

# Carnivore2+ Changelog

## Carnivore2+ MFC update 09.05.2025, firmware 3.02.0014

### Public release of improved functionality

1. Added support for MSX Audio: new firmware and music BIOS
2. The new MSX Audio firmware supports ADPCM playback and 256kb SRAM emulation in Shadow RAM
3. Fixed timing problems on some Turbo-R and MSX2+ machines
4. Fixed SD card read errors on machines with R800 and Turbo mode
5. Added on-board 2mb RAM memory management into C2MAN and C2MAN40 utilities
6. Added options to disable FMPAC SRAM and MSX Audio SRAM into C2MAN and C2MAN40 utilities
7. Added options to select several CF/SD card configurations into C2MAN and C2MAN40 utilities
8. The C2FWUPD utility now prints what firmware was selected by a user before uploading
9. The DAC was significantly improved making MUSIC modules sound better
10. All utilities now return the FlashROM into the command mode in case of an error
11. The Boot Menu got the fix for enabling the turbo mode
12. The C2RAMLDR utility now auto-identifies the available Shadow RAM amount for ROM loading
13. The C2RAMLDR utility can start the uploaded ROM instantly or reboot to the Boot Menu
14. The C2RAMLDR utility can restart the computer with 2mb available for shadow RAM
15. The C2SRAM utility now only works with FMPAC firmware and SRAM

## Carnivore2+ MFC update 29.03.2024, firmware 3.01.0006

### Initial public release

1. The C2FPUPD utility has been rewritten to backup firmware+crc+bios and to upload either backed up data or one of 3 firmwares
2. The set of firmwares now contains the BIN (firmware file), CRC (CRC of the BIN) and ROM (Music module's BIOS)
3. C2FWUPD utility now exits correctly, allowing it to start again and to find the cartridge automatically

## Carnivore2+ MFC update 26.03.2024, firmware 3.01.0006

1. Firmware files are now located in a single folder with module-specific names, use fmpac.bat and sfg.bat files to select the desired firmware
2. The Boot Menu now shows which MUSIC module is installed on a simpler boot screen that is shown on MSX1 computers, the version is 3.04
3. The SFG music module now properly plays all files with MXP2 and VGMPlay players
4. The SFG BIOS no longer hangs the computer if FMPAC firmware is present in the cartridge
5. The C2SRAM utility no longer works if SFG firmware is present in the cartridge, it shows the corresponding message and exits
6. The C2RAMLDR utility has been modified to upload up to 920kb ROMs into shadow RAM with FMPAC firmware and up to 983kb ROMs with SFG firmware
7. The C2FW\_UPD utility has been renamed into C2FWUPD as there were reports about the underscore symbol in the name causing problems on DOS1
8. The C2FWUPD utility now shows the message about changing BIOSes after updating the firmware, the readme for the firmware also has the same note
9. The files for diskless setup and OpenMSX have been updated with the latest BIOSes and Boot Menu

## Carnivore2+ MFC update 20.03.2024, firmware 3.01.0005

1. The C2MAN, C2MAN40, C2EDIT and C2EDIT40 utilities now support writing both SFG and FMPAC BIOSes into the cartridge
2. The firmware now has 2 separate variants with the same version number - one for SFG, another for FMPAC
3. The Boot Menu now shows which MUSIC module is installed on the title screen under the firmware version
4. The SFG BIOS is combined from 01 and 05 versions, the 05 version is the default one, call music works, but is useless without music keyboard
5. Now all music modules are called MUSIC in utilities and Boot Menu
6. The mono option for FMPAC has been renamed in the configuration screen of the Boot Menu, mono affects both SFG and FMPAC
7. The cartridge can be disabled any time with a magnet; when the glass switch is activated, the SD card LED is lit

## Carnivore2+ MFC update 21.01.2024, firmware 3.01.0004

1. The Boot Menu is now 49152 bytes long (fixed size)
2. The C2RAMLDR utility got a new menu option to optimize directory and remove "RAM: " entries
3. The C2MAN, C2MAN40, C2EDIT and C2EDIT40 utilities now remove "RAM: " entries during optimization of directory
4. The C2MAN and C2MAN40 utilities now check Boot Menu's size and format before uploading it into the cartridge
5. The C2MAN and C2MAN40 utilities now check BIOSes' format before uploading them into the cartridge

#### **Carnivore2+ MFC update 18.01.2024, firmware 3.01.0004**

1. Fixed non-starting DOS from CF card when there's no SD card present
2. Added Nextor 2.1.2 IDE and SD BIOSes with master-only option

#### **Carnivore2+ MFC update 13.01.2024, firmware 3.01.0003**

1. Added proper SN initial sound suppression
2. Fixed mapper size (6 bit instead of 7), TESTMAP no longer complains

#### **Carnivore2+ MFC update 09.01.2024, firmware 3.01.0001**

1. Added support for Sega chip SN76489 into the firmware 3.01.0001
2. Modified Boot Menu to support SN76489 (controls are in Volume screen)
3. Modified color scheme for Boot Menu (lighter colors, different from C2)
4. Modified utilities to have 2024 instead of 2023 year
5. Modified utilities to have proper new DefConfig string: "DefConfig: RAM+DISK+MUSIC+SCC"
6. Modified necessary files for OpenMSX
7. Modified files for diskless setup

#### **Carnivore2+ MFC update 23.11.2023, firmware 3.00.0005**

##### **Initial version. Same as in Carnivore2 setup**

1. Added support for SD Nextor BIOS into utilities (4 and 5 blocks are now used for SD BIOS)
2. C2MAN adjusted to select card configuration (SD, CF or both)
3. C2FW\_UPD utility updated to verify CRC of the firmware before uploading
4. POF to BIN conversion utility added to convert firmware and calculate CRC
5. C2TESTER utility created to fully test Carnivore2 and Carnivore2+
6. C2BFORCE and C2CFORCE utilities created to bypass security checks done by original C2BACKUP and C2CFGBCK utilities
7. C2MAN utility split into C2MAN and C2EDIT (for editing directory)
8. Boot Menu now shows title screen animation

<https://sysadminmosaic.ru/en/msx/carnivore2p/changelog>

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