

## [DESCRIPTION]

**MegaFlashROM SCC+** lets to store and execute ROM files as if they were working from the original cart. Its features let it to work as most of ROM files without needing to be patched whatever mapper is needed.

ROM files are loaded into the Flash memory by using the MSX program OPFX which will identify the ROM and will config the cartridge with right settings to make it working correctly. Everything is made automatically so there's no needing of any kind of switch or button.

The most recent version of OPFX can be found in the FLASH section of [www.msxcartridgeshop.com](http://www.msxcartridgeshop.com)

## [MINIMUM REQUIREMENTS]

- MSX computer with at least one free Slot
- MSX-DOS / MSX-DOS 2
- Storage device: FDD, HDD, ZIP, MMC/SD, etc.

## [FEATURES]

- 1024KB flash memory
- SCC-I
- PSG
- Mapper: ASC8, ASC16, Konami, Konami SCC, linear 48K/64K
- 4x subslot with 256KB simulation
- No switch or button needed

## [WORKING]

Insert the MegaFlashROM SCC+ cart in one slot while the computer is turned off.

Turn the computer on and boot MSX-DOS or MSX-DOS2. Execute OPFX by selecting the ROM and needed options.

Once the ROM is stored the cartridge will behave as if it were the original one and won't be erased even if the computer is turned off.

**ESC** key or the one configured through **/T** option must be pressed while computer is booting to avoid the execution of the cart.

**RESET** key can be hold on pressed for **5 seconds** to disable MegaFlashROM SCC+ temporarily if previous system would fail for any reason.

## [PSG]

The PSG included in the cartridge is mapped to ports #10-#12.

| <b>Internal MSX PSG</b> | <b>MegaFlashROM PSG</b> |
|-------------------------|-------------------------|
| Port #A0                | Port #10                |
| Port #A1                | Port #11                |
| Port #A2                | Port #12                |

## [OPTIONS]

|              |  |
|--------------|--|
| <b>/X</b>    | Executes the game stored in the cartridge.<br><b>OPFX KLORE2.ROM /X</b> <- Stores the ROM and executes it<br><b>OPFX /X</b> <- Executes whatever is stored in the cartridge  |
| <b>/E</b>    | Patches Konami ROMs to simulate that they are executed in an European computer<br><b>OPFX USAS.ROM /E</b> <- Shows the texts in English in a Japanese computer               |
| <b>/J</b>    | Patches the Konami ROMs to simulate that they are executed in a Japanese computer<br><b>OPFX NEMESIS3.ROM /J</b> <- Shows the texts in Japanese in an European computer      |
| <b>/8</b>    | Enables the R800 CPU when executing the ROM.   |
| <b>/Hxx</b>  | Changes the Frequency when executing the ROM. It won't have any effect if the game change it again during its execution.<br><br><b>/H50</b> <- 50 Hz<br><b>/H60</b> <- 60 Hz |
| <b>/RCxx</b> | Simulates a Konami cart inserted in another slot.<br><b>OPFX NEMESIS2.ROM /RC743</b> <- Simulates Penguin Adventure  |
| <b>/Kx</b>   | Forces the execution of the ROM with a Konami mapper<br><b>/K4</b> <- Konami<br><b>/K5</b> <- Konami SCC   |
| <b>/Ax</b>   | Forces the execution of the ROM with a ASCII mapper<br><b>/A8</b> <- ASC8<br><b>/A16</b> <- ASC16  |

|               |  |
|---------------|--|
| <b>/L</b>     | Indicates that the ROM has no mapper and works in #0000-#FFFF area as 48K or 64K roms.   |
| <b>/M</b>     | Manual mode. OPFX won't identify the ROM mapper automatically.   |
| <b>/D</b>     | Completely erases the cartridge memory. It lets to have it inserted without needing to avoid its booting just after turning the computer on.   |
| <b>/Sxx</b>   | Forces the slot where the cartridge is placed:<br>/S1 = Slot 1<br>/S13 = Slot 1, subslot 3   |
| <b>/T[rc]</b> | Fixes the key which will avoid the execution of the ROM stored in the cartridge. ESC acts in that way by default. To select the desired key it is necessary to select the file and column of the key matrix<br>/T64 <- File 6, Column 4 = CODE<br>/T82 <- File 8, Column 2 = INS<br><b>[See keyboard matrices]</b> |
| <b>/Bx</b>    | Loads the ROM in the desired subslot.<br><b>[See SUBSLOTS section]</b>   |
| <b>/O</b>     | Creates a MULTIROM with the games inside the MULTIROM.OPF file<br><b>[See MULTIROM section]</b>  |
| <b>/F</b>     | Executes the game by using a "soft reset". In this way the MSX BIOS takes the ownership of the booting process.  |
| <b>/P</b>     | Patches a Konami ROM to use the PSG of the cartridge. So the sound balance of SCC and PSG is constant and perfect.   |

## [KEYBOARD MATRICES]

### International:

|    | 7    | 6      | 5    | 4    | 3    | 2     | 1    | 0     |
|----|------|--------|------|------|------|-------|------|-------|
| 0  | 7 &  | 6 ^    | 5 %  | 4 \$ | 3 #  | 2 @   | 1 !  | 0 )   |
| 1  | ; :  | ] }    | [ {  | \    | = +  | - _   | 9 (  | 8 *   |
| 2  | B    | A      | DEAD | / ?  | . >  | , <   | ` ~  | ' "   |
| 3  | J    | I      | H    | G    | F    | E     | D    | C     |
| 4  | R    | Q      | P    | O    | N    | M     | L    | K     |
| 5  | Z    | Y      | X    | W    | V    | U     | T    | S     |
| 6  | F3   | F2     | F1   | CODE | CAPS | GRAPH | CTRL | SHIFT |
| 7  | RET  | SELECT | BS   | STOP | TAB  | ESC   | F5   | F4    |
| 8  | →    | ↓      | ↑    | ←    | DEL  | INS   | HOME | SPACE |
| 9  | NUM4 | NUM3   | NUM2 | NUM1 | NUM0 | NUM/  | NUM+ | NUM*  |
| 10 | NUM. | NUM,   | NUM- | NUM9 | NUM8 | NUM7  | NUM6 | NUM5  |

### Japanese:

|    | 7           | 6      | 5              | 4         | 3                | 2               | 1    | 0     |
|----|-------------|--------|----------------|-----------|------------------|-----------------|------|-------|
| 0  | 7 ' (grave) | 6 &    | 5 %            | 4 \$      | 3 #              | 2 " (quotation) | 1 !  | 0     |
| 1  | ; +         | [ {    | @ ` (grave)    | ¥   (yen) | ^ ~ (circumflex) | - =             | 9 )  | 8 (   |
| 2  | B           | A      | _ (underscore) | / ?       | . >              | , <             | ] }  | : *   |
| 3  | J           | I      | H              | G         | F                | E               | D    | C     |
| 4  | R           | Q      | P              | O         | N                | M               | L    | K     |
| 5  | Z           | Y      | X              | W         | V                | U               | T    | S     |
| 6  | F3          | F2     | F1             | KANA      | CAPS             | GRAPH           | CTRL | SHIFT |
| 7  | RET         | SELECT | BS             | STOP      | TAB              | ESC             | F5   | F4    |
| 8  | →           | ↓      | ↑              | ←         | DEL              | INS             | HOME | SPACE |
| 9  | NUM4        | NUM3   | NUM2           | NUM1      | NUM0             | NUM/            | NUM+ | NUM*  |
| 10 | NUM.        | NUM,   | NUM-           | NUM9      | NUM8             | NUM7            | NUM6 | NUM5  |
| 11 |             |        |                |           | NO               |                 | YES  |       |

**Azerty:**

|    | 7    | 6      | 5    | 4    | 3    | 2     | 1    | 0     |
|----|------|--------|------|------|------|-------|------|-------|
| 0  | 7 è  | 6 §    | 5 (  | 4 '  | 3 "  | 2 é   | 1 &  | 0 à   |
| 1  | M    | \$ *   | ^ ¨  | < >  | - _  | °)    | 9 ç  | 8 !   |
| 2  | B    | Q      | DEAD | = +  | / :  | . ;   | # £  | Ù %   |
| 3  | J    | I      | H    | G    | F    | E     | D    | C     |
| 4  | R    | A      | P    | O    | N    | ? ,   | L    | K     |
| 5  | W    | Y      | X    | Z    | V    | U     | T    | S     |
| 6  | F3   | F2     | F1   | CODE | CAPS | GRAPH | CTRL | SHIFT |
| 7  | RET  | SELECT | BS   | STOP | TAB  | ESC   | F5   | F4    |
| 8  | →    | ↓      | ↑    | ←    | DEL  | INS   | HOME | SPACE |
| 9  | NUM4 | NUM3   | NUM2 | NUM1 | NUM0 | NUM/  | NUM+ | NUM*  |
| 10 | NUM. | NUM,   | NUM- | NUM9 | NUM8 | NUM7  | NUM6 | NUM5  |

Keyboard matrices from UK and Spain are the same as the international one except these rows:

**UK:**

|   | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 |
|---|---|---|---|---|---|---|---|---|
| 2 | B | A | £ | / | . | , | ` | ' |

**Spanish:**

|   | 7   | 6   | 5    | 4   | 3   | 2   | 1   | 0   |
|---|-----|-----|------|-----|-----|-----|-----|-----|
| 1 | ñ Ñ | ] } | [ {  | \   | = + | - _ | 9 ( | 8 * |
| 2 | B   | A   | DEAD | / ? | . > | , < | ; : | ' " |

## [SUBSLOTS]

The cartridge can simulate 4x256KB subslots (subslot 3 only with 240KB). This new function lets to simulate till 4 inserted cartridges at the same time. Each one will take one subslot from the primary slot where the MegaFlashROM SCC+ will be inserted.

Many Konami cartridges can be combined in this way. It lets to simulate that a ROM is inserted in a fixed subslot too.

As more than two cartridges can be simulated it lets to do many combinations which are not possible without using a slot expander.

Example:

[Game Master 2 + Nemesis 2 + Penguin Adventure](#)

Game Master 2 lets to choose the starting stage and the number of lives in Nemesis 2. When booting the game our ship will be replaced by a penguin.

If a ROM must be loaded in a fixed subslot the **/B** option has to be used followed by the subslot number (0-3). A similar option with same effect is **/BB** but it is used to store and execute a single ROM in the fixed slot.

Next example combines Hinotori in subslot 0 and King Kong 2 in subslot 1:

- Erase cartridge and store the ROM in the subslot 0:

**OPFX HINOTORI.ROM /B0**

- Store the ROM in subslot 1

**OPFX KINGKONG2.ROM /B1**

Next example to execute Penguin Adventure from subslot 3:

**OPFX PENGUIN.ROM /B3 /F**

Next command has same effect:

**OPFX PENGUIN.ROM /BB3**

Even if every subslot has 256KB in size MegaFlashROM SCC+ still lets to load bigger ROM files but it will disable next overlapped slots:

**OPFX MGEAR2.ROM /BB1** <- Executes Solid Snake from subslot 1 while subslot 2 remains useless.

**Note:** Subslots simulation will only work on cartridges inserted on primary slots so slot expanders can't be used.

## [MULTIROM]

It is possible to put several games into the cartridge at the same time, as many as they fit in the cartridge's memory. In order to create a multiROM, you need to make a MULTIROM.OPF file with the file names to load.

Each file name must be in a text line, adding at the end of the list the keyword **[END]**. In order to pause the loading process you can use **[PAUSE]**. Once this file is ready, you need to process the list using the option **/O**. The ROMs to load must be in the same path that OPFX and MUTIROM.OPF.

Example of MULTIROM.OPF content:

```
GALIOUS.ROM  
HERO.ROM  
PENGUIN.ROM  
KLORE2.ROM  
[END]
```

Command to make the multiROM: **OPFX /O**

After booting the cartridge a menu will be show with the games in the cartridge. Before running the game it is possible to change the video and CPU modes.

### Controls:

|                        |                            |
|------------------------|----------------------------|
| Cursor keys / Joystick | Move                       |
| Space / Fire           | Select                     |
| TAB / Fire 2           | Enter / Exit configuration |
| ESC                    | Exit multiROM              |

## [STAFF]

### **Hardware**

Kazuhiro Tsujikawa  
Manuel Pazos

### **Software**

Manuel Pazos (Guillian)  
Armando Pérez (Ramones)

### **English translation**

Francis Álvarez (SaebaMSX)

### **User's Manual design**

MSX Kun

### **Artwork**

Nova706