MalaRom 1.1.0 flashing Guide

Introduction
This guide is ONLY valid for MalaRom 1.1.0 and ONLY for 256 Mb devices!

Please make sure to read the entire guide before you begin. Also if you have flashed your tablet before! I have created some scripts to make things easier, so you might see something new.

To flash MalaRom on to your M701 requires you to have the following ready:

- MalaRom 1.1.0 package unzipped. You must be sure to have the one that fits your model. Step 1 in this flashing guide shows you how to identify your model. If you got the wrong files, simply download the correct one, unzip it and open this guide from there.
- A pc with either: Windows 2000/XP 32 bit, Windows Vista 32/64 bit or Windows 7 32/64 bit. Windows XP 64 bit is not supported. You must have administrative rights on this pc.
- Your M701 tablet fully charged, and power plugged in. Before you turn it on, remove the SD card. Make sure that USB debugging is enabled. You do that under Settings->Applications->Development. Google "enable USB debugging" if you are in doubt. There are plenty of guides.
- A USB male A to male mini B cable. There is a white one supplied with the tablet (the long one). If you do not have that, you can use one from a USB hard drive for instance. But make sure its proper quality. It should look something like this:

Flashing consists of 8 steps. The steps are as follow:

1. Identify your tablet
2. Install adb drivers and testing adb
3. Back up your data and settings
4. Install FWDN drivers
5. Flash MalaRom to Tablet
6. Restore settings
7. Fix small issues on the tablet
8. Install extra features

The steps should be followed in order as one process. Once you have turned on the tablet and connected it to the pc via USB, keep it turned on and keep the cable in until instructions says otherwise (in step 5).

Sometimes during the process, you are instructed to turn off the tablet. If you use Androids "Turn Off" function, and the USB cable is inserted, you will experience that the tablet will not turn off. Just slide the switch to "Off".

Prepare
Turn on the tablet. Plug in the USB cable to the tablet and the pc. Make sure that the time and date on the tablet is correct. If time is incorrect, you can get problems with Android Market later!
Put on a pot of coffee. When it is finished you are ready to start the flashing process, which takes about same time as drinking one cup of coffee.

1: Identify your tablet

Android will tell you that USB is connected. Pull down the notification bar and turn on USB storage.

On your windows pc open "My Computer"/"Computer" and notice the size of the new drive:
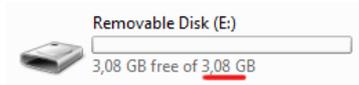
3.08 GB means M701 4GB HY (Hynix)

2.70 GB means M701 4GB MI (Micron)

1.35 GB means M701 2GB SA (Samsung)

Once finished, turn the tablet off and on again.

2: Install adb drivers and testing adb.

If you have used adb with this tablet on this pc, and therefore already have a working adb driver, you can skip this step. However it is a good idea to test adb as described in the end of this step.

Adb is "Android debugging bridge". It is software on both the pc and the device which enables them to communicate via USB. This can be used for all kind of things. You need it to back up and restore your settings and install extra features. Also if you read on forums you will often see references to adb. It is good to make it work and know what it is, in case you need it later.

The pc software is included in the MalaRom package and you do not need to install it. But you do need to install a driver. The driver I located in the folder WindowsADBDriver.

Installation

To install it, click the start button and choose Run. In the run dialog write "devmgmt.msc" and click OK:

This opens a window. In the window find "Other devices". Find the device with a yellow dot on it. It is probably named either "M57TE", "tcc92xx" or "Android Eclair":
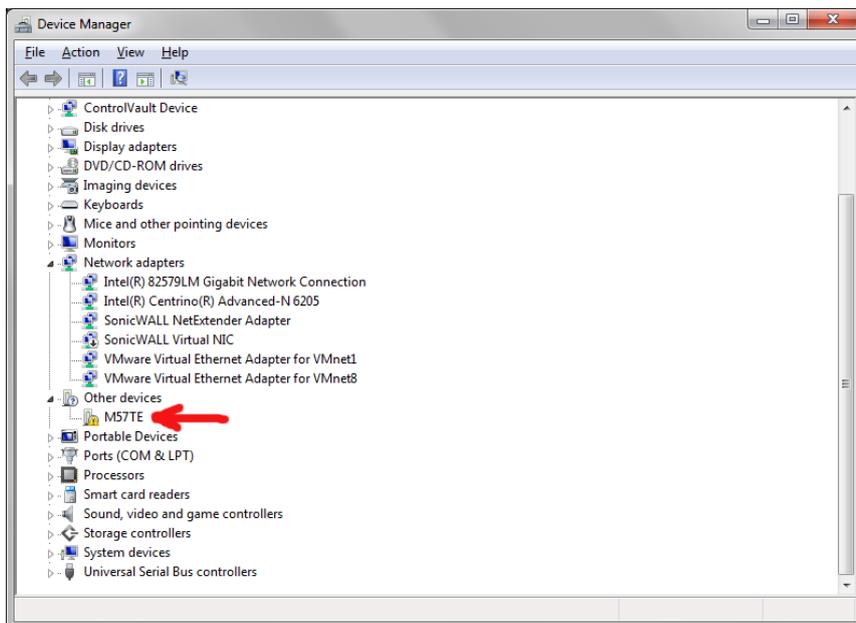
Right click on it and choose "Update Driver Software".

Then choose Browse for folder, and browse to the WindowsAdbDriver folder in the MalaRom package.

Click yes, next and accept as needed until the driver is installed.

Test

To test that adb works double click the file "adbshell.cmd" in the MalaRom package. It should bring up a black window like this:
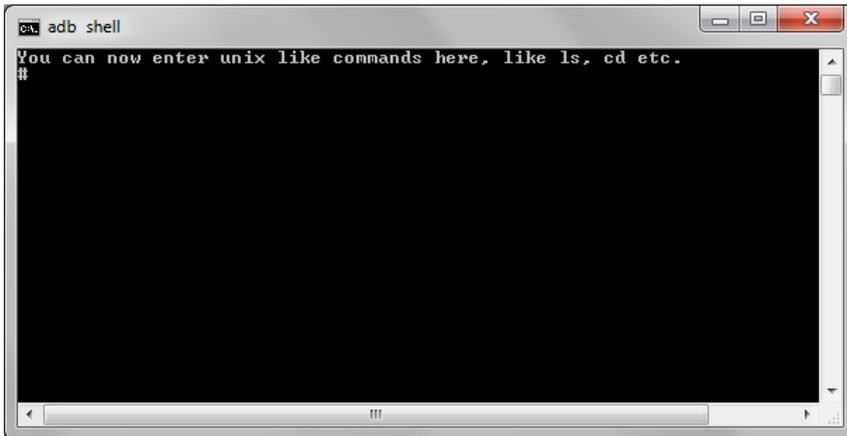
There might be a few strange lines in between. The important thing is that the last line is a "#".
This means that you have contact to the tablet and it is ready to receive commands.

3: Back up your data and settings.

You tablet has three different types of storage:

- Internal data storage. This is where apps, apps settings, and system settings are stored. All this is erased by flashing the new rom.
- Internal user storage. This is storage that you can use for what you want like music, movies etc. It is accessible via USB from the pc. The size of this is what we used to identify the tablet in step 1. All this is erased by flashing the new rom.
- External user storage (sd card). This should be removed before you started. If not turn off tablet, remove it and turn tablet on again.

Everything on Internal user storage that you put there needs to be backed up manually. Some apps might also put some data there, but this can be difficult to recognize. If you are in doubt, you can just copy everything to your pc.

In internal data storage you might want to back up some apps. I recommend the application Titanium backup from Android Market. It is not easy to use, but can back up everything of an app, also its data (also what is on the internal user storage). It uses the sd card to back up to. So you might want to reinsert it, and take it out (after turning off tablet) when you have finished.

Titanium backup will not show all your apps. Go to settings and choose the option "Use system busybox" to fix this.

IMPORTANT:

There are a few settings that you really need and that can be backed out automatic. Simply double click the file "BackupSettings.cmd". It will bring up a black window with the text something like this:

```
Retrieving data...
2 KB/s (36 bytes in 0.015s)
0 KB/s (43 bytes in 1.000s)
0 KB/s (249 bytes in 1.000s)
1 KB/s (18 bytes in 0.015s)
Press any key to continue . . .
```

Press Enter to close window. Now a new folder called "TabletSettingsBackup" should appear in the package folder. Open it and verify that it has the three files:

- Pointercal. This is calibration data for the touchscreen. It is not very important, but it is much easier to restore this file, than to calibrate screen again after flashing.
- wpa_supplicant.conf. This is your remembered WiFi networks, with usernames and passwords. When restoring this after flashing, you immediately get access to you WiFi networks.
- TabletInfo.txt. This one contains information you will need in step 5 (Flash MalaRom to Tablet). You should open it and check that it has info something like:
  ```
  Serial number:
  F1003435FA021263101229151043018
  MAC address:
  0x3435FA 0x021263
  0x3435FA 0x021263
  ```
  If your current system is Android 2.1 (Éclair) this file might not have the serial number, and the first line of the MAC address might just be "0x". But as long as you have one line with the full MAC address you are safe.

There should also be a file called softmac. In some cases it might not appear though. It is simply an extra backup of the MAC address of the WiFi card (is also in "TabletInfo.txt" file).

The MAC address is important to keep, because it is unique to the tablet. It is used to identify this specific tablet in Android Market and other places.

You might want to make a copy of the "TabletSettingsBackup" folder somewhere else as backup and for future use and safety.

If you choose to skip this this automatic backup, or for some reason the MAC address is not saved correctly in the "TabletSettingsBackup " folder, be sure to note the MAC Address of your tablet.
You can find it under Settings->Wireless and networks->WiFi settings->(Press Menu button)->Advanced.

You will need the MAC address for step 5 (Flash MalaRom to Tablet).

4: Install FWDN drivers.
If you have flashed your tablet before on this pc, and therefore already have the VTC drivers installed, you can skip this step.

Like adb FWDN is software on tablet and pc that allows them to communicate via USB. However FWDN is specific for this kind of tablet and is built directly in to the hardware. It can therefore work without Android started on the tablet. FWDN is used to do the actual flashing process.

The software itself is part of the MalaRom package and do not need to be installed. However, as with adb you need to install a driver on the pc, if you do not have it already. The driver is called VTC driver and the installation files is in the WindowsVTCDriver folder in the MalaRom package.

To install it, simply double click on the file that fits with you system. Press Next and Finish. You might get a message that "The program did not install correctly". Just press cancel.

5: Flash MalaRom to Tablet

So finally you are ready for the actual flashing process.

Turn off your tablet but leave the USB cable in. Slide the power switch to "Off". Double click on "FWDN_V7_v2.13.exe" file in MalaRom package. This will open the FWDN main window.

Configuring FWDN part 1

Scroll the drop down box with "Default download" to "Low format whole memory before download".

If there are any filenames listed under "File Path" click on one of them and press delete on the keyboard. Continue till list is empty and the window looks like this:
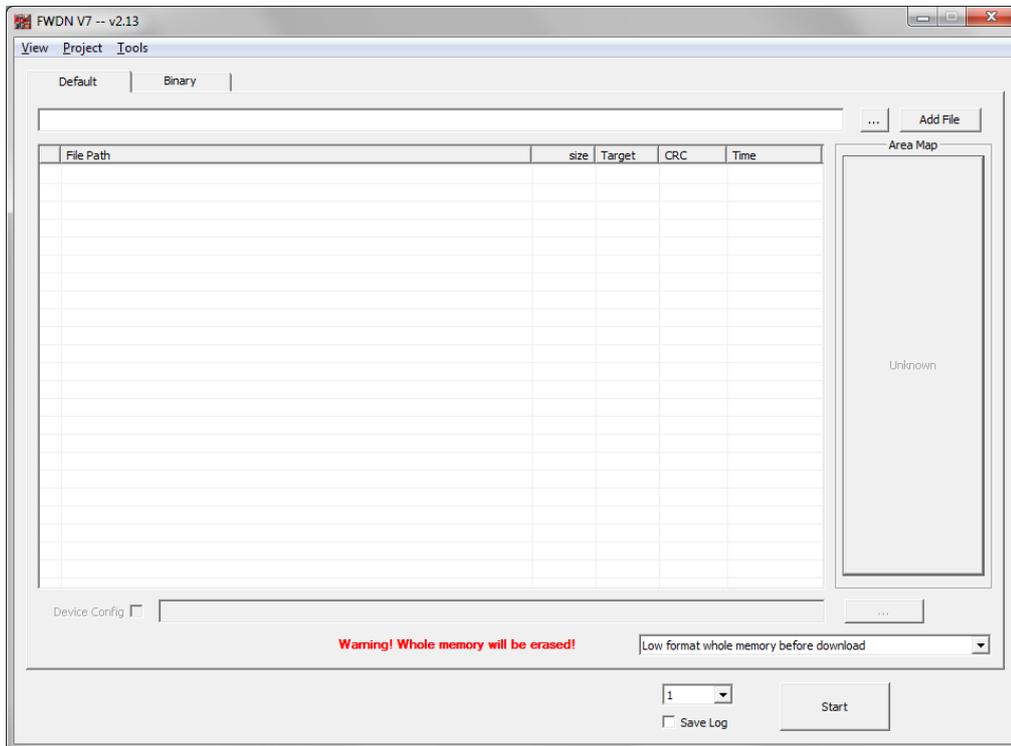
Click on the button labeled "…" which opens up a file selector:

Scroll the "Files of type:" to "All files (*.*)"

Browse to MalaRom package and select file MalaRom-1.1.0_mtd_4GB_HY.img (might be 4GB_MI or 2GB_SA depending of your model):
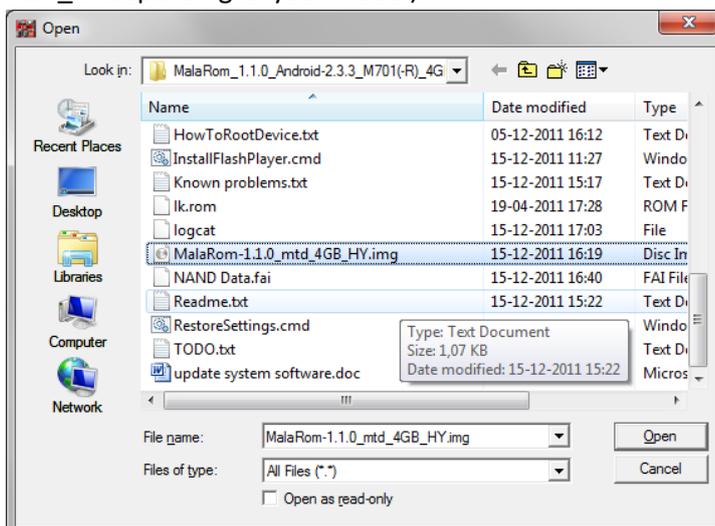
Click "Open", then the window closes.

Then press the button "Add File".
The file should be seen in list under "File Path".

Click the "…" button again.
This time hold down the Cntrl key on your keyboard and first click on the file "lk.rom", then on "NAND Data.fai" so are they both are blue:
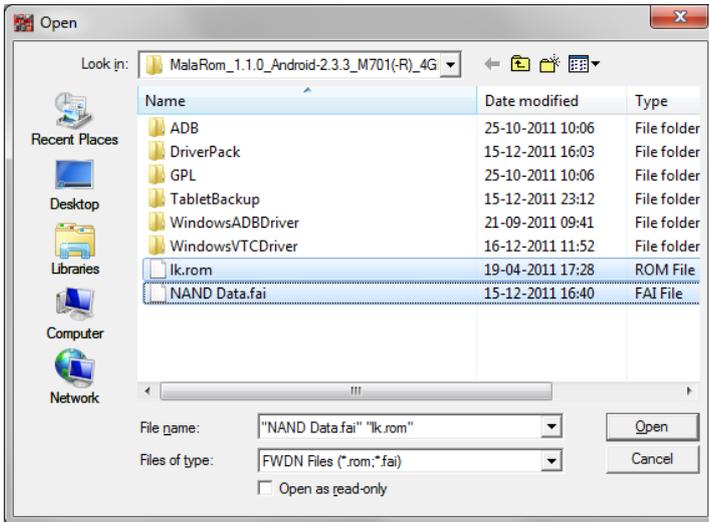
Click "Open" and then the "Add File" button.

You should now have 3 files listed in the window:
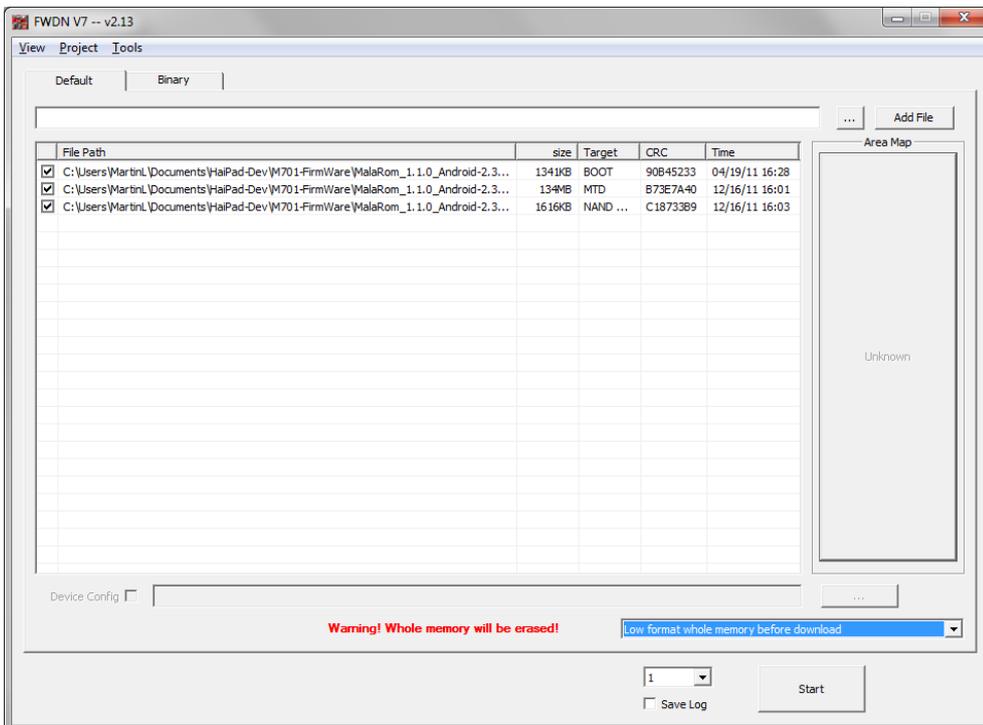
Select Tools->Options in the menu. This brings up a new window.

Put a mark in "Insert WiFI MAC Address".

Open the file "TabletInfo.txt" in the folder "TabletSettingsBackup" created in step 3.
Copy-Paste the two numbers from the MAC Address line into the two fields "OUI:" and "NIC:".
IMPORTANT: Do NOT use the numbers from this example. It will give you problems!

The window should now look like this (Here the MAC Address is set to the example from step 3):
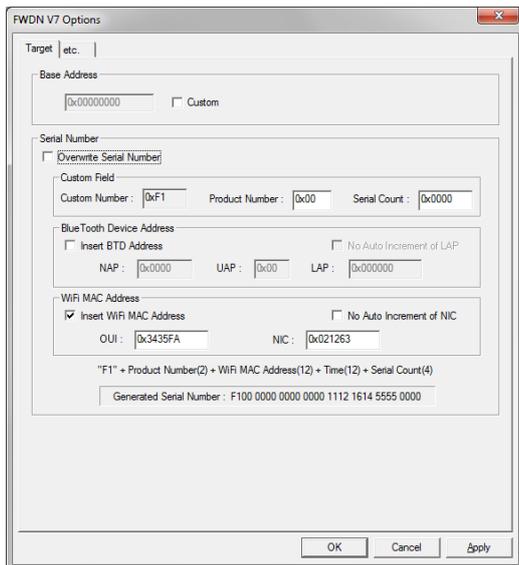
Click "OK".

Connect tablet to FWDN

Now you need to do a bit difficult procedure:

Hold the tablet with your left hand, so the USB cable points to the right. Hold it so that you press and hold the right rocker (Menu) button down. While holding it, slide the power switch to "On".

If you have an older tablet, you might have to hold both left and right side of the rocker down, while sliding the power switch to "On".

Do not release the rocker button yet!

If you did not skip step 4 (Install FWDN drivers) a balloon should come up from windows saying something like "Installing device driver" etc.

Then the FWDN window will open a new window:
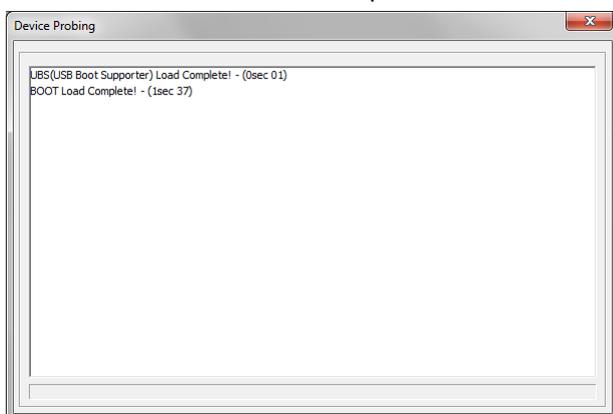
This window will quickly disappear by itself.
Then a new window appears which will also disappear by itself.
The tablet will show a "I love you" or a blue "Haipad" screen, which will stay on.

Now let go of the tablet and rocker button.

If you did the procedure incorrect, the tablet will start up normally and the two windows will not appear.
Slide the power switch to "Off" and try again.

Configure FWDN part 2

The main window of FWDN has changed a bit after the two windows appeared and disappeared:
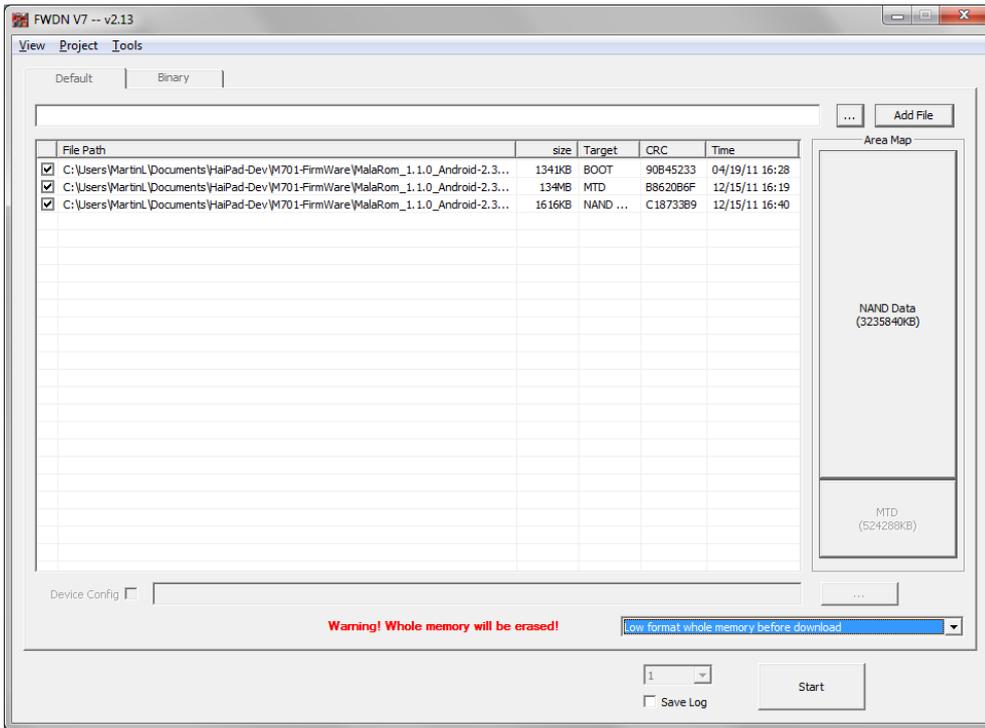
Press the big button called "NAND Data" on the right. This opens a new window:
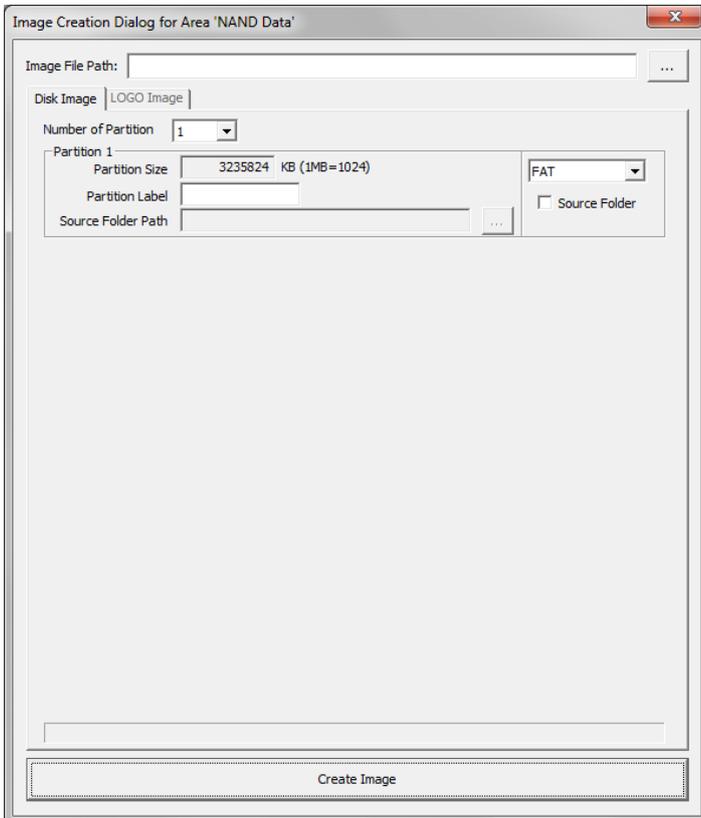
If you have used FWDN before on this pc, there might be a file in the field "Image File Path" Ignore that.

Click on the button "..." and browse to the file "NAND Data.fai":
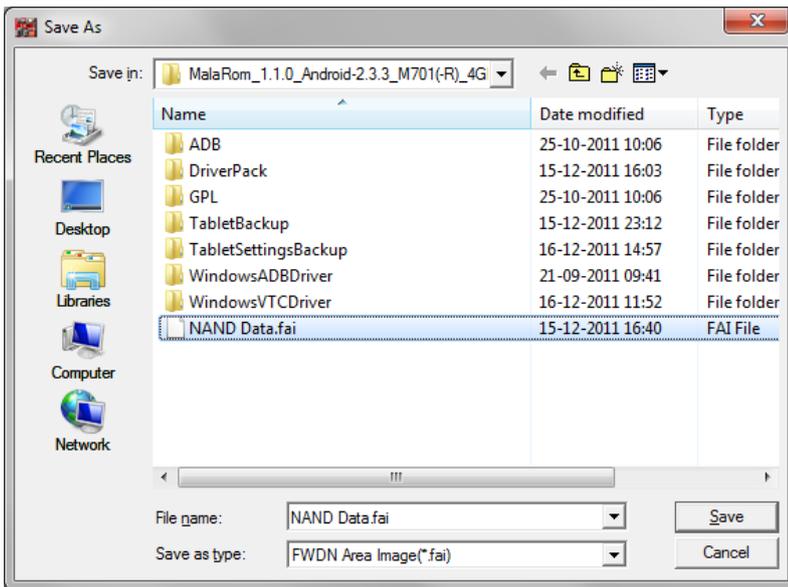
Click "Save". A dialog comes up asking to overwrite. Answer "Yes".

Click on the "Create Image button" and a dialog comes up:
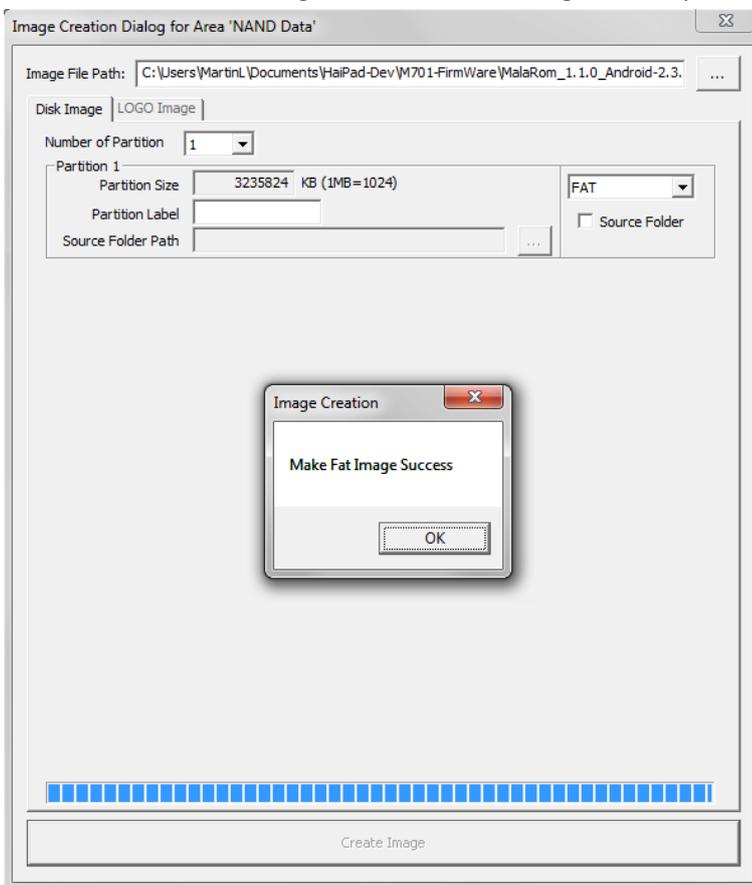
Click "OK"

Close window so you are back to the FWDN main window.

Start flashing

Now you are ready to start flashing. Click "Start". This opens a status window with a purple border:

The status bar will progress 3 or 4 times. Sometimes fast sometimes slow. The whole process takes about 5 minutes. Now go get that cup of coffee you put on earlier.

The flashing is finished when the border of the window turns green:

If the border turns red and there is a text in the window with the words "CRC Error" the tablet and rom are incompatible. Either you used the wrong rom (see step 1) or your tablet is not a Haipad M701 with 256 MB ram.

Now close the green window, close FWDN main window turn of the tablet by sliding power switch to "Off". The flashing is now complete.

6: Restore settings

If you completed step 3 (Back up your data and settings) you should now be able to restore your calibration and WiFi settings automatically.

Slide the power switch to "On". If the USB cable is still inserted, the tablet might turn on by itself. Otherwise turn it on normally. Wait for it to boot up. It takes a long time the first time.

When it has started up, it will show a white calibration screen.
Do not touch it! Simply double click the "RestoreSettings.cmd" file in the MalaRom package. It will bring up a black window with the text something like this:

```
Uploading data...
1 KB/s (43 bytes in 0.025s)
17 KB/s (249 bytes in 0.014s)
Tablet will reboot after you press return
Press any key to continue . . .
```

Press Enter to close window. Wait for the tablet to reboot by itself. It will take 20-30 seconds.

When the tablet is rebooted, it will reach a lock screen. Tip: You can unlock the tablet by pressing right rocker (Menu button) or the Menu button on the remote control.
It is much easier than using the slider on the screen.

Your tablet is now ready to use.

7: Fix small issues on the tablet

Requires working adb, see step 2.

There are 2 known issues with this rom.

- Location by WiFi does not work in Google Maps.
  To fix this double click on the file "EnableLocationByWiFi.cmd" in the MalaRom package with the tablet connected to the pc with the USB cable.
  This will open a dialog on the tablet. Click "Next". The dialog closes and now WiFi based location works.
- Right after a flash or a factory reset, the search button in the Market app will not work.
  To fix this, open the Google Search app on the tablet. Close Google Search app again.
  Now the search button works in Android Market.
  Sometimes the search stops working again. This is because Android market gets updated. Just repeat the procedure above.

8: Install extra features

Requires working adb, see step 2.

In the MalaRom package there are two extra sets of features:

- Adobe Flash Player 10.2. To install this, click on the "InstallFlashPlayer.cmd" file with the tablet connected to the pc via the USB cable.
- DriverPack. This is an advanced feature. It is a collection of linux drivers for USB devices, filesystems and much more. Most people will not need this.
  Its files are located in the "DriverPack". Please refer to the "ReadMe.txt" located in the folder.