

SwapFTL TM Binary Utility Operation Manual

(Revision 1.0)

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1. OVERVIEW

This software allows a flash memory card to be used as an intermediate medium between a flash ROM (or RAM) on the machine and a Windows 95 based computer.

The basic procedure is as follows:

1. You receive ROM files from a database either via network or via physical medium, and save them onto your computer's local hard disk.

Your computer works as a flash memory card programmer after you install a SwapBox and SwapFTL software (this software).

2. You program the ROM file to a flash memory card using this software.

3. You carry the programmed card to a machine site and download the ROM data from the card to the machine's internal flash ROM.

The 4MB flash memory card that is customized for this application is available from SPC. You cannot use other types of flash memory card.

4. After downloading ROM data to one machine, you can use the same card with another machine of the same type.



2. OPERATION

2.1 PROGRAMMING A FLASH MEMORY CARD

2.1.1 GETTING A SOURCE FILE

You can (or will be able to) obtain the source firmware file(s) in one of the following ways.

- Notes mail or through a Notes database
- Internet-mail
- BBS
- Floppy disk
- Flash memory card (you need to save the data on the card as a file on a PC before using the data.)
- Others (as yet unspecified)

2.1.2 PROGRAMMING A CARD WITH THE SOURCE

NAD30/40 Copy and Fax Main Firmware

You can program copy and fax firmware together onto one 4MB flash memory card, as shown below.



NAD30/40 Fax Modem Firmware and Fax SRAM Backup

Modem

Program modem firmware using the address and length settings as shown below. You cannot program other data on the card once the modem firmware has been programmed.

SRAM

Using Fax SP mode, you can make a backup of SRAM data onto the 4MB flash memory card. This will help you set up multiple machines with fax options with the same settings, or will help you restore user data if the SRAM data has been erased accidentally. To save the SRAM backup data from a fax unit on a 4MB flash memory card as a file, or to program a backup file from a PC onto a 4MB flash memory card, use the address and length settings as shown below.



2.2 DOWNLOADING TO A MACHINE

Refer to the machine's service manual for how to download its firmware to the flash ROM inside it.

2.3 SAVING DATA TO A FILE

Some machines can upload an internal flash ROM image to a flash memory card. To save the image on the flash memory card as a computer file, read the card with a specific address range setting that was mentioned in section 2.1.2, and save the read data as a file.

3. FUNCTIONS

3.1 File Menu

3.1.1 [File] - [Open]

Open	?	×
ファイルの場所(リ):	🔄 NAD_Basic	
€ v1029		
ファイル名(N):	開((()))	
ファイルの種類(工):	Binary Files (*,bin)	
	Binary Files (*bin)	
	SwapUti Files (#.dmp) Intel Hex Files (#.hex)	
	Motorola S Format Files (*.ms)	
	FILE-OPEN	.BMP

This opens a binary file.

Use "Binary Files (*.bin)" or "SwapUti Files (*.dmp). Do not use the others. The default setting is "Binary Files (*.bin).

SwapUti -	[v1029] w <u>I</u> mage <u>W</u>	indow <u>H</u> elp			- D ×
00000000 00000000 00000010	88 00 00 06 00 E6	00 06 00 F1 06 00	AA FB 06 F8 F1 06	00 C2 F1 06 00 00 0A F2 06 00	04 F1
00000020 00000030 00000040 00000050 00000050	06 00 2E 06 00 5E 06 00 EC 06 00 EC 06 00 94	F2 06 00 F2 06 00 F8 06 00 F8 06 00 F2 06 00	40 F2 06 EC F8 06 EC F8 06 EC F8 06 A6 F2 06	00 44 F2 06 00 00 70 F2 06 00 00 EC F8 06 00 00 EC F8 06 00 00 B0 F2 06 00	54 F2@JT. 32 F2 3C F8 3C F8 3A F2
Checksum : • Ready	0x1D21				

OPENED_FILE.BMP

An 8-bit checksum is displayed at the lower left corner of the opened file.

3.1.2 [File] - [Close]

This closes an active file that has been opened.

3.1.3 [File] - [Save]

This saves an active file with the same name.

3.1.4 [File] - [Save As]

Save As				? ×
保存する場所(1):	NAD_Basic	£ (*	
€ v1029				
				_
7ァイル名(№):	v1029		保存(S)	
ファイルの種類(<u>T</u>):	Binary Files (*.bin)	-	キャンセル	, []
	Binary Files (*.bin) All Files (*.*)			
			FILE-SAVEAS-	BIN.BMP

This saves an active file with a different name from the original.

3.2 VIEW MENU

3.2.1 [View] – [Toolbar]

This switches on the toolbar display.

3.2.2 [View] - [Status bar]

This switches on the status bar display.

3.3 IMAGE MENU

3.3.1 [Image] – [Erase]

Erase Card			×
Source: Card 0	T Ba	ase of Address/Length Sectors O Decimal O Hex	
Start Address :		Length: 400000	
Card Info:	BlockCount: Blocksize:	0×00000020 0×00020000	
	ок	Cancel	
		IMAGE-ERASE.B	MP

Field	Description
Source	Card slot number that has a flash memory card currently installed.
Start Address	A "0 (zero)" appears at default.
	To erase the whole card, do not change the setting
Length	Hexadecimal length of the card appears at default.
	To erase the whole card, do not change the setting
Base of Address/	Do not change the settings.
Length	The default setting is "Hex".

NOTE: If the specified start address and length do not coincide with block boundaries on the flash memory card, the message below appears.



IMAGE-ERASE-ERR.BMP

3.3.2 [Image] – [Read]

Read from Card			×
Source: Card 0	T Ba	ase of Address/Ler Sectors C O	ngth) Decimal) Hex
Start Address : 0		Length: 400000	
Card Info:	BlockCount: Blocksize:	0×00000020 0×00020000	
	ОК	Cancel	

Field	Description
Source	Card slot number that has a flash memory card currently installed.
Start Address	A "0 (zero)" appears at default.
	Change this setting if necessary.
Length	Hexadecimal length of the card appears at default.
	Change this setting if necessary.
Base of Address/	Do not change the settings.
Length	The default setting is "Hex".

3.3.3 [Image] - [Write]

Write to Card	×
Source:	Target:
v1029	Card 0
Start Address:	🔽 card erase before write
0	Base of Address/Length
Length:	🔲 Sectors 🔘 Decimal
200000	• Hex
	Card size: 0x00400000
OK	Cancel
	IMAGE-WRITE.BMP

Field	Description
Courses	Course file name that is surrently active in the application
Source	Source file name that is currently active in the application.
Target	Card slot number that has a flash memory card currently installed.
Card erase	If this is checked, the application erases the whole card before writing
before write	data from the source file.
	The default setting is checked (= erase).
Start Address	A "0 (zero)" appears at default.
	Change this setting if necessary.
Length	Hexadecimal length of the source file appears at default.
	Do not change the setting.
Base of Address/	Do not change the settings.
Length	The default setting is "Hex".

000 000 SwapUti
000 🕥 🛈
000 (i) Checksum: 0x80A9
000
000
Checksum: 0x80A9
Ready

CHECKSUM_SWAPUTI.BMP

After writing the data to a flash memory card, an 8-bit checksum 1 pops up, so that you can compare it with the checksum 2 of the source file.

3.3.4 [Image] – [Verification]

Verification	×
Source:	Target:
v1029	Card 0
Start Address:	🔽 card erase before write
0	Base of Address/Length
Length:	Sectors O Decimal
200000	
	Card size: 0x00400000
ОК	Cancel
	IMAGE-VERIEY BMP

Field	Description	
Source	Source file name that is currently active in the application.	
Target	Card slot number that has a flash memory card currently installed.	
Start Address	A "0 (zero)" appears at default.	
	Change this setting if necessary.	
Length	Hexadecimal length of the source file appears at default.	
	Do not change the setting.	
Base of Address/	Do not change the settings.	
Length	The default setting is "Hex".	

If verification was successful, a 'Verification OK!" message pops up. If verification was not successful, a "Compare error !" message pops up with the source and target addresses.



VERIFY-OK.BMP



3.4 HELP MENU

3.4.1 [Help] – [About SwapUti...]

About Swa	pUti	×
õ	SwapUti Version V 2.01R SCM Microsystems RICOH COMPANY, LTD. Copyright _ 1996-1997 Additional Information VxD Name: SwapBox VxD Version: 1.34	
		VERSION2.BMP