mode is set. (See "6.3.1 Maintenance Initial Setting Screen".) *The center display turns on.
Password setting	Password is not set. (See "6.3.1 Maintenance Initial Setting Screen".) *Password is not required for uploading.

10. Troubleshooting

10.1. Mode entry error occurs when programming

Mode entry error shows "0","2" on the Center Display, "0002" on the Execution Screen" or "Mode Entry Err" on the Execution Detail Screen.
Mode entry error occurs while preparing for programming.
Following shows how to resolve.

① Check power voltage
Is the target board power voltage set in the device setting screen "Vcc" label setting value?
    *Do not connect external power source if "3.3V" or "5V" is selected in "Vcc Type" list box.
In case the power is supplied from S550-SFWv3, does the consumption current of the target board exceed 200mA?
If exceeding 200mA, use an external power supply for the target board.
② Check CPU oscillator
Is the frequency of the CPU in the range described in the hardware manual?
③ Check terminal status
Are the CNVSS, EPM terminal values set correctly?
④ Check baudrate
Is the baudrate of the device on the target side in the range described in the hardware manual?
    *Try programming with the lower baudrate if the mode entry error is not resolved after ①, ②, and ③ operations.

10.2. Erase error occurs when programming

Erase error shows "0","4" on the Center Display, "0004" on the "Execution Screen" or "Erase Err" on the Execution Detail Screen.
Erase error occurs when the target ROM area cannot be erased.
Following shows how to resolve.

① Check power voltage
Is the target board power voltage set in the device setting screen "Vcc" label setting value?
② Check CPU oscillator
Is the frequency of the CPU in the range described in the hardware manual?

10.3. Program error occurs when programming

Program error shows "0","5" on the Center Display, "0005" on the "Execution Screen" or "Program Err" on the Execution Detail Screen.
Program error occurs when data cannot be written in the ROM area of the device on the target side.
Following shows how to resolve.

① Check power voltage
Is the target board power voltage set in the device setting screen "Vcc" label setting value?
② Check CPU oscillator
Is the frequency of the CPU in the range described in the hardware manual?

10.4. Blank error occurs when programming

Blank error shows "0","7" on the Center Display, "0007" on the "Execution Screen" or "Blank Err" on the Execution Detail Screen.
Blank error refers to an error that occurs when the ROM area of the device on the target side is not initialized (0xFF).

10.5. Verify error occurs when programming

Verify error shows "0","6" on the Center Display, "0006" on the "Execution Screen" or "Verify Err" on the Execution Detail Screen.
Verify error refers to an error that occurs when the ROM area of the device on the target side does not match the written value.

10.6. Memory error occurs when programming

Memory error occurs when the S550-SFWv3 main unit ROM is damaged.
Following shows how to resolve.

① Download
　　Download the programming data again.
② Initialize and download
　　Click the "Initialize" button, or press and hold the S550-SFWv3 main unit "START" switch. Then download the programming data again.

10.7. Mode entry error occurs when programming R8C Family

Are you not using 14pin-10 pin connecting cable? For R8C Family, 14pin-10pin connecting cable cannot be used. Use 14pin-14pin connecting cable.

10.8. Nothing is displayed on the center display

Isn't it set to the power saving mode? In order to turn on the center display, remove the check in the "Enable Power Save Mode" box in the maintenance screen.

10.9. I only can select "Erase/Program/Verify" or "Verify" for the execution process.

Isn't it set in the normal mode? Check "Enable Expansion Action Mode" box in the maintenance screen in order to select either "Blank/Program/Verify", "Erase/Blank/Program/Verify", "Erase/Program", "Erase/Blank" , "Blank", "Chip Erase" and "Read".

10.10. Forgot the password for uploading

If you lose your password, set a new password and download the data to program again.

10.11. I can't select the data when stand-alone programming in power saving mode.

With the power saving mode set, S550-SFWv3 main unit center display does not turn on, and "FUNC" switch is invalidated. Thus, only the data with the smallest data number can be programmed in stand-alone programming.

Version	Revised contents	Revised date
Rev.A	First edition	2010/03/29
Rev.B	Changes of the whole ・The description has been changed from the "R8C/Tiny series" to the "R8C family". ・The description has been changed from the "H8SX series" to the "H8SX family". ・The description has been changed from the "SH/Tiny series" to the "SuperH family". 2.2. Function Specifications ・The explanation of data mode has been changed. 2.7.2. 14pins – 10pins Connecting Cable (Applicable for M16C Family) ・Connector model's name has been corrected. 3.12. SH/Tiny7124, 7125 Group of circuitry examples ・The description has been changed from the "SH/Tiny7124, 7125 Group" to the "SH/Tiny Series". 3.13. SH7147, SH7280 Series of circuitry examples has been added. 3.14. H8SX/1622 Group of circuitry examples ・The description has been changed from the "H8SX/1622 Group" to the "H8SX/1600 Series". ・It has been changed as not to connect the ELME terminal with S550-SFWv3. 3.15. RX600 Series ・It has been changed as not to connect the ELME terminal with S550-SFWv3. 6.1.1. Main Screen ・The explanation of mcu Type has been changed. ・The explanation of Check Sum has been changed. ・The explanation of Copy button has been added. 6.2.1. Device Setting Screen ・The explanation of Baudrate has been changed. ・Main Multiplier has been changed. ・PerMultiplier has been added. ・The explanation of Check Sum has been changed. 6.2.10. ROM Area Block Information Setting Screen ・The explanation of program setting for each block has been changed. 6.3.1. Maintenance Initial Setting Screen ・The explanation of the "Enable FA Mode" check box has been added. 6.4.1. Execution Screen ・The explanation of Check Sum has been changed. 7.3. Data Settings ・The explanation of "Multi Data Mode" writed on the "② Go to the device setting screen" has been changed. ・The explanation of the "Main Multiplier" and "PerMultiplier" have been added in the "⑤ Select clock frequency" ・The explanation of the "user boot mat area" and "E2 data flash area" have been added in the "⑦ Edit data". ・The "⑬ Copy device setting (Only in the "Multi Data Mode")" item has been added.	2010/07/21

Rev.C	2.3. System Requirements ・Windows 7(32bit) has been added to OS. 5.1. Installing USB driver ・"5.1.1 Windows 7(32bit)" has been added. 6.2.1. Device Setting Screen ・"Erase/Blank" and "Blank" mode have been added. 6.4.1. Execution Screen ・The explanation of serial number has been added to "<<Result section>>". 7. Remote Mode ・The parts related to Remote Mode have been brought together. 8. Stand-alone Mode ・The parts related to Stand-alone Mode have been brought together. 9. Messages and Warnings ・The warning messages have been added.	2011/03/30
Rev.D	2.2. Function Specifications ・Channel mode has been added. 4.3. Connection for Remote Programming ・"When supplying voltage to the target board using an external power supply - Multi CH Mode" has been added. ・"When supplying voltage to the target board from S550-SFWv3 - Multi CH Mode" has been added. 6.1. Main Screen ・Main screen in the "Multi CH Mode" has been added to the "6.1.1 Main Screen". ・About screen in the "Multi CH Mode" has been added to the "6.1.2 About Screen". ・"6.1.3 Initialize Setting Screen" has been added. ・"6.1.4 UpLoad Setting Screen" has been added. ・"6.1.5 DownLoad Setting Screen" has been added. ・"6.1.6 Program Setting Screen" has been added. 6.3.1. Maintenance Initial Setting Screen ・"Multi CH Mode" has been added. 6.4.1. Execution Screen ・Execution screen in the "Multi CH Mode" has been added. 7. Remote Mode ・"7.2 Multi CH Mode" has been added.	2011/05/18
Rev.E	9. Messages and Warnings ・The warning messages have been added.	2011/06/14
Rev.F	2.3. System Requirements ・Windows 7(64bit) has been added to OS. 5.1. Installing USB driver ・"5.1.2 Windows 7(64bit)" has been added.	2011/07/26

Rev.G	2.2.Function Specifications ・The Operation Mode has been changed. 2.7. Target Connecting Cable ・The explanation of Target Connecting Cable has been changed. ・Target Connecting Cable name has been changed. 3. Circuitry Examples ・Circuitry Examples have been deleted . 6.2.1. Device Setting Screen ・"Set Vcc" and "Chip Erase" mode have been added. ・The explanation of Communication has been changed. 6.2.11.ROM Protection Setting Screen ・"RL78,78K Family" has been added. 6.2.12.Input Vcc Setting Screen ・"6.2.12.Input Vcc Setting Screen" has been added. 6.3.1. Maintenance Initial Setting Screen ・The explanation of "Enable Expansion Action Mode" has been changed. 7.1.1.2.Maintenance Settings ・"Select extended operation mode " has been changed. 9. Messages and Warnings ・The warning messages have been added. 9.4.List of Error Information on Center Display ・The explanation of "Protect Err" has been added. 9.5.Execution Detail Screen List ・The explanation of "Protect Err" has been added. 10.9. I only can select "Erase/Program/Verify" or "Verify" for the execution process. ・"Chip Erase" mode has been added.	2012/03/07
Rev.H	2.7. Target Connecting Cable ・Custom cable model have been added.	2013/04/05
Rev.I	2.2.Function Specifications ・"Clock-synchronous serial I/O[No handshake]" have been added. 6.2.1. Device Setting Screen ・"Clock-synchronous serial I/O[No handshake]" have been added. 9.1. Message Dialogs ・The warning messages have been modified.	2015/06/12
Rev.J	9.3. Led Status List ・List have been modified. 9.4. List of Center Display ・List have been added.	2015/10/28
Rev.K	2.3. System Requirements ・Windows 10 and 8.1 has been added to OS. 5. Setting Up ・The procedures of installing and uninstalling have been modified.	2016/09/22
Rev.L	5. Setting Up ・The procedures of installing and uninstalling have been modified.	2018/08/17
Rev.M	2.1. Specifications ・"CE Mark Obtained" has been deleted.	2019/07/09

Rev.N	2.1. Specifications - "CE Mark Obtained" has been added. 2.2. Function Specifications - Programmable MCU has been modified. 2.4. Programmable Device - Programmable MCU has been modified. 6.2.1. Device Setting Screen - The explanations about "Flash Option", "Security Bit" and "Read" have been added. 6.2.9. Target MCU ID Code Setting Screen - The explanation for "TXZ3 Series" has been added. 6.2.11. ROM Protection Setting Screen - The explanation for "TXZ3 Series" has been added. - The explanation for "RX100 Series" has been added to "78K Family or RL78 Family". 6.3.3. Execution Operation Log Display Screen - "6.3.3.1. Details of Execution Operation Log" has been added. 7. Remote Mode - The explanation about "Read" has been added. 8. Stand-alone Mode - The explanation about "Read" has been added. 9. Messages and Warnings - The explanation about "Read" has been added. 9.1. Message Dialogs - The message for "TXZ3 Series" has been added. 9.5. List of execution result on Center Display, Execution Screen and Execution Detail Screen - The relations of execution result displayed on Center Display, Execution Screen and Execution Detail Screen have been clarified. 10. Troubleshooting - The execution result displayed on Center Display, Execution Screen and Execution Detail Screen have been added to several cases.	2020/01/10
Rev.O	6.2.1. Device Setting Screen - The explanation about the ID code for device identification has been added. 6.2.9. ID Code for Device Identification Setting Screen - The title has been changed from "Target MCU ID Code Setting Screen". - The explanation about changing the ID code for device identification in case of big endian has been added. 6.3.1. Maintenance Initial Setting Screen - The explanation about the "Enable Standalone" check box has been added. 7.1.1.3. Data Settings - The explanation about the ID code setting when selecting the user program file has been added.	2020/10/09

International Standard
・CE Mark Obtained (EMI:EN55011 Group1 ClassA, EMS:EN61000-6-2)

・FCC Compliance
This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions;
(1)This device may not cause harmful interference, and (2)this device must accept any interference received,
including interference that may cause undesired operation.