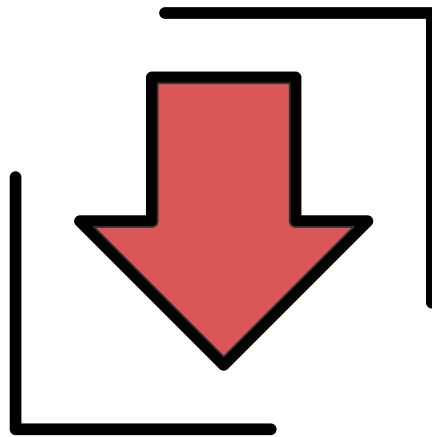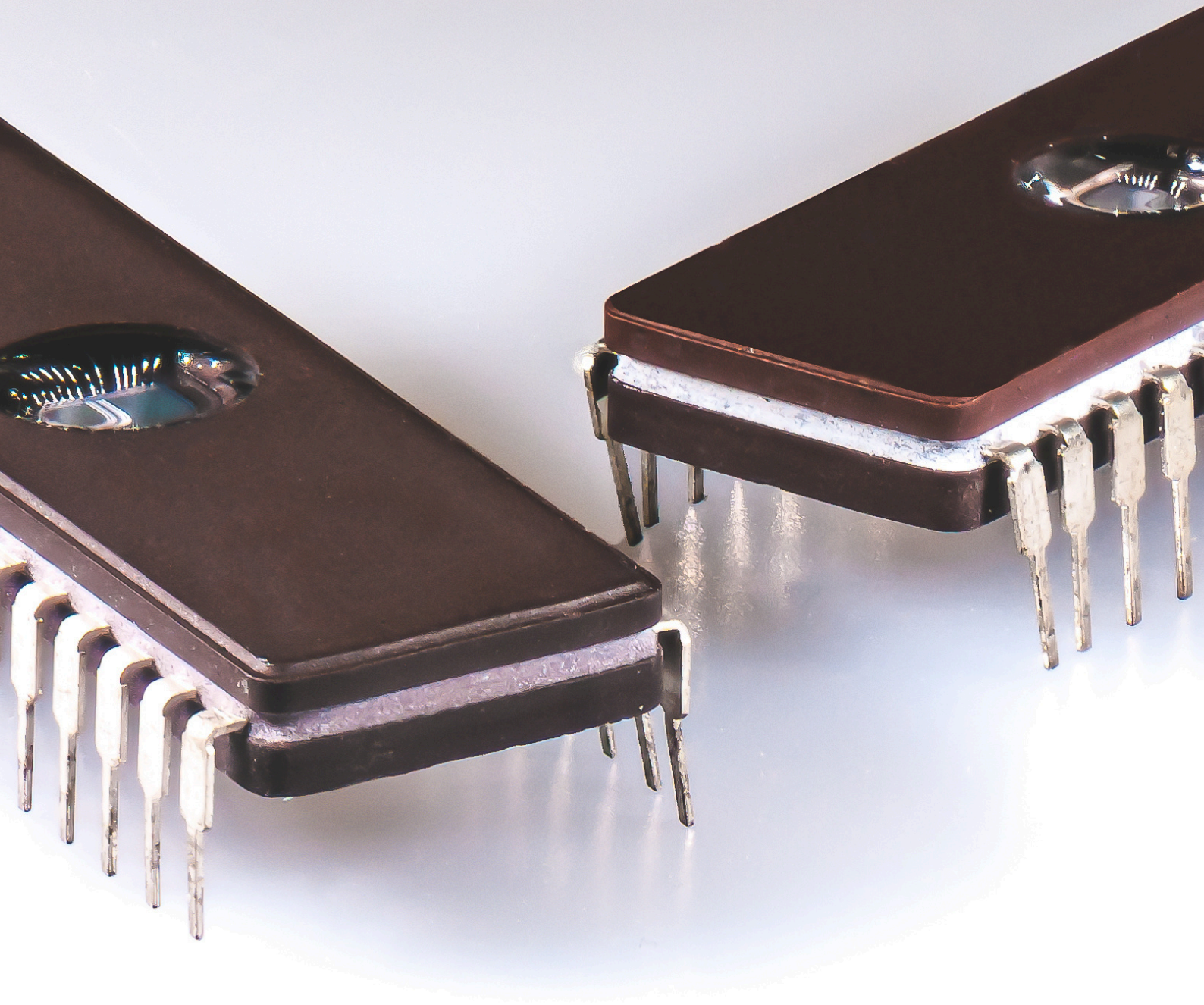# POWER CHUPIN

INSTRUCTIONS MANUAL
Version 1.1, September 2024

Welcome to Power Chupin!

The latest version is 2.6 and this manual is based on that.
We are proud to bring you the most powerful ROM Dumper ever made for the MSX.

This manual is intended for you to get the most of it and we believe that you will be astonished about how powerful this tool can be.

It is recommended to print this manual for quick reference too, so you can consult it anytime on-the-fly about the best way to copy cartridges and internal roms.

We hope you enjoy it!

THE TOOL

Power Chupin runs in all MSX computers and all DOS operating systems.

But to use the integrated file manager interface, you need to boot the computer with DOS2 or Nextor.

If you have just the file version (CHUPIN.COM), you need to start it from DOS.

if you have the cartridge version, you can start it pressing "C" during the boot, or using the "CALL CHUPIN" command from BASIC

If you started it during the boot, you are not able to save the ROMS because the necessary routines are not initialized yet. But you have the option to use the Memory Viewer option. We will see that in details ahead.

Take a look at the main interface:

Using the arrows, you can:

1 - Set the Rom Type
2 - Set the Rom Size
3 - Set the Slot
4 - Set the Sub Slot
5 - Set the Drive

The are some hidden options. Press the following keys to:

- **N**: Set the Filename.
  Just choose the name of the rom file as you wish and press **ENTER**.

- **M**: Open the Memory Viewer.
  This viewer can be used to see every data that is hidden inside your computer. So, all ROMS, SUBROMS and Cartridges that are connected to the computer can bee seen. Including MEGAROM cartridges. More details ahead.

- **S**: Open the File Manager interface.
  With this option you can navigate through all Drives and Directories to choose the correct path to save your ROMS. More details ahead.

- **ENTER**: Start the dumping process.

THE ARROW OPTIONS

- **Rom Type**: You just need to set this option if you are dumping a MEGAROM cartridge, otherwise it has no effect. The possible options are:
  - Konami
  - AscII 8 Kb
  - AscII 16 Kb

  It´s the type of mapper used by the cartridge to change the memory pages.

- **Rom Size**: Here you set the ROM size. Remember that sizes up to 64k are for normal ROMS, without mappers. Sizes from 128k up to 4096k are for MEGAROM cartridges, the ones with internal mappers. If the ROM has 16k or 32k, you need to select the initial memory page too (0000h, 4000h or 8000h).
  The possible options are:
  - 16k 0000h (Normally the computer BIOS, ROM or SUBROM)
  - 16k 4000h (Normally the internal BASIC ROM or a Cartridge Game)
  - 16k 8000h (Normally a BASIC Cartridge Game)
  - 32k 0000h (Normally an internal ROM or SUBROM)
  - 32k 4000h (Normally an Assembly Cartridge Game)
  - 48k (Normally an Assembly Cartridge Game. Rare!)
  - 64k (Normally an Assembly Cartridge Game. Super Rare!)
  - 64k Backup
    - Use this option to DUMP all 4 memory pages from all SLOTS and SUBSLOTS. So, everything connected to the computer (MEGAROM cartridges NOT included) will be saved. It will create 16 files (4 for each SLOT) named SLOT00.ROM, SLOT01.ROM, up to SLOT32.ROM, SLOT33.ROM.
  - 128k (Normally a MEGAROM Cartridge Game)
  - 256k (Normally a MEGAROM Cartridge Game)
  - 512k (Normally a MEGAROM Cartridge Game)
  - 1024k (Normally a MEGAROM Cartridge Game)
  - 2048k (Normally a MEGAROM Cartridge Game)
  - 4096k (Normally a MEGAROM Cartridge Game)

- **Slot**: Set the SLOT where the ROM is located.

- **Sub Slot**: Set the SUBSLOT where the ROM is located.

- **Drive**: Here you can set the Drive where the ROM will be saved. If you choose "Default", the default drive will be used. Normally It´s the drive from where you started Power Chupin.

THE HIDDEN OPTIONS

- **THE MEMORY VIEWER:**

 With this beautiful interface you can see all data in the 4 memory pages from all SLOTS and SUBSLOTS.
The options here are:

  - **S**: Set the SLOT where the data is located.

  - **U**: Set the SUBSLOT where the data is located.

  - **RIGHT** and **LEFT** arrows: Increase / Decrease the memory address by 128 bytes (0x80).

  - **UP** and **DOWN** arrows: Increase / Decrease the memory address by 2048 bytes (0x800).

  - **T**: Set the Cartridge Mapper type (Used **JUST** for MEGAROM cartridges).
    There are 2 keys to use to navigate through the mapper pages:
    - **<**: Decrease the page by 1
    - **>**: Increase the page by 1

    To see the data from the mapper pages, you need to go to the address 0x8000. All data will be there up to the address 0xBFFF.

Memory View from a Disk Interface ROM

Memory View from the GRADIUS Megarom Game

PS: Remember to go to address 0x8000.
Navigate through the mapper pages using "<" and ">" keys.

- **THE FILE MANAGER:**

This option will ONLY work if you boot the computer into DOS2 or Nextor and then start Power Chupin from BASIC using the command "CALL CHUPIN" (Cartridge Version) or from DOS typing A:\CHUPIN.COM (File version).

PS: You don´t need to use the File manager to select the destination path where the ROM will be saved. If you just select the DRIVE and press **ENTER** in the main screen, the ROM will be saved in the default path of that drive. Normally the root. And doing that, no need to have DOS2, Nextor nor even DOS1. It´s the perfect choice when you have just the Cartridge Version and a Disk Drive.

So, to choose the destination PATH, Just navigate to the Drive and Directory you want, select the option "**SET PATH**" and press **ENTER**.

Take a look at the examples below:

Selected Path: A:\
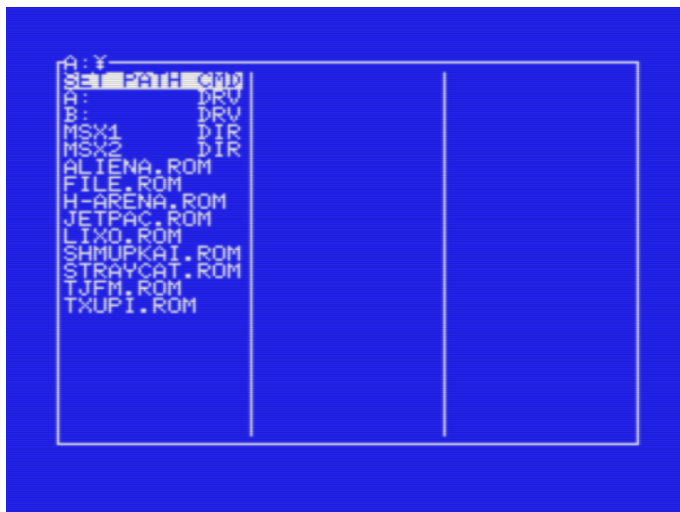
Selected Path: A:\MSX1\NEW

Example to dump the Zanac EX Megarom Cartridge game, using just the computer Philips NMS 8250 and a 720k formatted disk:

We need to have a Slot Expander to ENABLE and DISABLE the game cartridge.

Then follow these steps:

1. Insert the Power Chupin Cartridge into SLOT 1 of the computer.
2. Connect the Slot Expander into SLOT 2 of the computer.
3. Insert the game cartridge into the first slot of the Slot Expander.
4. DISABLE that slot.
5. Turn on the computer to allow us to boot the computer into the BASIC.
6. Use the command "CALL CHUPIN" to start the tool.
7. ENABLE that slot again.

If you don´t have a Slot Expander, you can try the Hot Swap technique. You boot the computer into BASIC, insert the game cartridge into SLOT 2 with the computer turned on, and pray not to freeze it.

Now in the main screen of Power Chupin, set the options like this:

- **Rom Type**: AscII 16k
- **Rom Size**: 256k
- **Slot**: 2
- **Sub Slot**: 0
- **Drive**: Default
- **Filename**: ZANAC-EX.ROM

And press **ENTER**.
The file **ZANAC-EX.ROM** will be saved in the disk
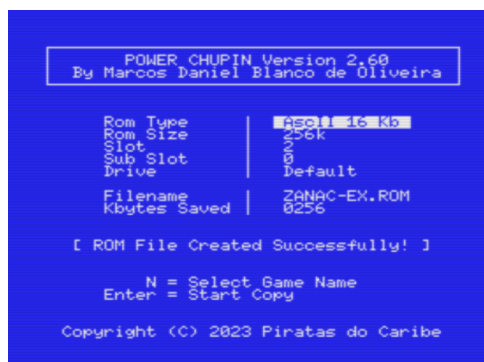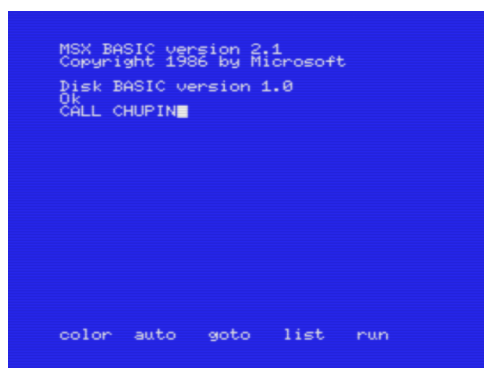
Now you have a perfect ROM file of the game to run.

CREDITS

Program by:
Marcos Daniel Blanco de Oliveira

THE END