

„AgaCart” is a cartridge that emulates original Lynx cartridges in 256kB and 512kB standard. Third type, 128kB, is run through the conversion to 256kB. The supported file type is .LYX, the right tools and conversion method are saved on attached SD card.

Technical details

- support for SD and SDHC cards to 32GB in the micro standard,
- FAT16 and FAT32 files system support,
- software upgrade from the SD card level (bootloader),
- the ability to enable/disable verification of writing to the SRAM memory,
- operation using two buttons,
- support for up to 199 files (software restriction),
- game numbers, error codes and other information displayed on the display at the back of the cartridge,
- automatic memorising of the last used file number,
- 9 memory cells to memorising the most used or favorite games, the so-called speed dial,
- two modes of operation possible:
 1. after starting the console, the last used game file is automatically read from the SD card and saved in SRAM,
 2. after starting the console, cartridge waits for you to dial the number of the game and then it's read from the SD card and saved in SRAM,
- .LYX file support in size 256kB and 512kB (128kB after conversion to 256kB),
- after loading the game the SD card is disconnected, to save energy,
- every time you start the console cartridge counts the number of files in the root directory of the SD card and it does not allow you to choose the bigger number than the actual number of files,
- the cartridge cover is a three-colored print from the 3D printer

Handling

The cartridge is operated by two buttons and display



Right button increases the number of the game by one, left button by ten. After exceeding the maximum number it will return to number one. „AgaCart” has two modes of operation, their change is possible in configuration options described below.

Mode 1:

In this mode, after starting the console, the last used game file is automatically read from the SD card and saved in SRAM, only after loading the file it is possible to change the game.

After selecting the game number you need to wait 1,5s, the console will turn off. After restarting it the newly selected game will be loaded.

Mode 2:

In this mode, after starting the console, cartridge waits for you to dial the number of the game and then it's read from the SD card and saved in SRAM. After selecting the game you need to wait 1,5s, until the display goes out.

In both modes after starting the console the „Insert Game” message will be displayed, it is the correct behavior.



While rewriting the data from the SD card to the cart's SRAM memory, the flashing letter „P” will be seen on the cart's display. After it goes down the selected game will be loaded.

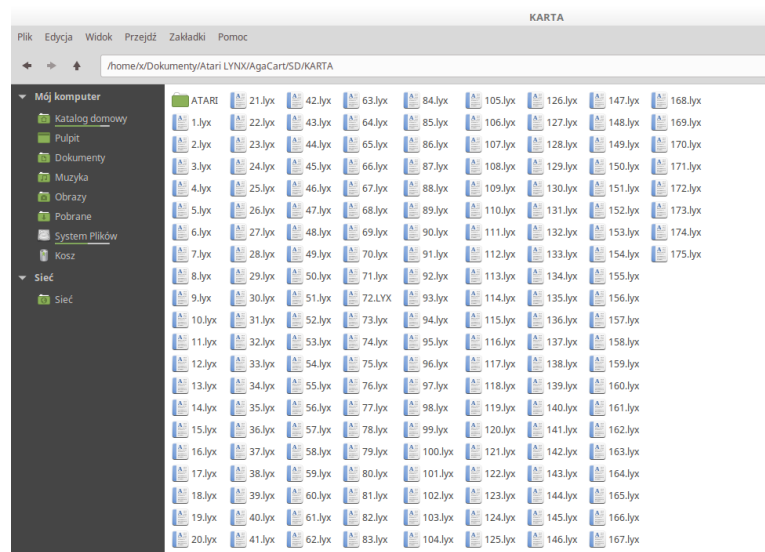


SD Card

The SD card must have a FAT16 or FAT32 file system.

In the main catalog **must be** located one folder with any name, its content is ignored by the cart's software. You can keep there whatever you want, on the

attached card there will be all games and demos that I could find online saved there (converted to .LYX), conversion software and the instructions. In the main catalog, at least one game file **must be** locted, otherwise cartridge will report an error. The file names **must be** in „file_name.lyx” format.



The SD card slot has an ejector (push-push type), to take it out you need to press it gently and let go, the card will come out.

Error handling

Error codes are shown on the cart's display:



- **EE code** indicates an SD card error (no card, wrong file system, card empty, damaged card)
- **E code** indicates a file or verification error (no file, wrong file size, wrong name or file extension, write error to SD memory with the verification option enabled)

Configuration options

Cartridge has three configuration options:

Option 1: the number of the last selected game is stored in EEPROM memory. In this option we can choose the number of the cell in which this data will be stored. We have 9 such cells to choose from. We can use it to store our favourite game numbers and quick access to them.

To enter this option, we need to turn off the console, press the right cartridge's button and while holding it down start the console. On the cart's display the „shifting points“ will appear, we can then release the button. The digit „1“ will appear on the middle display segment, after a while it will go out, and the number of currently used memory cell will appear on the right display segment. We can change it by pressing the right button. Pressing the left button confirms the choice, leaves the configuration and automatically loads the game that we saved on the chosen cell.

We need to remember that from this moment the change of the number of the game will change the record in the cell, leaving others intact.

Option 2: this option turns on (setting nr **1**) or turns off (setting nr **0**) verification of writing to cart's SRAM memory. Enabling this option gives you the certainty of correct saving but extends the time in which the game loads.

Option 3: this option changes the cart's operating mode, it has been described earlier.

To enter the option 2 and 3 settings, you need to turn off the console, press both of the cartridge's buttons and while holding them down start the console. On the cart's display the „shifting points“ will appear, we can then release the buttons. The digit „2“ will appear on the middle display segment, after a while it will go out, and the number of currently chosen option 2 will appear on the right display segment. We can change it by pressing the right button, to confirm we press the left button. The digit „3“ will appear on the middle display segment, after a while it will go out, and the number of currently chosen option 3 will appear on the right display segment. We can change it by pressing the right button, to confirm we press the left button. There will be an exit from the configuration and normal start of the cartridge.