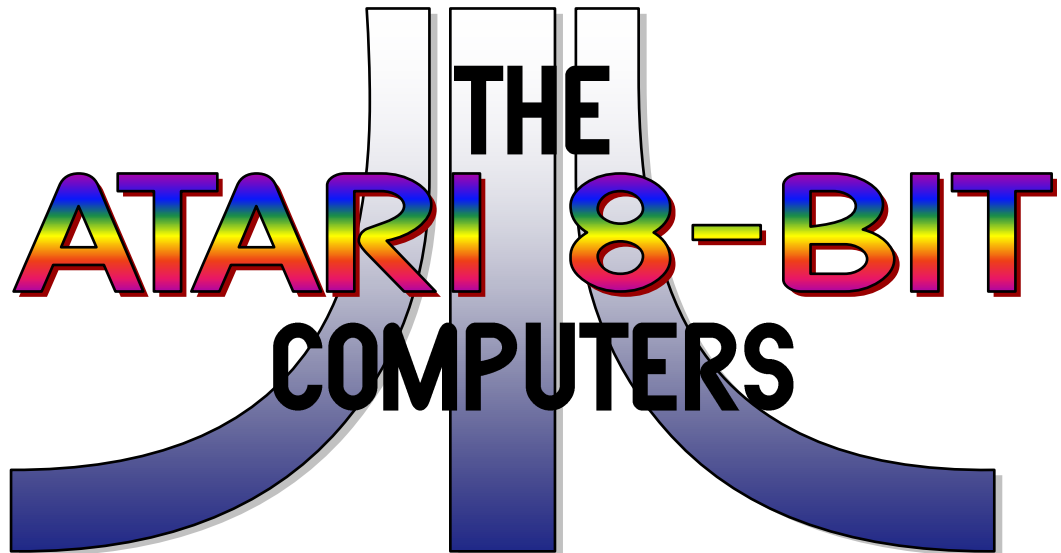


USER GUIDE

ATARITOLS-800 V.0.5.0 x86-WIN32 TOOLS FOR



PM-EDITOR

FOREWORD :

ATARITOOLS-800 is a little toolkit to assist the software development across the range of ATARI-8bit computers (400/ 800/ 5200 SuperSystem/ XL/ XE/ XEGM game console).

The toolkit is divided into several parts, each dedicated to a particular function to use such as Characters, Bitmap graphics, Screens, Players-Missiles, ect ..

This documentation was made quick, so be lenient with faults & quirks.

But be free to do a notification at ataritools mail, I accept with gratitude comments & corrections.

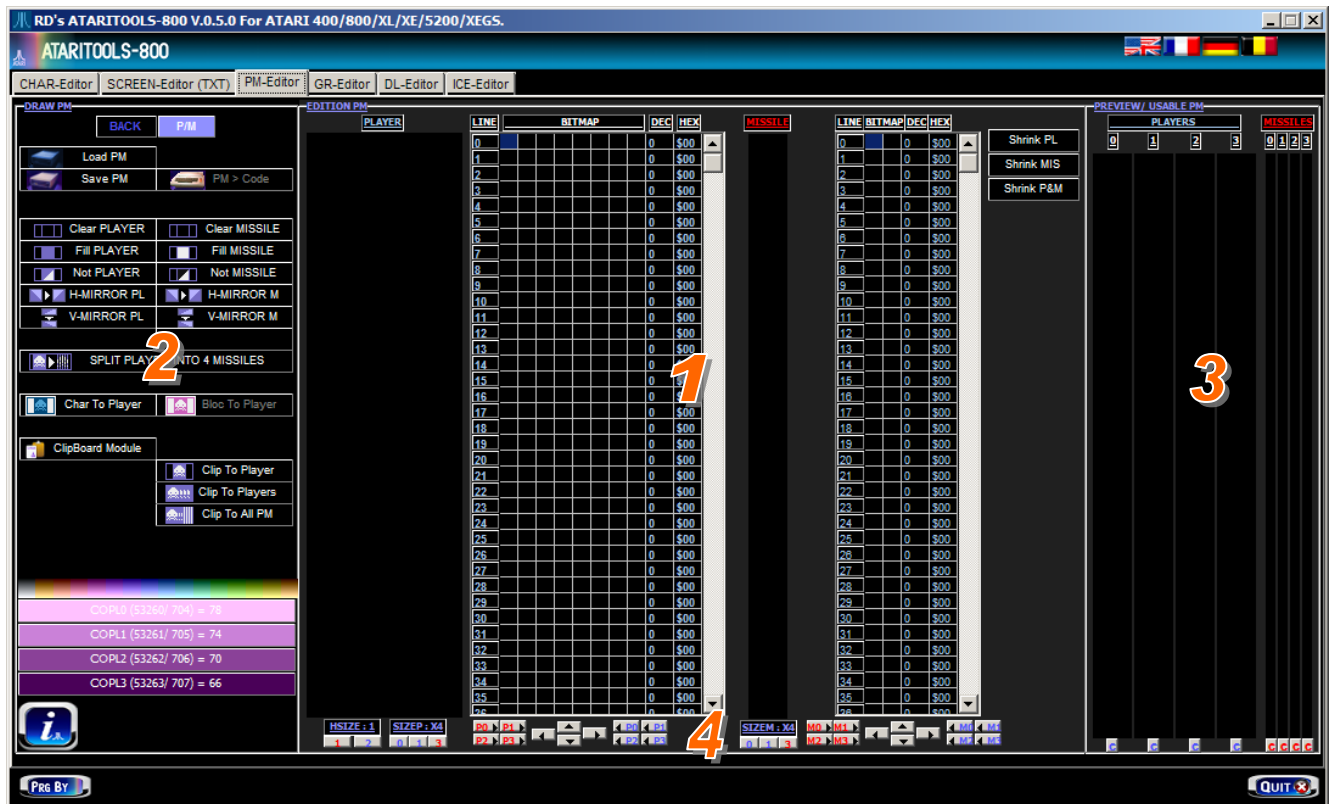
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2. Working with PM-Editor

2.1. Display & usage

The third folder is PM-Editor, witch is an Atari Player-missiles editor.



On Atari-800 a « sprite » feature is embedded into the hardware system and is called Player-Missiles. Atari Player-Missile Graphics was originally designed to simplify the creation of arcade-style games. These games often include ships who fire missiles at each other, this is the tool to help create [draw] them. There are 4 Players and 4 Missiles.

The player-missile memory bloc takes 1Kb or 2Kb in memory (4X128 for players and 128 bytes for missiles or 4X256 bytes for players and 256 bytes for missiles) .

The editor handle 240 lines and save/load 240 lines witch is more than comfortable.

The code-generator (for PM) handles 256 lines data.

With it you can :

draw player-missiles, at hand and with tools ; Load/ Save the job, generate code ..

First, the **zone 1** is the editor part that can be edited with 8-pixels wide graphics for the player part and 2-pixels wide graphics for the missile part.

The zone is set to 240 lines but note that in the Atari structure this is 128 or 256 lines.

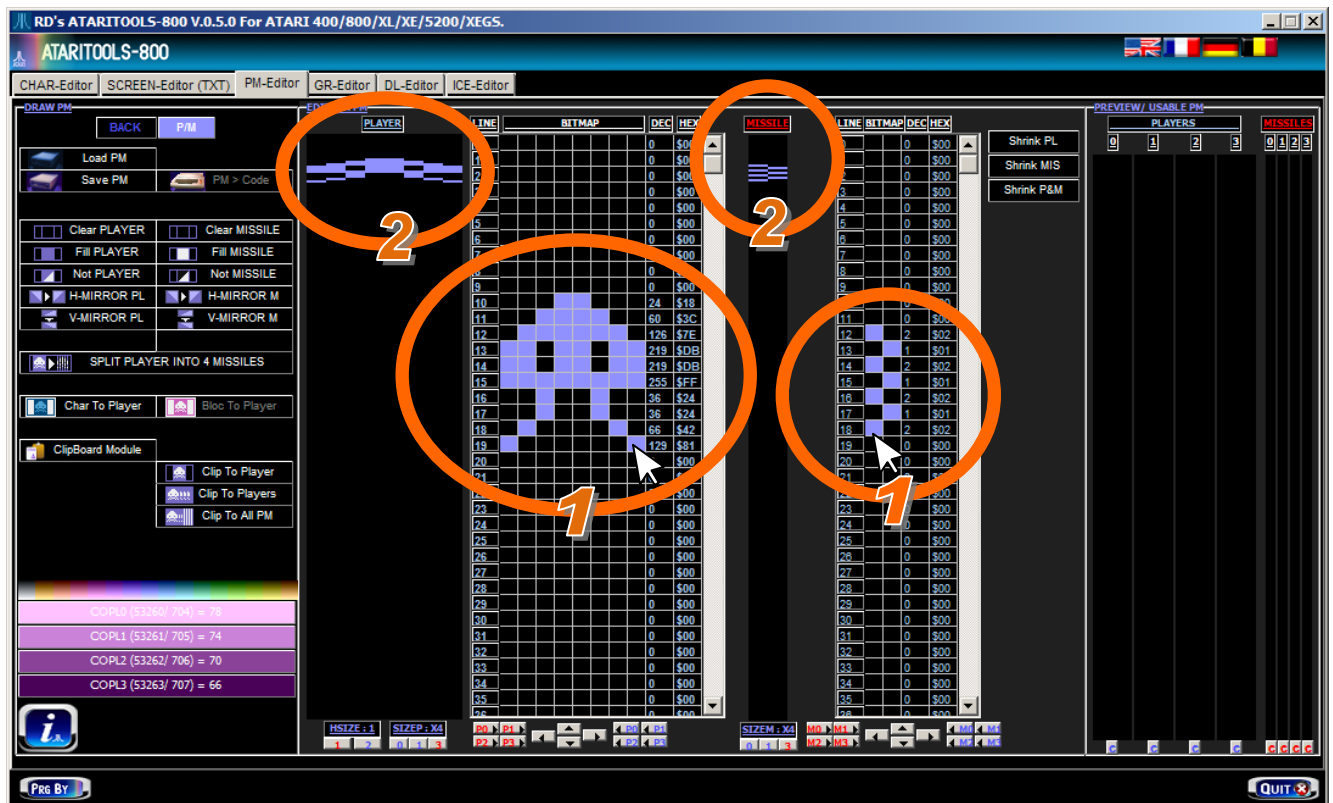
The **zone 2** is a panel with tools to handle PM graphics by several ways.

The **zone 3** is the full 4 Player-Missiles graphics bank. This is this bank witch is saved/loaded.

The **zone 4** is a set of move/ transfer/ view options tools to help edition.

2.2. PLAYER-MISSILE Edition.

To edit the player or the missile graphics, just mouse-left click on a pixel to switch on/off him to 1 or 0, in the edit zone (1). On the left side of the editor, a viewer displays a preview (2).



2.3. PLAYER-MISSILE Handling.

We have some buttons to transform the PM graphics.
Clear, Fill, Logical NOT, Horizontal & Vertical Mirrors.

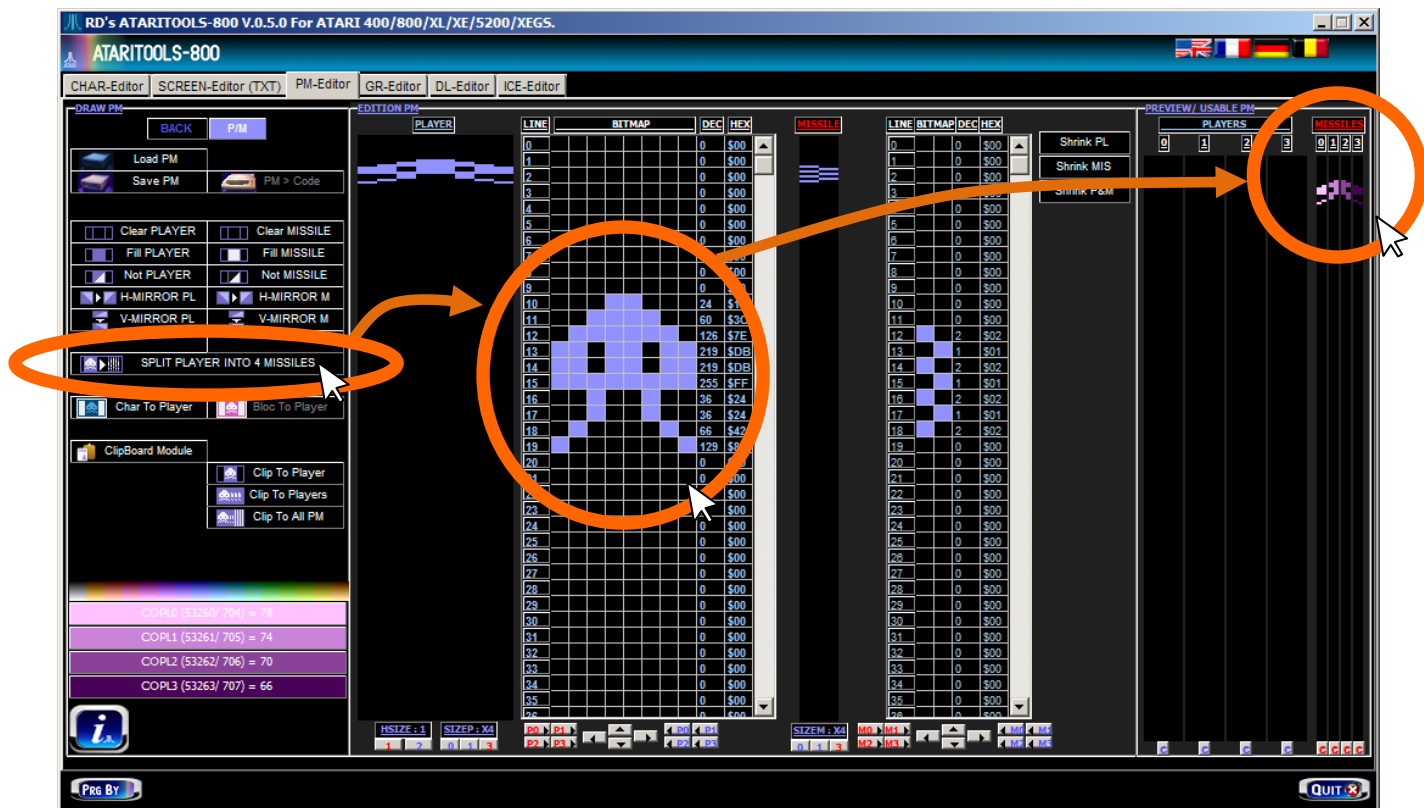
This can be extended in the future, as other tools.

<input type="checkbox"/> Clear PLAYER	<input type="checkbox"/> Clear MISSILE
<input checked="" type="checkbox"/> Fill PLAYER	<input checked="" type="checkbox"/> Fill MISSILE
<input checked="" type="checkbox"/> Not PLAYER	<input checked="" type="checkbox"/> Not MISSILE
<input checked="" type="checkbox"/> H-MIRROR PL	<input checked="" type="checkbox"/> H-MIRROR M
<input checked="" type="checkbox"/> V-MIRROR PL	<input checked="" type="checkbox"/> V-MIRROR M

2.4. Split a player into 4 Missiles.

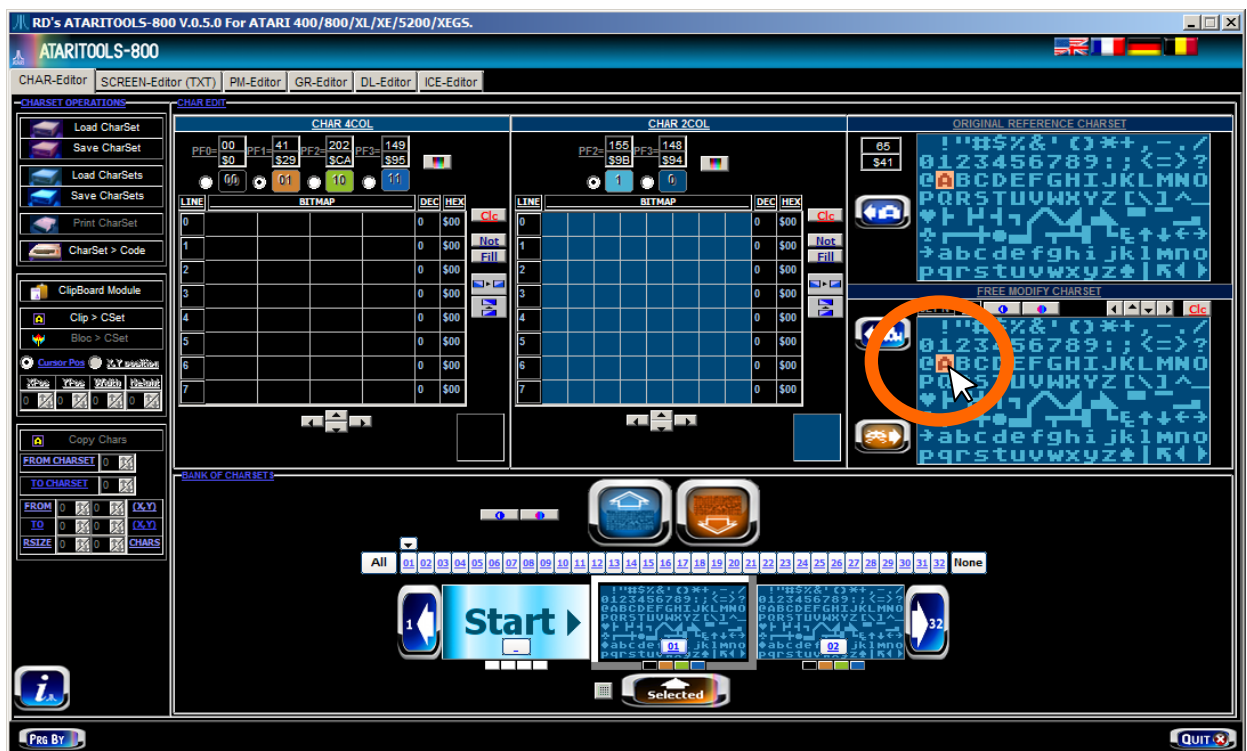
This is an option to split a player into the 4 missiles.


Just click on the  SPLIT PLAYER INTO 4 MISSILES button.

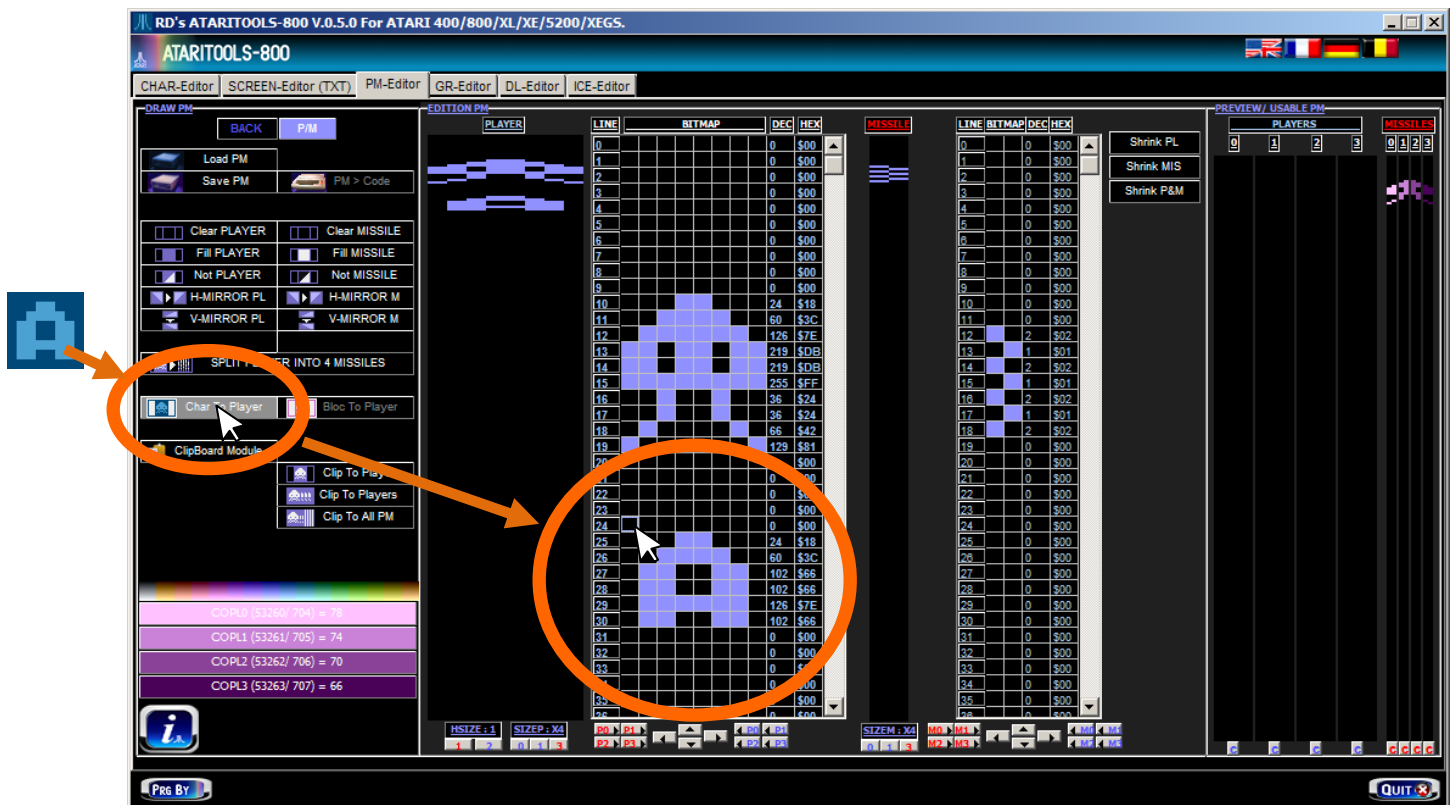


2.5. Use the CHAR-Editor to insert a character in a player.

To insert a char from CHAR-Editor to the PM-Editor, just go to the CHAR-Edit and select a char.



Then back to PM-Editor and choose a row that will be the top of the char to be inserted (you can just click on a square) and click on  **Char To Player** button to copy.



2.6. Transfer PM from Edition to Bank.

To transfer player(s) and/ or missile(s) from editor to bank zone (bank zone is where the player-missiles are read to be saved), just use the bottom option-buttons.



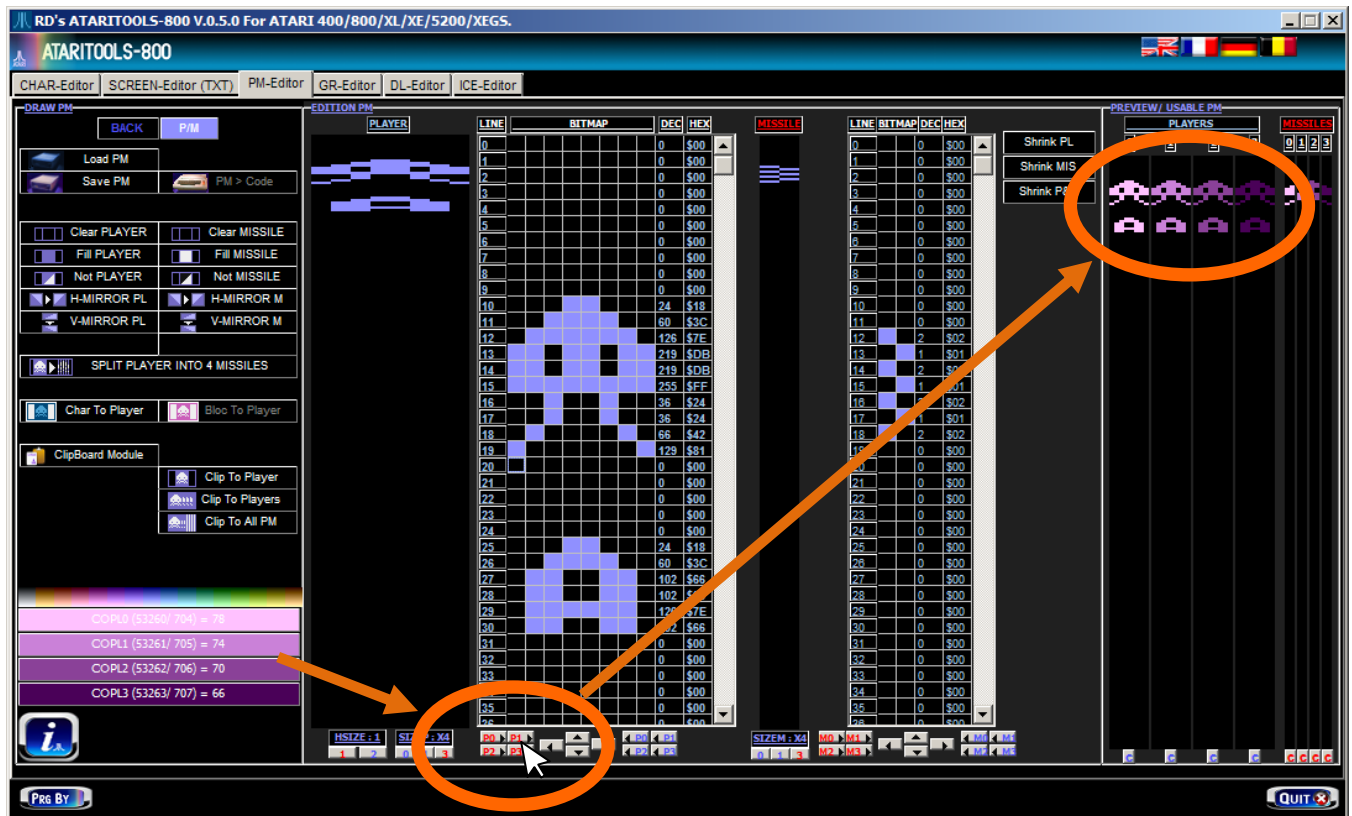
The P0 to P3 «red» buttons are to transfer the editor-zone to Player 0 to Player 3 bank-zone, The P0 to P3 «blue» buttons are to transfer from bank to editor-zone to edit them.

The same way for missiles with M0 to M3.

Note 1 : The Hsize, Sizep buttons are for select the Atari player-missiles display-mode (single or double line, size of pixel width, ..) just to see PM in a particular mode

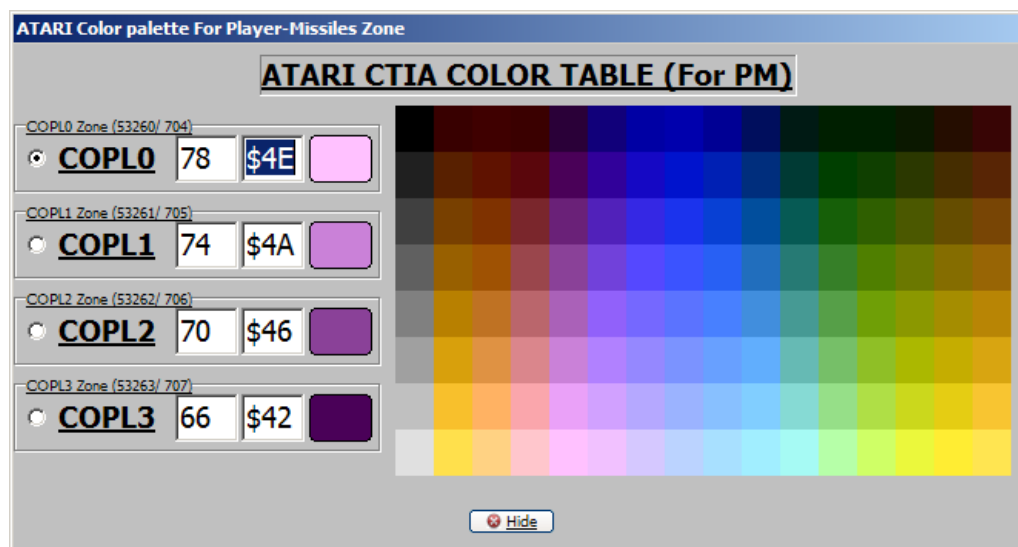
Note 2 : The arrow buttons are for positioning the graphic into the editor-zone (displacement).

Example of transfer from Player-Editor to the four Players (see that color of each player is taken) (click-left on all P0 to P3).




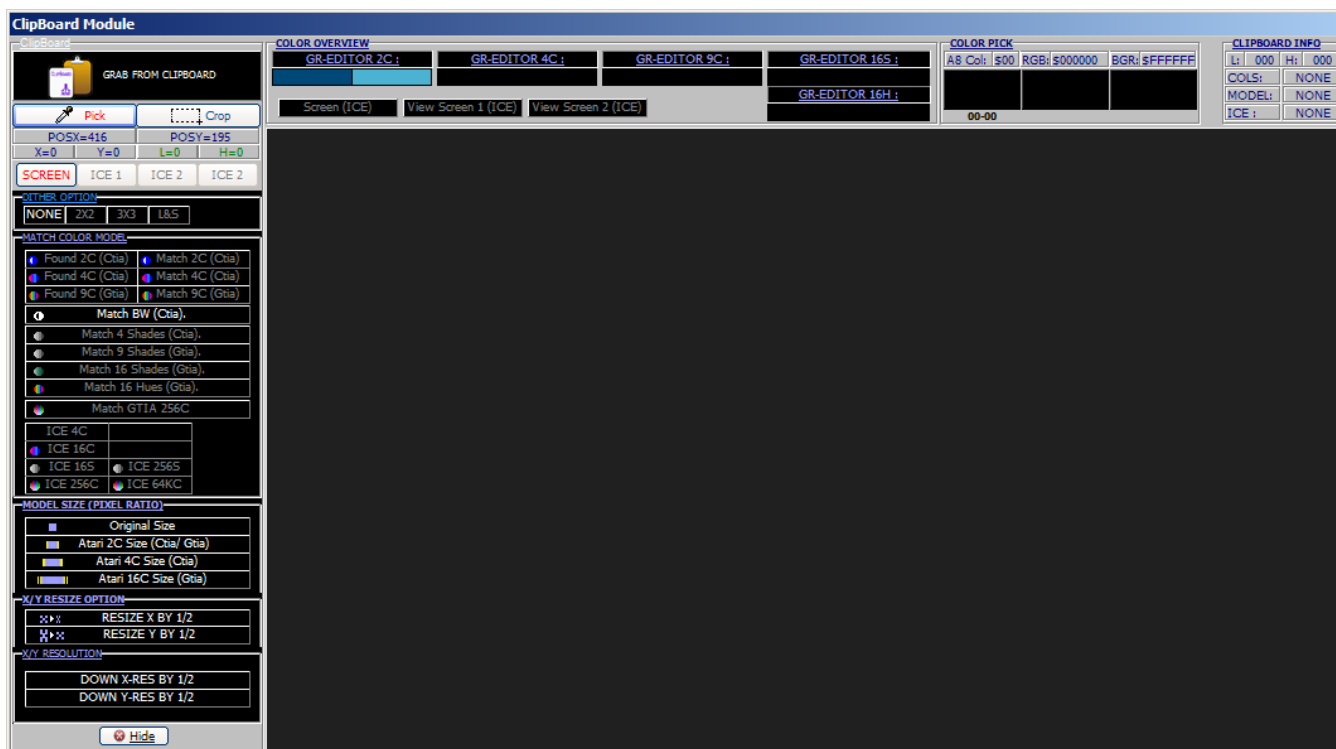
2.7. Change PLAYER-MISSILES Colors.

By clicking directly on one of the color buttons, this window will appears in witch we can change, dynamically, the PM colors. Colors are CTIA model for PM.

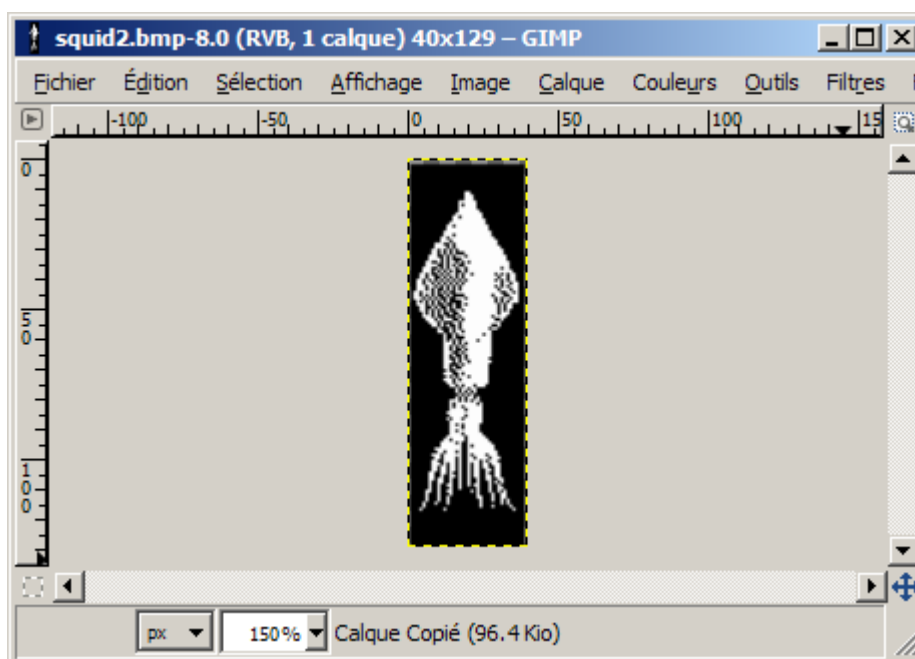


2.8. Using the ClipBoard with Player-Missile Editor.

Click on  **Clipboard Module** button will call the module, in witch only «Match B/W» is available (since PM are 1-bit fields).



So just «copy» a picture into clipboard with your favorite drawing/ explorer program (here a bw squid quickly handled with GIMP).

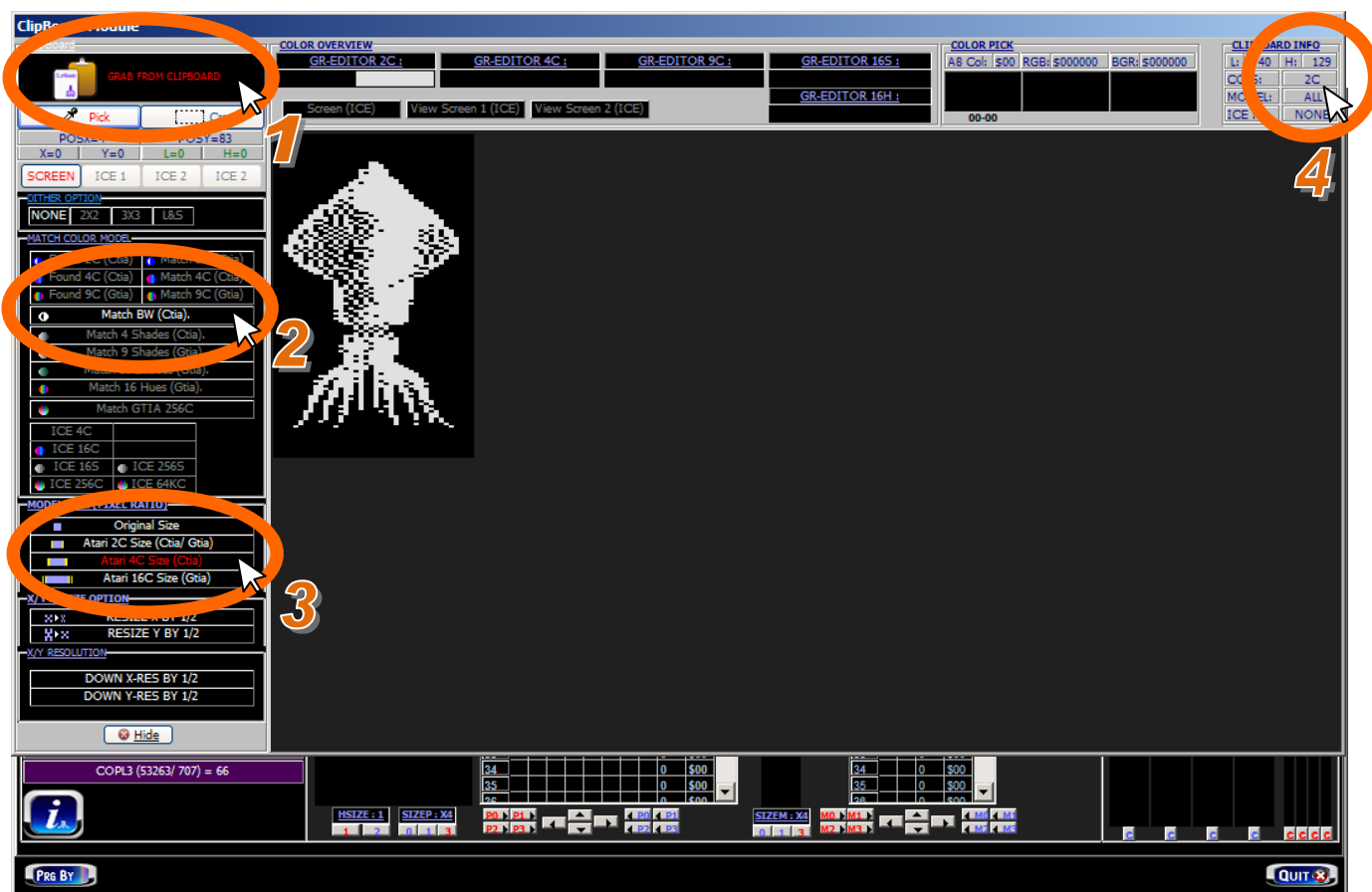


After that, just click on « Grab from clipboard » button to see imported picture (1).

Click on « Match B/W (ctia) » to force the picture to black & white (important to enable the future importation in PM structure !!!) (2).

Click this show a code « 2C » in right corner of the clipboard-module (3) witch is the code to enable future importation.

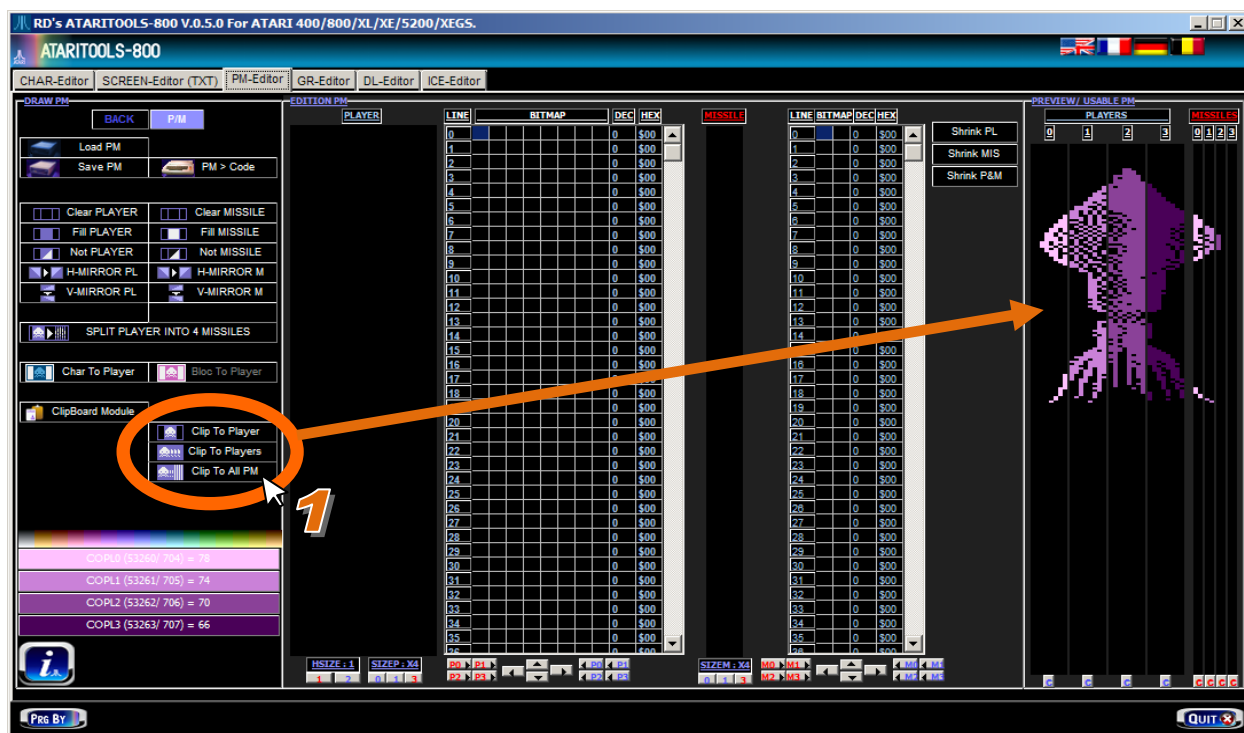
Click on « Atari 4C size (ctia) » to see the picture with near 160X192 « look » (just an option to see the picture result in the mode we want to handle the PM graphics) (4).



Theses 3 steps finished (but only 2 are important to well done the process), we can close the clipboard-module and back to the PM-Editor.

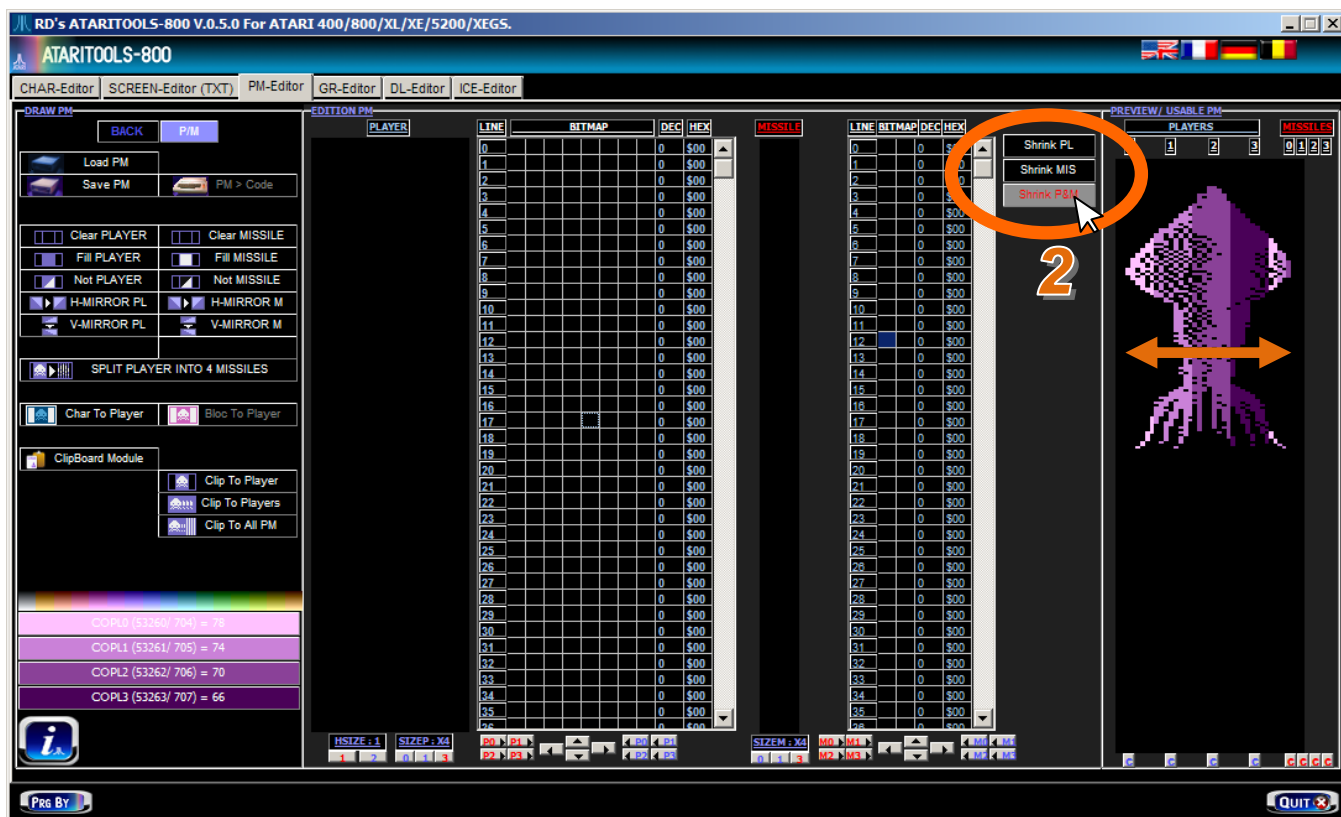
Back in the PM-Editor, just click on one of the buttons available to clip the part we want (single player, all players or all players-missiles structure).

Here, in example, we click on all Player-Missiles « Clip To All PM » (1) button with copy the full clipboard picture in 4 Players and 4 missiles (40 pixels total wide, maximum).



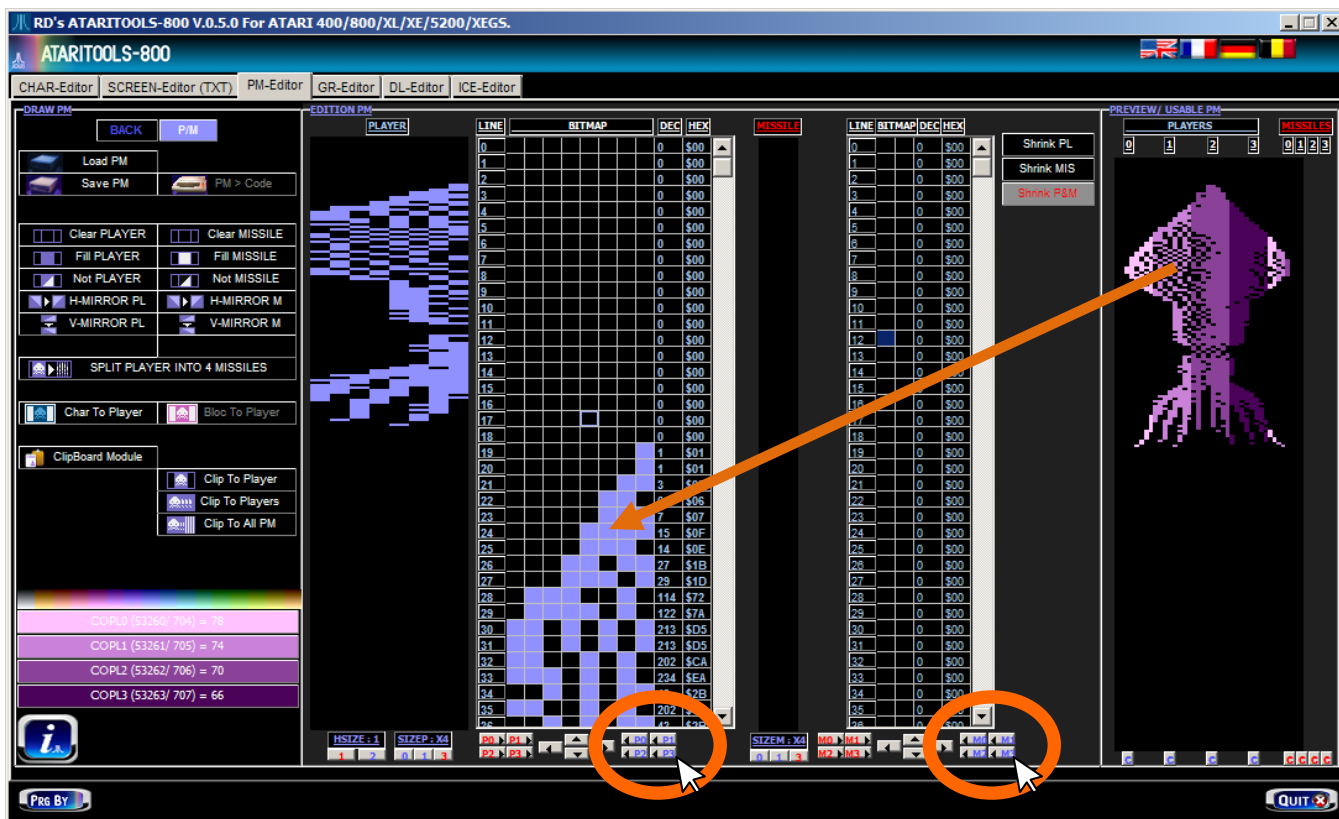
2.9. Shrink or Unshrink the view of Player-Missiles.

Some features (2) are present to shrink or unshrink the PM-zone to have a more compact view.



2.10. Transfer PM from Bank to Edition.

At this point we can transfer a Player or Missile into editor with P0 to P3 or M0 to M3 « blue » buttons to modify/ arrange the graphic and after re-put it in bank with « red » buttons.



2.11. LOAD and SAVE Player-Missiles.

To Load/ Save PM structure, several targets are available, 11 different choices, 4 different files.

Structure	Size single-line	Size double-line	AT800 size	Filename
1 player	256 bytes	128 bytes	240 bytes	*.1PL
1 missile	64 bytes	32 bytes	60 bytes	*.1MI
4 players	1024 bytes	512 bytes	960 bytes	*.4PL
4 missiles	256 bytes	128 bytes	240 bytes	*.4MI
4 player-missiles	2048 bytes	1024 bytes	1200 bytes	*.4PM

Note that AT800 uses a 240 lines structure in files !!!




For more information about PM-Graphic AT800 files, just click on information button (as found in each tool-folder).



Will show more precise information on AT800 PM files used :

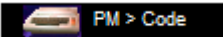
CHARSET Files
SCREEN Files
PM Files
GR files
DL Files
ICE-CHAR Files
Graphic Modes
Clipboard info

AtariTools-800 - PLAYER-MISSILES Files Info

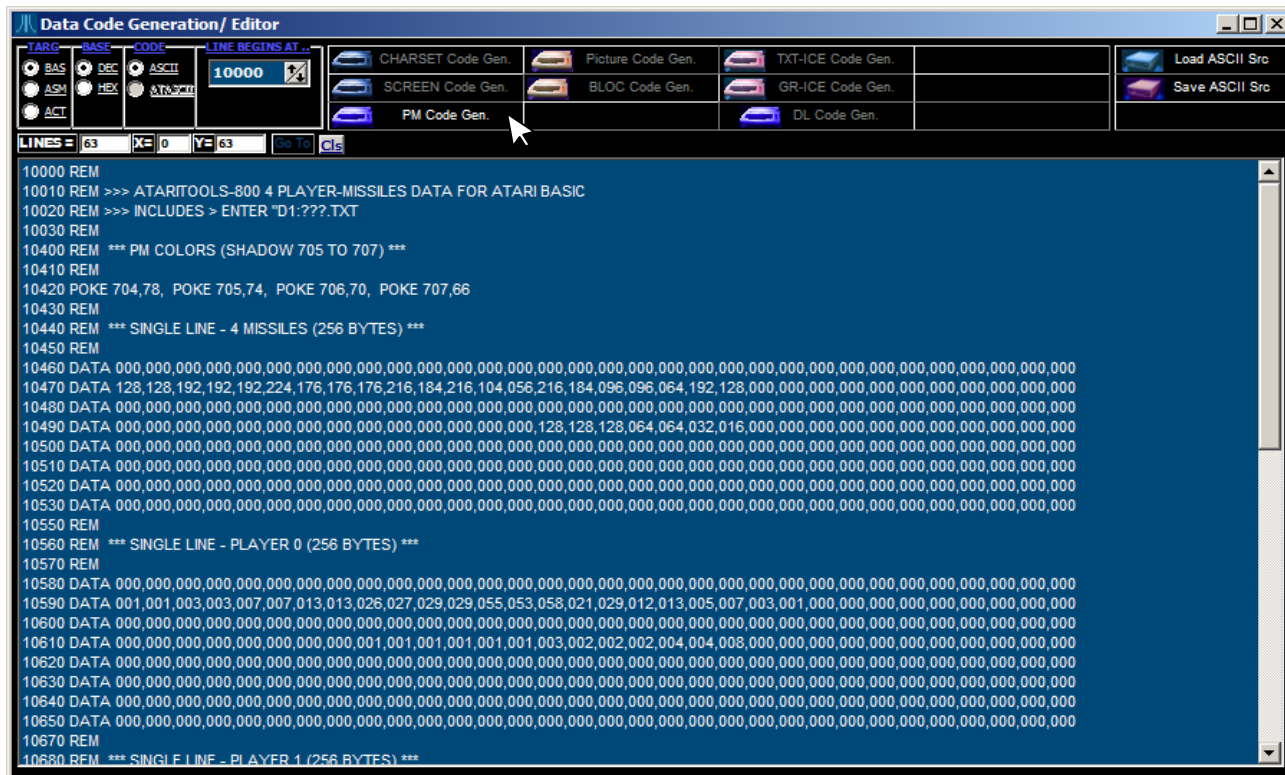
*.IPL File description	*.IMI File description	*.APL File description	*.AMI File description	*.APM File description
<u>1 Player file only</u> Atari Player color : 1 Byte Player bitmap : 240 Bytes 1 Player Byte = 1 Player Line  241 Bytes long <u>Note :</u> In PM_Editor, PM high is set to 240 for convenience but don't forget that it's 128 (double-line) or 256 (single-line) in system.	<u>1 Missile file only</u> Atari Missile color : 1 Byte Missile bitmap : 60 Bytes 1 Missile Byte = 4 Missile Lines  61 Bytes long	<u>4 Players file only</u> Atari Player 0 color : 1 Byte Atari Player 1 color : 1 Byte Atari Player 2 color : 1 Byte Atari Player 3 color : 1 Byte Player 0 bitmap : 240 Bytes Player 1 bitmap : 240 Bytes Player 2 bitmap : 240 Bytes Player 3 bitmap : 240 Bytes  964 Bytes long	<u>4 Missiles file only</u> Atari Missile 0 color : 1 Byte Atari Missile 1 color : 1 Byte Atari Missile 2 color : 1 Byte Atari Missile 3 color : 1 Byte Missile 3,2,1,0 bitmaps : 240 Bytes M3 M2 M1 M0 1 Byte = 00 00 00 00 X 240 From TOP (0) to BOTTOM (239)  244 Bytes long	<u>4 Player-Missiles file only</u> Atari PM0 color : 1 Byte Atari PM1 color : 1 Byte Atari PM2 color : 1 Byte Atari PM3 color : 1 Byte Player 0 bitmap : 240 Bytes Player 1 bitmap : 240 Bytes Player 2 bitmap : 240 Bytes Player 3 bitmap : 240 Bytes Missile 3,2,1,0 bitmaps : 240 Bytes  1204 Bytes long

Hide

2.12. Code Generation.

As found in some other tools,  permits to generate data program-code (mostly for Basic and ASM). 32 bytes data per line, lines 240 to 255 are set to zero.

In basic, code for colors, data for missiles (256 bytes) and each (256 bytes too) player are write (further I will include code to test).



Note : !!! don't forget that Atari-800 handle 128 and 256 lines long PM models, and here in code-generation, only 256 model !!!

