Programmer for flash micro computers





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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



*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.



🖶 StickWriter - InstallShield Wizard	×
Setup Type Choose the setup type that best suits your needs.	
Please select a setup type.	
Complete All program features will be installed. (Requires the most dis space.) Custom Choose which program features you want installed and whe will be installed. Recommended for advanced users.	k re they
InstallShield	Cancel

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

🙀 StickWriter - InstallShield Wizard	×
Ready to Install the Program The wizard is ready to begin installation.	×4
Click Install to begin the installation.	
If you want to review or change any of your installation settings, click Back. Click exit the wizard.	Cancel to
InstallShield	
< Back	Cancel

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.

Found New Hardware Wizard		
	Welcome to the Found New Hardware Wizard Windows will search for current and updated software by looking on your computer, on the hardware installation CD, or on the Windows Update Web site (with your permission). Read our privacy policy Can Windows connect to Windows Update to search for software? Or Yes, this time only Connect a device Or No, not this time	
	Click Next to continue.	
< <u>B</u> ack <u>N</u> ext > Cancel		

Since the driver for the StickWriter is not registered in Windows Update, select "No" and click $\boxed{Next>}$.

Found New Hardware Wizard
This wizard helps you install software for: Application StickWriter-01
What do you want the wizard to do?
O leadell the software automatically (Precommanded)
Install from a list or specific location (Advanced)
Click Next to continue.
< <u>B</u> ack <u>N</u> ext> Cancel

Select "Install from a list or specific location(Advanced)", and click Next>



Check the "Include this location in the search:" and click Browse.

Browse For Folder	? ×
Select the folder that contains drivers for your hardware.	
	•
Conline Services	
🛅 Outlook Express	
🗉 🛅 SigmaTel	
🖃 🛅 TESSERA Technology INC	_
🖃 🧰 StickWriter	
Driver	
🕀 🛅 Trena Misco	
🗉 🖃 🚞 Ulead Systems	
🗀 Uninstall Information	
🗉 📄 Windows Media Player	-
To view any subfolders, click a plus sign above.	
	:el
	11.

Select the "DRIVER" folder located in the folder where StickWriter was installed.

Plazas abasas					
r lease choose	your search and installation options.				
Search for	or the best driver in these locations.				
– Use the cl paths and	heck boxes below to limit or expand the default search, which includes local removable media. The best driver found will be installed.				
🗖 Se	Search removable media (floppy, CD-ROM)				
💌 Inc	✓ Include this location in the search:				
C:N	C:\Program Files\TESSERA Technology INC\Stick 🔻 📕				
C Danhara	unit i uitte de ser de ser install				
Choose th	ion, i will choose the driver to install.				
the driver	you choose will be the best match for your hardware.				
	< Back Next > Cancel				
$\operatorname{Next} > $.					
Handstar	o Installation				
Hardwar	re Installation				
Hardwar	re Installation				
Hardwar	Te Installation The software you are installing for this hardware:				
Hardwar	re Installation The software you are installing for this hardware: StickWriter-01				
Hardwar	Te Installation The software you are installing for this hardware: StickWriter-01 has not passed Windows Logo testing to verify its compatibility				
Hardwar	re Installation The software you are installing for this hardware: StickWriter-01 has not passed Windows Logo testing to verify its compatibility with Windows XP. (<u>Tell me why this testing is important.</u>)				
Hardwar	The software you are installing for this hardware: StickWriter-01 has not passed Windows Logo testing to verify its compatibility with Windows XP. [Tell me why this testing is important.] Continuing your installation of this software may impair or destabilize the correct operation of your system				
Hardwar	The software you are installing for this hardware: StickWriter-01 has not passed Windows Logo testing to verify its compatibility with Windows XP. (Tell me why this testing is important.) Continuing your installation of this software may impair or destabilize the correct operation of your system either immediately or in the future. Microsoft strongly recommends that you also this installation pair balls in a new pair				
Hardwar	The software you are installing for this hardware: StickWriter-01 has not passed Windows Logo testing to verify its compatibility with Windows XP. (Tell me why this testing is important.) Continuing your installation of this software may impair or destabilize the correct operation of your system either immediately or in the future. Microsoft strongly recommends that you stop this installation now and contact the hardware vendor for software that has				
Hardwar	The software you are installing for this hardware: StickWriter-01 has not passed Windows Logo testing to verify its compatibility with Windows XP. (Tell me why this testing is important.) Continuing your installation of this software may impair or destabilize the correct operation of your system either immediately or in the future. Microsoft strongly recommends that you stop this installation now and contact the hardware vendor for software that has passed Windows Logo testing.				
Hardwar	The software you are installing for this hardware: StickWriter-01 has not passed Windows Logo testing to verify its compatibility with Windows XP. (Tell me why this testing is important.) Continuing your installation of this software may impair or destabilize the correct operation of your system either immediately or in the future. Microsoft strongly recommends that you stop this installation now and contact the hardware vendor for software that has passed Windows Logo testing.				
Hardwar	The software you are installing for this hardware: StickWriter-01 has not passed Windows Logo testing to verify its compatibility with Windows XP. (Tell me why this testing is important.) Continuing your installation of this software may impair or destabilize the correct operation of your system either immediately or in the future. Microsoft strongly recommends that you stop this installation now and contact the hardware vendor for software that has passed Windows Logo testing.				

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

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.		
Т	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]	RESET	RESET
[3]	SI/RxD/DGDATA	SO TxD DGDATA(X2) TOOL0 TOOLD0/TOOLD1
[4]	VDD	VDD
[5]	SO/TxD	SI RxD
[6]	FLMD0	FLMD0
[7]	SCK	SCK
[8]	H/S	Pxx(HS)
[9]	CLK/DGCLK	X1 DGCLK(X1) TOOLC0/TOOLC1
[10]	Reserved	

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

Appropriate Target Side Connectors: SMT Type DIP Type Insulation Displacement Socket Clamping Socket

DF11CZ-10DS-2V DF11-10DS-2DSA DF11-10DS-2R26 DF11-10DS-2C

3.3 Target Cables



Cape Specifications		pecifications	Display Specifications	Connection Point with Target CPU
[1]	Black	GND	1, GND	VSS
[2]	Brown	RESET	2, RESET	RESET
[3]	Orange	SI/RxD/DGDATA	3, SI/RxD/DGDATA	SO TxD DGDATA(X2) TOOL0 TOOLD0/TOOLD1
[4]	Red	VDD	4, VDD	VDD
[5]	Yellow	SO/TxD	5, SO/TxD	SI RxD
[6]	Green	FLMD0	6, FLMD0	FLMD0
[7]	Blue	SCK	7, SCK	SCK
[8]	Purple	H/S	8, H/S	Pxx(HS)
[9]	White	CLK/DGCLK	9, CLK/DGCLK	X1 DGCLK(X1) TOOLC0/TOOLC1
[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/FP5. 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. When using 78K0 series, such as TOOLC/D, turn 1 ON and 2 OFF.

SW-1	Others	78K0S/Kx1+	78K0R	78K0(TOOLC/D)
1	ON	OFF	ON	ON
2	ON	OFF	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/TOOLD0/1.
SCK	Output from StickWriter
H/S	Output from Target CPU

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



For UART communication









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.

It is necessary to connect the device with TOOLC0/1.

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)
Torrat valtage		1.65V - 5.5V
Talget voltage		(For under 3.3V, power supply is required from USB)
Interface	PC side	USB 2.0/1.1 (Bus/power operation)
Interface	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 \times D23 \times 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.

StickWriter	
File(<u>F)</u> Programmer(<u>P</u>) Device(<u>D</u>)	Help(<u>H</u>)
Setup Download Blank	Erase Program Verify EPV
Setup information —	
Setting file	SS-K0SKA1-MC[9222]
Parameter	78K0S_Kx1+_Ver0_05.prs
Target device	uPD78F9222
Supply voltage	5.0V Output
Supply	8,000,000 * 1.0
Communication	UART
Speed	115,200 bps
Operation mode	Chip
HEX file	
File	romp.hex
Time	27/07/2005 11:35:58
CRC	C41F6844
HEX File Information	on Upload Completion
<	
1 11000	

Fig 1





- (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.





(1) [HEX File Download] Menu

Download

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.

Save As			? 🛛
Savejn: 🗀	Application CO.,LTD	• 🗢 🔁	r 📰 🕶
StickWriter			
File <u>n</u> ame:	*.S		<u>S</u> ave
Save as <u>t</u> ype:	Motorola Hex files(*.s)	-	Cancel

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.

Checksum 🛛 🔀
Device Checksum : 0BAD FP4 Algorithm CRC sum(32bit:1M) : 4D9A0FB9 CRC sum(32bit:2M) : 8F0F6585

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.

Open		? 🗙
Look jn: 🔀	Application CO.,LTD 💽 🗢 🗈 📸 🎫	
StickWriter		
File name:	×.prs Oper	
Files of type:	Parameter files(* prs)	el
. пос с. уро.		

Fig 7

[Open]

Downloads the selected parameter file.

StickWriter / Parameter registration 🛛 🔀				
2	May I register C:\V850ES_5x2_Ver0_06.prs ?			
	OK Cancel			



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

For new registration

StickWr	StickWriter / Parameter registration				
2	New case is registered in V850E5_5x2_Ver0_06.prs, and the number of the rest licenses becomes 0 Is it good?				
	Cancel				

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 (<u>http://www.tessera.co.jp</u>).

[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.

Open				?	×
Look jn: ն	Application CO.,LTD	•	⊨ €	💣 🎟 •	
StickWriter					
File <u>n</u> ame:	*.set			<u>O</u> pen	
Files of <u>type</u> :	Setting files(*.set)		•	Cancel	

Fig 11

[Open]

Downloads the selected setting file to StickWriter.

[Cancel]

Closes without downloading the selected setting file.

Setting file management information						
	No	SET File Name	PRS File Name	~		
	00	VE2	79K0 Kv2 \/2 \/ex1 01 ere			
	00	REZ	78K09 Kv1+ Ver0 05 pre			
	02	SS-K0SKR1-MC[3222]	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	Ξ		
	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					
	16					
	17					
	18					
	19					
	20					
	24					
		ок	CANCEL			

Fig 12

Select a number to download and press [OK].





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	PBS File Name	^
	00	KF2	78K0 Ky2 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			_
	10	88-KUKC2-GB[0513]	78KU_Kx2_V2_Ver1_U2.prs	
	10	88 KOKE2 CCI05471	78K0 K-2 1/2 1/2-1 02 pm	
	12	33-KUKF2-GC[0547]	/onu_nxz_vz_veri_uz.prs	
	13			
	14			
	15			
	16			
	17			
	18			
	19			
	20			~
	04			_
		ОК	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.

Setting file management information				
	No	SET File Name	PRS File Name	^
	00 01 02	KE2 SS-K0SKA1-MC[9222] SS-K0SKB1-MC[9234]	78K0_Kx2_V2_Ver1_01.prs 78K0S_Kx1+_Ver0_05.prs 78K0S_Kx1+_Ver0_05.prs	
	03 04 05 06	SS-K0KE2-GC[0537] SS-K0KB2-MC[0503] SS-K0SKY1-GR[9212] SS-850S62-6C[3283]	78K0_Kx2_V2_Ver1_02.prs 78K0_Kx2_V2_Ver1_02.prs 78K0S_Kx1+_Ver0_05.prs V850ES_Sx2_Ver0_07_prs	
	07 08	SS-K0KD2-GB[0527]	78K0_Kx2_V2_Ver1_02.prs	
	09 10	SS-K0KC2-GB[0513]	78K0_Kx2_V2_Ver1_02.prs	
	11 12 13	SS-K0KF2-GC[0547]	78K0_Kx2_V2_Ver1_02.prs	
	14 15			
	16 17 18 19			
	20			~
		ок	CANCEL	

Fig 17

Select a number to delete and press [OK].

May I delete SS-K0KF2-GC[0547][11]?	SET File Delete 🔀
Cancel	May I delete SS-K0KF2-GC[0547][11]?
	OK Cancel

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.

StickWriter					
File(E) Programmer(P)	Device(<u>D</u>)	Help(<u>H</u>)			
Setup Download	Blank	Erase	P rogram	Verify	EPV
Setup inform	nation				1
Setting fi	le				
Paramet	er				
Target de	evice				
Supply ve	oltage				
Supply					
Commu	nication				
Speed					
Operatio	n mode				
HEX file					1
File		romp.hex			
Time		27/07/200)5 11:35:58		
CRC		C41F684	4		
					1
	Initializatio	n Comple	tion		,
CheckSum>	4665				I
<				>	,
Trace					

Fig 19

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



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

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

Authentication registration	×
Authentication code	
1234567890abcdefg	_
OK CANCEL	
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.

Log information	$\overline{\mathbf{X}}$
EPV OK / NG 1	/ O Save
NG Log	
No Message	
<	
Delete	

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.

Log history information delete 🛛 🛛				
May I delete it ?				
OK Cancel				

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.

		? 🔀
bin	- 🗢 🗈 (* 🎟 •
sw_fw*.hex		<u>O</u> pen
SW firmware(sw_fw*.hex)	•	Cancel
	bin sw_fw*.hex SW firmware(sw_fw*.hex)	bin

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.

🗹 Stick	«Writer		
File(<u>F</u>)	Programmer(<u>P</u>)	Device(<u>D</u>)	Help(<u>H</u>)
Setup) Download	Blank Ch Erase(<u>A</u> Program Verify(<u>V</u>	neck(<u>B)</u>) n(P))
	– Setup inform Setting fil	EPV(<u>E</u>) EPV with Read(<u>R</u>)	n serial Number(<u>N</u>)
	Paramete Target de	Security Checksu	(C) _(_() _() _()
	Supply vo	Signatur Setup(T	re(I)
	Commun	ication	<u>, sio</u>

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.

	Blank Check Completion	
<	× >	
🗖 Trace		

Fig 30

The status displayed when [Blank Check] finishes successfully.





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.

	Erase Completion
<	
🗖 Trace	

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.

Program	
	A. V
<	>
Trace	
Erase the target device.	



The writing progress status and Progress bar are displayed.

	Program Completion	
<	× ×	
Γ	Trace	



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.

Verify Completion
Trace

Fig 35

The status displayed when [Verify] finishes successfully.





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.

		Program Com	pletion	
<				×
	Trace			

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.

EPV with serial Number	
Address 0 Size 1 •	Algorithm • +1 • -1 • Expansion
EPV	Cancel

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.

StickWri	iter ammer(P)	Device(D)	Help(H)			
Setup	Download	Blank	Erase	Program	Verify	¢ EPV
Se	tup inform Setting fil Paramete Target de PV with s	ation e er vice serial Nur	SS-KOKE 78K0_Kx uPD78F(mber	2-GC[0537] 2_V2_Ver1_ 0537[KE2]**	l _02.prs Ver2.0	
	Address Size Data	0	•	Algorithm +1 -1 C Expa	nsion	
		EPV		Cancel		
		Pr	ogram			-
	Trace				<u>×</u>	

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 As				? 🛛
Save jn: 隘	HEX	•	۵ ط	📸 🎟 -
File <u>n</u> ame:	×.s			<u>S</u> ave
Save as <u>t</u> ype:	Motorola Hex files(*.s)		•	Cancel

[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.

Security Corr	npletion
>Security : OK	×
Trace	

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.

CheckSum> 432E	
CheckSum> 432E	and the second se
	×
Trace	

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.)

Completio	on
Righturg & OK	
s and a solution of the soluti	×
Trace	

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.

Setup	X
Device Setting file test Parameter 78K0R_Kx3-L_Ver0_ Target uPD78F1009[KE3-L]	_03.prs
Supply voltage SV Output C 3.3V Output C Ta	arget voltage 🦵 Wide voltage mode
Supply oscillator Frequency On Target Multiply Operation Mode Chip Start Block End Show Address Extension reset time time 0 (uSec) WAIT time (uSec)	Communication interface to device Port UART [TOOL0] Speed 300K Baud Command options Blank check before Erase Read verify after Program Blank check before Erase Read verify after Program Checksum after Program Checksum after Program Checksum after Program Lechip Erase disabled Block Erase disabled Read disabled Read disabled Boot block cluster reprogramming disabled
Stand-alone Operation © EPV © Verify Only © Erase Only © Blank Check Only © No operation ■ Log record	Reset vector h Block potection Boot block end FS Block start 000 FS Block end 063 Showy Address Ok Cancel

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

Device			
Setting file	SS-850SG2-GC[3281]		Select
Parameter	V850ES_Sx2_Ver0_07.prs		
Target	uPD70F3281*	•	

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].

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			
	U3 04	SS-KUKE2-GU[U537]	78KU_KX2_V2_Ver1_U2.prs 79K0_Kx2_V2_Ver1_02.prs	≣		
	04 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 NG	99-K0KC2-GB(0513)	78K0 K-2 V2 Ver1 02 pro	_		
	10	33-КОКО2-ФБ[0313]	70K0_KX2_V2_Ver1_02.prs			
	11	SS-K0KF2-GC[0547]	78K0_Kx2_V2_Ver1_02.prs			
	12					
	13					
	14					
	16					
	17					
	18					
	19 20					
	20			~		
		ок	CANCEL			

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.

Setting file renewal			
Setting file			
Parameter file	78K0S_Kx1	1+_Ver0_05.prs	•
OK CANCEL			
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.

	-Supply voltage ● 5V Output	C 3.3V Output C Target voltage 🔲 Wide voltage mode	
		Fig 47	
5V Ou	ıtput	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	t Voltage	Set to the target board voltage.	
Wide	voltage mode	When the check is put, each command is executed in a wide voltage mode.	

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

Supply oscillator		
Frequency		~
On Target 🔽	5000000	Hz
Multiply	4.0	•

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

PortAvailable communication methods are UART or CSI.SpeedCommunication speed can be selected.

[5] Operation Mode

Sets the type of commands to the target device.

Operation Mode		
Chip Start	v	
C Block End	~	
Г	Show Address	



Chip Block Access in chip mode.

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.

Command options
Blank check before Erase
Read verify after Program
🔲 Security flag set after Program
Checksum after Program

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.

 Security flag settings 		
🦳 Chip Erase disabled		
Block Erase disabled		
Program disabled		
🥅 Read disabled		
Boot block cluster reprogramming disabled		
Reset vector h		

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	1
	Disables [Block Erase].
Program disabled	
	Disables [Program].
Read disabled	
	Disables [Read].
Boot block cluster re	programming 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

 Block potection 		
Boot block end	-	
FS Block start	-	
FS Block end		
☐ Show Address		

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

Extension reset time			
time	0	(uSec)	
WAIT time	0	(uSec)	



TimeExtends the Reset time that was previously input. (Maximum 4 seconds)WAIT TimeExtends 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.





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).

About S	tickWriter	×	
	StickWriter		
_	F/W Ver:	1.00(Build0063)	
	GUI Ver :	V1.00(E)	
	DLL Ver :	V1.00	
	Serial No	5064-310208-043028-217	
Number of licenses : 01			
	Number of regi	stration : 01	
SUCKWING			
Copyright (C) TESSERA Technology INC. 2005-2008			
		ОК	

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.
\downarrow	
2. Us	Deliver a "License Card" with an encrypted password.
\downarrow	
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."
\downarrow	
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).
\downarrow	
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. (<u>http://www.tessera.co.jp</u>).