Managing CF chips for the Tetroid CF interface with the Habi Image Editor (Img1.2-eng)

The graphic interface :
When executing this software (in super-user mode) the menu bar shows 4 menus :

- **File**
  - New Image
  - Open Image
  - Insert files
  - Extract files
- **Disc**
  - Open disc
  - Read disc
  - Write disc
- **Options**
  - Headers
    - Extract (check or uncheck)
    - None (either select)
    - QL (or select)
- **Help**
  - About...

Depending, some items are “grayed out” (not accessible)

File > Open image
opens an explorer window to let you navigate through directories and select an image of a CF chip. These files have suffix .img and hold the content of a whole CF chip. For confirming the selection, it will show the type of image = **RAW** , type of partitions = **QL** and type of file systems = **QubIDE** and the main window will display the partition tree. Selecting one partition will show all the files it contains. You may select one or several files like in an explorer window.

Disc > Open disc
opens a window showing all the disk units seen by the software. If a CF chip is seen you may recognize it by its size. Selecting it, the same confirmation window as with the **File > Open image** will be seen, showing the type of image = **RAW** , the type of partitions = **QL** and the type of file systems = **QubIDE**). Upon confirmation, the main window will display the partition tree. Selecting one partition will show all the files it contains. You may select one or several files like in an explorer window. But here the files are not those of an image, but rather those on the CF chip itself.

Disc > Read disc
to copy the whole content of a CF chip into an image file.
First, a window will show all the discs seen by the software. If a CF chip is seen you may recognize it by its size. Selecting it, the same confirmation window as with the **File > Open image** will be seen showing the type of image = **RAW** , the type of partitions = **QL** and the type of file systems = **QubIDE**. Upon confirmation, an explorer window will ask for an image file name, and then do the copy. It takes approximately 45 minutes per GigaByte.

Disc > Write disc
to copy back an image file into a CF chip.
To access this function, you will first have to open an image file by **File > Open image**. Then, **Disc > Write disc** will open a window showing all the disk units seen by the software. If a CF chip is seen you may recognize it by its size ; confirmation of your choice will begin copying the image file back to the CF card BUT BEWARE ! only a CF chip with “geometry” compatible with the chip that created the image will be accepted.

I succeded copying back any image file on the same CF chip which I used to create the image ; and also copying the 1Gb image on both my 8Gb CF chips. Other trials gave error messages.

Now comes the delicate part of the Habi software : inserting and extracting individual files.

First, you will have to open an image file or an attached CF chip.

Extracting a file means copying that file from opened image or CF to a Windows directory. Depending on the type of file and on what you want to do with it, you will have to look after the **Options** menu. Either you "uncheck" the **Options > Headers > Extract** item, then the file will be copied without its header ; or you "check" the **Options > Headers > Extract** item, then the file will be copied with its "true" header. The first option is for data (or zipped) files that you want to use in your Windows environment with a QL emulator ; but it will not suit executable program files. The other option will be useful for later inserting the file into another CF chip ; but it will not suit using the extracted (data or zipped) file in an emulator running under Windows, because the header will be seen as 64 spurious extra bytes. After this choice in the **Options** menu, you may select one or several files in a selected partition and do **Files > Extract files**.

Inserting a file means copying that file from a Windows directory to an opened image or CF. Before, you will have to "check" either **Options > Headers > None** or **Options > Headers > QL**.

In the first case, if the file had no header, it will be copied without a header, and the QL will not be able to use it because the Habi software will have copied its 64 first bytes as a header, which they are not ; but if the file had its "true" header, every thing will be copied all right to the CF card (may it be a data or zipped file or even an executable program).

Thus, always extract files (of any kind) **with header** when you want to re-insert them into another CF chip, and then do it with **Options > Headers > None** ; because the Habi software will manage it correctly – considering their 64 first bytes as a "true" header.

If you want to insert a file that (you know) has no header, you must select **Options > Headers > QL** and then the Habi software will generate 64 bytes of a "fake" header for any data or zipped file, so that the QL can handle them ; but this header will not suit an executable program. Moreover, if you use this option with a file that already has a header, these 64 first bytes will be considered as data.

The zipped files that you find on Internet archives have no header, so you have to insert them with **Options > Headers > QL** before trying to unzip them with the unzip program running in the QL . But to unzip them in a QL emulator under Windows, they are OK as they are, when they are loaded from a Windows directory attached to the emulator.

When I set up the partitions of my 1Gb CF chip, I divided it into 24 partitions of 40Mb with a block size of 2Kb. I copied all the floppies that I had into 2 of them (approximately 80Mb). I did this simply with SuperBasic commands like **WCOPY flp1_ TO win2_B1_D1_** (meaning Box1 Disc1) so to avoid destination name conflicts.

Then, to extract on my Windows system files suitable for inserting them back into another CF chip, I used the Habi software with **Options > Headers > Extract** (checked) and **Files > Extract files**.

So to be able to re-insert them with **Options > Headers > None** and **Files > Insert files**

Besides, I could also insert zipped files from Internet archives BUT with **Options > Headers > QL,** for them to be given "fake" headers to let unzip them with **unzip_exe** running on the QL.