Programmer for flash micro computers

StickWriter

User's Manual

TESSERA Technology INC.
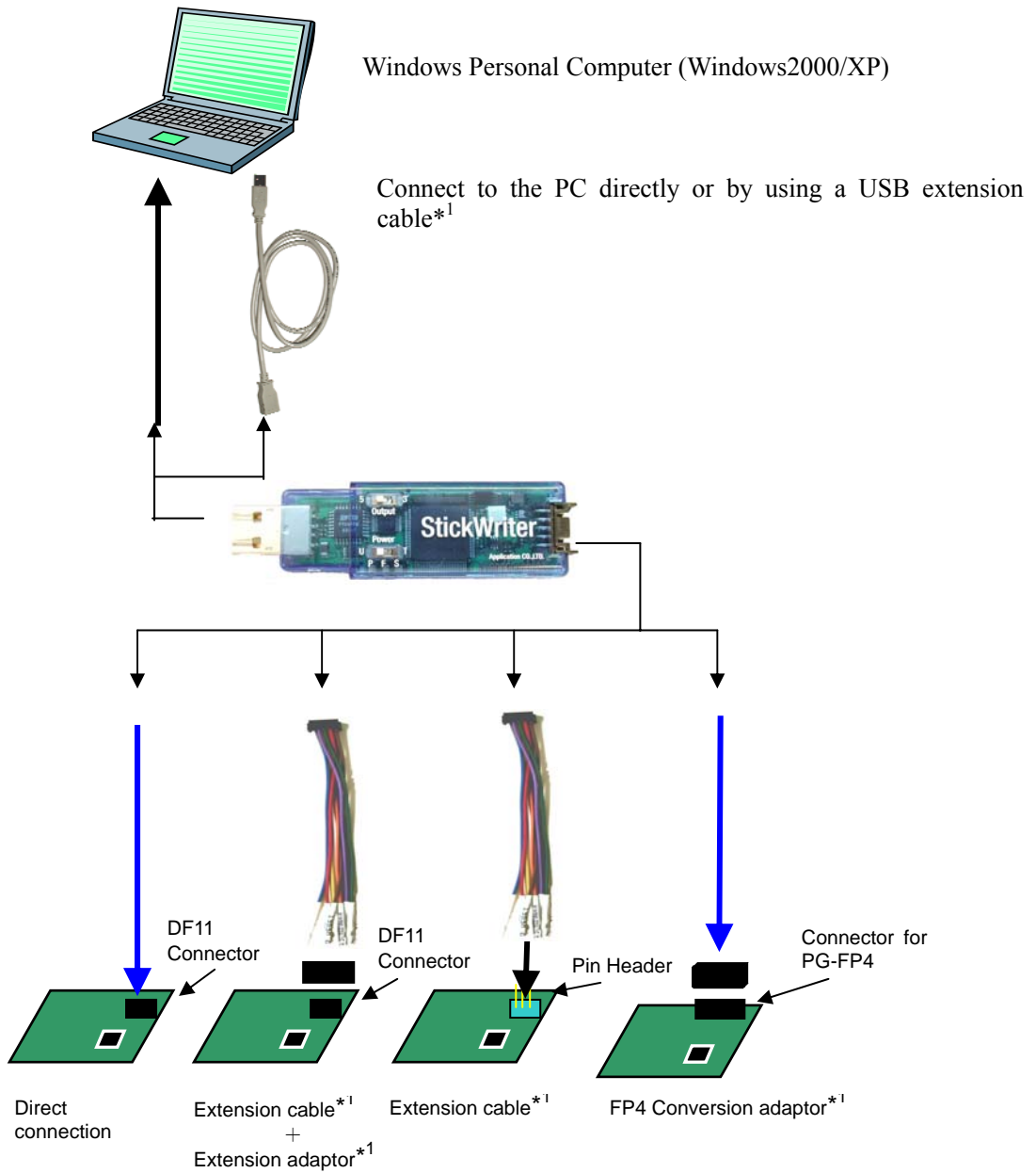
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Chapter 1 Summary

StickWriter is a compact and lightweight type of flash writer used to write program data into a micro-computer with built-in flash memory.

It allows for both "on-board writing" in which the micro-computer is implemented on a customer-built board, or "off-board writing" in which the device is mounted on the IC socket of our SS board.

Since the 32-MByte flash memory is built into the body of the StickWriter, it allows the HEX files and the parameter files for each device to be saved. Therefore, "stand-alone operation" is possible, without requiring a PC when programming.

When operating as a "stand-alone" system, complete stand-alone operation is possible without requiring external power for the StickWriter.

1.1 System Configuration

Windows Personal Computer (Windows2000/XP)

Connect to the PC directly or by using a USB extension cable*[1]

StickWriter

DF11 Connector

DF11 Connector

Pin Header

Connector for PG-FP4

Direct connection

Extension cable*[1]
+
Extension adaptor*[1]

Extension cable*[1]

FP4 Conversion adaptor*[1]

*1:Attachment for Standard Package
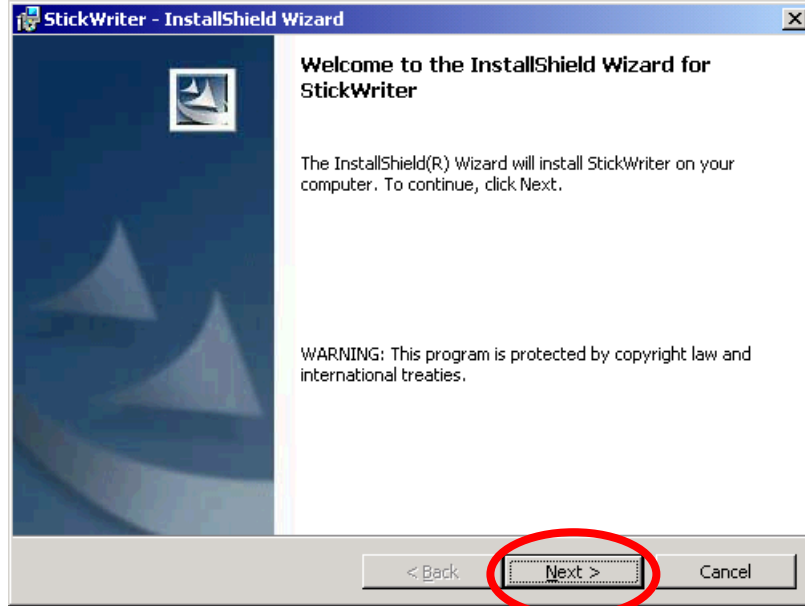
Chapter 2 Installation

2.1 System Requirement

Host Machine To use the StickWriter GUI, a PC running Windows2000 or Windows XP is required.

Host Interface USB(Rev1.1/2.0) port is required.

2.2 Software Installation

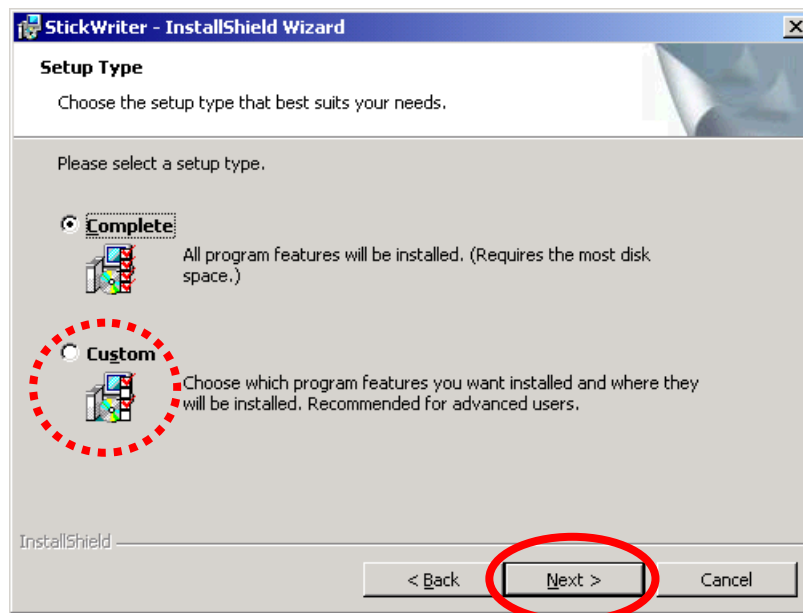After inserting the StickWriter Installation CD into the CD drive, the following installer is launched automatically.
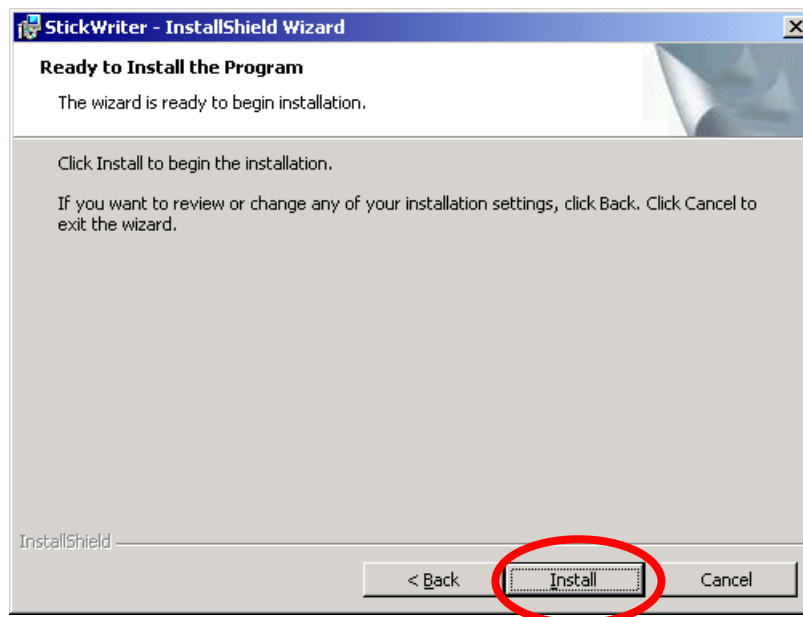

Click OK .
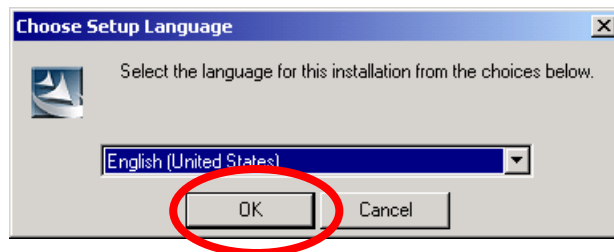
Click Next > .

To change the install folder, click Custom.
Click Next > . Installation will start.

Click Install . Installation will start.
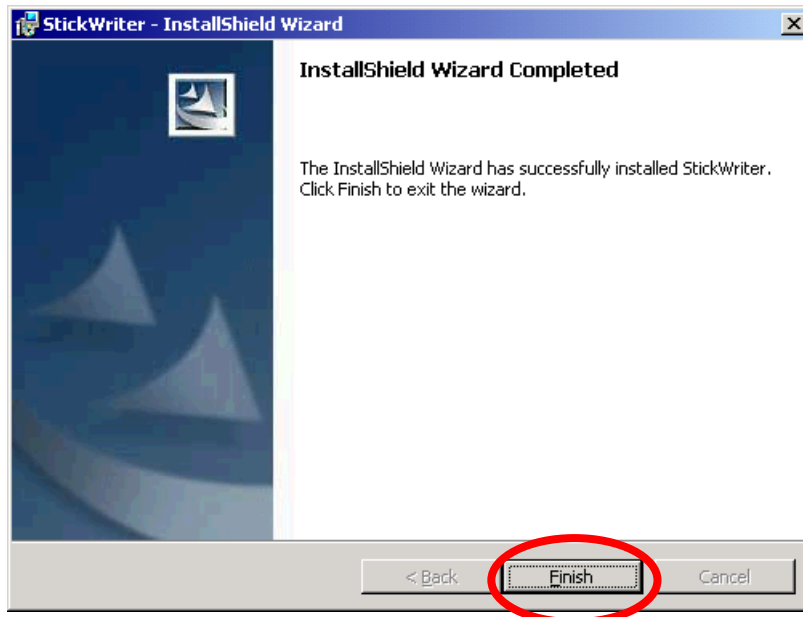
When installation finishes, the above window is displayed. Click Finish .
The GUI for StickWriter has been installed.

2.3 Driver Installation

When StickWriter is first connected, the "New Hardware Detection Wizard" will be launched.
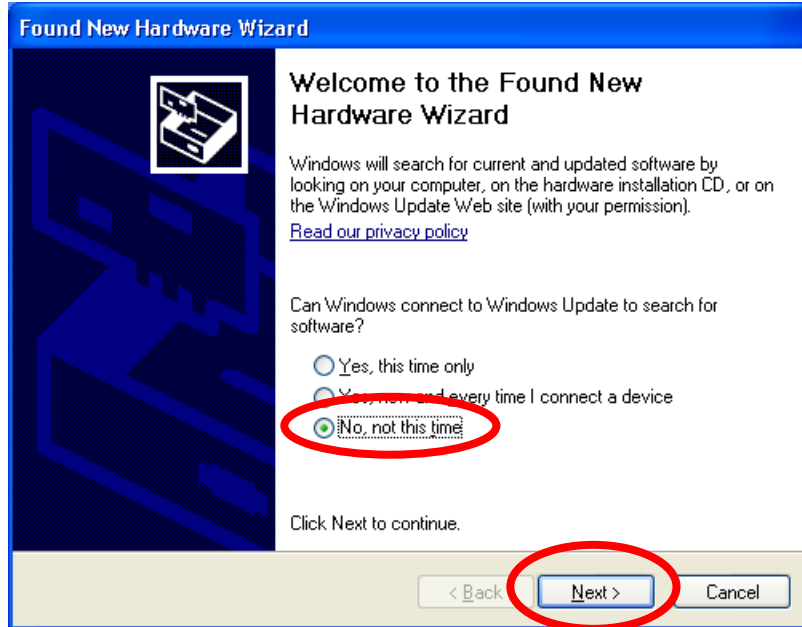
Since the driver for the StickWriter is not registered in Windows Update, select "No" and click ⌐Next＞.
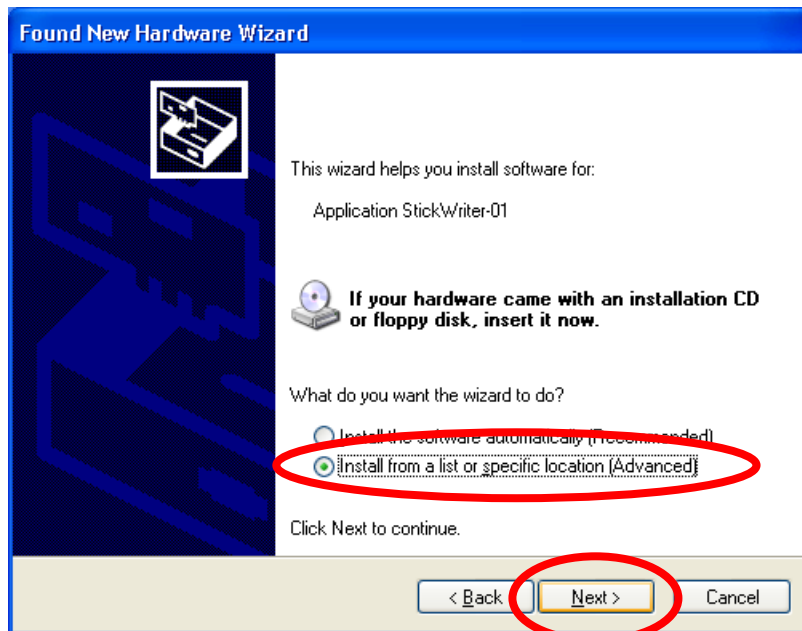
Select "Install from a list or specific location(Advanced)", and click ⌐Next＞.
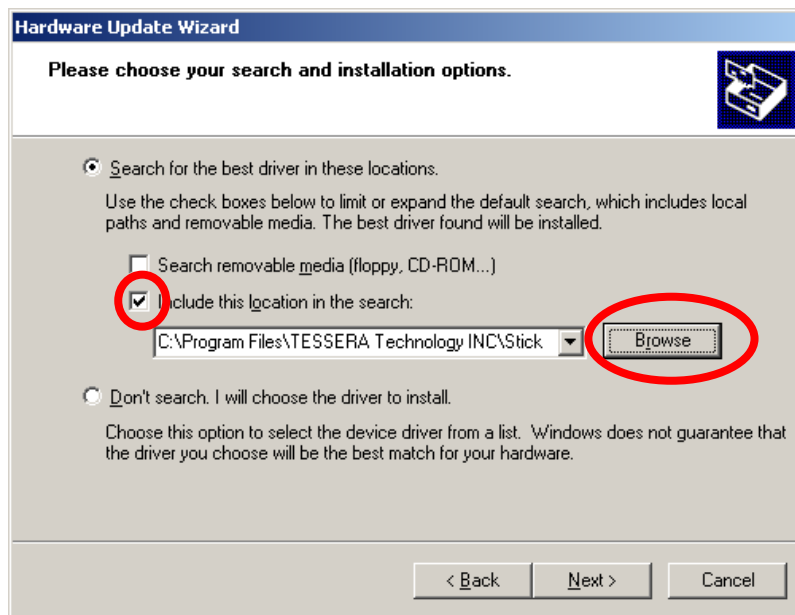
Check the "Include this location in the search:" and click Browse .
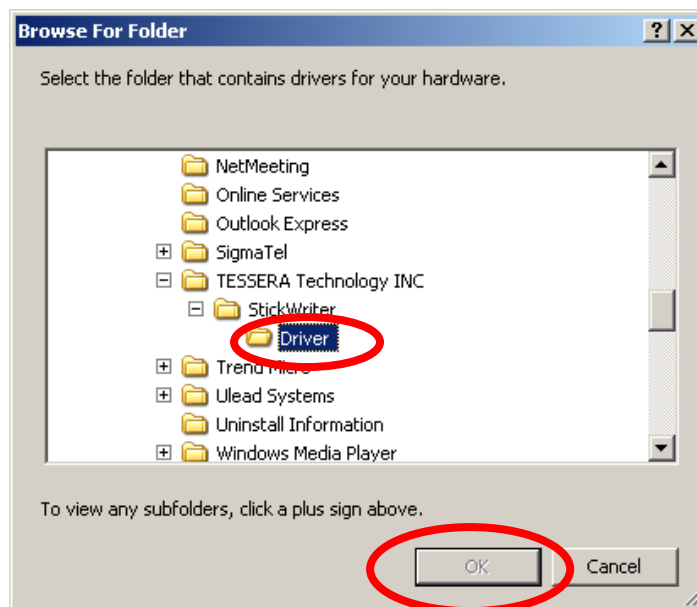
Select the "DRIVER" folder located in the folder where StickWriter was installed.

Click Next＞.
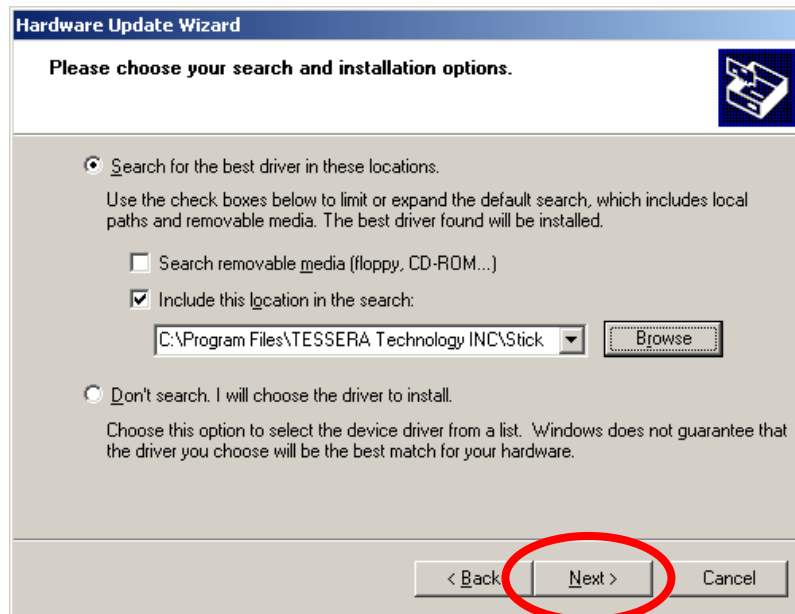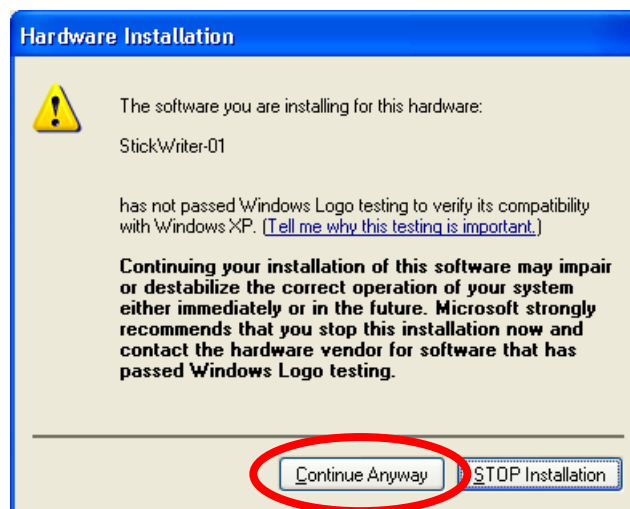
While installing the driver, the above message will be displayed. Click Continue Anyway. This will not cause operation failure or system instability.
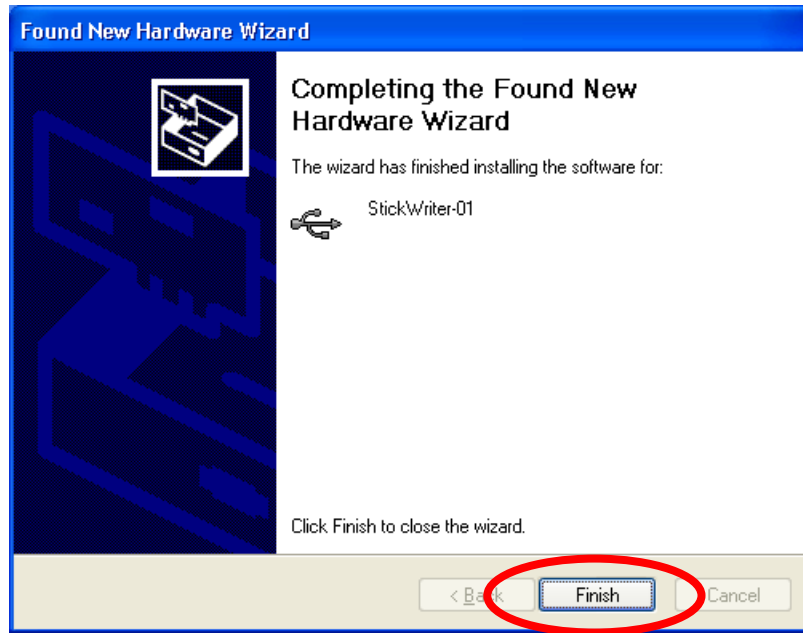
The driver installation is finished. Click | Finish |.

Chapter 3 Hardware Specifications

3.1 Switches and LED

Output switch

Status LED
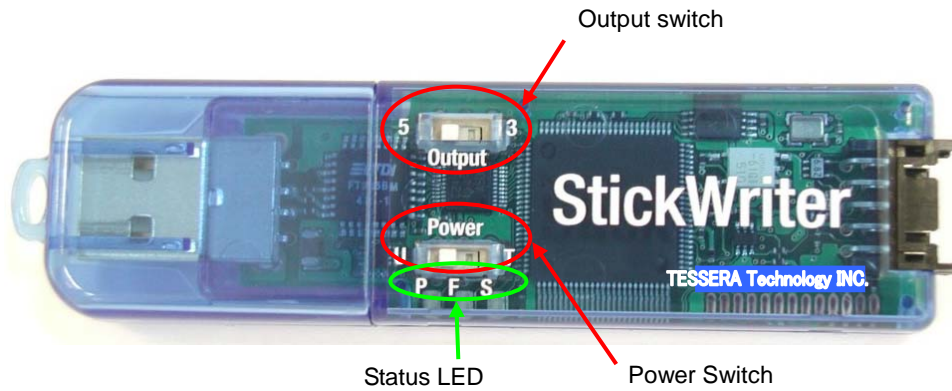
Power Switch

Output Switch
Specifies the voltage when power is supplied to the StickWriter.

5	Approximately 5V Output (max 400mA). Outputs USB power from the PC. Note: In a standard USB, the power range is 4.75 - 5.25V (on the Host side). Also diodes are contained for protection, so the power voltage drops to 0.36V at maximum.
3	Output 3.3V (max 250mA).

Power Switch
Specifies source of power supply to the StickWriter.

|	
U	Supplied by the USB.
T	Supplied by the target. The target voltage should be within 3.3V to 5V.

Status LED
The status is shown on an LED display under the Power switch.

P Power	Blue	The light turns on when power is supplied to the StickWriter. The light turns on when communicating with the PC or with the target device.
F Fail	Red	The light turns on when communication with the target device fails.
S Success	Blue	The light turns on when a command to the target device is successful.

3.2 Target Interface Connector Specifications
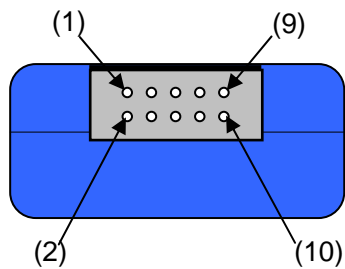
Pin No	StickWriter Signal Name	Connection Point with Target CPU
[1]	GND	VSS
[2]	$\overline{RESET}$	$\overline{RESET}$
[3]	SI/RxD/DGDATA	SO or TxD or DGDATA(X2) or TOOL0
[4]	VDD	VDD
[5]	SO/TxD	SI or RxD
[6]	FLMD0	FLMD0
[7]	SCK	SCK
[8]	H/S	P??(HS)
[9]	CLK/DGCLK	X1 or DGCLK(X1)
[10]	Reserved	

StickWriter Side Connector Type No: DF11-10DP-2DS (Hirose Electronics)

Appropriate Target Side Connectors:
SMT Type   DF11CZ-10DS-2V
DIP Type   DF11-10DS-2DSA
Insulation Displacement Socket   DF11-10DS-2R26
Clamping Socket   DF11-10DS-2C

3.3 Target Cables

	Cape Specifications		Display Specifications	Connection Point with Target CPU
[1]	Black	GND	1, GND	VSS
[2]	Brown	$\overline{RESET}$	2, RESET	$\overline{RESET}$
[3]	Orange	SI/RxD/DGDATA	3, SI/RxD/DGDATA	SO or TxD or DGDATA(X2) or TOOL0
[4]	Red	VDD	4, VDD	VDD
[5]	Yellow	SO/TxD	5, SO/TxD	SI or RxD
[6]	Green	FLMD0	6, FLMD0	FLMD0
[7]	Blue	SCK	7, SCK	SCK
[8]	Purple	H/S	8, H/S	P??(HS)
[9]	White	CLK/DGCLK	9, CLK/DGCLK	X1 or DGCLK(X1)
[10]			None	

Appropriate Header Pin Specifications: 0.64mm　Length: 6mm

Recommended Connector: PS Series (Japan Aviation Electronics Industry, Limited.)

3.4 Extension Adaptor

An adaptor used for connecting through a target cable if StickWriter cannot connect due to implications of the framework, etc. Please connect all of the 9 cables, connecting pin1 of the pin header to pin1 of the target cable.

3.5 FP4 Adaptor

An adaptor used for converting to a connector for NEC Electronics PG-FP4.
When using SW-1, turn both 1 and 2 ON.
When using 78K0S/Kx1+ series, such as DGDATA and DGCLK, turn both 1 and 2 OFF.
When using 78K0R series, such as TOOL0, turn 1 ON and 2 OFF.

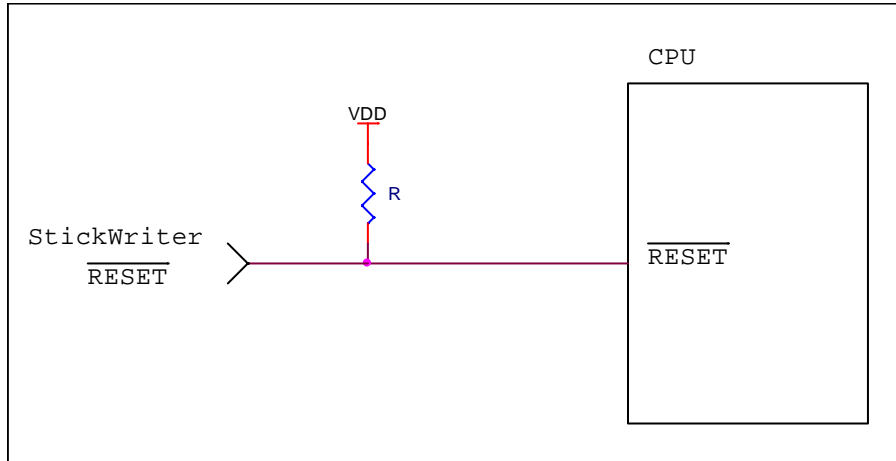| SW－1	Others	78K0S/Kx1+	78K0R
1	ON	OFF	ON
2	ON	OFF	OFF

3.6 Target Board Cautions

3.6.1 RESET

When StickWriter wants to reset the target CPU, it outputs "Low".
When StickWriter wants to cancel the reset, it changes to "Hi-Z".

When there is no external reset circuit

When there is an external reset circuit
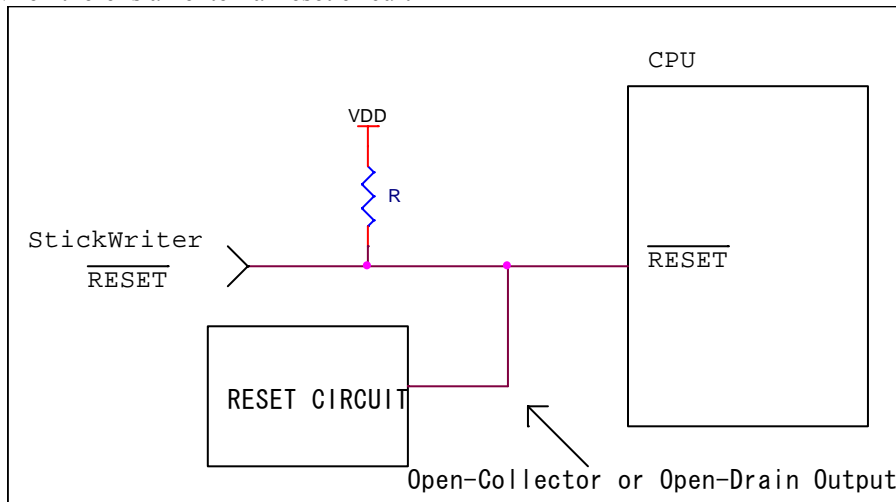
Set the external reset circuit as Open-Collector or Open-Drain output. Set the Wired OR Connection with the reset signal from StickWriter. Be sure that reset will not occur while writing to the target CPU from StickWriter. Be cautious when using an external watch-dog timer.

3.6.2 FLMD0

A pulse is output from StickWriter to determine the communication method.
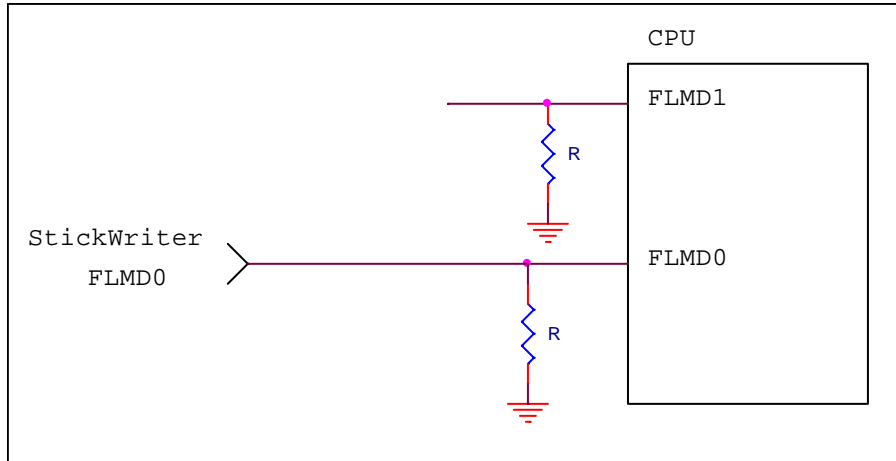Perform the "pull-down" process on the target board.
The "pull-down" processing is unnecessary in the device of 78K0R series because there is "pull-down resistance" in the inside.
If the target CPU has an FLMD1 port, perform the "pull-down" process and maintain "Low" level while StickWriter is being connected.

3.6.3 SO/TxD, SI/RxD/DGCLK, SCK and H/S

The StickWriter is in communication with the target CPU.

When external devices are connected to the ports, be cautious not to inhibit communication. Keep in mind that external devices may malfunction due to communication data with the StickWriter.

It is not necessary to perform processes for unused ports on StickWriter.

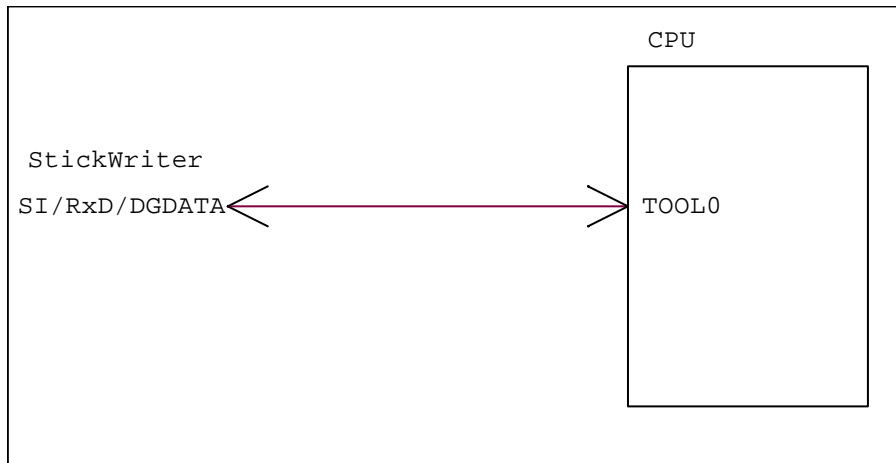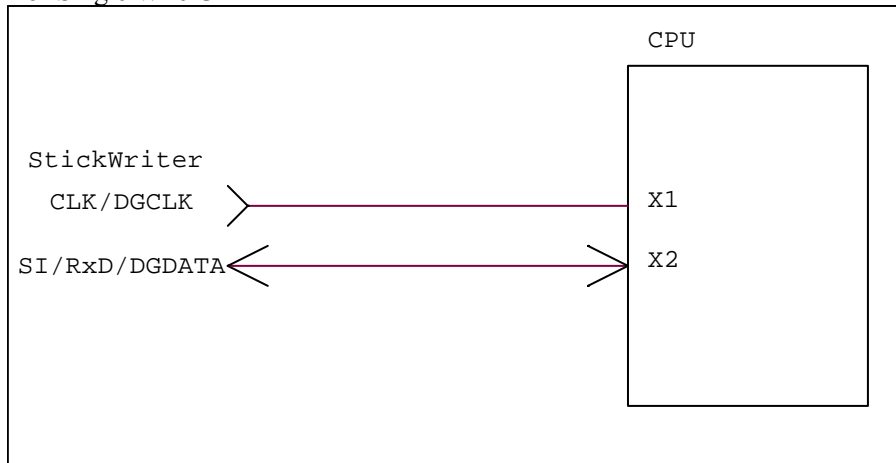|	
SO/TxD	Output from StickWriter
SI/RxD/DGDATA	Output from Target CPU for SI/RxD.
	Input/Output for DGDATA/TOOL0.
SCK	Output from StickWriter
H/S	Output from Target CPU

For clock-synchronized communication (H/S is optional)
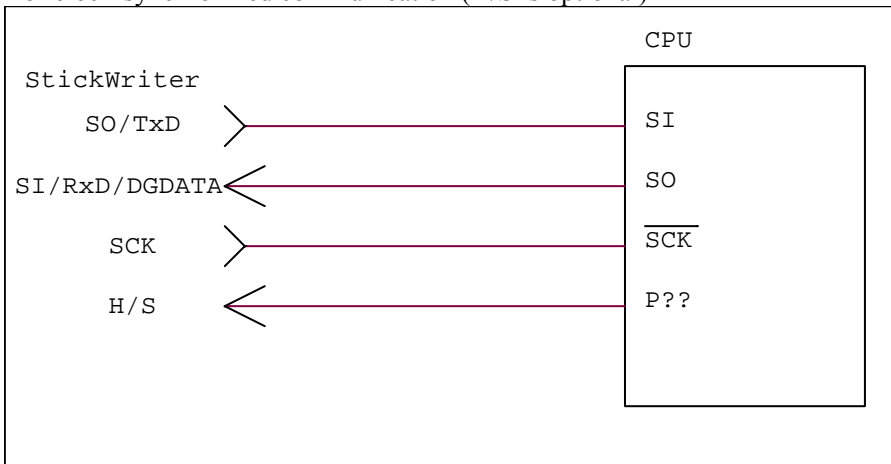
For UART communication

For Single Wire UART

```
                                          CPU
   ┌─────────────────────────────────────────────────┐
   │                              ┌──────────────────┐ │
   │                              │                  │ │
   │ StickWriter                  │                  │ │
   │   CLK/DGCLK    >─────────────── X1              │ │
   │                              │                  │ │
   │ SI/RxD/DGDATA  <─────────────> X2              │ │
   │                              │                  │ │
   │                              │                  │ │
   │                              └──────────────────┘ │
   └─────────────────────────────────────────────────┘
```

```
                                          CPU
   ┌─────────────────────────────────────────────────┐
   │                              ┌──────────────────┐ │
   │                              │                  │ │
   │ StickWriter                  │                  │ │
   │ SI/RxD/DGDATA  <─────────────> TOOL0            │ │
   │                              │                  │ │
   │                              │                  │ │
   │                              └──────────────────┘ │
   └─────────────────────────────────────────────────┘
```
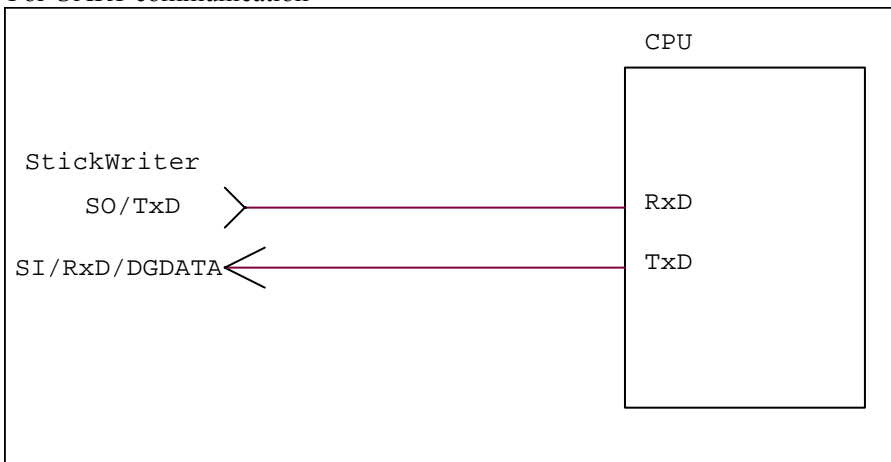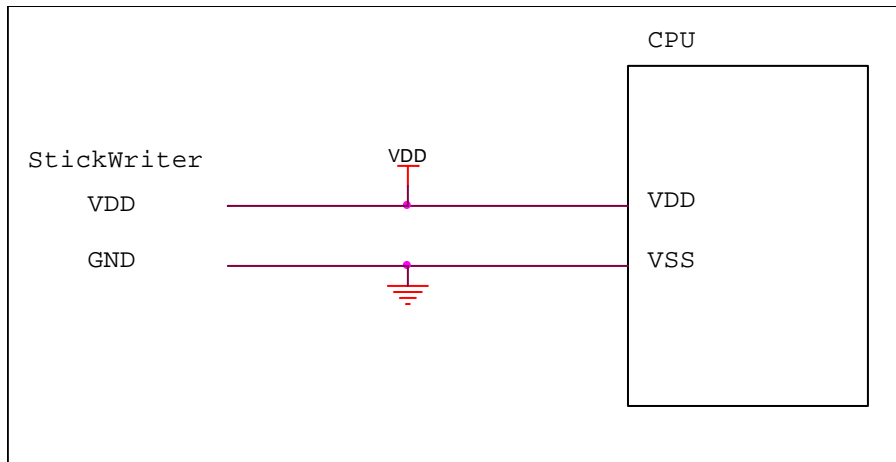
3.6.4 CLK/DGCLK

Outputs the clock.

Connection is not necessary if a CPU operation clock, such as an oscillator, is supplied on the target board.

3.6.5 VDD, GND

Connect to the I/O voltage of the target CPU.

If the CPU has multiple I/O voltages, connect the voltage equal to the port in communication with StickWriter.

3.7 Basic Specification

Built-in data memory		32MByte(NAND Flash: with ECC process)
Supported communication method		UART, clock synchronizer SIO (with/without H/S)
Target voltage		1.65V - 5.5V (For under 3.3V, power supply is required from USB)
Interface	PC side	USB 2.0/1.1 (Bus/power operation)
	Target side	Hirose Electronics DF11 series
Voltage capable for output		5V / 3.3V
Power Supply		PC / Target board (3.3V - 5.5V)
Consumption current		Maximum 80mA
Body size		W87 × D23 × H12 (mm)

Chapter 4 StickWriter Operation using GUI Software

4.1 Launching GUI Software

(1) System Connection
   Connect StickWriter to the PC that the StickWriter GUI program was installed in.

(2) Launching the GUI Software
   Select [Program (P)]->[StickWriter]->[StickWriter] from the Windows Start menu.
   Initialize the GUI software by initiating communication with the StickWriter firmware.If the
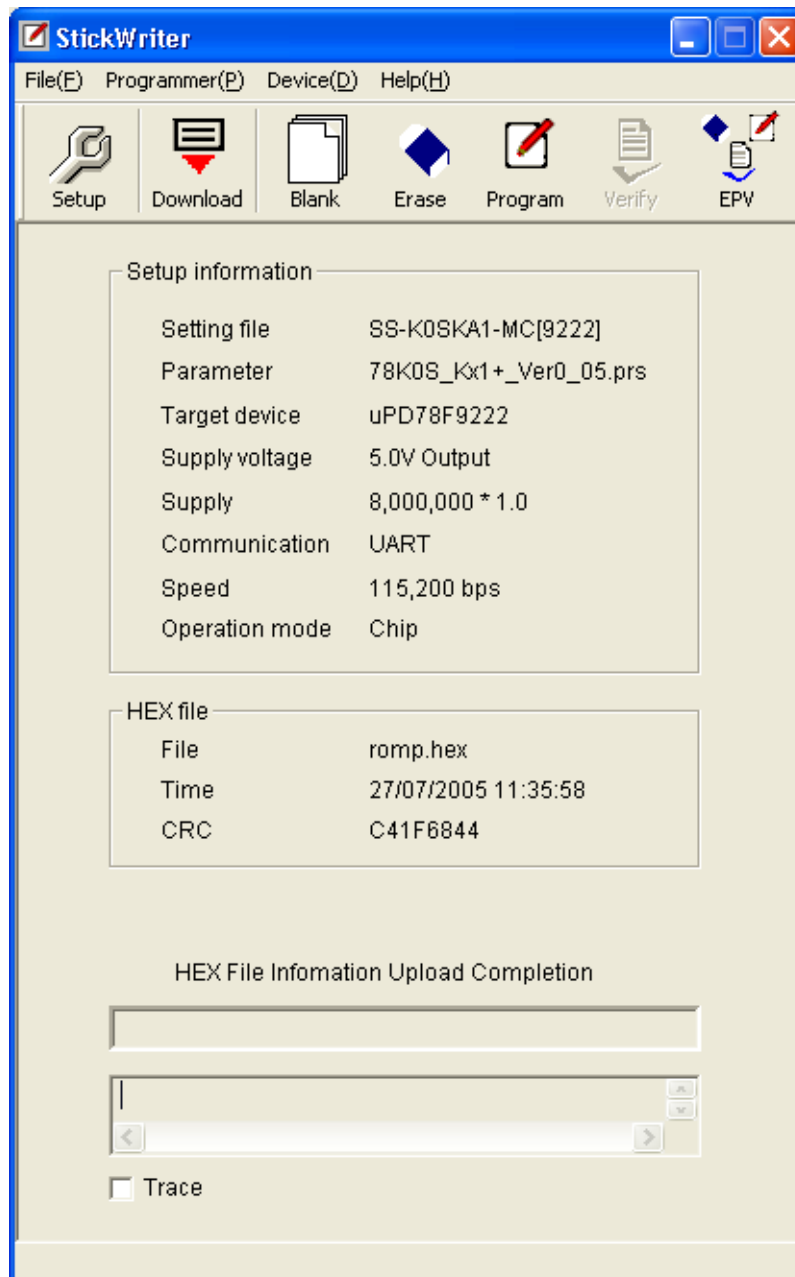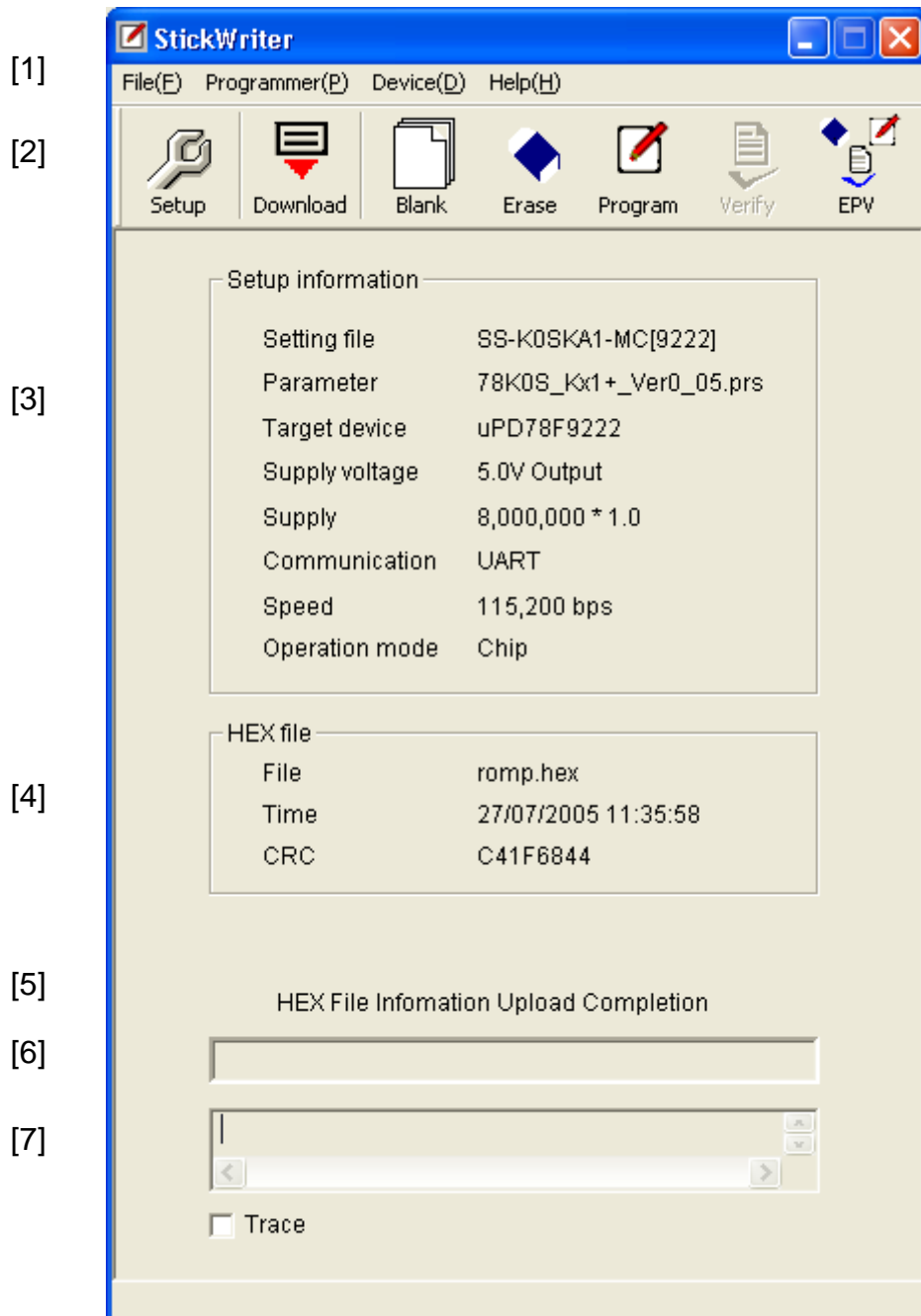   initialization process was successful, the window shown in Fig. 1 will be displayed.

Fig 1

[1]
[2]
[3]
[4]
[5]
[6]
[7]

Fig 2

(3) Configuration of the Windows Screen
    [1] Menu Bar (Displayed on top)
    [2] Tool Bar (Displayed under the menu)
    [3] Setup Information section
    [4] HEX File Information section
    [5] Status Display section
    [6] Progress Status Display section
    [7] Trace Display section

  * Setup displays the information from the default setting file.

4.2 Tool Bar

The Tool bar consists of a set of buttons that initiate important operations in StickWriter.

[Device] - [Setup] button

[File] – [HEX File Download] button

[Device] – [Blank Check] button

[Device] – [Erase] button

[Device] – [Program] button

[Device] – [Verify] button

[Device] – [EPV] button

4.3 Menu Bar

Depending on the status and type of the actual device, some menus may not be applicable.

4.3.1 [File] Menu
Clicking the [File] menu will display a pull-down menu.
The menu consists mainly of commands for file operations.
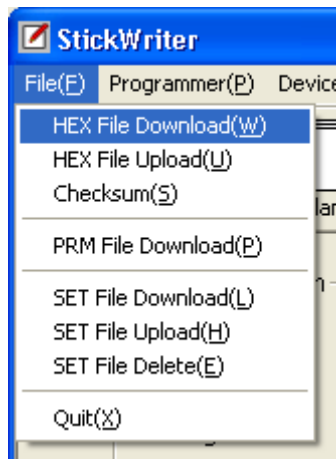
Fig 3

(1) [HEX File Download] Menu

You can select a HEX file to be written and download it to the flash memory in StickWriter. The downloaded HEX file can be written into the flash memory of the target device by executing program commands or EPV commands.
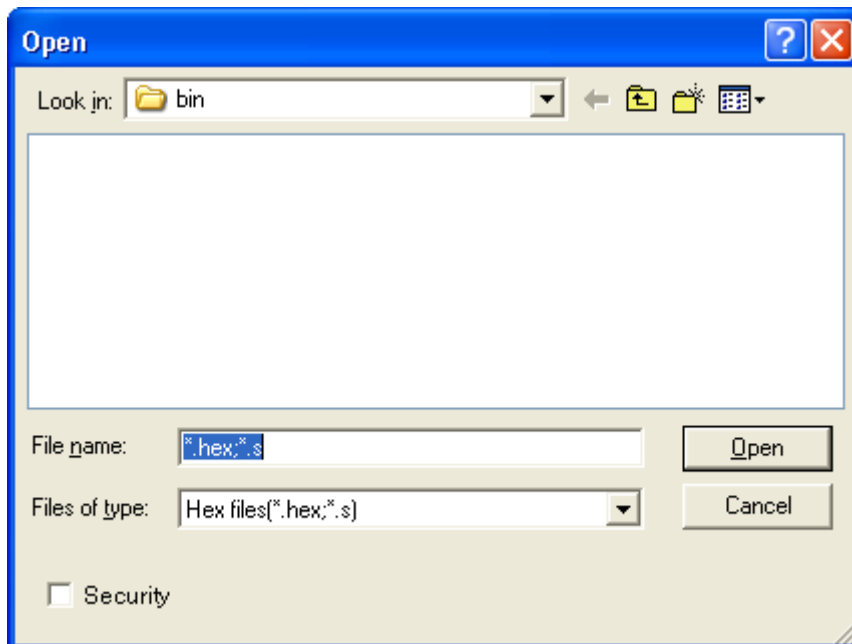

Fig 4

［Open］
    The selected HEX file will be downloaded to the flash memory in StickWriter. The result of the download will be displayed in the HEX File information section in the window shown in Fig 2.

［Cancel］
    Closes the window without downloading the selected HEX file.

By checking "Security" in the lower left corner, the downloaded HEX file cannot be uploaded to the host machine.

(2) ［HEX File Upload］Menu
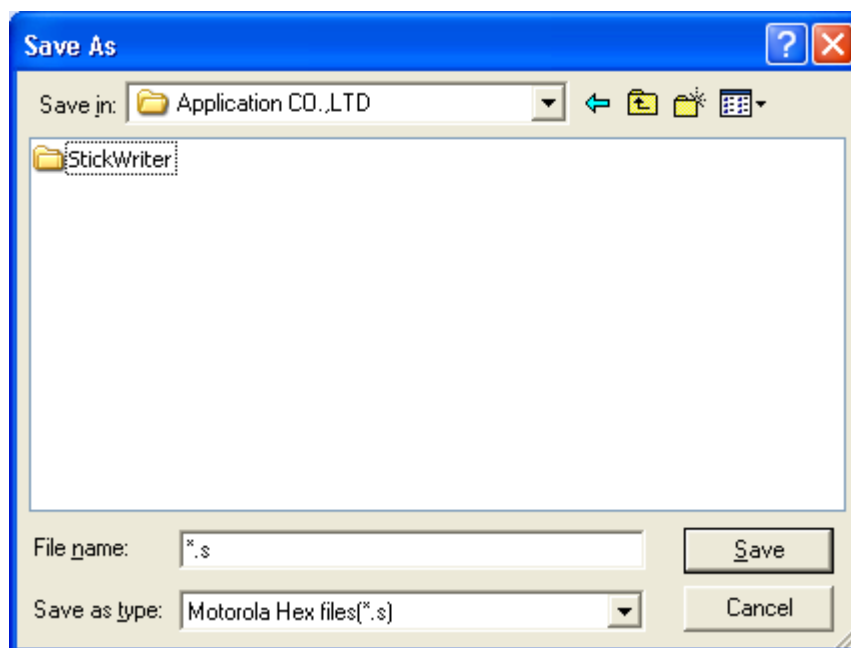   Upload the HEX file that was downleaded on the StickWriter to the host machine.

Fig 5

［Save］
  Input the file name and press the Save button to start uploading. It will be saved in Motorola S format.

［Cancel］
  Closes the window without uploading the HEX file.

(3) ［Checksum］Menu

The checksum value of the HEX file downloaded to the flash memory of StickWriter is displayed.

  Device Checksum : It is a value calculated by the same algorithm as the target device.
  FP4 Algorithm : It is a value calculated by the same algorithm as programmer
          "PG-FP4" made of NEC Electronics.
   CRC sum(32bit:1M) : It is a value when Program Area of PG-FP4 is set to 1MByte.
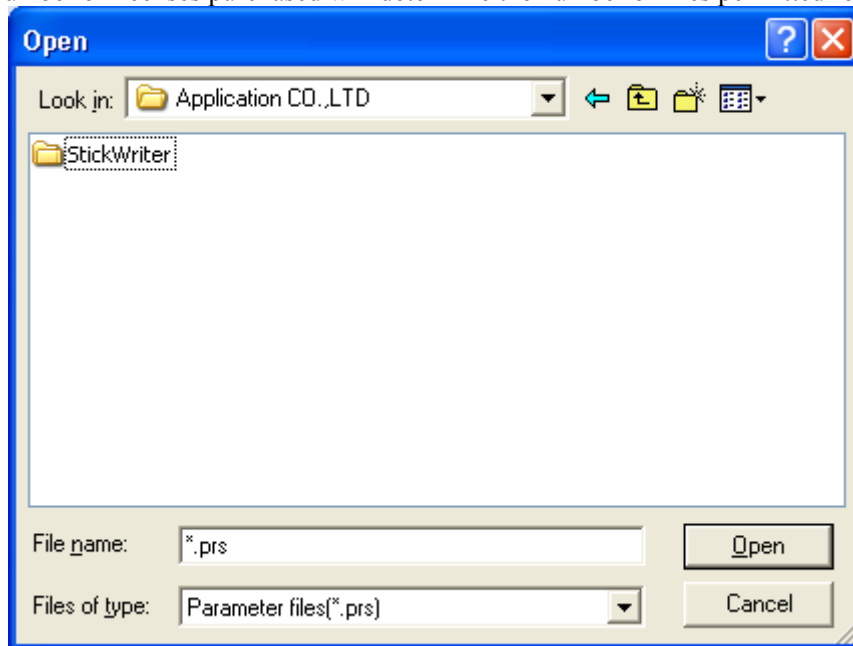   CRC sum(32bit:2M) : It is a value when Program Area of PG-FP4 is set to 2MByte.
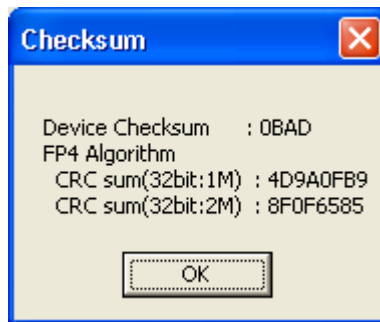
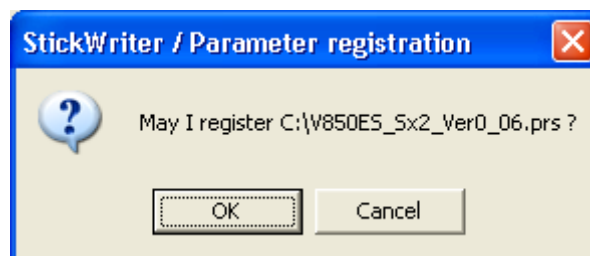**Fig 6**

(4) [Parameter File Download] Menu
Select a parameter file to enable downloading to the StickWriter's flash memory. The number of licenses purchased will determine the number of files permitted for downloading.

Fig 7

[Open]
Downloads the selected parameter file.

Fig 8

Press [OK] to display the license confirmation window or update confirmation window.
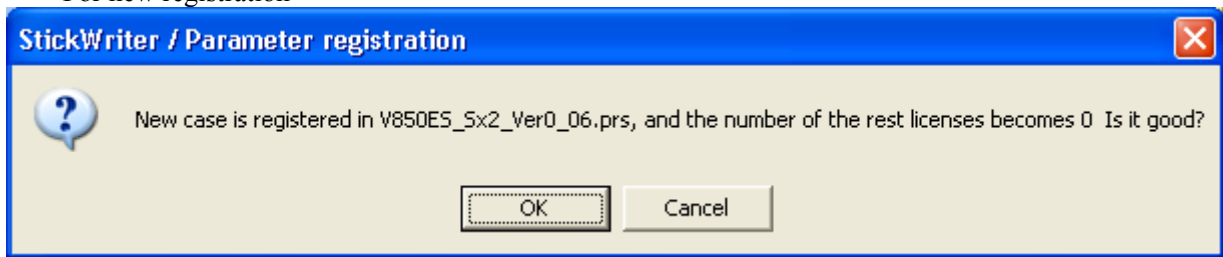
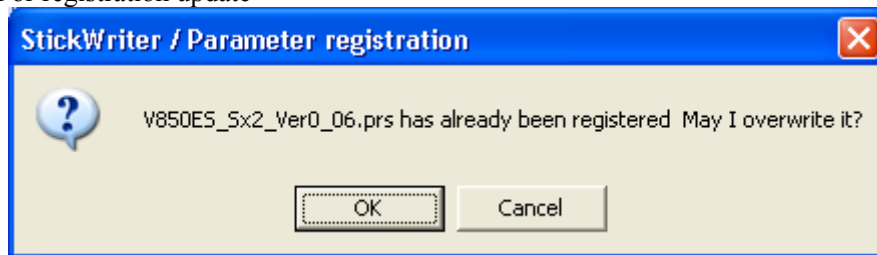For new registration


Fig 9

For registration update

Fig 10

The selected parameter file will be downloaded to the flash memory in StickWriter.
The latest parameter files can be downloaded from our website (http://www.tessera.co.jp).

[Cancel]
Closes the window without downloading the selected parameter file.

(5) [Setting File Download] Menu
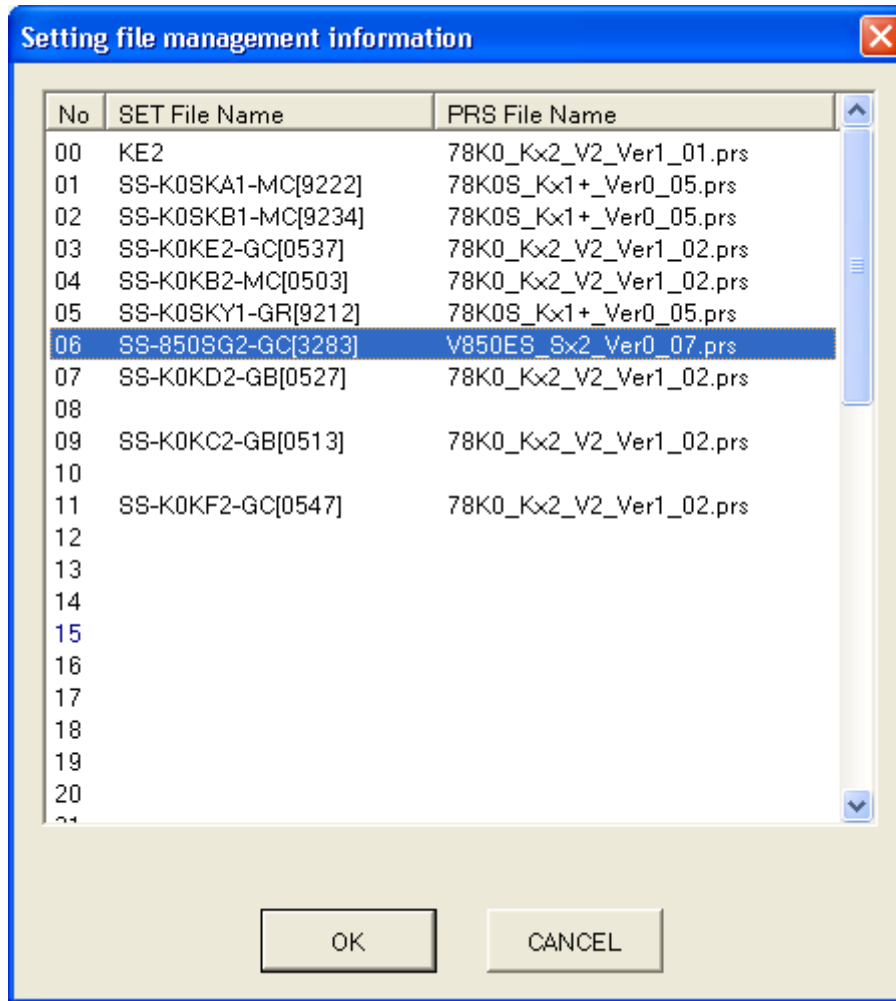Select a setting file for download to the StickWriter's flash memory.
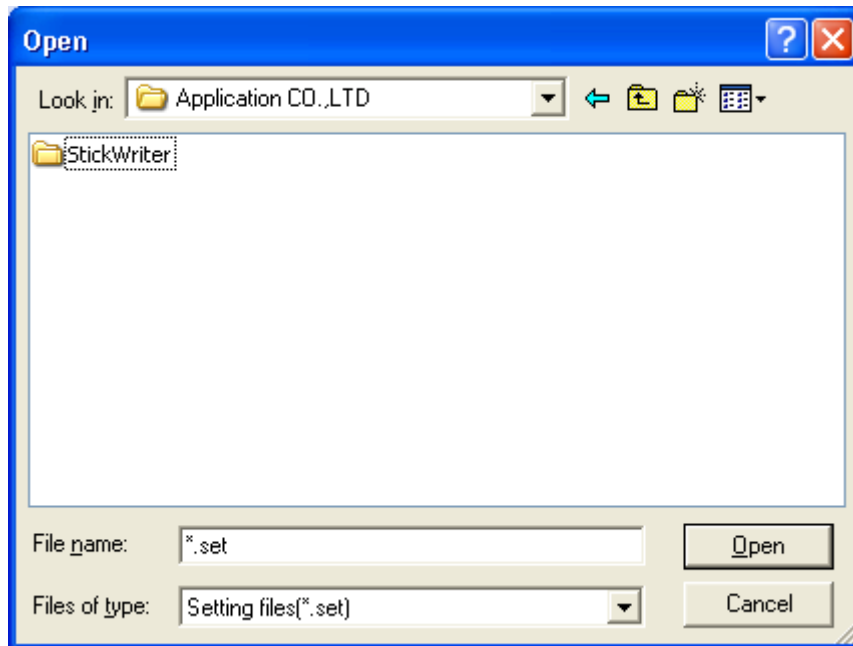
Fig 11

[Open]
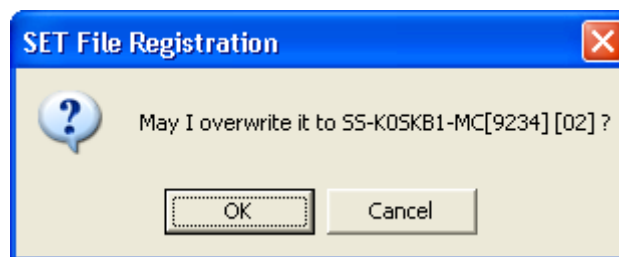 Downloads the selected setting file to StickWriter.

[Cancel]
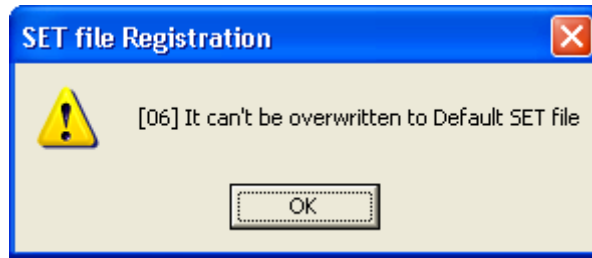 Closes without downloading the selected setting file.

Fig 12

Select a number to download and press [OK].

Fig 13

Confirm the destination of the download and press [OK] to start downloading.
If the specified location is the default setting (in the case of overwriting), the warning window shown in Fig 14 will be displayed and the download will not start.
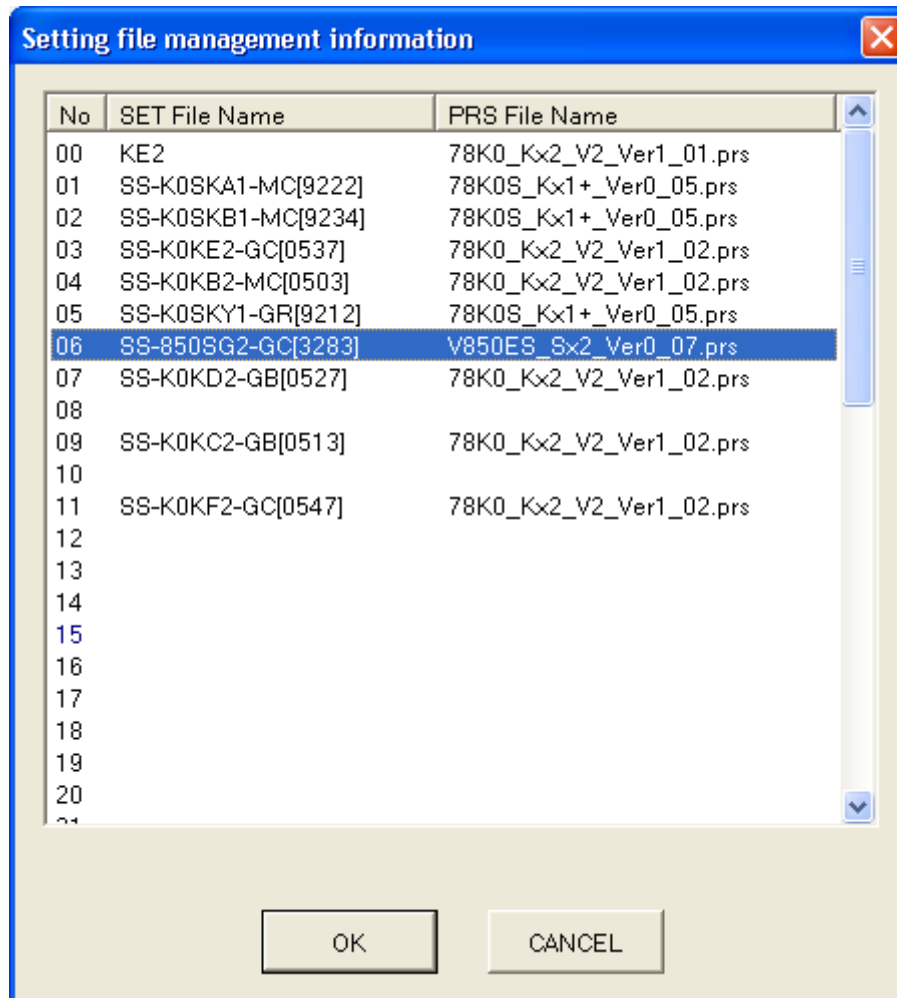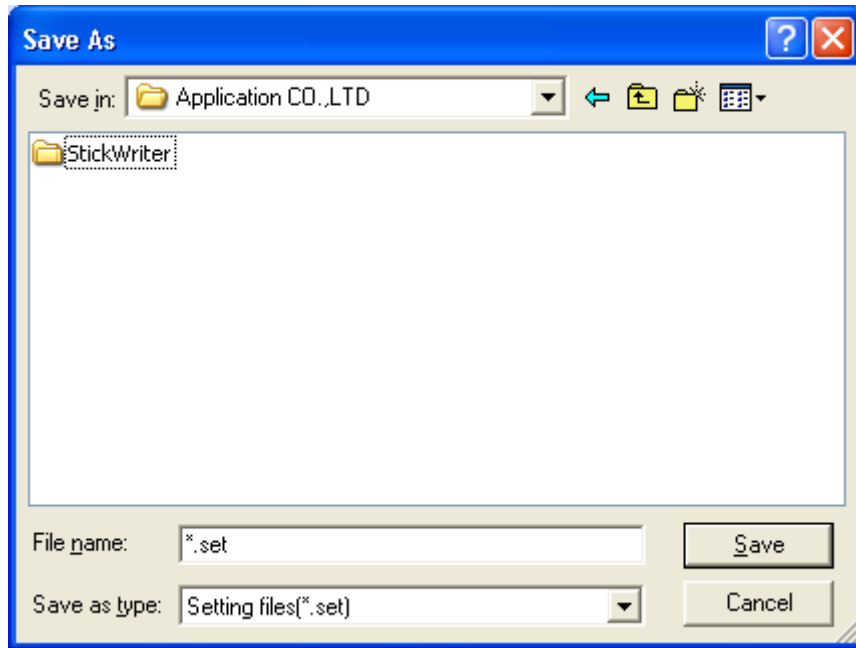
Fig 14

The downloaded setting file will become the default setting file. (This will be reflected in the Setup information section in Fig 2.)

(6) [Setting File Upload] Menu
    Upload the setting file from StickWriter to a specified location in the host machine.

Setting file management information

No	SET File Name	PRS File Name
00	KE2	78K0_Kx2_V2_Ver1_01.prs
01	SS-K0SKA1-MC[9222]	78K0S_Kx1+_Ver0_05.prs
02	SS-K0SKB1-MC[9234]	78K0S_Kx1+_Ver0_05.prs
03	SS-K0KE2-GC[0537]	78K0_Kx2_V2_Ver1_02.prs
04	SS-K0KB2-MC[0503]	78K0_Kx2_V2_Ver1_02.prs
05	SS-K0SKY1-GR[9212]	78K0S_Kx1+_Ver0_05.prs
06	SS-850SG2-GC[3283]	V850ES_Sx2_Ver0_07.prs
07	SS-K0KD2-GB[0527]	78K0_Kx2_V2_Ver1_02.prs
08		
09	SS-K0KC2-GB[0513]	78K0_Kx2_V2_Ver1_02.prs
10		
11	SS-K0KF2-GC[0547]	78K0_Kx2_V2_Ver1_02.prs
12		
13		
14		
15		
16		
17		
18		
19		
20		

OK   CANCEL

Fig 15

Select a number to upload and press [OK].

Fig 16

[Save]
　　　　Input a file name and press [Save] to start uploading.
　　　　The saved file can be downloaded from the [Setting File Download] menu.

[Cancel]
　　　　Closes the window without uploading the setting file.

(7) [Setting File Delete] Menu
     Delete a setting file from a specified location in StickWriter.
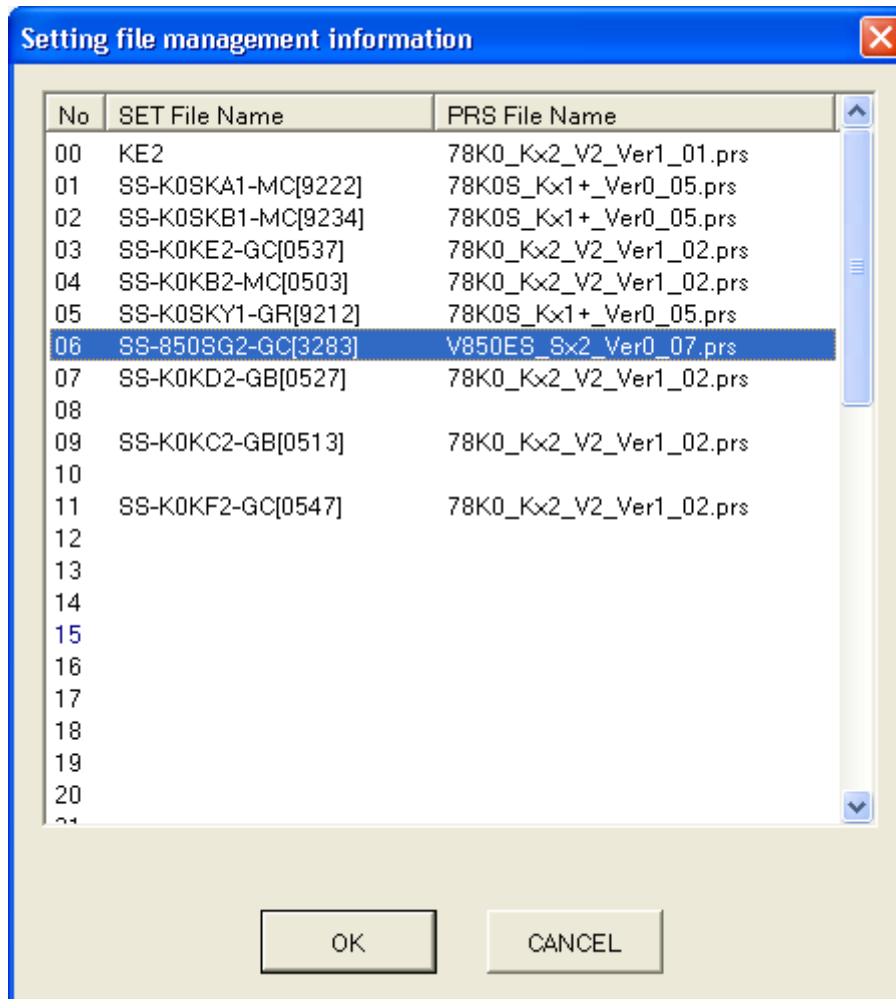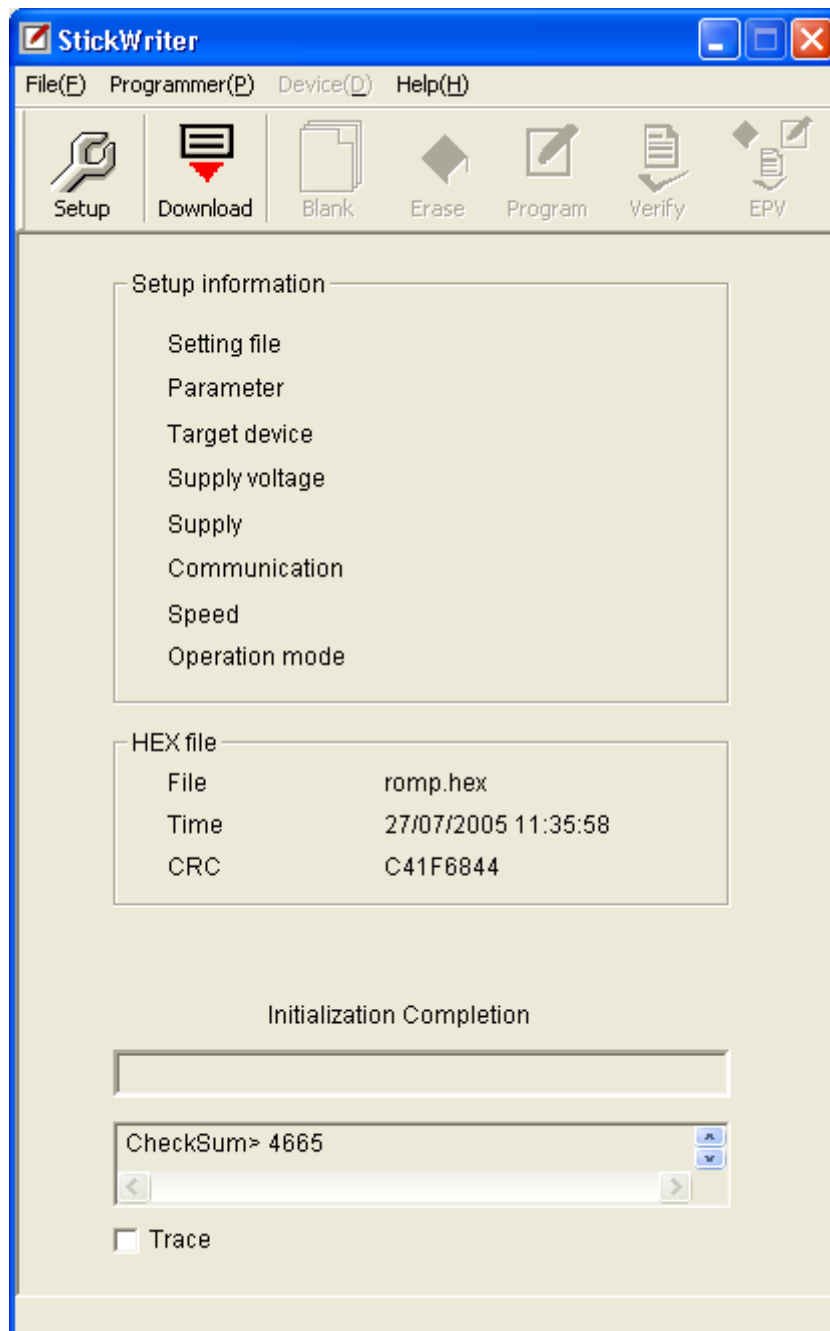

Fig 17

Select a number to delete and press [OK].

Fig 18

A confirmation window for the selected location will be displayed. Press [OK] to delete the
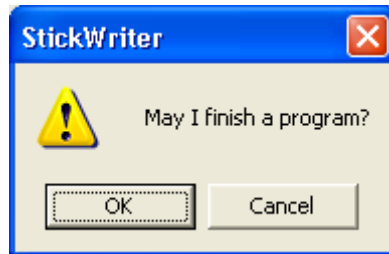
setting file. If the selected setting file is a default setting file, the setup information will be erased.

Fig 19

(8) [Application Exit] Menu
Exit the StickWriter GUI software. The user may also exit by clicking the ⊠ button on the right side of the task bar.

Fig 20

Press [OK] to exit the application. Press [Cancel] to cancel the exit.

4.3.2 [Programmer] Menu
Clicking on the [Programmer] menu displays a pull-down menu as shown below. The menu consists of a set of setup commands relating to programming.
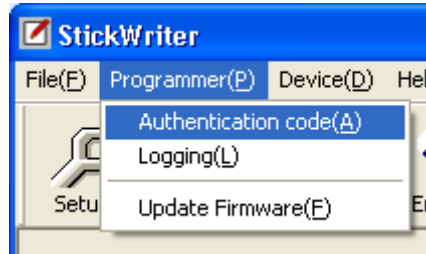

Fig 21

(1) [Authorization Code] Menu
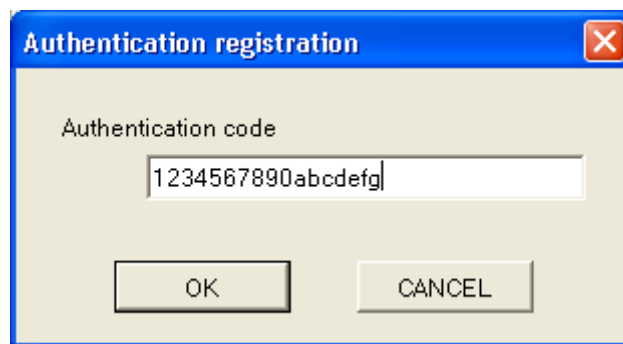Input the distributed authorization code to update the number of licenses for StickWriter.

Fig 22

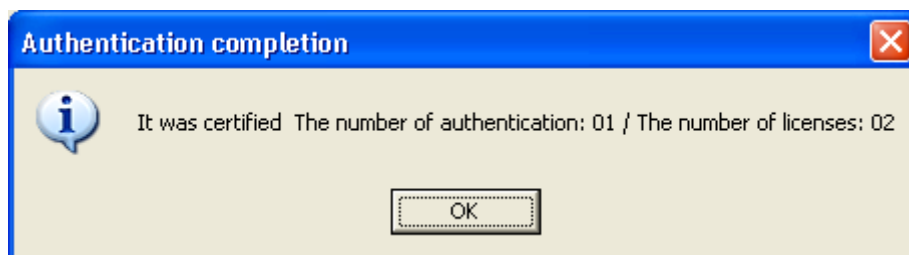Input the authorization code and press [OK] to execute authorization.

Fig 23

When authorization is complete, the number of authorizations (the number of registered parameter files) and the number of licenses will be displayed.

(2) [Logging] Menu
Display and save the results of log records during stand-alone operation.

To enable the log history, the following three conditions must be met.
- ・ A default setting file is registered.
- ・ The "Log Record" is checked in the setup window.
- ・ Any setting other than "No operation" is selected in the setup window for stand-alone operation.

Pressing [OK] in the Setup window will erase the log history information.
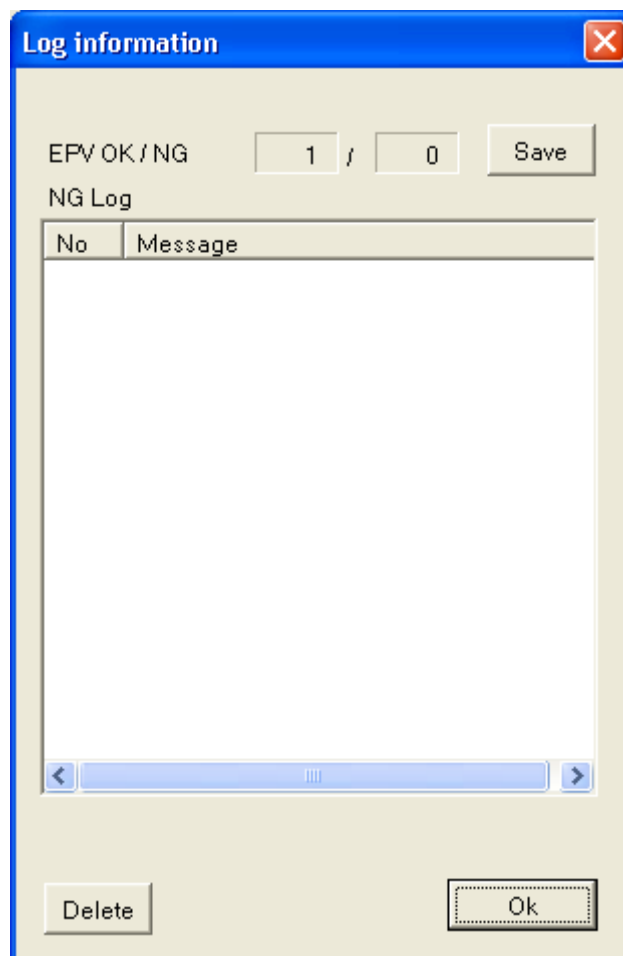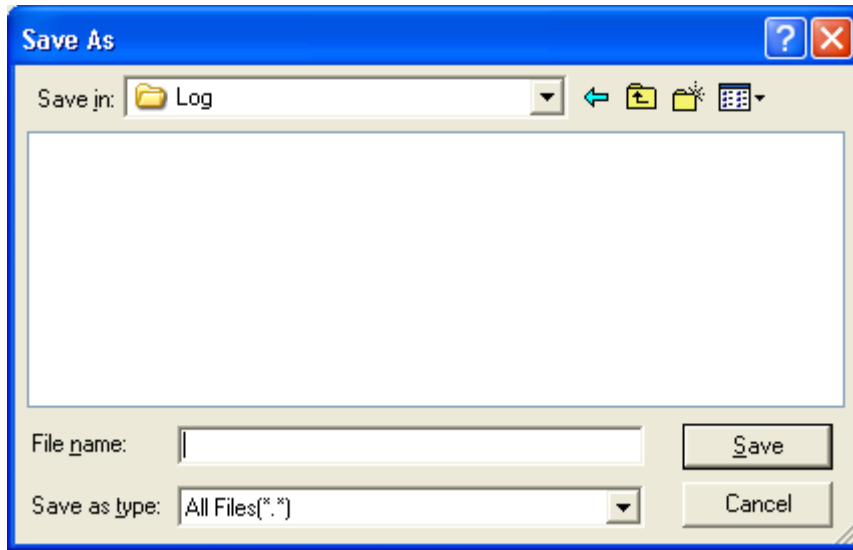

Fig 24

[Save]
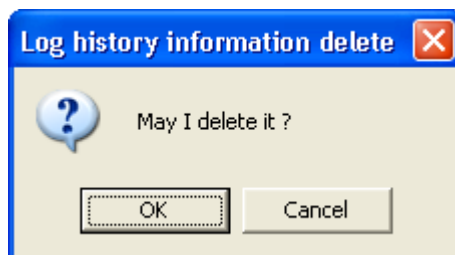After pressing [Save], the Input file name window will be displayed.

Fig 25

Input a name and press [Save] to create a file for saving the log history details.

Example of log history file contents

EPV OK/NG Count： 1 / 0

[Delete]
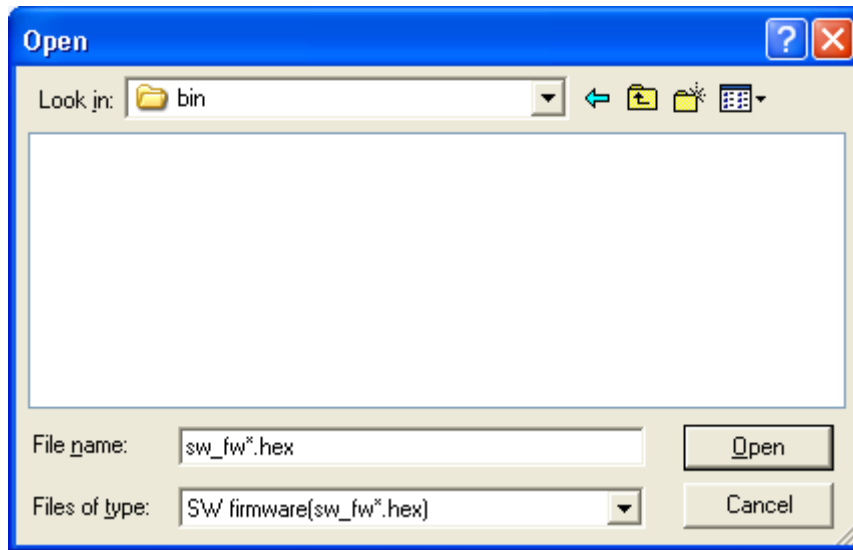Deletes the displayed log history information.

Fig 26

Press [OK] to delete the log history from the screen. Press [Cancel] to go back to Fig. 24 without deleting.
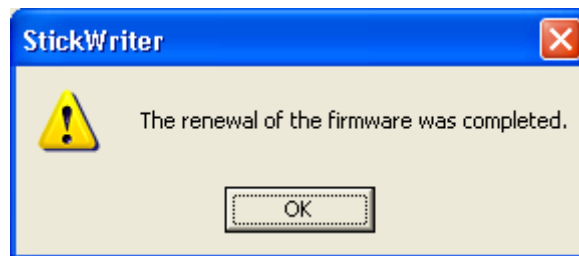
[OK]
Exits the log history window.

(3) [pdate Firmware] Menu
    Update the firmware program for StickWriter.

Fig 27

Input the file name and press [Open] to start downloading the firmware.

Fig 28

After the firmware program is successfully downloaded, the window shown in Fig. 28 will be displayed. Press [OK] to initialize StickWriter which will complete the process.

4.3.3 [Device] Menu

Clicking the [Device] menu displays a pull-down menu. The menu consists mainly of commands related to programming of the target device, such as deleting, programming and verifying.
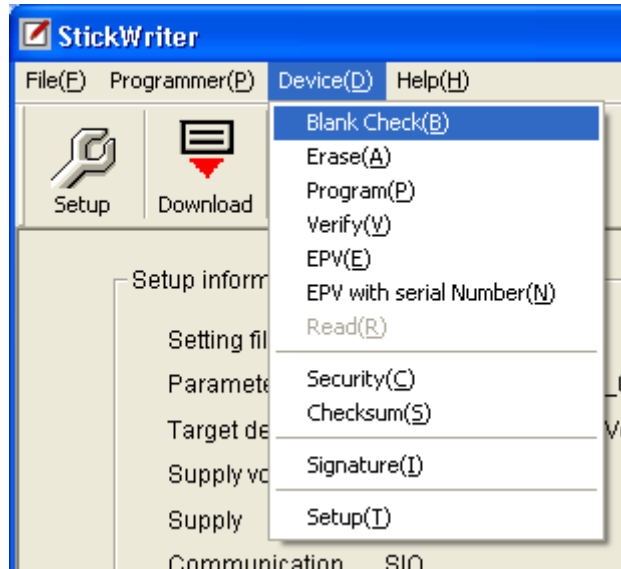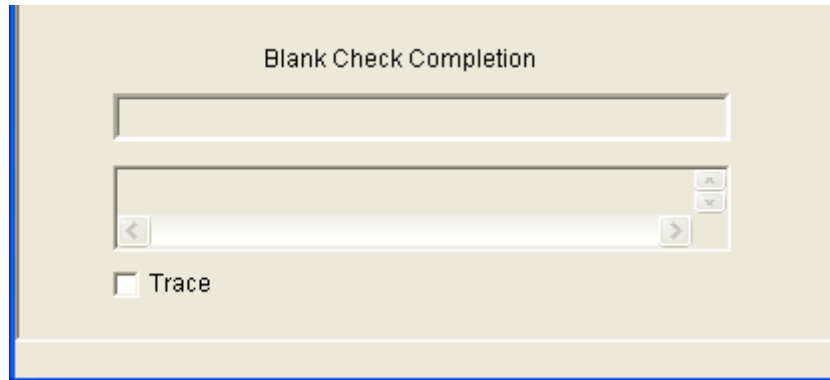

Fig 29

(1)[Blank Check] Command

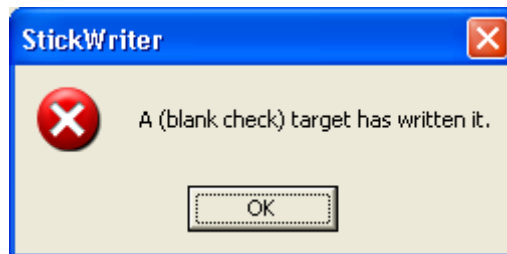 Performs a blank check for the target device connected to StickWriter. If the flash memory in the target device has been erased, the blank check will finish successfully. If the flash memory has not been erased, an error message will be displayed.

Fig 30

The status displayed when [Blank Check] finishes successfully.

Fig 31

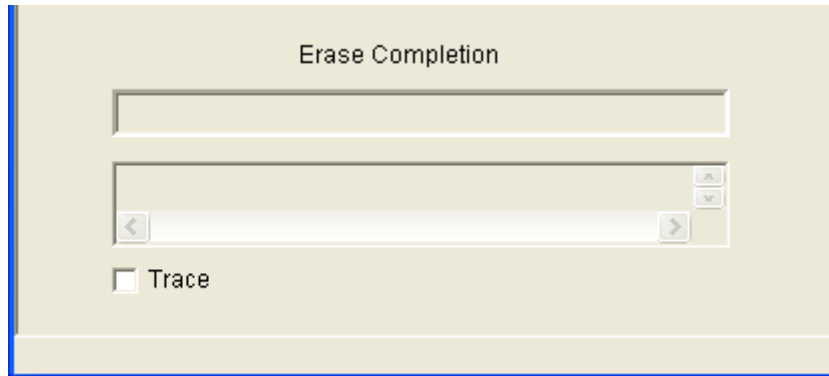The window displayed if data has been written to the target device.

(2) [Erase] Command

Erases the flash memory of the target device connected to StickWriter. If "Blank check before Erase" is checked in the "Command options" of the [Setup] window, a blank check is performed before erasing. If the flash memory is blank, [Erase] will not be performed.

Fig 32

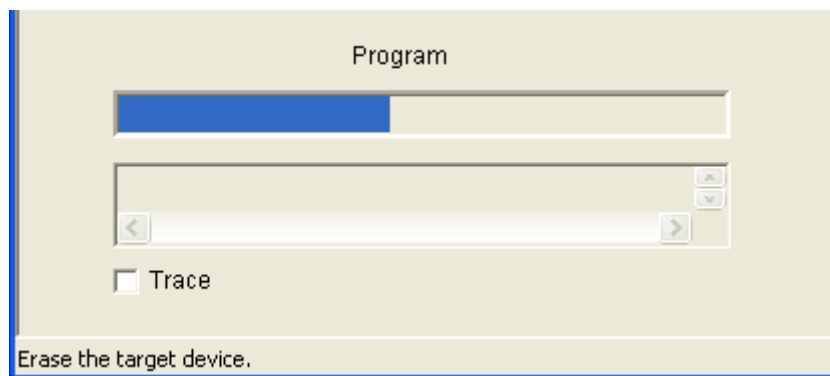The status displayed when [Erase] finishes successfully.

(3) [Program] Command

The HEX file downloaded to the StickWriter is sent to the connected target device and is written to the flash memory. While writing, the progress status is displayed in the progress status display section and the programmer's operations are shown.

If "Read verify after Program" is checked in the "Command option" of the [Setup] window, "Read verify" will be performed after writing to memory is completed. If it is not checked, "Internal verify" will be performed.

If "Security flag set after Program" is checked, a security flag is written after the writing is completed.

Fig 33

The writing progress status and Progress bar are displayed.

Fig 34

The status displayed when the program finishes successfully.

(4) [Verify] Command

Verifies the data written to the flash memory of the target device connected to the StickWriter and the data written to the flash memory in the StickWriter. While verifying, the progress status is displayed in the progress status display section and the programmer's operations are shown.
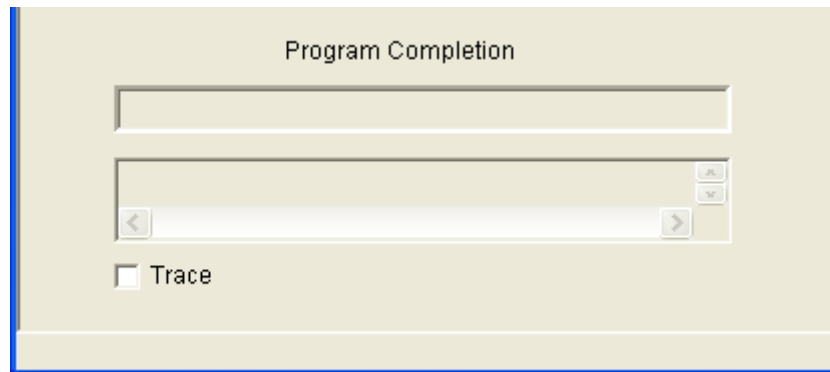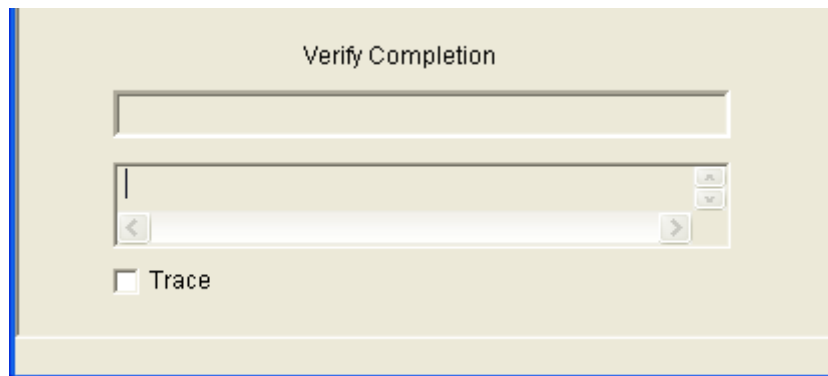
Fig 35

The status displayed when [Verify] finishes successfully.

Fig 36

The window displayed if [Verify] fails.

(5) [EPV] Command

 Performs the [Erase] command, followed by the [Program] command for the target device connected to StickWriter. The options set in the "Command options" of the [Setup] window are also effective. During EPV, the progress status is displayed in the progress status display section and programmer's operations are shown.
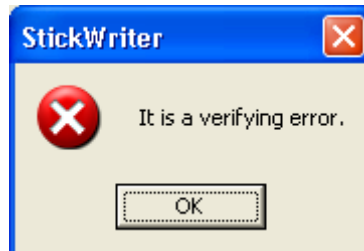

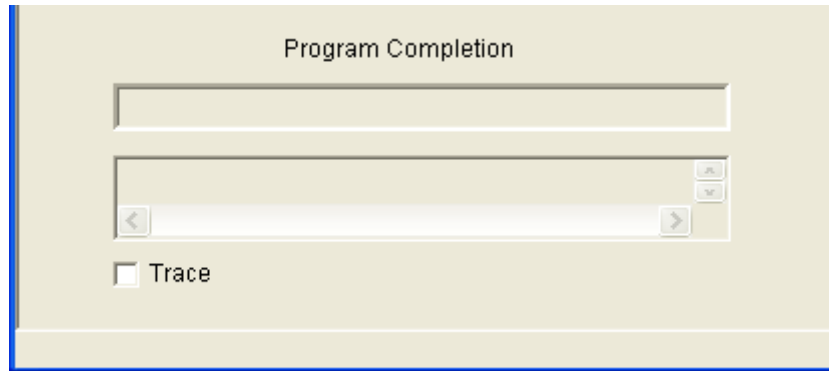**Fig 37**

The status displayed when EPV finishes successfully.

(6) [EPV with Serial No.] Command

        Operates the same as the [EPV] command; however, when the [EPV] button is pressed, data for the specified address size will be changed to the specified standard in the algorithm.
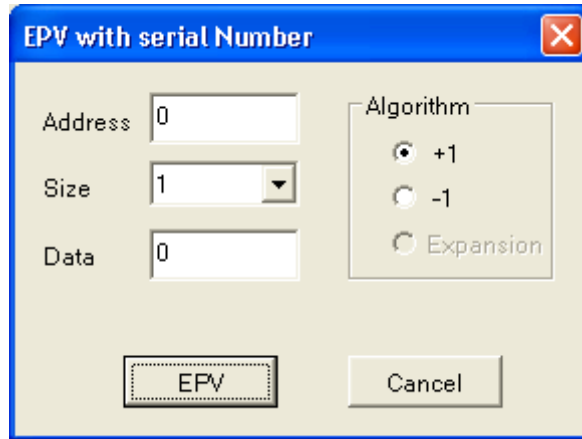
Fig 38

[Address]
        The address where the changed data will be written
[Size]
        The size of data: 1, 2 or 4 Byte(s) can be specified
[Data]
        The data to be written; Input an initial value.

[Algorithm/+1]
        When the [EPV] button is pressed, the data increases by one.
[Algorithm/-1]
        When the [EPV] button is pressed, the data decreases by one.
[EPV] button
        The EPV process is performed.
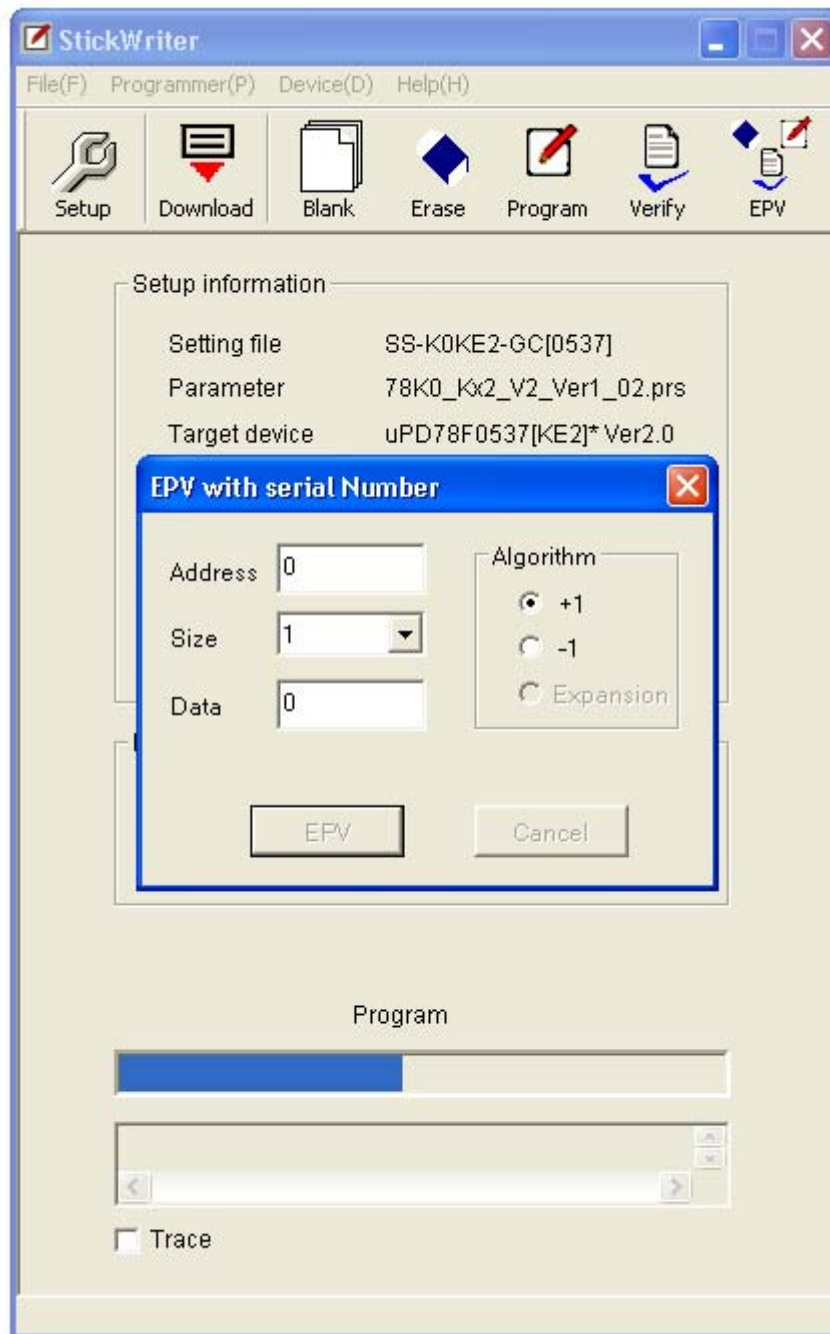
Fig 39

Fig. 39 shows the window displayed while [EPV with Serial No.] is executed.

(7) [Read] Command
Reads the contents of the flash memory in the target device connected to StickWriter.
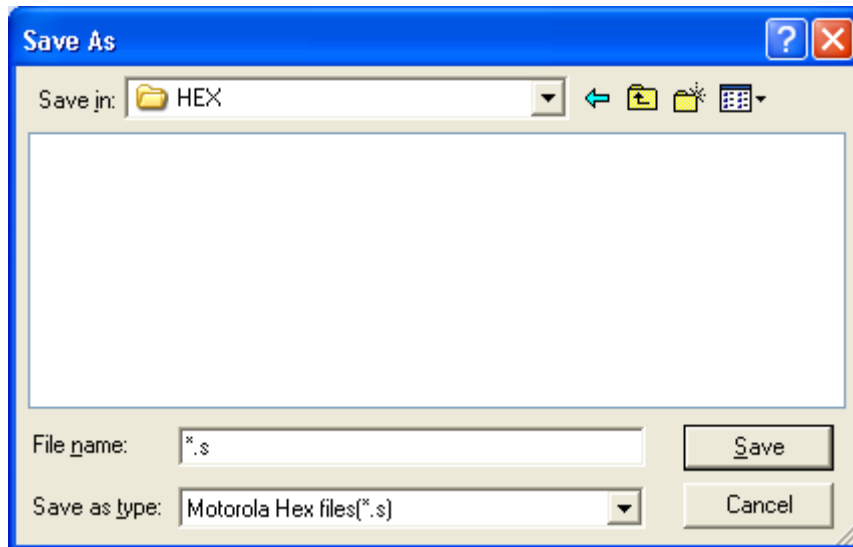
[Save]
Input a file name and press [Save] to start reading the flash memory.
The save file format is only a Motorola, Inc. hex form.

[Cancel]
Closes the window without reading the content of the flash memory.

(8) [Security] Command
    Writes a security flag to the target device connected to StickWriter.
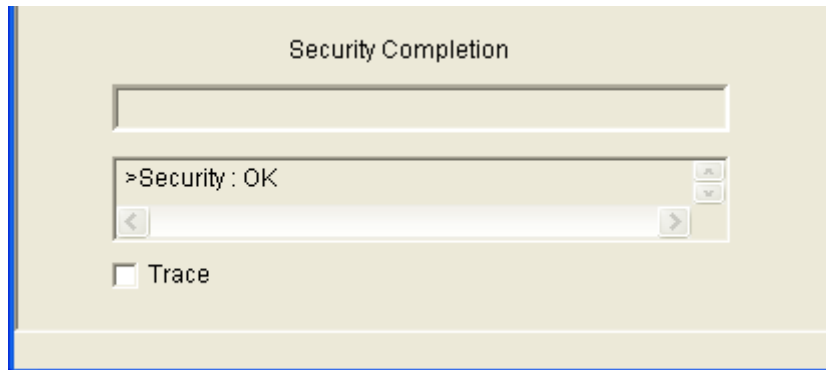
Fig 40

The status displayed when [Security] finishes successfully.

(9) [Checksum] Command

Reads and displays the checksum value of the target device connected to StickWriter. It does not compare the value to the data written in the flash memory of StickWriter.
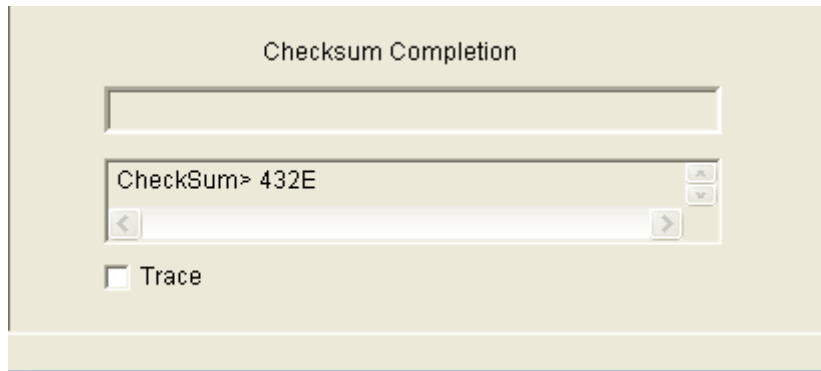
Fig 41

The status displayed when [Checksum] finishes successfully.

(10) [Signature] Command

Signature information on the target device connected with StickWriter and the device specified by the setup is compared.

(Signature information is not displayed.)
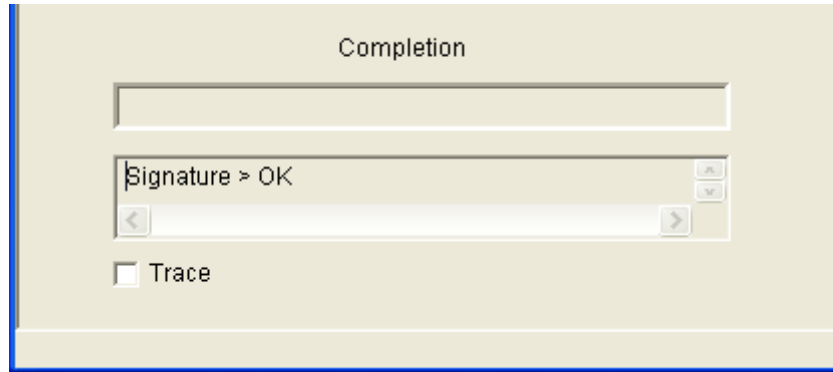
Fig 42

The status displayed when [Signature] finishes successfully.

(11) [Setup] Command

Performs setup for the flash memory rewrite settings according to the user environment, and for the command option settings. The updated content will be saved in the Settings file.
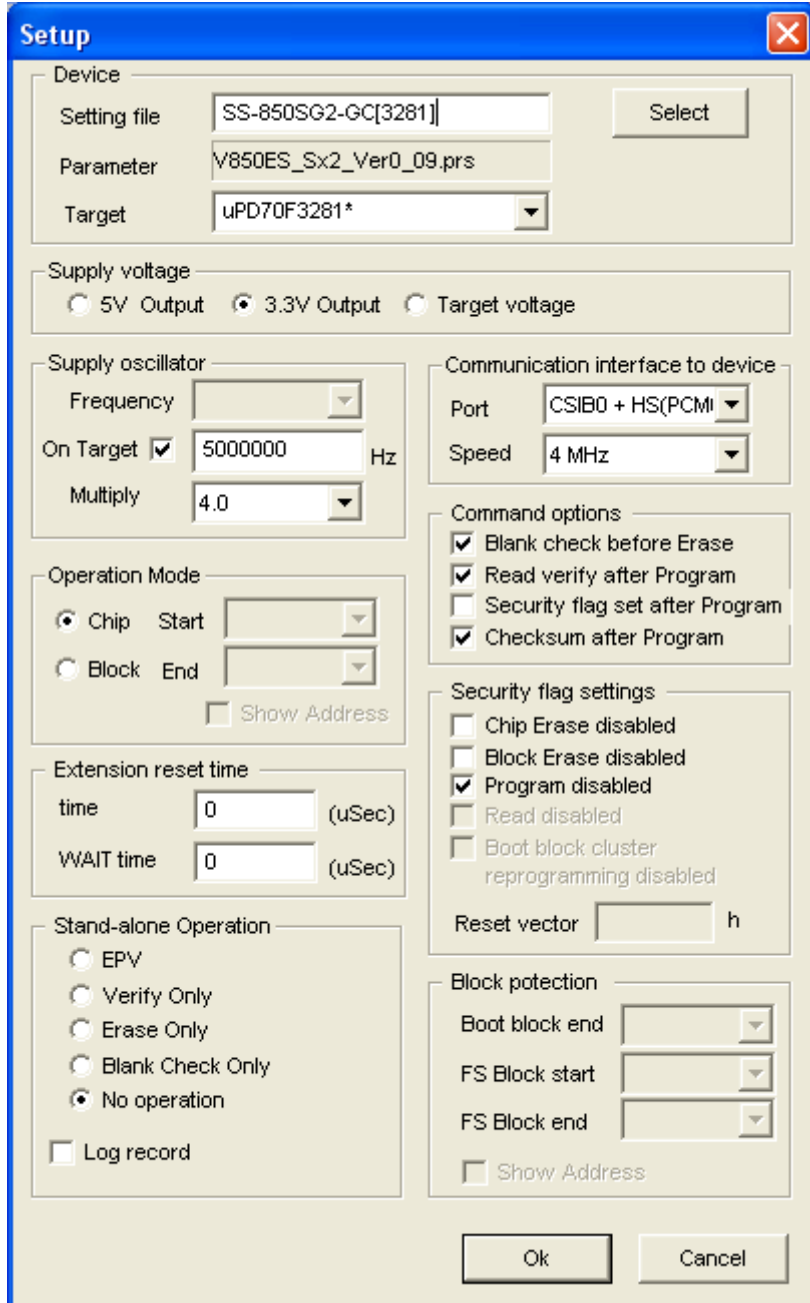
Fig 43
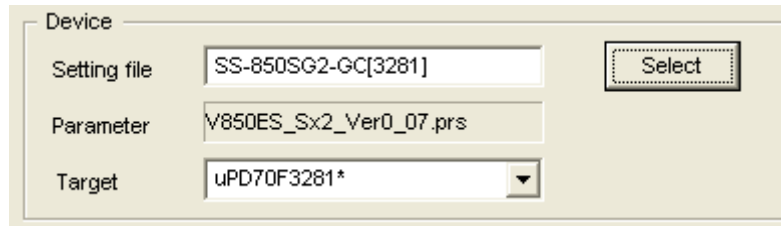
[OK]
> Saves the parameter information with the Settings file name input by the user. (registered as the default settings file).

[Cancel]
> Returns to [Launch] screen without saving.

[1] Device

Fig 44

[Setting File]
> The file containing Settings information saved in StickWriter. The file name can be changed.
> Use the "Select" button to select other settings files or create a new file.

[Parameter File]
> The file containing recorded device memory size and communication-timing information.

[Target Device]
> A device can be selected for use from among the support devices recorded in the parameter file.

[Select] button
> Displays the Setting file Management information window. (Fig 45)
> The Setting file name and Parameter file name that were input in this window will be displayed in [Setting File] and [Parameter File].
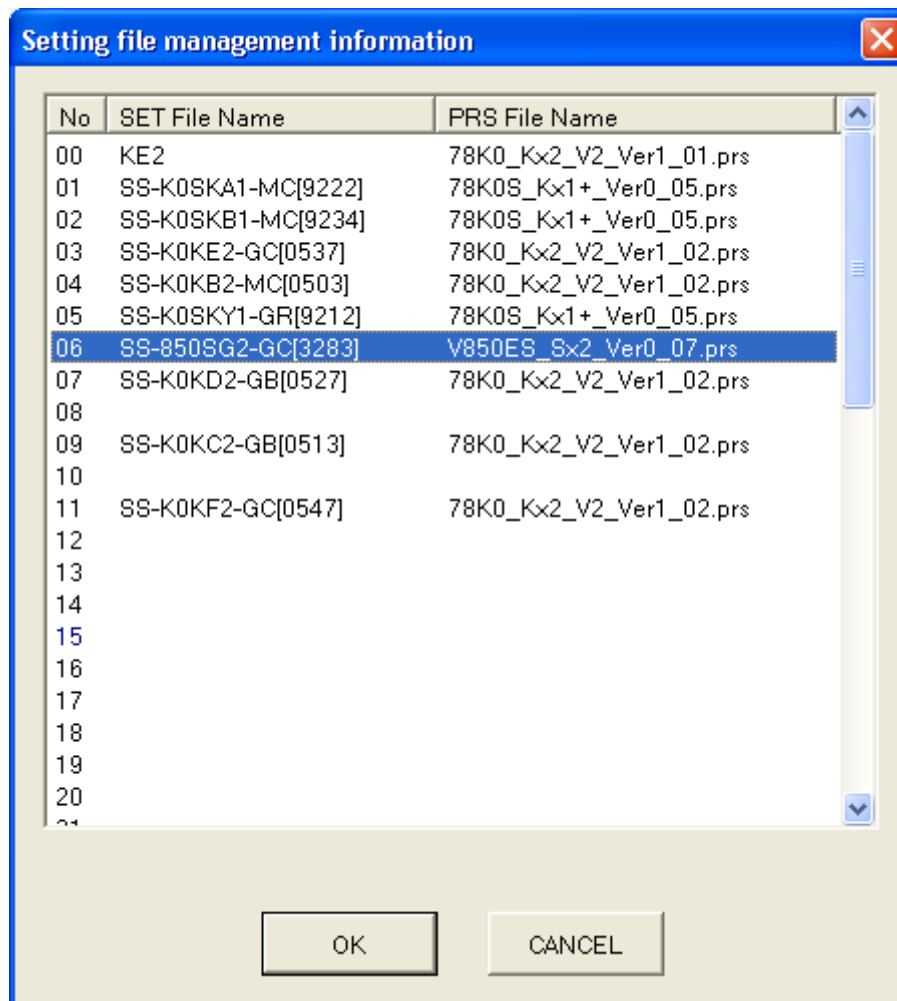
Fig 45

Setting file information from 00 to 49 can be newly registered or selected.
Double click a position on the line to register new information, or click on a position and press [OK] to select previous information.
If a previously registered number is selected, you will return to the Setup window.
If new information is created, the window shown in Fig. 46 is displayed.
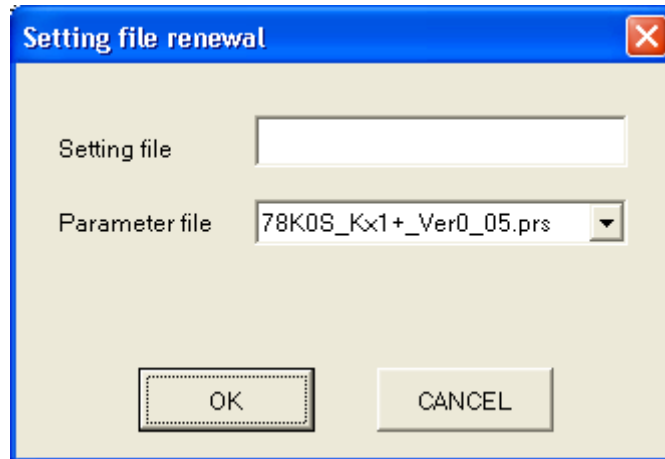
Fig 46

Input any Setting file name and select a Parameter file for the target device. Press [OK].   In the Parameter file list box, a list of previously registered parameter files will be displayed.

[2] Supply Voltage
    This will set the voltage for communication with the target device.
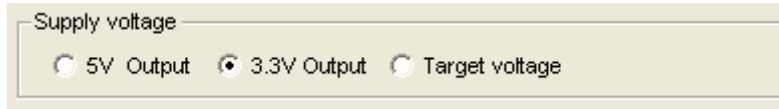
Fig 47

5V Output	Set to 5V for the USB. The same voltage is supplied to the target board.
3.3 V Output	Set to 3.3 V for the power generated in StickWriter from the USB. The same voltage is supplied to the target board.
Target Voltage	Set to the target board voltage.

[3] Supply Oscillator
    Sets the operating frequency for the target device.
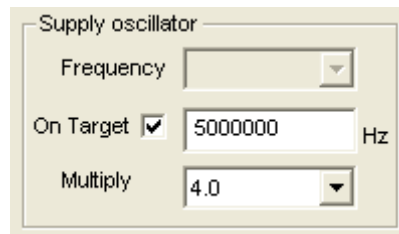
Fig 48

Frequency	Select the frequency to be supplied from StickWriter to the target device. Available frequencies are: 8MHz, 6MHz, 4MHz, 2MHz or 1MHz.
On Target	If a clock is supplied by the target board of the target device, input the supplied frequency here.
Multiply	If the target device supports multiplying, set the scale here.

[4] Communication interface to device

Specifies the communication method between the target device and StickWriter.
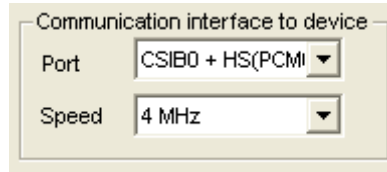
Fig 49

Port	Available communication methods are UART or CSI.
Speed	Communication speed can be selected.

[5] Operation Mode

Sets the type of commands to the target device.
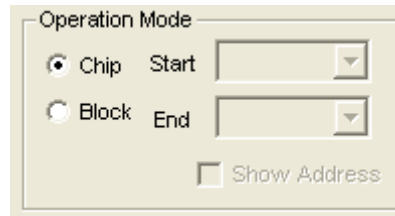
Fig 50

Chip	Access in chip mode.
Block	Access in block mode. In this case, Start block and End block can be specified. Or check Show Address to display the address.

[6] Command options
    Options can be specified for each command to the target device.
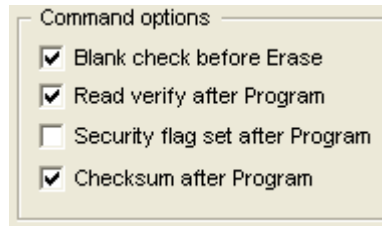
Fig 51

Blank check before Erase
              Before executing the [Erase] command, the [Blank check] command is
              issued to confirm whether data has been erased. If it has been erased,
              [Erase] command will not be issued.
Read verify after Program
              After data is written with the [Program] command, the written data will
              be re-sent for verification.
Security flag set after Program
              After data is written with the [Program] command, a security flag will
              be written as specified by the Security flag setting.
Checksum after Program
              After data is written with the [Program] command, the checksum value
              for the target device is received by the [Checksum] command for
              comparison.

[7] Security flag settings

    Sets a security flag.
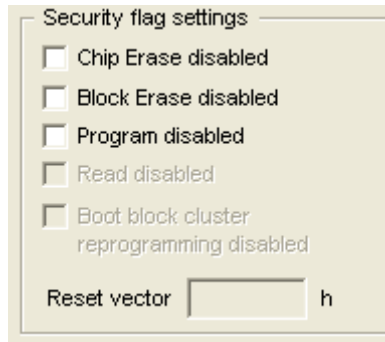
Fig 52

Chip Erase disabled

        Disables [Erase]

        Note: After the security flag is set to the target device, Erase or Write
                will not be allowed on the device.

Block Erase disabled

        Disables [Block Erase].

Program disabled

        Disables [Program].

Read disabled

        Disables [Read].

Boot block cluster reprogramming disabled

        Disables the Boot block updates.

        Note: After the security flag is set to the target device, the boot area
                will not allow Rewrite on the device.

Reset vector

        Changes the address to one with the reset vector specifications.

[8] Block protection

Fig 53

Boot Block end

        The boot area is designated up to the specified block.
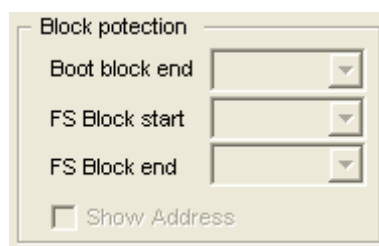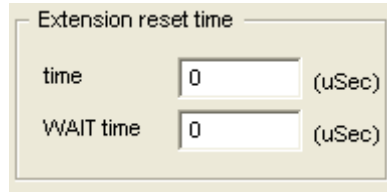
        Note: After the security flag is set for the target device, the boot area
                will not allow Rewrite for the device.

FS Block start/FS Block end

        Blocks other than the range specified here are rewritten by the flash
        memory self programming and lost.

[9] Extension reset time

Fig 54

Time   Extends the Reset time that was previously input. (Maximum 4 seconds)
WAIT Time   Extends the time between the cancellation of Reset and the issue of a
                           new command. (Maximum 4 seconds)

[10] Stand-alone Operation
Specifies an execution command when operating as a stand-alone device (without connecting to PC).   Confirm that the "Target Voltage" is specified in the Supply voltage for stand-alone operation.
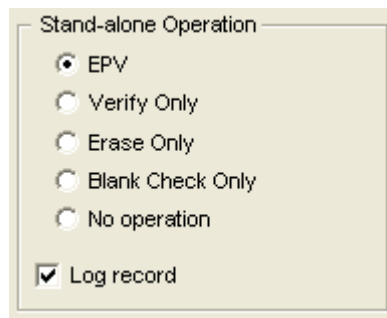
Fig 55

EPV   Issues [EPV] command.
Verify Only   Issues [Verify] command.
Erase Only   Issues [Erase] command.
Blank Check Only   Issues [Blank Check] command
No operation   No command is performed.

Check the "Log Record" for the number of devices written during stand-alone operation, the number of failed devices and error numbers for the failure (the last 32 histories), as recorded in the EEPROM built into StickWriter. The record details can be confirmed in the "Logging" of the "Device" menu.

4.3.4 ［Help］Menu

Clicking the [Help] menu displays the following pull down menu.

Fig 56

(1) ［About］Menu

Opens the window as shown below (Fig. 57).
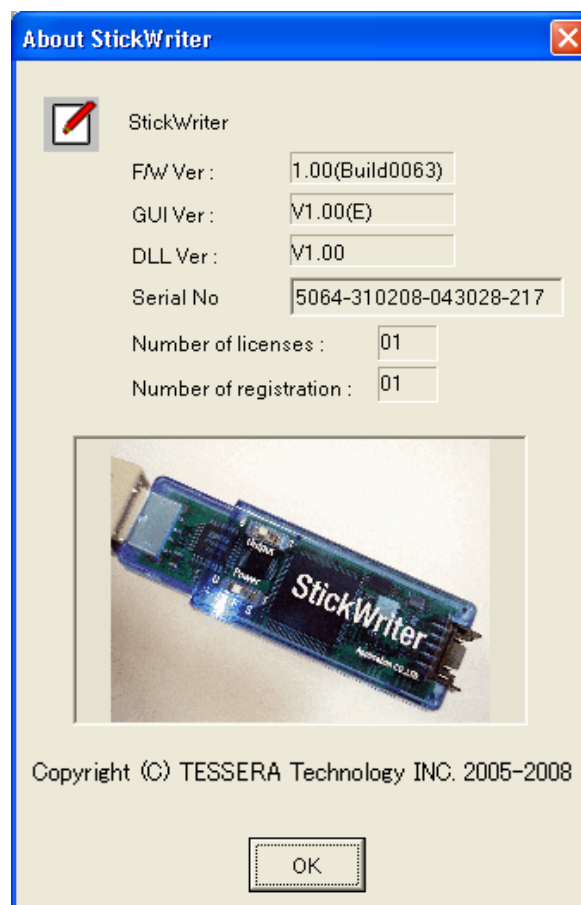
Fig 57

Press [OK] to exit the window.

F/W Ver	: Firmware Version
GUI Ver	: GUI Program Version
DLL Ver	: DLL Version
Serial No	: 19-digit Serial Number
License Count	: Possible registration numbers for device parameters
Registered Count	: The number of registered device parameters

Chapter 5 Additional License

When first purchasing StickWriter, only one series of parameter files can be used; however, by purchasing additional license, additional parameter files can be added.

License Purchase Flow

1. Customer	Order product type "SW-AD01" for additional licenses.
↓	
2. Us	Deliver a "License Card" with an encrypted password.
↓	
3. Customer	Send e-mail including the password and StickWriter serial number. ・ The e-mail address is written on the license card. ・ The StickWriter serial number can be confirmed in "About" in the "Help" menu. Copy the information from "Serial No."
↓	
4. Us	Confirm the password and reply with an authorization code enabling the addition of any 1 series of parameter files (within 2 business days).
↓	
5. Customer	Input the authorization code into "Authorization Code" in the "Programmer" menu. Download the new parameter file to StickWriter from "Parameter File Download" in the "File" menu. ・ The new parameter files can be downloaded from our website. (http://www.tessera.co.jp).