Little guide helping users creating an hardfile
Usable on a Minimig's board equipped with an ARM controller

After receiving a Minimig's board with its ARM controller, you wish to create an hardfile for installing the 3.1 Workbench on it for example.

For this, you'll need one PC with WinUAE installed or a Mac with at least MacOS X and your Minimig's memory card with some free space on it (at least 512MB for example).

You can download WinUAE here :
http://www.winuae.net/frames/download.html

The MacOS X process needs no third party software, it only uses the X version of MacOS in order to get the terminal software from it.
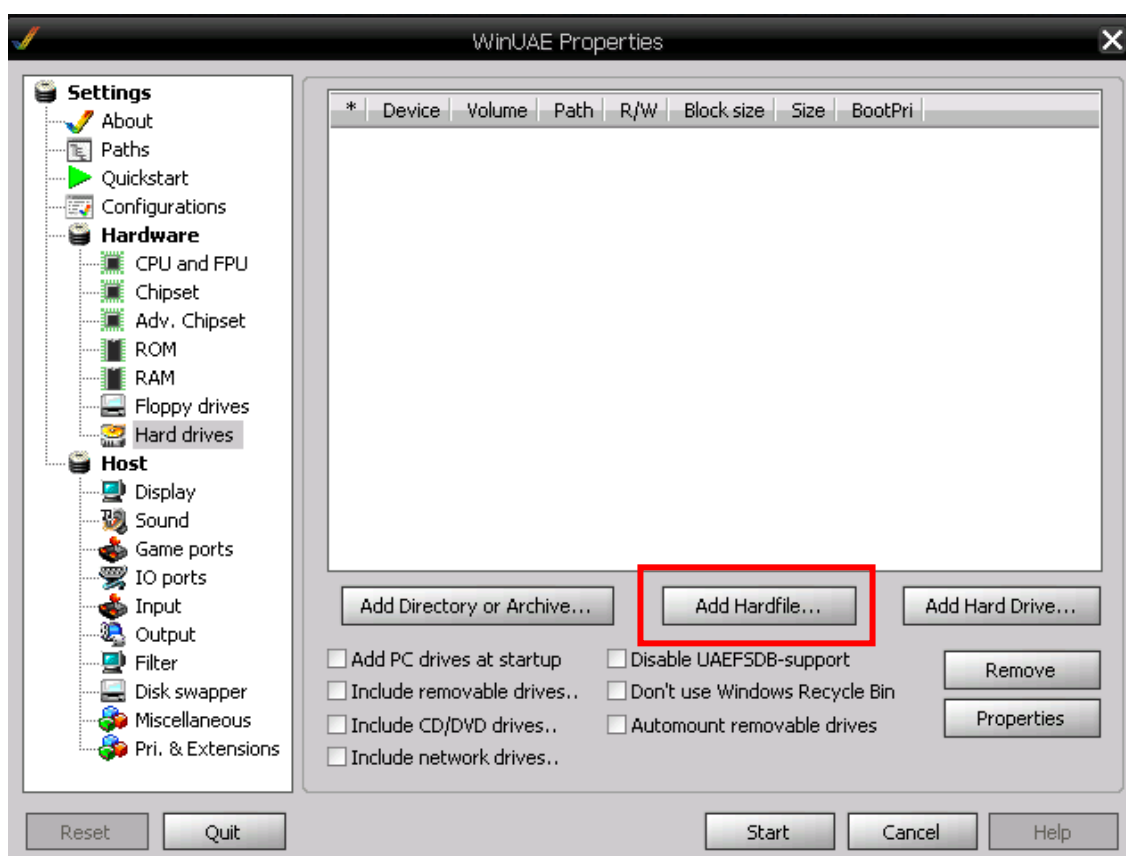
First Step : Hardfile creation

Here, you'll have to create an hardfile which must be usable with your Minimig's board.
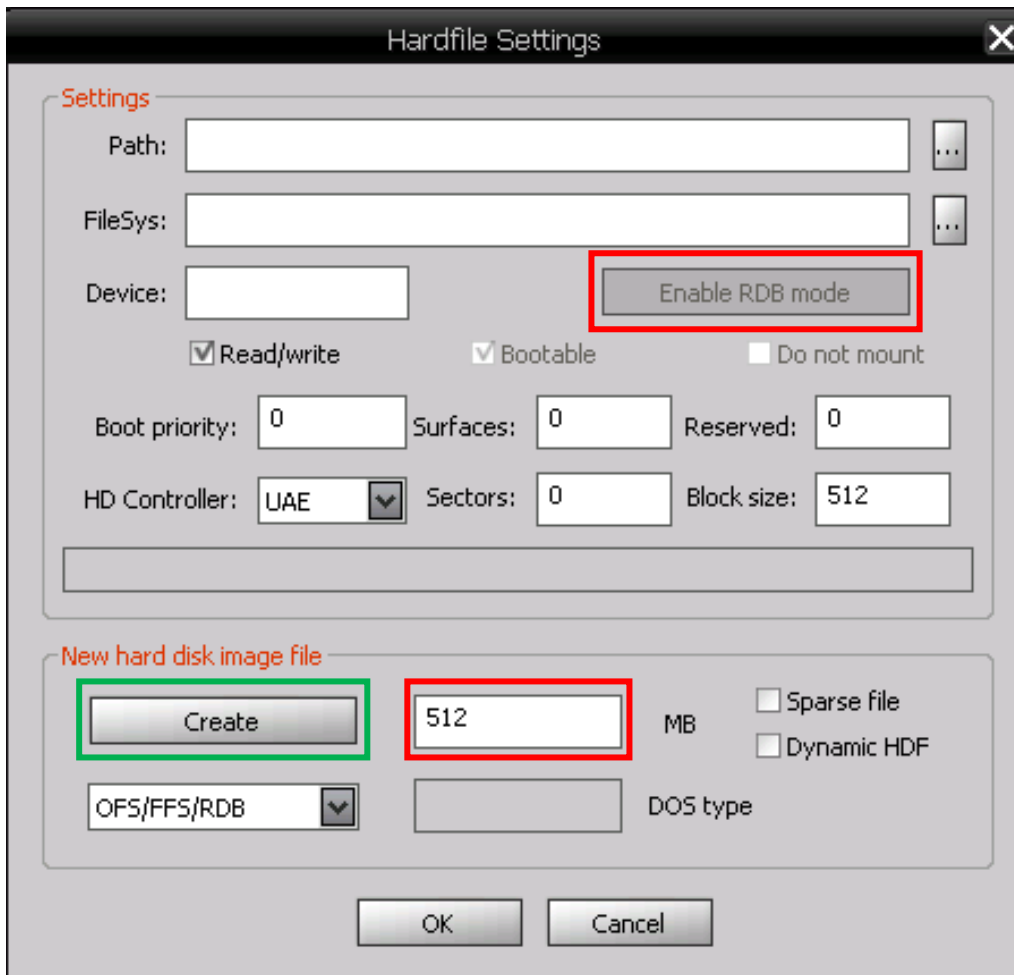
Process under Windows (XP / Vista / 7 / 8)

After installing WinUAE software, please launch it.

You'll get the following window :

Here, please click on the 'Add Hardfile …' button for adding one hardfile.

In the next window, please activate the 'RDB' mode ('Rigid Disk Block') by clicking on the 'Enable RDB mode' button.


Tpye here the size of the hardfile you want to create in the indicated red case.

N.B. : If your memory card is FAT formatted (FAT or FAT16), you'll not be able to creater an hardfile larger than 1,99GB. Also, if your memory card is FAT32 formatted, the maximum size can not be larger than 3,99GB. Finally, according to the Workbench version you want to install, please note that the orignal 3.1 kickstart can't manage partition largern than 2GB.

One you have chossen the right hardfile size, you'll just have to click on the 'Create' button.

In the following window, you'll be asked the place where you want to save your new hardfile.
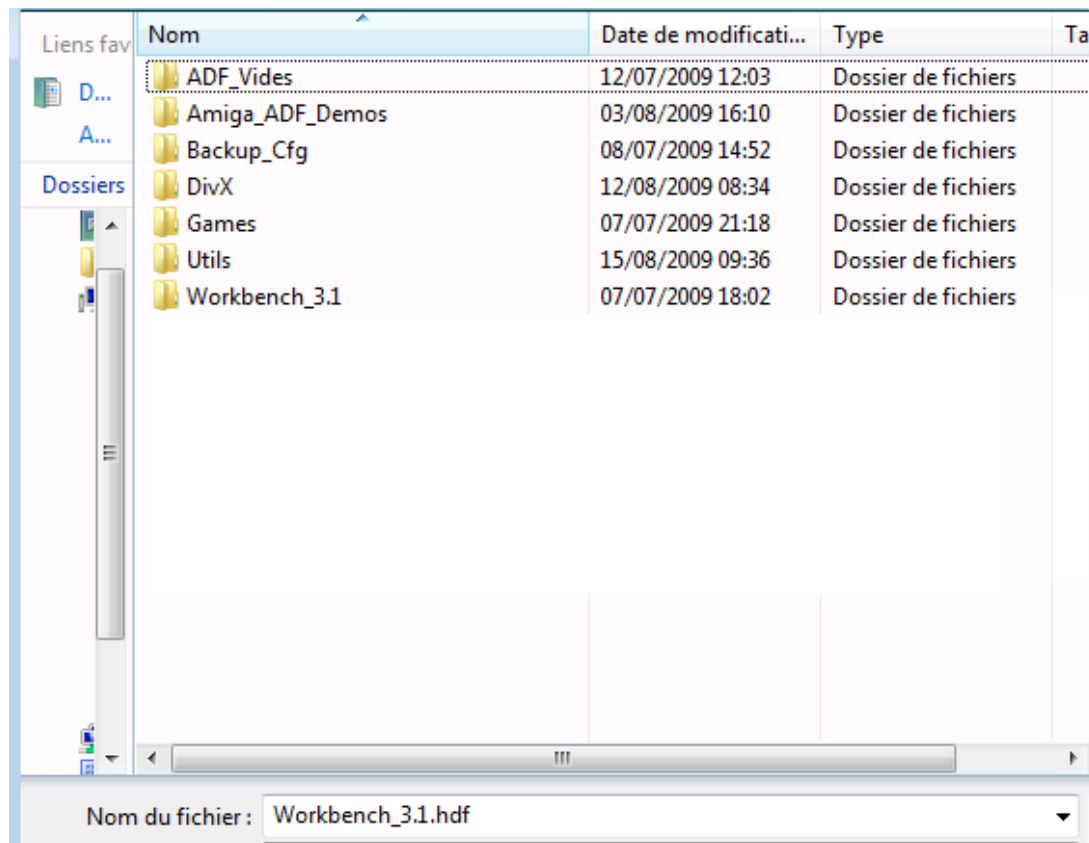
Once the target directory and the filename are choosen ('Workbench_3.1.hdf' for example), simply click on the 'Save' button for creating the hardfile.

Please note that you can create the hardfile directly on your memory card !

N.B. : according to the desired filesize, the creation process can take several minutes, so, please be patient.

Process under MacOS X

From the 'Finder' window, please launch the 'Terminal' software which you can find in the subdrawer 'Utilities' from the 'Applications' drawer of your MacOS X system.
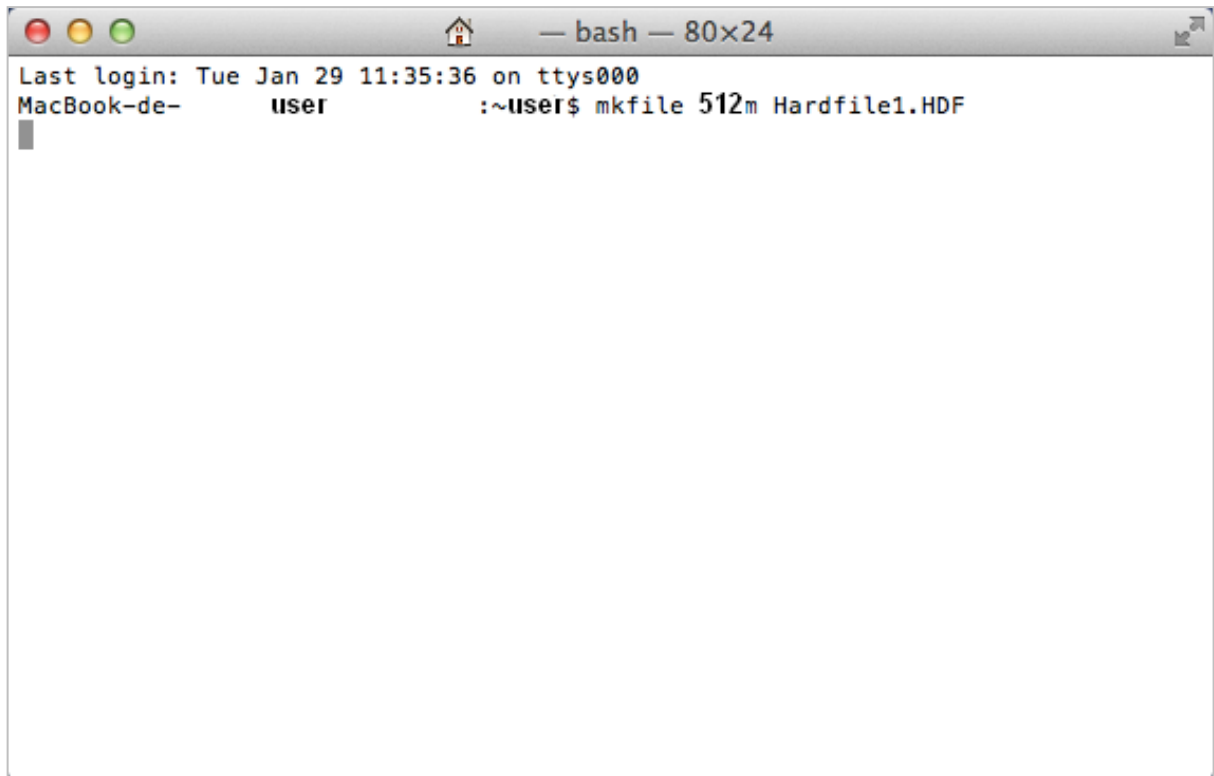
You'll get the following windows :
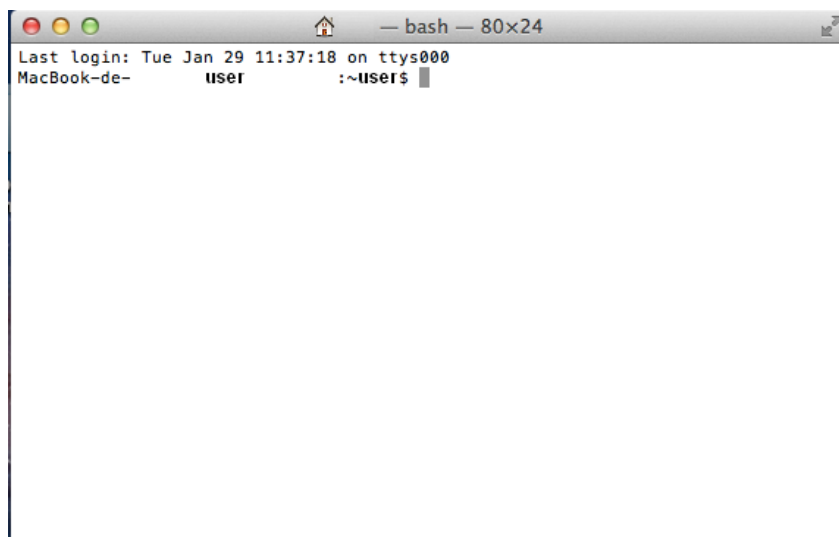
One the 'Terminal' window is opened, you just have to type the following command :
mkfile 512m Hardfile.hdf

This commande will create one file named 'Hardfile.hdf' in your 'Home' directory in your MacOS X system with a size of 512MB ('512m' argment).

Please note that if you want to create one file of 3,99GB size (maximum size supported on a FAT32 formatted memory card or 1,99GB on a FAT formatted memory card), you just have to specify '3999m' instead of '512m'.

```
Last login: Tue Jan 29 11:35:36 on ttys000
MacBook-de-      user            :~user$ mkfile 512m Hardfile1.HDF
```

The final thing to do is to copy the new created file 'Hardfile.hdf' from your 'Home' directory to your memory card.

Second step : Minimig's board parameters

One the hardfile is created and transfered on your memory card, you just have to initialize it for using it with your Minimig's board equipped with your ARM controller.

For this, please insert your memory card in your Minimig's card slot and startup your Minimig's board.

One the kickstart is loaded, please display the OSD menu (with the 'Menu' button of your Minimig's board or the with the 'F12' key of your keyboard) as it's shown in the following picture :
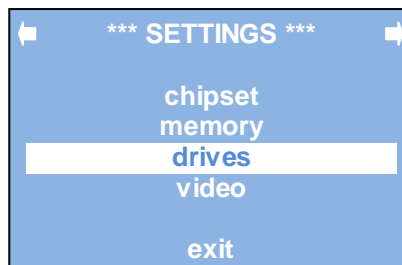
In the menu, please use the right arrow from your keyboard for getting the settings menu as it is shown in the following picture :
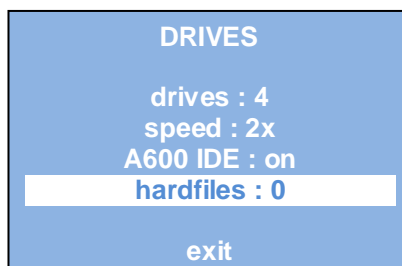
```
◀       *** MINIMIG MENU ***      ▶

    df0: * no disk *
    df1: * no disk *
    df2: * no disk *
    df3: * no disk *


               exit
```

After that, please select the 'settings' option for getting the following picture :

```
        *** MINIMIG MENU ***

               reset
              settings
              firmware


               exit
```

Select the 'drives' option for getting the following picture :

```
◀         *** SETTINGS ***        ▶

             chipset
             memory
              drives
              video

               exit
```

Here, please select the 'hardfiles' option for getting the following picture :

```
              DRIVES

             drives : 4
             speed : 2x
            A600 IDE : on
            hardfiles : 0

               exit
```

Here, you'll have to enable the master hardfile ('Master') and then, you'll have to choose the hardfile you want to use.

```
             HARDFILES

         Master : enabled
               Workbench_3.1
          Slave : disabled
               none

               exit
```
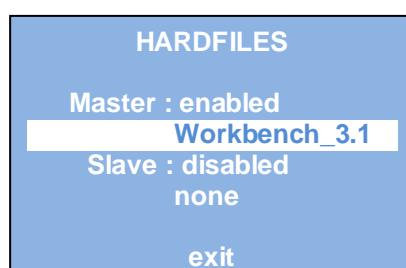
After that, you'll be asked to resest the Minimig as it is shown in the following picture :

Changing configuration requires reset.

Reset Minimig ?

yes
no
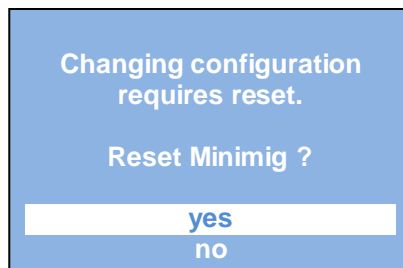
Select the 'Yes' option for restarting your Minimig.

N.B. : once the Minimig is restarted, don't forget to save your new settings !

For that, please display the OSD menu like it is previously described :

*** MINIMIG MENU ***

df0: * no disk *
df1: * no disk *
df2: * no disk *
df3: * no disk *

exit

In the menu, please use the right arrow from your keyboard for getting the settings menu as it is shown in the following picture :

*** MINIMIG MENU ***

reset
settings
firmware

exit

After that, please use the down arrow from your keyboard until the 'exit' option and type one more time on the down arrow key for getting the 'save' option :

*** MINIMIG MENU ***

reset
settings
firmware

save

Here, just type on the 'enter' key for saving your new settings !

One the hardfile is choosen in your Minimigs settings, you'll just have to insert your 'Install' adf filedisk from your Workbench 3.1 (or any other Workbench version) for initializing your new virtual harddisk as it is explained in the next step.

Here, the process discribes the initialization of your new virtual harddisk in order to install the Workbench 3.1 on it.

For that, please insert your 'Install' adf filedisk from Workbench 3.1 as it is shown in the following picture :

After that, please restart yout Minimig for starting with the 'Install' floppy disk.

Once the Workbench is loaded, please double click on the 'Install3.1' icon for opening it, and after that in the 'HDTools' icon, and finally on the 'HDToolBox' icon :
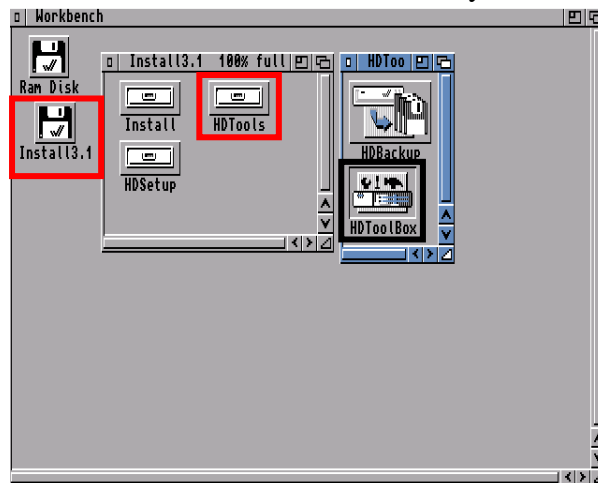

Once the 'HDToolBox' is loaded, please click on the 'Change Drive Type' button for defining a new harddisk type.
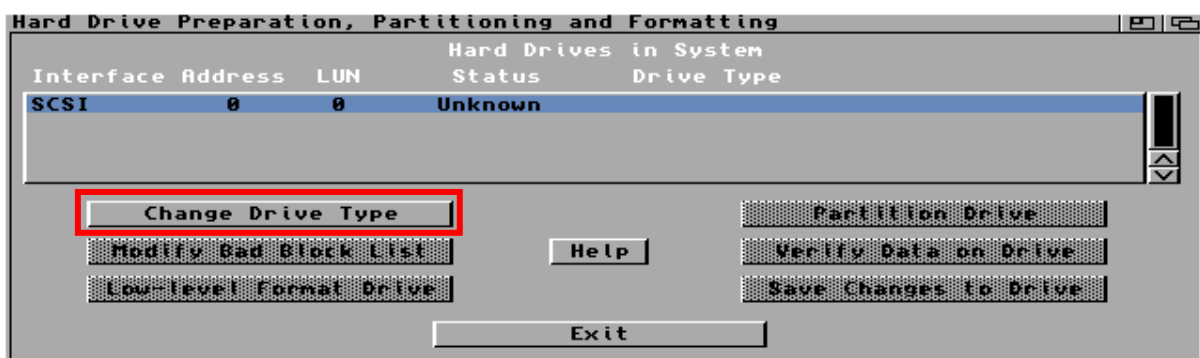
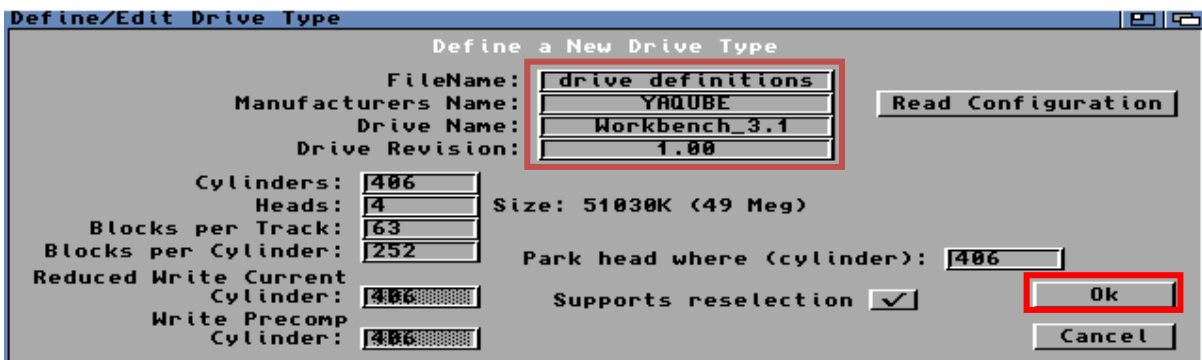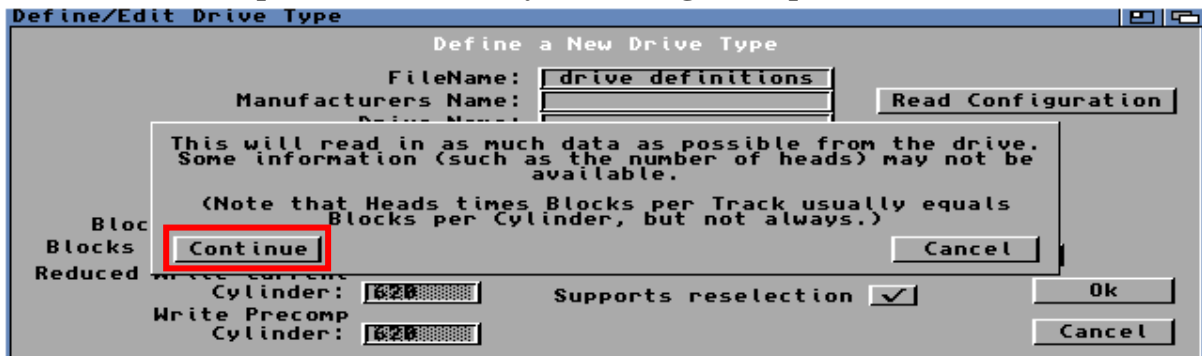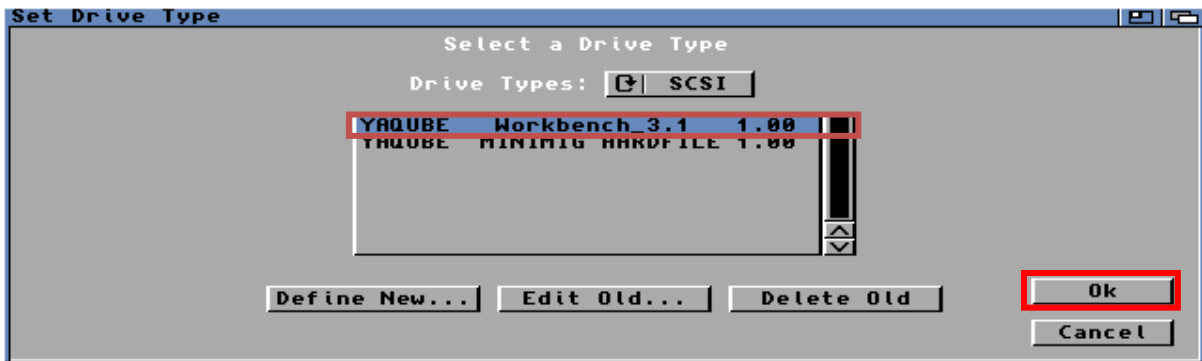Then, click on the 'Define New …' button for getting the harddisk advanced settings.
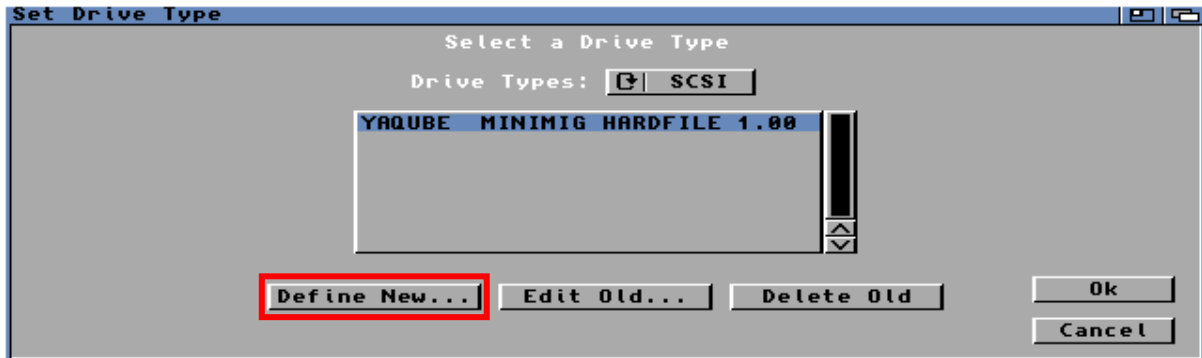
In the next window, the hardisk configuration will have to be loadedby clicking on the 'Read Configuration' button and than, please confirm this choice in order to get the harddisk exact parameters (complete size, blocks size …).
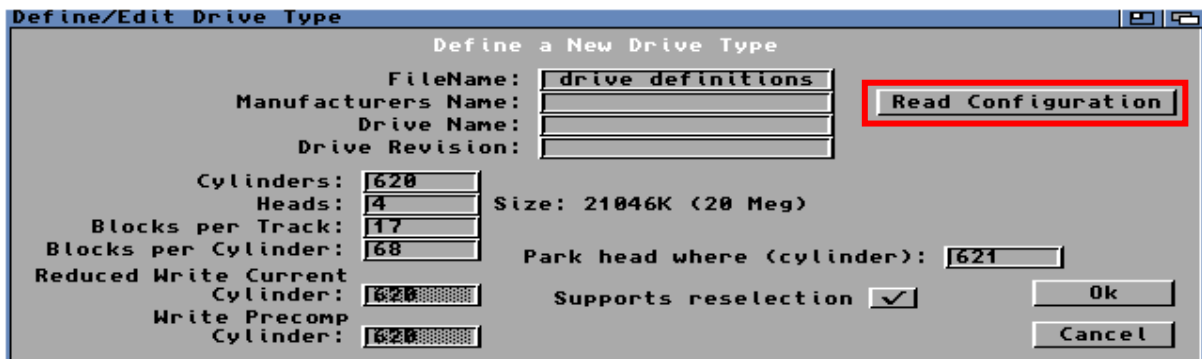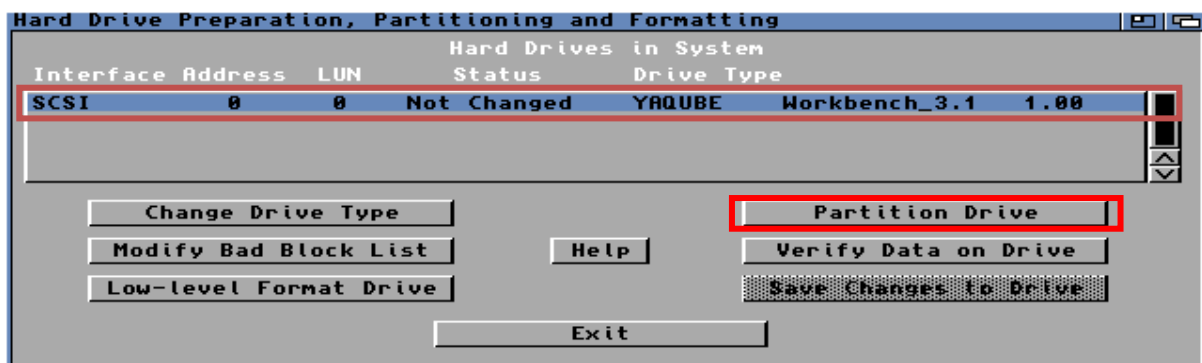

Once it is defined, please confirm it.
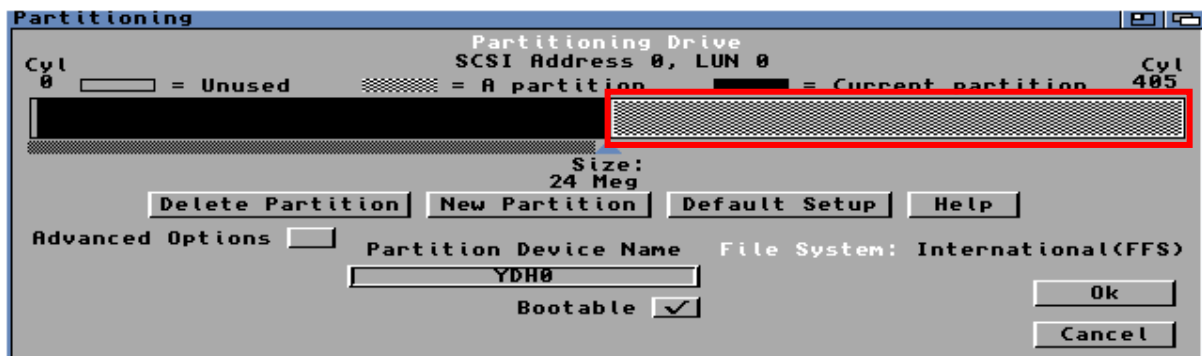**N.B. : this operation will destroy all existing data / partitions !**

Finally, when coming back to the first window, click on the 'Save Changes to Drive' button for saving these new settings.

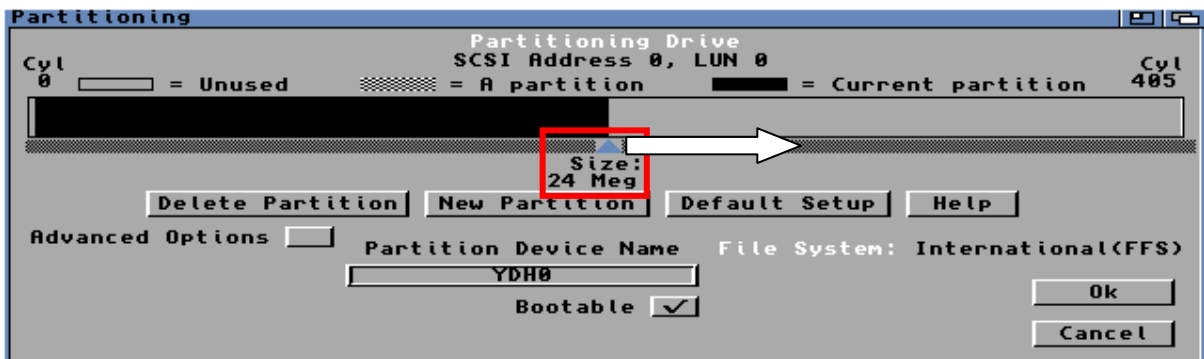After that, you'll have to partition your harddisk.

For that, please click on the 'Partition Drive' button for getting the following picture :
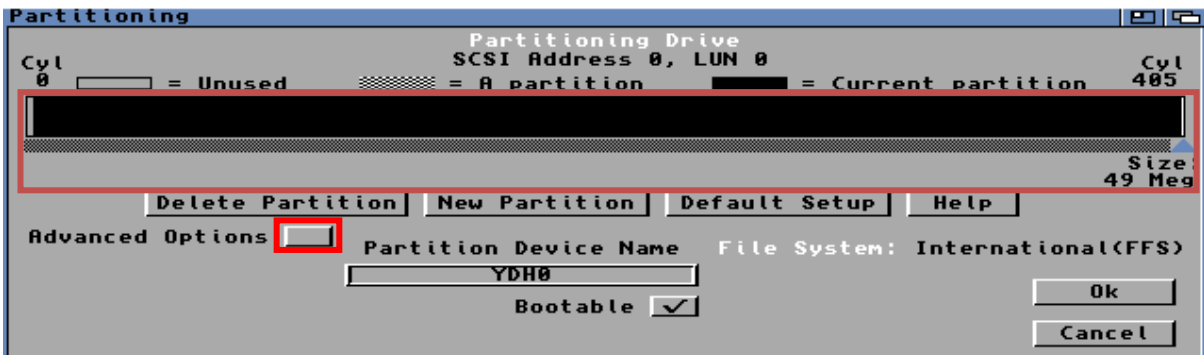
Please select here the second partition for erasing it and getting only one partition.
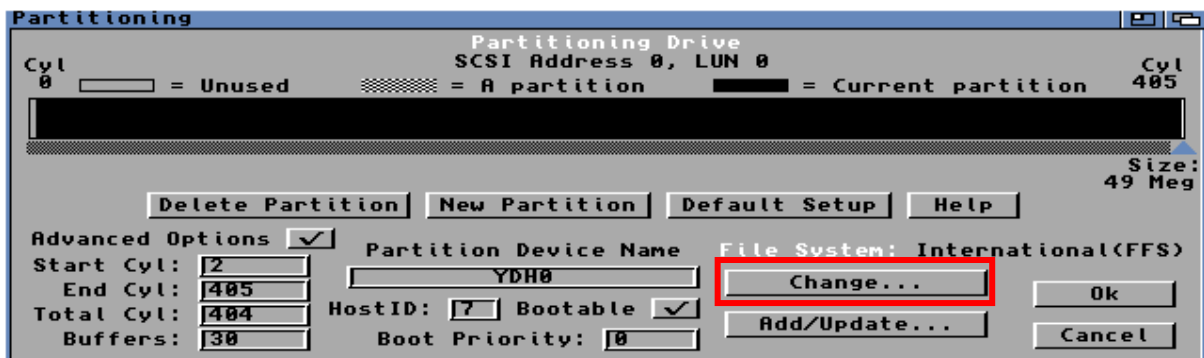

Click on the 'Delete Partition' for erasing the second partition.

Then, please select the cursor located above the 'Size' word for moving it to the end of the box representing the partition size for getting its maximal size.


Then, ckick on the 'Advanced Options' button for displaying for displaying the partition's advanced options.


Here, you'll be able to modify the partition's name and to choose 'DH0' instead of 'YDH0' for example and also to choose the bootable mode for this partion ('Bootable' case,

must be checked if you want to install the Workbench on this partion), the boot priority too, to add a filesystem with the 'Add / Update …' button and the most interesting will be shown when clicking on the 'Change …' button as it is shown in the following picture.
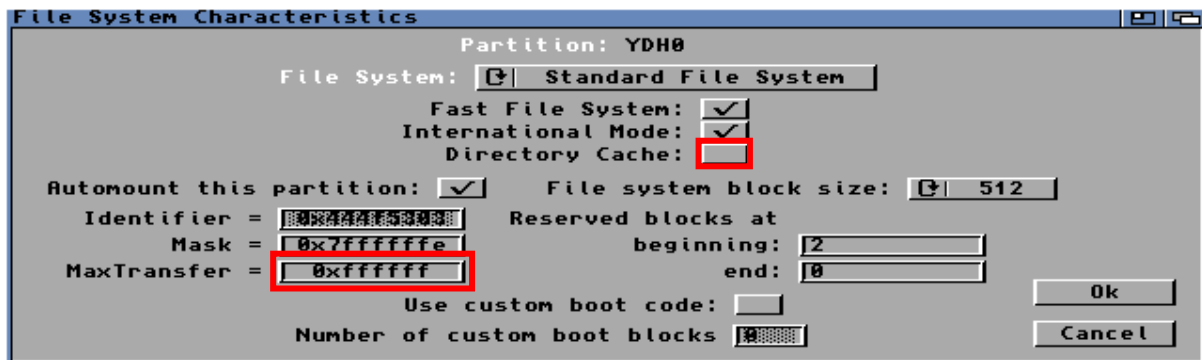
Here, you'll just have to check the 'Directory Cache' case in order to improve your harddisk read access rate.

N.B. : one important thing for those who own an ARM controller, please replace the '0xffffff' value by '0x1FE00' in the 'MaxTransfer' case.
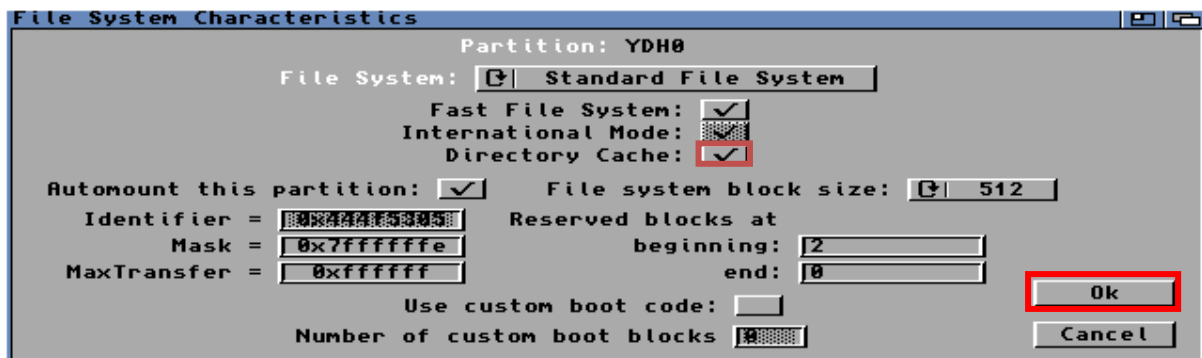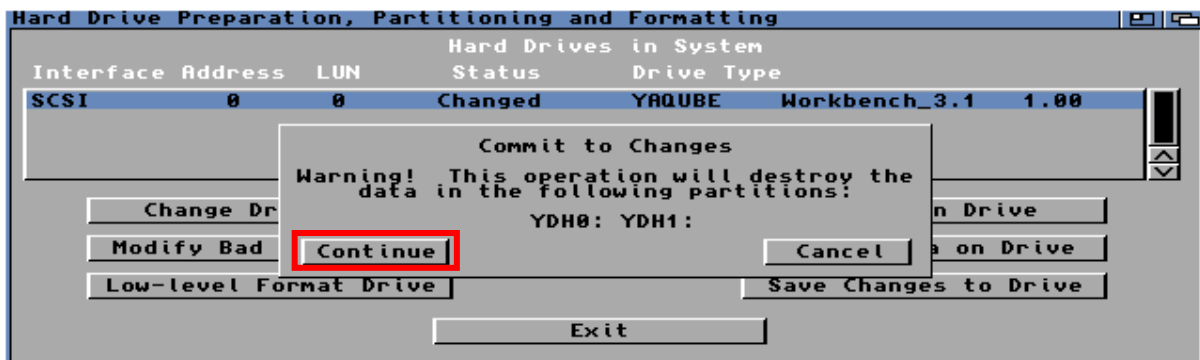

Then, you can click on the 'Ok' button for applying these settings.

In the main partition's window, please click one more time on the 'Ok' button for applying these new settings.
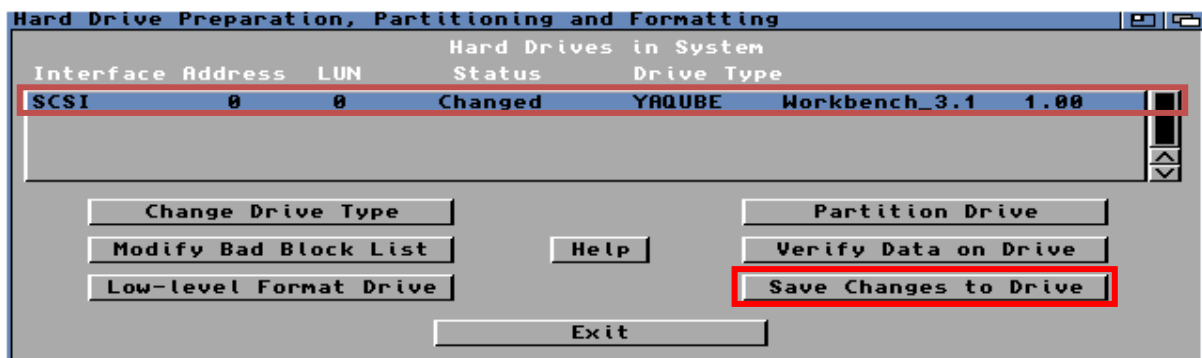
Finally, click on the 'Save Changes to Drive' button and then on the 'Continue' button for saving these new settings.

Once these new settings are saved, please click on the 'Exit' button and confirm the reboot request.
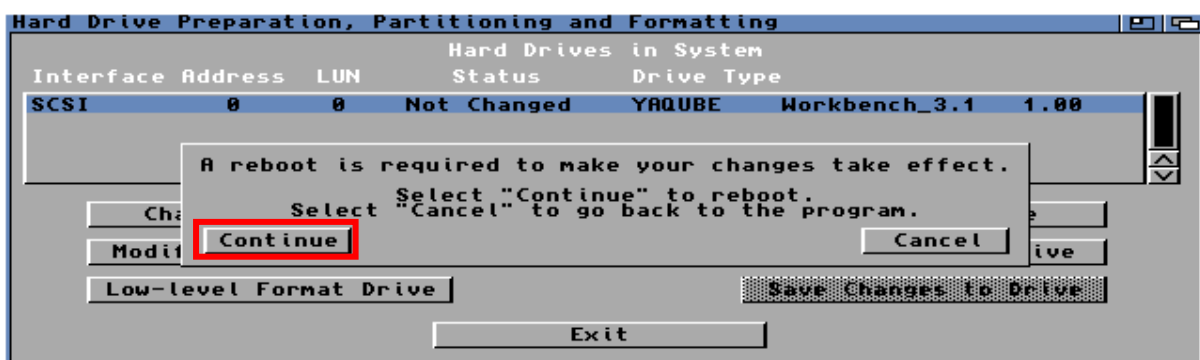
One the Minimig is restarted, a new icon will appear and you'll just have to format it in order to install your Workbench version on it !

For formatting your new virtual harddisk, please select the 'YDH0:NDOS' icon, please right click on it and choose the 'Icons' option, then the 'Format Disk …' option.

N.B. : a quick format ('Quick Format') is largely good enough for installing the Workbench on it.

Please enjoy this new world the your Minimig's board ARM equipped !

N.B. : don't try to format the HDF file and to install the operating system directly with your PC with WinUAE because the HDF file will not be usable on the Minimig ! This file MUST absolutely be formatted on the Minimig's board directly !

Many Thanks to Jakub Bednarski for designing and developping the ARM with its wonderful firmware release!

Some useful links :

AMedia Computer France : http://www.amedia-computer.com
English Minimig Forum: http://www.minimig.net
French Minimig Forum : http://minimig.amiga-ng.org
ACube Systems : http://www.acube-systems.biz
Obligement - Excellent french Amiga articles site : http://obligement.free.fr
Amiga Impact – Excellent french Amiga news site : http://www.amigaimpact.org

**Thanks to Acube Systems for producing these boards,
To Dennis Van Weeren for finalizing his project,
To Jakub Bednarski for his wonderful processing on these boards
And SebMacFly for the MacOS X detail's process !**

Faranheit @ 2013