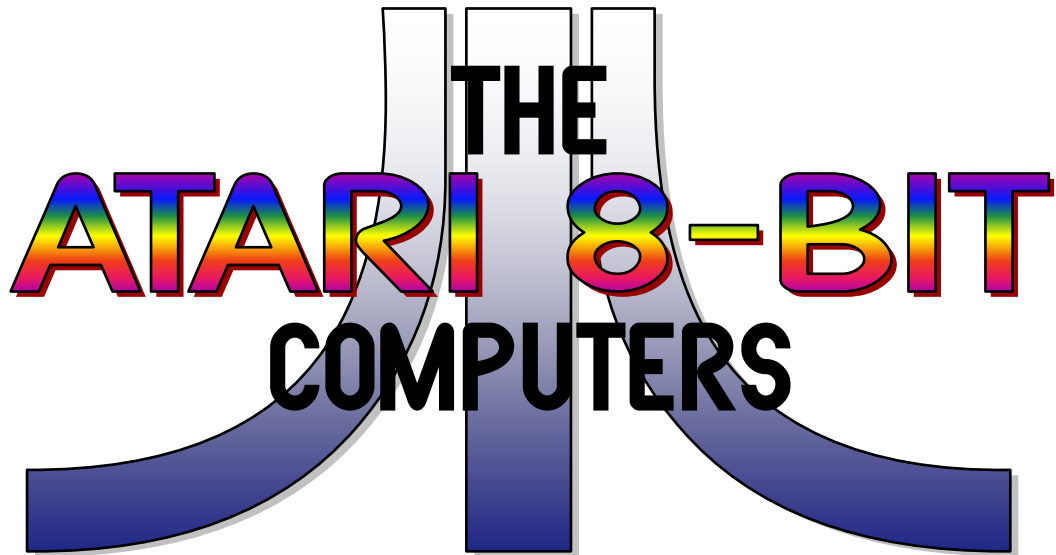


USER GUIDE

ATARITOLS-800 V.0.3.0 x86-WIN32 TOOLS FOR



CHARSET-EDITOR

FOREWORD :

ATARITOLS-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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1. Working with CHAR-Editor

1.1. Displays & usage

The toolkit is divided into several folders, each of which is assigned to a task.

The very first is CHAR-editor, it is organized in several zones, and the central area of window is the charset editor himself.

With it you can : Edit a charset both in monochrome and 4-color simultaneously, handle up to 32 charsets in one time, recolor, use the windows clipboard to fill a charset with a bitmap, generate program-code and finally load and save set(s).

On ATARI 8-BIT a charset has 128 characters in one set (1Kb), the last bit (7) only say to system to put chars in inverted-video, so we just have the first 128 chars for our usage without quibble.



First, the **zone 1** is a charset ONLY showed to be a work reference, we can take a char from it, move on the set when other is not clear, select a char and so on but never edit it.

The **zone 2** can be edited, deleted, recolorized, .. through **zone 3 & 4** This is the free-modify charset zone of the Char-Editor.

When you redefine a new charset on atari 800, you need a new 1kb data-charset page-based (256 bytes multiple), this one is the free-modify charset.

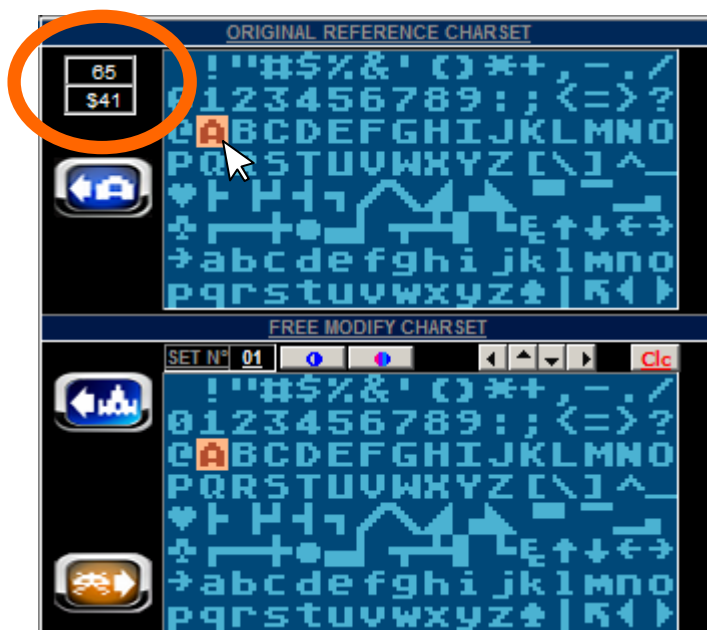
By default, the set is the same as the rom content.

Zone 5 is a bank of 32 charsets and **zone 6** is load/ save and special functions part.


1.2. Reference CharSet




By clicking on the reference-charset or free-modify charset, you can see the cursor moving both in parallel in the two sets. So if you click on free-modify charset when it is completely blank or set with intricate graphics, you can always see where is the cursor by reading the reference in original Atari-charset.

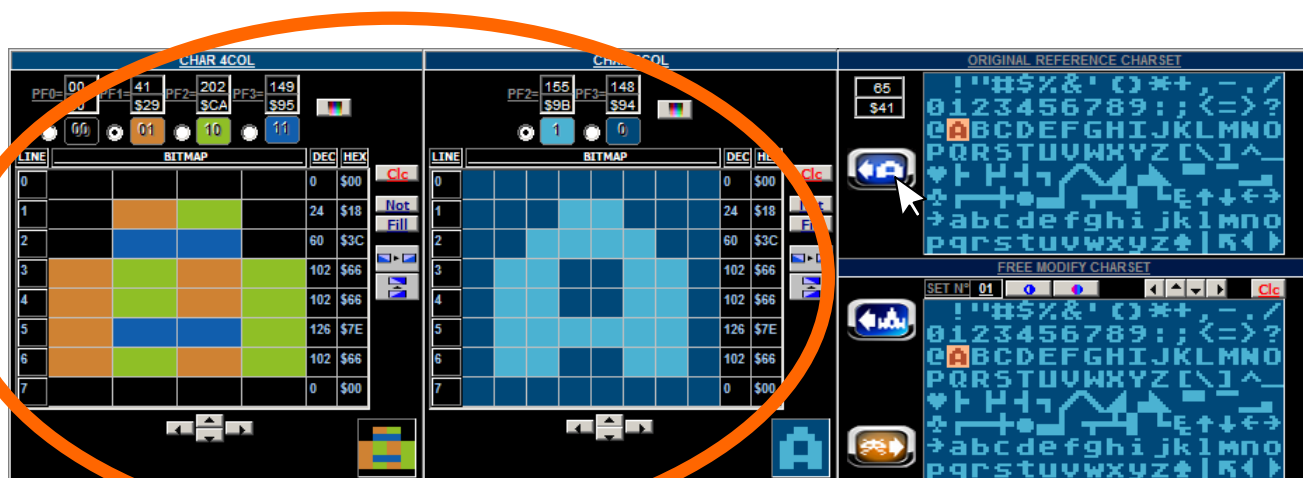
When clicking on the reference or free-modify charset, CHAR-Code zone is updated with the ATASCII code value (dec & hex) of the char selected in the charset.



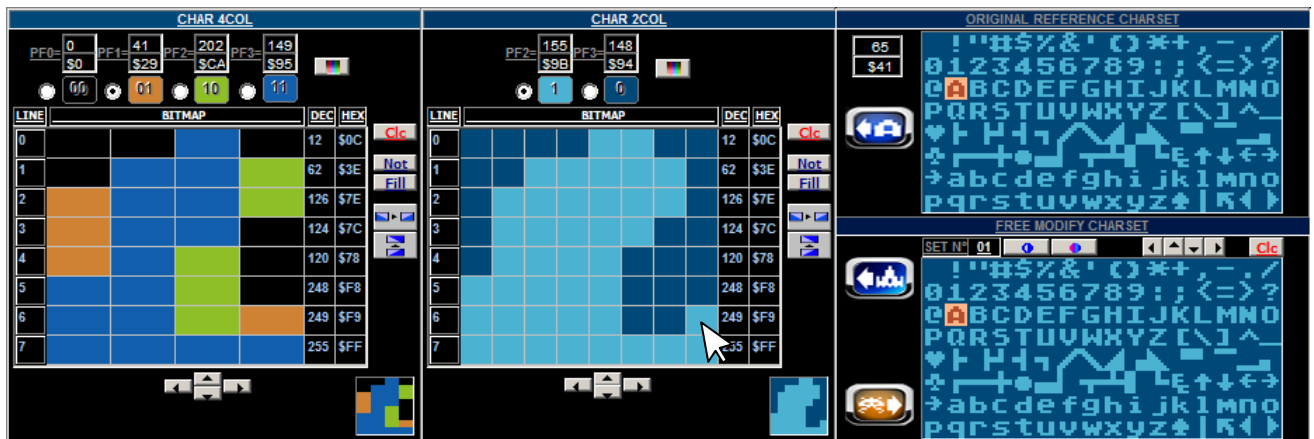
1.3. Transfer a reference character

Once a character is selected, as our example « A », we can transfer it into the edit grid by pressing  icon in the reference charset zone.

The main difference between  from reference charset and  from free-modify charset is that the reference charset ALWAYS return the original graphic-char the free-modify charset return what you previously put into with  icon.



You can also draw directly into the monochrome grid without transfer anything.

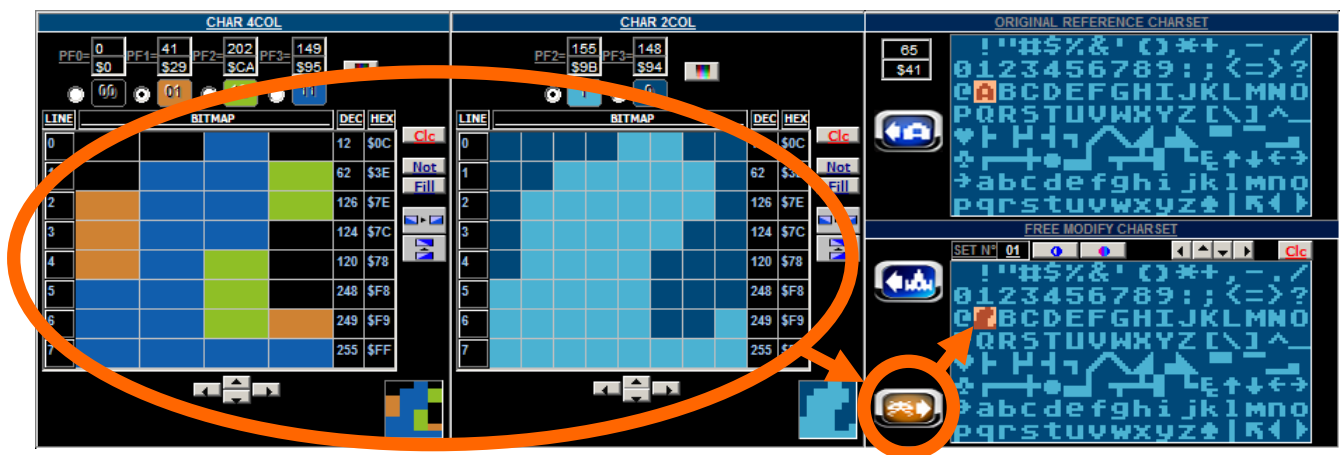



When you edit monochrome grid by clicking, you see color grid interpretation of the monochrome one.

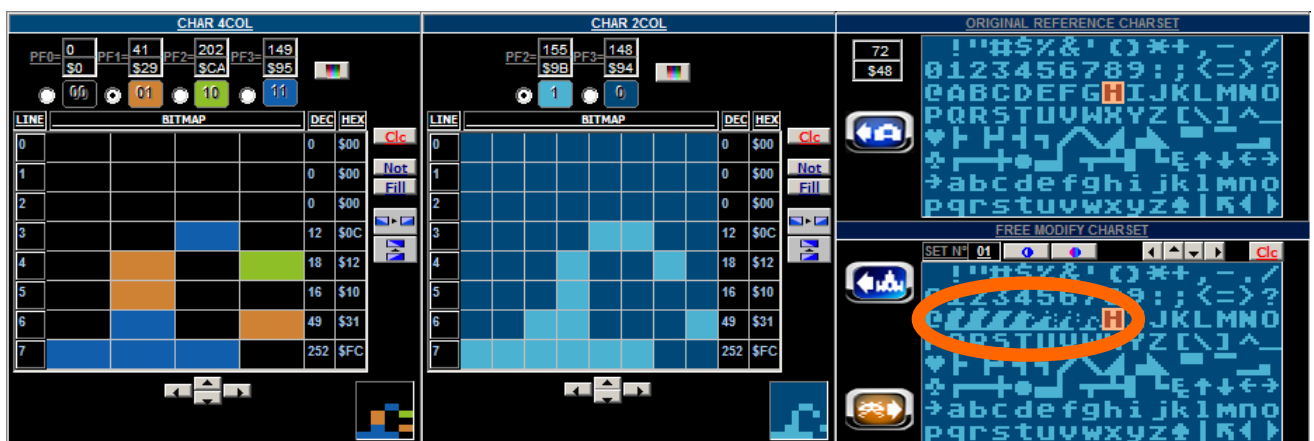
You can directly edit the color one with the 4 colors on the top.

Remember that a character in monochrome is 8X8, in 4 colors : 4X8 and colors are set via PF0 to PF3 registers, since monochrome is PF2 & PF3.

1.4. Transfer a newly edited character




By clicking on  icon, you do a transfer into the free-modify set at the cursor location.

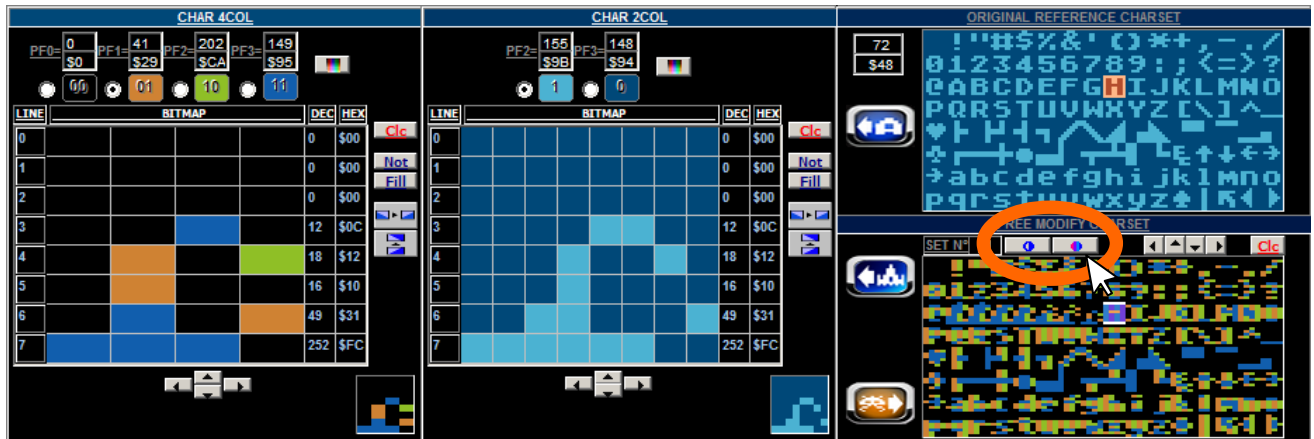


Above example : the build of a small wave with 7 chars (A to G).


1.5. Switch between monochrome and four-color charset


To edit in color and view the charset in color mode, click on the button .

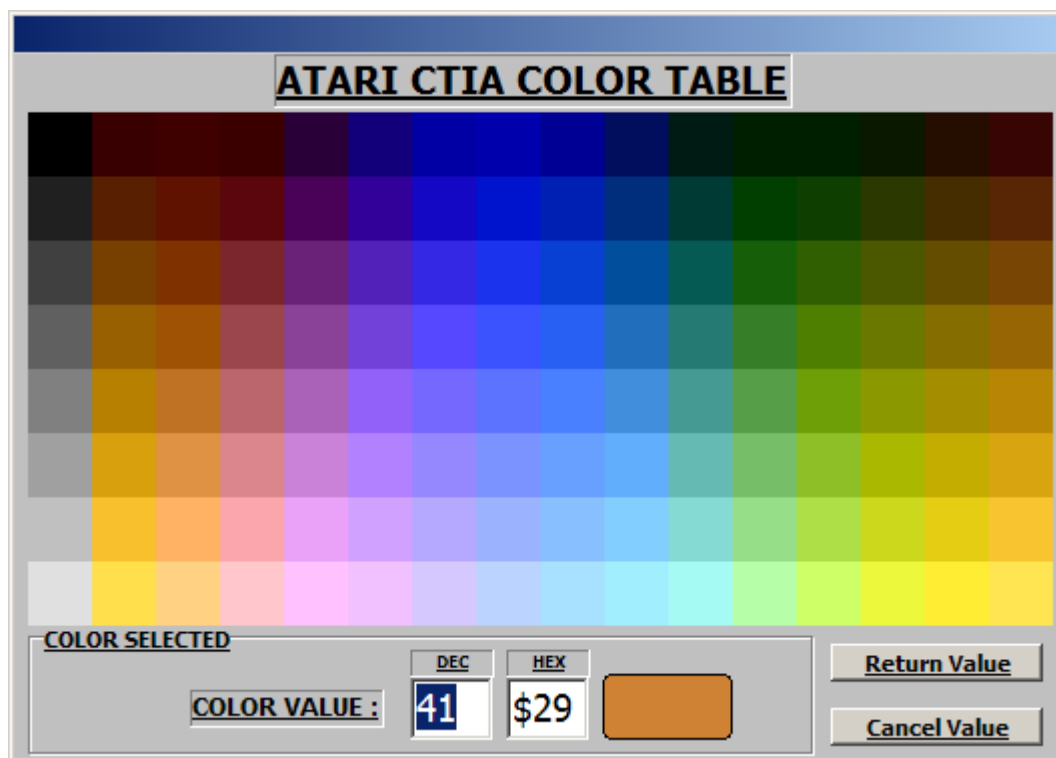
The edit grids stays the same, just edit in color grid with one of the 4 colors in the palette section.



1.6. Change colors

Any of the 4 colors from PF0 to PF3 can be changed : Just select the color to change by selecting one, and click on PALETTE button () to choose a color between 128 CTIA colors available in this mode.

In monochrome mode, colors stay the same « blue », for reference to the A8 system.
For the moment : no recoloration in monochrome () unactivated).



Return value is to validate a color or colors selected, cancel to stay with the previous.

I say « colors » because you can select another PF color without closing the color table until you have the expected result.
Here below an example of recolor charset with 4 new colors, dynamically.



1.7.

1.8. Clipboard tool in Charset editor

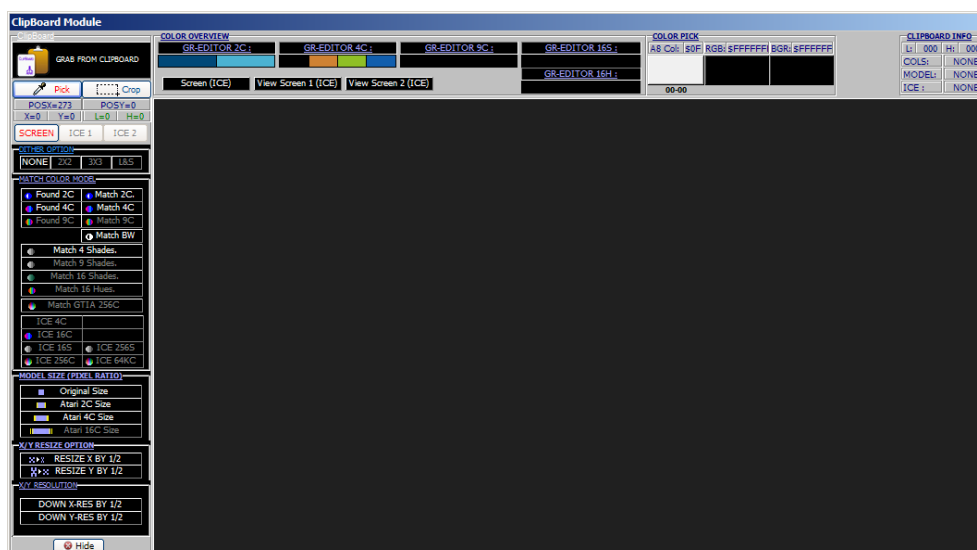
An other way to edit graphics in charsets without a big repaint work is to use the clipboard.

You prepare a picture with your favorite drawing program; well prepared and cut to the right dimension; reduce the number of colors to 2 or 4 and so on.

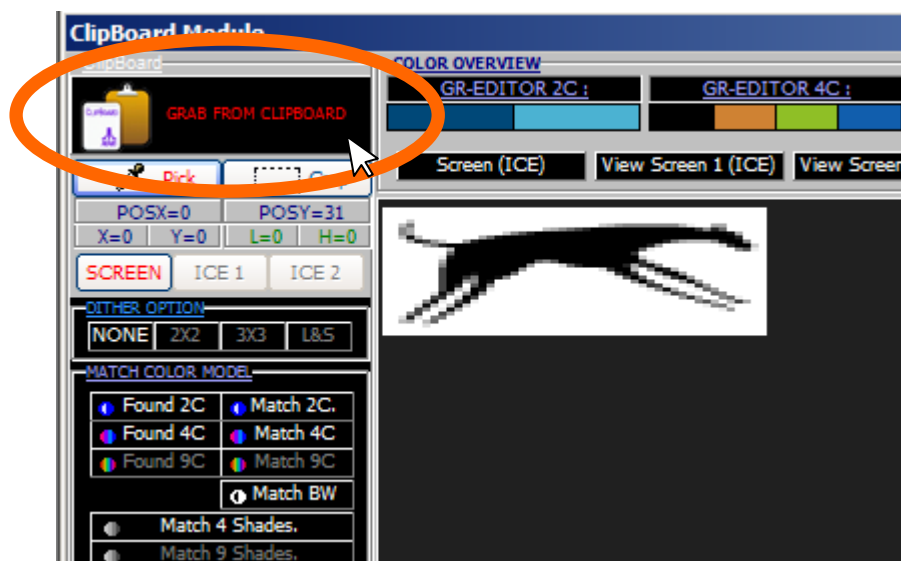
Example :



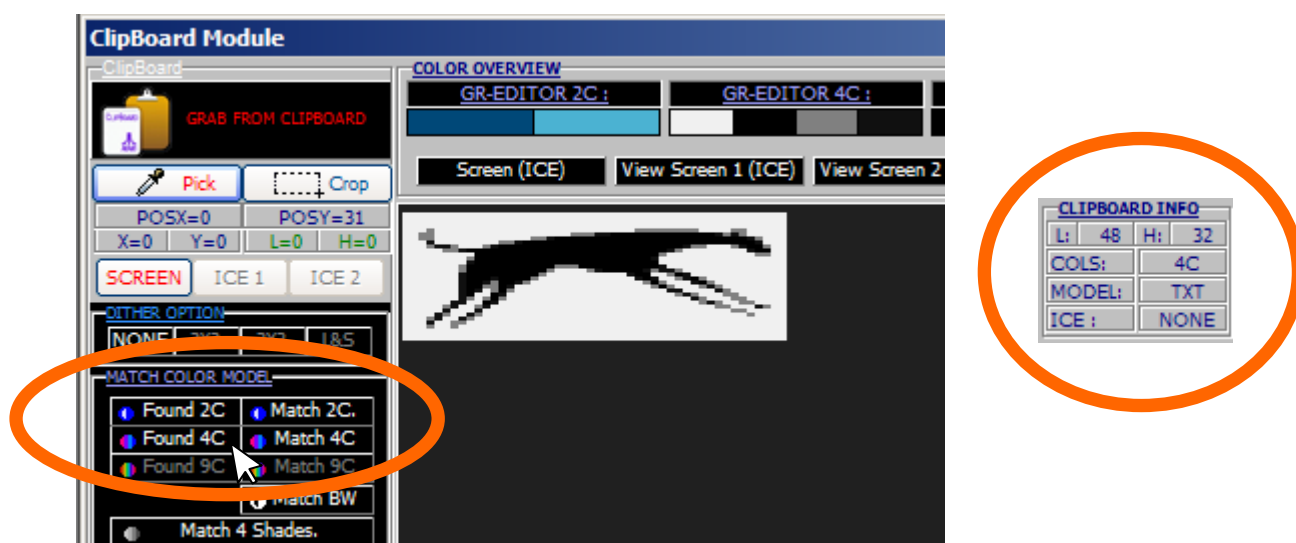
After that, you do a ctrl-c or « copy » the picture or the bloc in drawing program and in AtariTools-800 just click on the « Clipboard module » button (**zone 6**) to see this screen :



Click on « GRAB FROM CLIPBOARD » button (to take a copy from windows clipboard) and click on « Atari 4C size » (to match A8 aspect but it's for best viewing) will show this :



Now we see the picture at the good size, the last job to do is to tell to the clipboard module to find the right ATARI-Model colors and convert to them (here CTIA) with « found 4C » and « match 4C » if in 4 colors and 2C if monochrome.



We see that the work is done with the information found in the clip area that gives information about the format of the image.

Now we can quit the clipboard module, the picture is ready to be used in a buffer frame.

At the return of the main screen of the char-editor, just move the cursor to the charset to the position where you want to copy the image buffered (because the cursor will be the upper-left corner of the clipped picture). When this is done, click on « Clip to Cset » button (**zone 6**).

The result should be this :



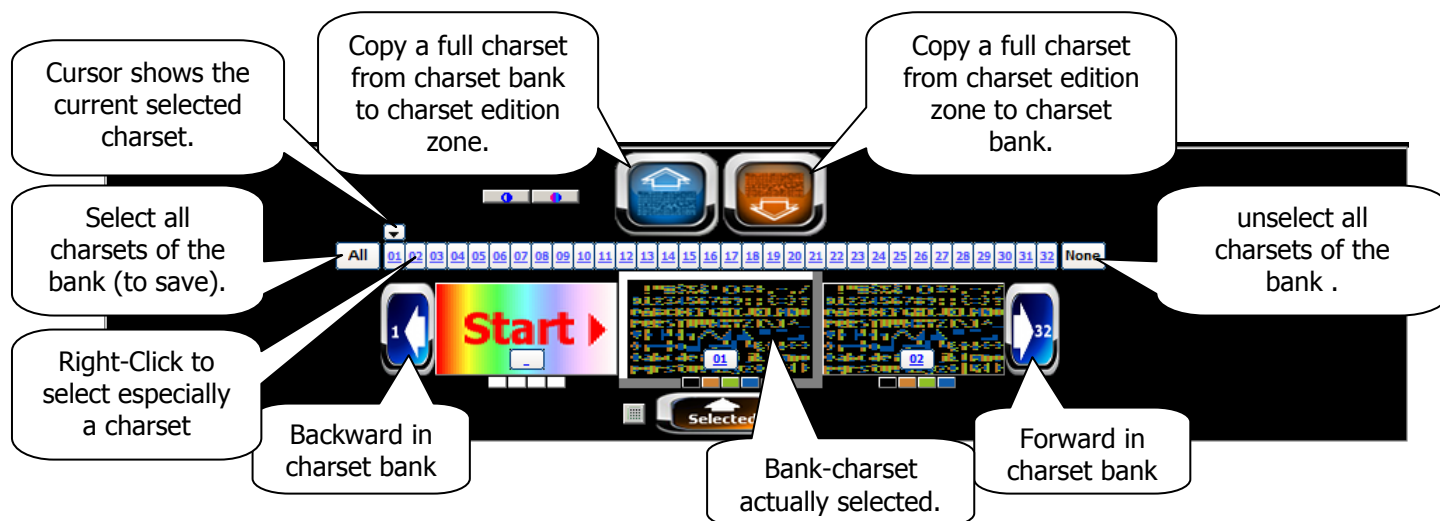
Or this, when switch to 4-colors charset view :



1.9. Multiple Charsets

From 1 to a maximum of 32, you can handle 32 charset at once.

The charset-bank (zone 5) is a collection of 32 charsets to be edited or not.

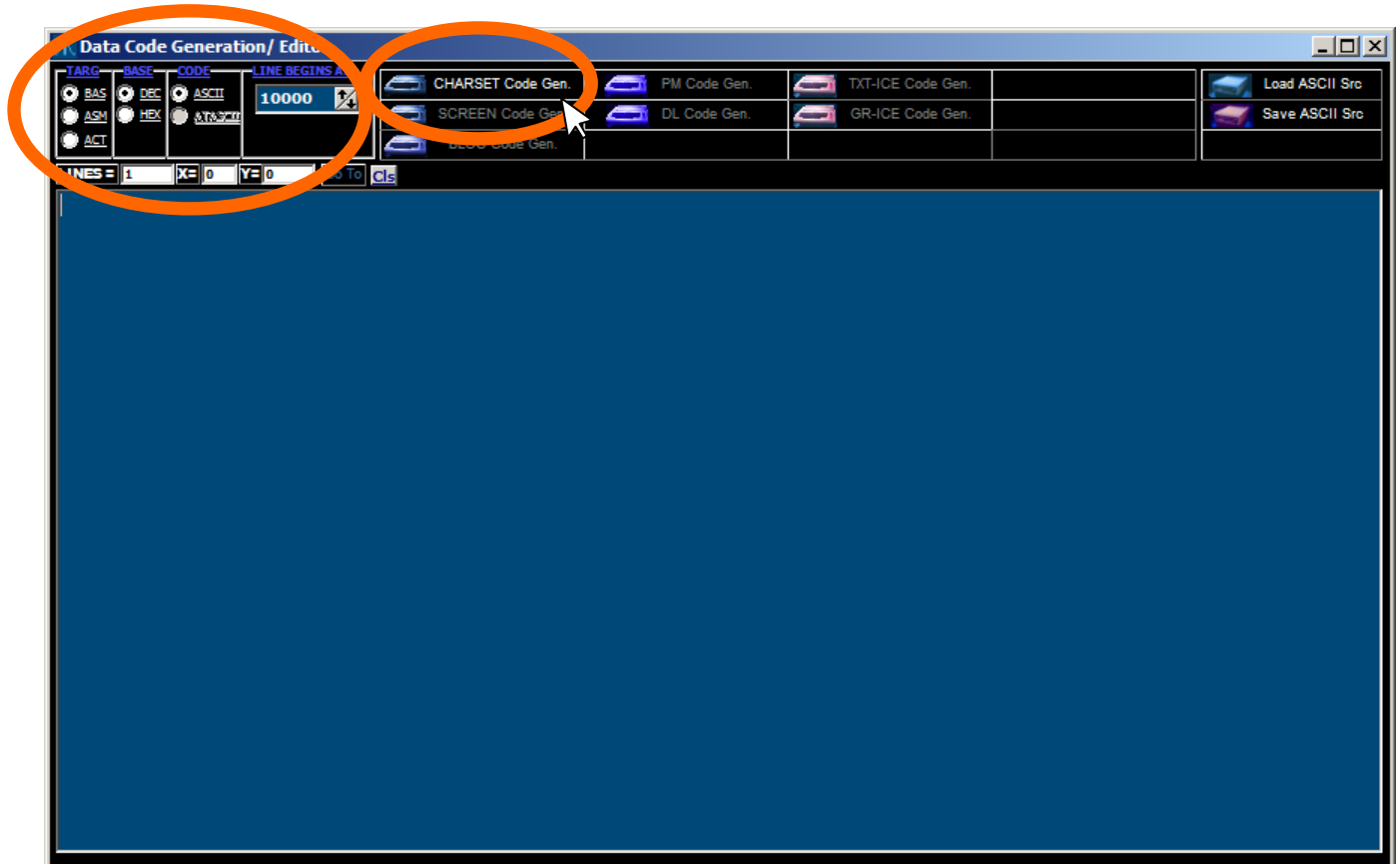


All 32 charsets are set to ATARI-ROM default at the start. You can choose a charset and his colors by moving buttons and transfer it into edition zone to modify or working with.

1.10. Generate code

There is a option to obtain a program code from a charset.

To transform charset data directly into Atari basic, Assembler (M65 like) or ACTION ! with the button « Charset to code ». Click on it give this screen :

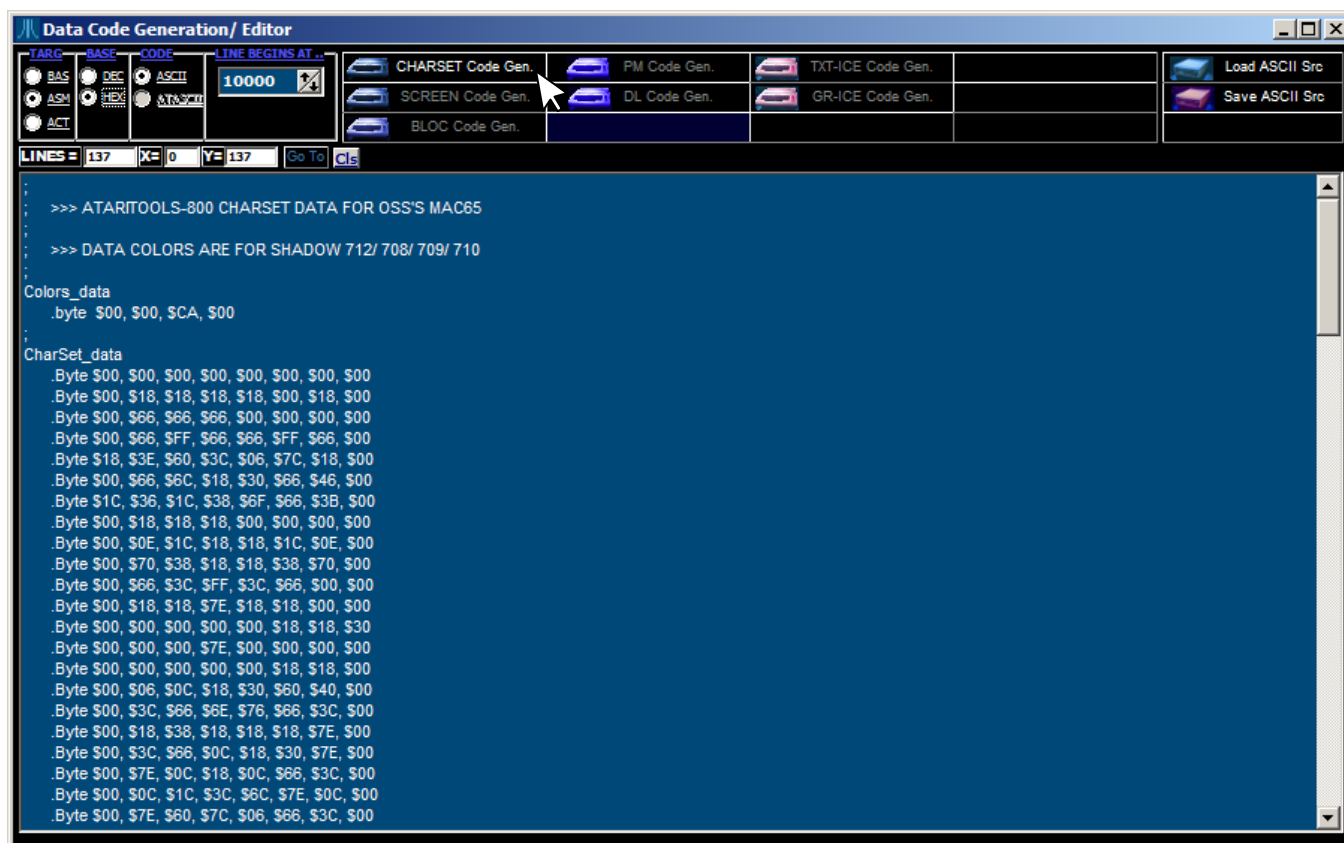


On the top, you can choose between BAS/ASM/ACTION target, DEC/HEX notation, line to begin (for basic) and finally a button to generate code « CHARSET Code Gen. »

NB : ACTION ! may not be activated at this time.



Example if click on ASM/HEX,.. With current charset :



Just do a copy-paste or save in atascii/ ascii format.

1.11. Load & Save

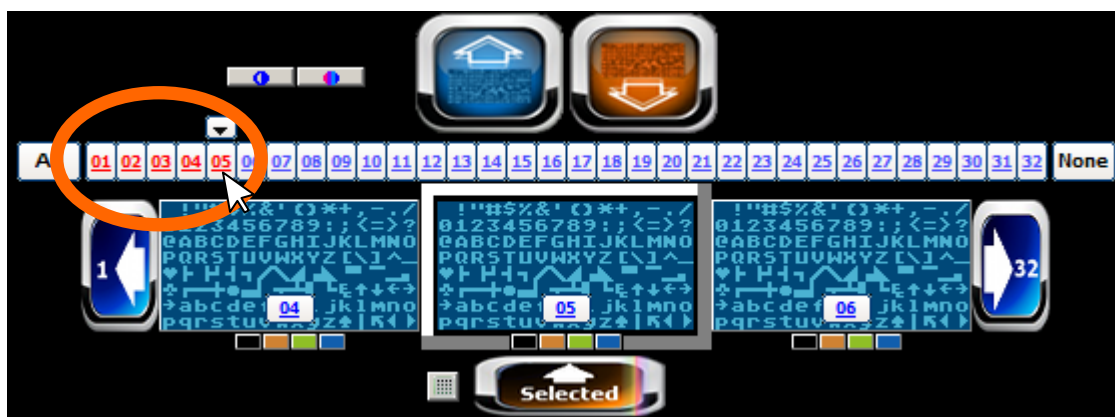
You can load & save 2 types of data : single charset and multi-charsets.

Single charset can be : 1/ *.FNT (Standard ENVISION font), 1024 or 1025 bytes.
 2/ *.ACS (AtariTools-800 font), 1028 bytes (contains colors).

Multi charsets are : *.NCS (AtariTools-800 multi fonts), N*1028 bytes (contains colors).
(up to 32 charsets in one file).

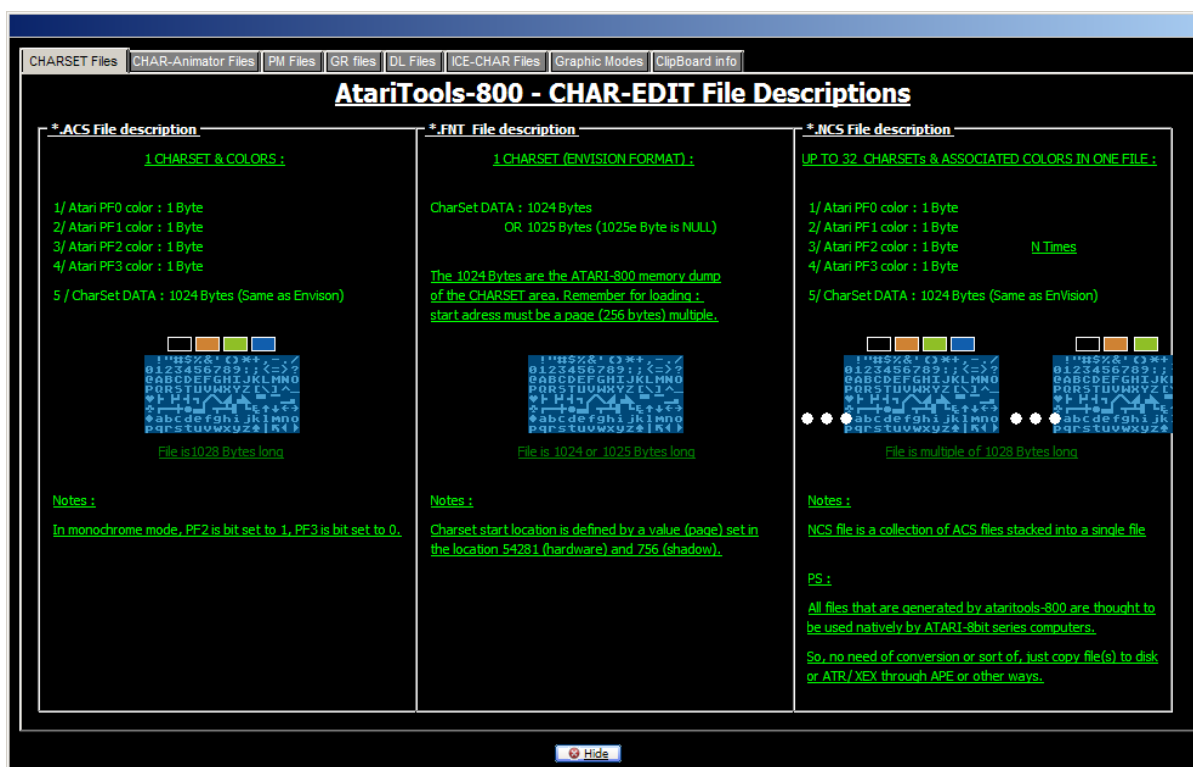
For compatibility, the charset himself is always set in EnVision format, witch is a dump of ATARI memory charset zone. Easy to implement, easy to manage.

To save a group of charsets you must select them first by clicking with right button of the mouse on the numbers (here below on 1,2,3,4,5) (they are switching in red).



After that, just click to « save charsets »

The full description of files used can be found by help button in each folder.



1.12. Samples created/ read with CHAR-Editor

