

# ART

## **AAF Recovery Tool – V 3.7\* AV 7000/AV 700**

**A detailed overview of the ART features,  
Quick-Installation-Guide for the maxiubootloader  
and installation guide for AAF E2 images (Flash and USB)**



# PART II

Rev 1.0, May 2010

\*V 3.7 is current released version



The most important at the beginning....

## **Acknowledgements** (in alphabetical order)

To **Andy-1** and the AAF crew for operating and maintaining a fantastic board!

To **Black\_64**, who provides a lot of tools (not only for Atevio) and was not tired to answer my (sometimes silly) questions about ART. Finally for reviewing this document.

Special thanks to **Maic**, who supports creating this manual by providing an AV7000 for testing. So I could keep my family box still running without stress ☺.

To **SoLaLa**, who delivers not only the uboot and bootloaders. He provides a lot of information about bootloader installation, flashing the box and also reviews this document.

To all **users** of the board who will help with their feedbacks, issues and solutions to keep the board alive at an actual knowledge level.

# **Thank you!**



This manual is for use with AV 7000 (TwinTuner) and AV 700 (Single Tuner)  
 All tasks are common for both receivers. If you use this manual for AV 700 make sure that you use the correct software version.  
 Currently ART is available for AV 7000 and AV 700. The versions are only for use with the corresponding receiver!

All screenshots, commands and log files shown in this manual are referring to an Atevio AV7000.  
 They are may be created using different and older versions.

The AV7000 is identical with following other brands:

Reseller	Model	Reseller ID	Country
Fortis	FS-9000	20 00 00 00	Korea
Rebox	RE.9000HD	20 01 00 00	Belgium
Octagon	SF-1018	20 02 00 00	Germany
HDBox	FS 9300 HD	20 03 00 00	Czech Republic
UltraPlus	F-9000HD	20 05 00 00	New Zealand
Openbox	S8 HD PVR	20 06 00 00	Ukraine
Tiviar	F1 HD PVR	20 07 00 00	Switzerland/USA
ICECRYPT	S4000HDPVR	20 08 00 00	Great Britain
Atevio	AV 7000 HD	20 09 00 00	Germany
Skyway	Diamond	20 13 00 00	Russia

The AV700 is identical with following other brands:

Reseller	Model	Reseller ID	Country
Fortis	HS-9510 HD PVR	20 00 03 00	Korea
Rebox	RE.4000HD PVR	20 01 03 00	Belgium
Octagon	SF-1008	20 02 03 00	Germany
HDBox	FS 9100 HD	20 03 03 00	Czech Republic
UltraPlus	980 HD	20 05 03 00	New Zealand
Openbox	S5 HD PVR	20 06 03 02	Ukraine
Tiviar	S1 eco HD PVR	20 07 03 00	Switzerland/USA
Optibox	Koala HD	20 15 03 00	?
Atevio	AV 700	20 09 03 00	Germany
Skyway	Classic	20 13 03 00	Russia

The tables are may be not complete!  
 Information about identical clone boxes are found at  
<http://www.aaf-board.com/wbb2/index.php> and other sites in the internet.



**Important Note:**

**This software may be affects the functions and warranty of your HDTV SAT receiver!**

**Neither AAF Board nor any other person is responsible if anything works not as expected – except YOU!**

**The software is shared voluntary and non-commercial!  
If you don't agree with this don't use this software!**

**Use at your own risk!**



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Document revision history:

Release 1.0 – April 30th 2010 – Document created.

Please report any bugs or typos to the AAF Board or send a PN to FSC830!

*This document is written by FSC830*



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## Overview

For better ease of use and readability this manual is divided in several parts.

### **PART I:**

Basic informations about ART, required hard- and software and recommended connection settings are found here.

Contains also a “**Quick-Installation-Guide**” for the maxiubootloader, a guide for installing an **E2 USB Image** using the “**AAF Maxiboot Installer**” (AMI) and installing an **E2 Flash Image**.

### **PART II:**

Describes every single pane of ART in a very detailed way.

This section should be read carefully if any issues during the maxiubootloader installation are occurring to your system.

Also recommended for interested users who want to know some more details what ART can do.

### **PART III:**

Explains how to install the maxiubootloader using USB or TFTP method.

Some hints about troubleshooting.



## Requirements

### Required hardware:

Laptop or PC with MS Windows XP, MS Vista or MS Windows 7 and a serial connector (native COM Port (preferred) or USB2COM adaptor)  
Microsoft .NET Framework (at least V3.5) must be installed!  
A null-modem cable (not just a serial cable)  
Network equipment for connecting the receiver and the computer. This might could be a single cross-over LAN cable or at least two patch cables, and a switch or router.  
At least one USB stick for E2 images or bootloader installation

### Required software:

AAF Recovery Tool "ART" for your receiver.\*  
AAF maxiboot installer "AMI".\*  
An Enigma2 image, flash or USB version depends which type of E2 image you like to install.\*  
A terminal software (i.e. Hyperterminal, Putty, Teraterm) for logging and debugging.

Note: Putty is not able to transfer files. In some cases files need to be transferred using the KERMIT protocol. Ensure that the terminal software you are using supports KERMIT transfer.

**Using ART the receiver and the computer must be connected with serial and LAN interface!**

When using AMI only a LAN connection is required.

This manual covers not detailed information how to setup a network.  
Basic network knowledge is recommended.

\*) Please refer always to the AAF-board for current releases of the software!

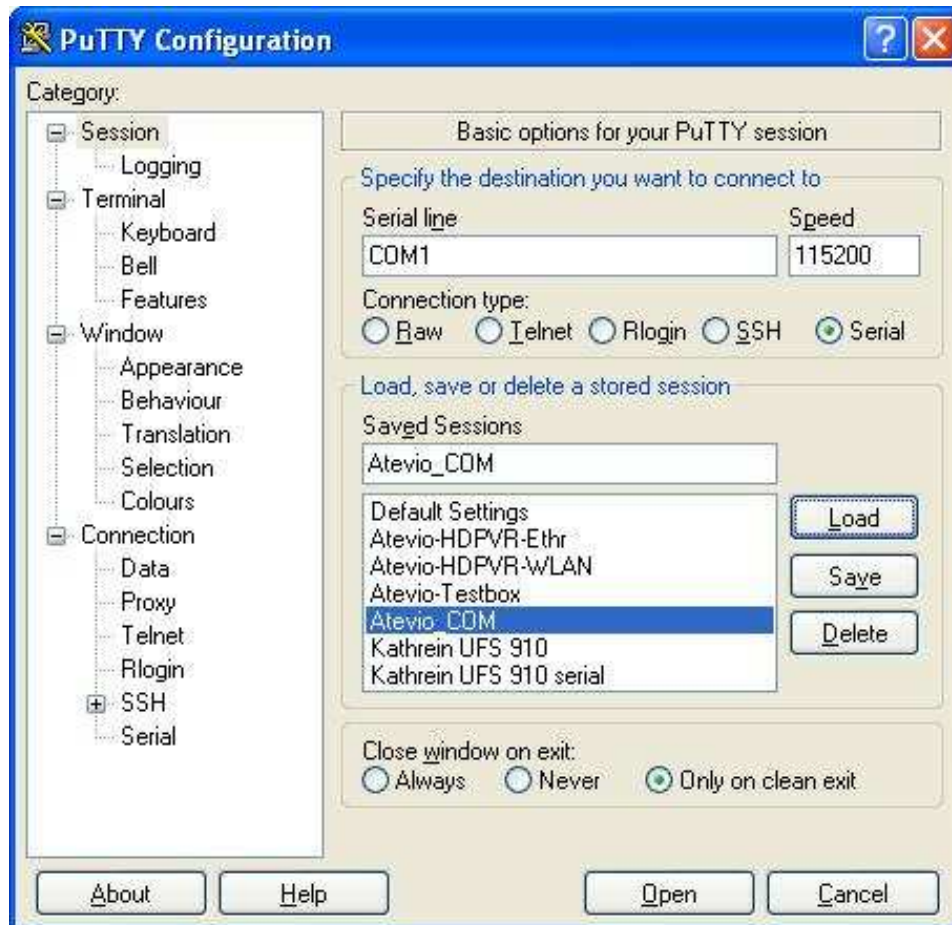


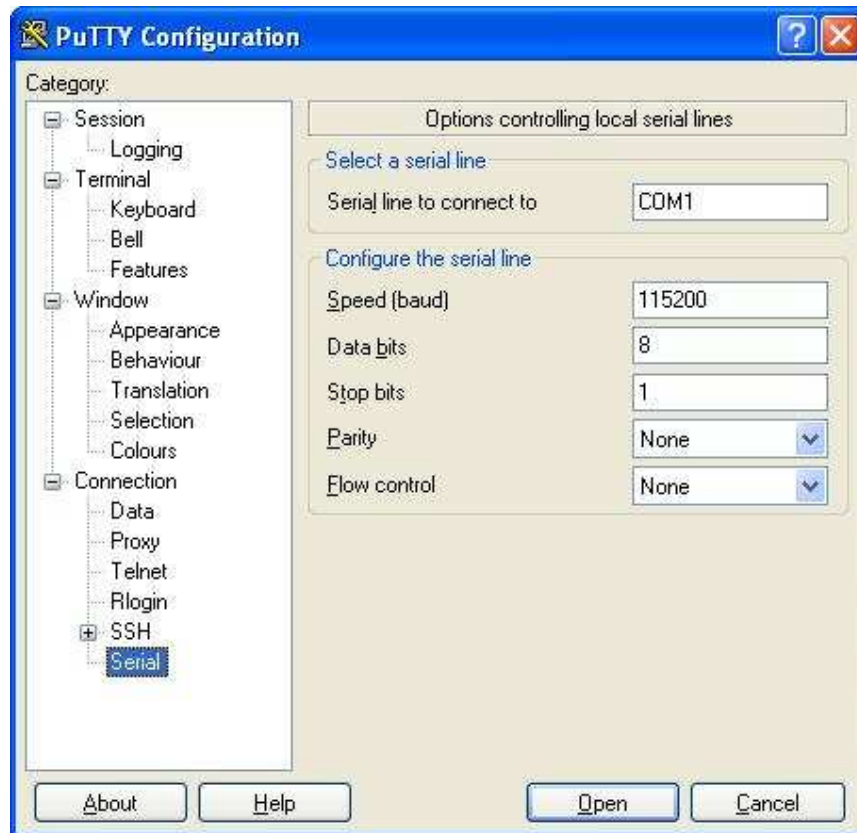
## Connecting computer and receiver

### ***Serial connection:***

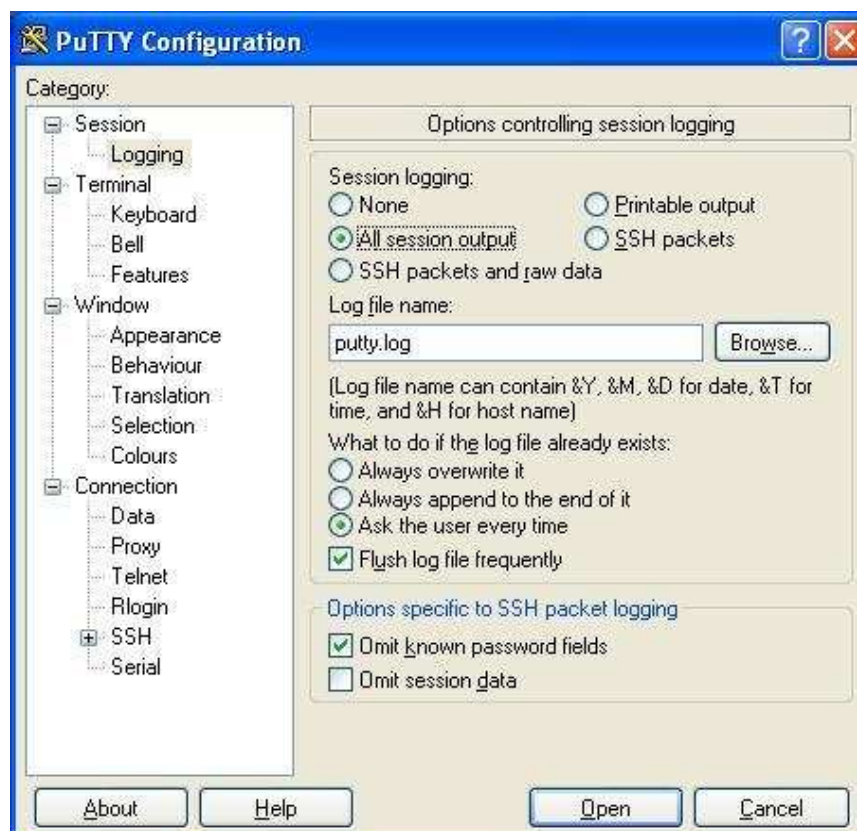
Settings for the serial connection are 115200,8,n,1,n

Example with Putty



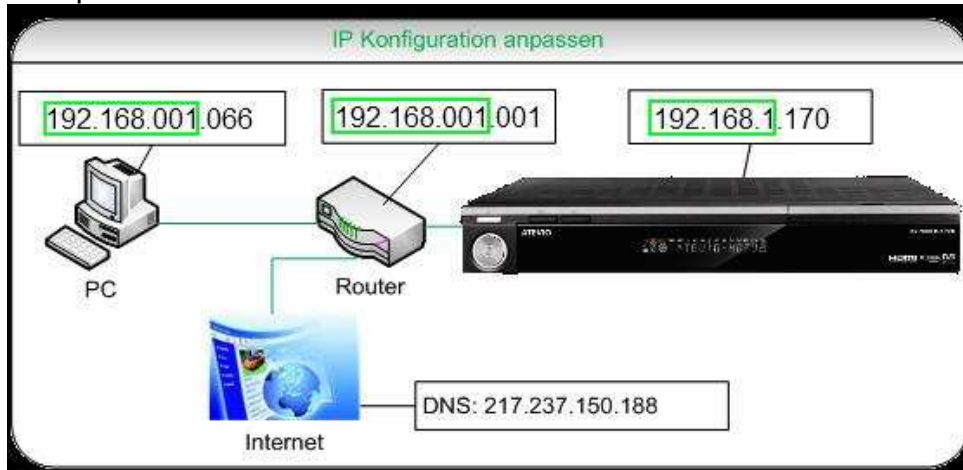


Putty allows you to log all sessions output



## Network connection

Computer and receiver are connected via a router:



Entries in the Settings pane for ART:

IP-Adress: 192.168.1.170  
 Gateway: 192.168.1.1  
 Server-IP: 192.168.1.66  
 Submask: 255.255.255.0

The DNS entry at your router depends on your provider!

Computer and receiver are connected via a crosswired LAN cable (or a switch):



**Note: if the pc uses a 1GB/s LAN interface a normal patch cable can be used.**

Entries in the Settings pane for ART:

IP-Adress: 192.168.1.170  
 Gateway: 192.168.1.66  
 Server-IP: 192.168.1.66  
 Submask: 255.255.255.0



## Testing the connection:

Start your terminal program and connect to the receiver, then start the receiver. Type several times the enter or space key to interrupt the boot.

You should get an output like this:

A screenshot of a PuTTY terminal window titled 'COM1 - PuTTY'. The background is yellow. The text displayed is: 'U-Boot 1.1.2 (Jul 3 2009 - 12:01:20) - st2.0-14', 'rTs 01FrTs', and 'STi710x>' followed by a green cursor bar.

```
COM1 - PuTTY
U-Boot 1.1.2 (Jul 3 2009 - 12:01:20) - st2.0-14
rTs 01FrTs
STi710x>
```

(Picture shows the original bootloader AV7000)

Typing printenv shows the settings (extract).

A screenshot of a PuTTY terminal window titled 'COM1 - PuTTY'. The background is yellow. The text displayed shows the output of the 'printenv' command, listing various boot parameters such as bootdelay, baudrate, board, targetname, bootcmd, hwnfconf, nfs\_server, ipconf, and bootargs.

```
COM1 - PuTTY
STi710x> readenv
Unknown command 'readenv' - try 'help'
STi710x> printenv
bootdelay=0
baudrate=115200
board=stb7100ref_27
targetname=muso
bootcmd=bootm a0300000
hwnfconf=set nwhwnet device:eth0,hwaddr:$ethaddr
nfs_serverconf=set nfs_server nfsroot=$serverip
ipconf=set ipaddrcfg ip=$ipaddr
cramfsbootargs=run hwnfconf;run ipconf;set bootargs console=ttyAS1,115200 root=/dev/mtdblock3
rcfg::192.168.10.1:255.255.255.0:hmp7109::off nwhwconf=$nwhwnet bigphysarea=4060 stmmaceth=m
e:16 loglevel=0
idebootargs=run hwnfconf;set bootargs console=ttyAS1,115200 root=/dev/sda1 nwhwconf=$nwhwnet
msglvl:0,watchdog:4000,rxsize:16
nfsbootargs=run hwnfconf;run nfs_serverconf;run ipconf;set bootargs console=ttyAS1,115200 root
```

## Note:

During all flashing and testing for this manual the receiver and computer have been connected directly with a patch cable (computer is equipped with 1GB/s interface) and serial connection.



Where do you want to go from here?

Follow the links!

**[I like to install the maxiuboot asap!](#)**

**[I want to know more about ART!](#)**

**[Hints and troubleshooting](#)**



## ART in details

### ***What ART can do and what ART can NOT do...***

ART is a powerful tool which allows you easily updating/changing a bootloader or a flash image.

With ART you can prepare your receiver to use a multiboot environment.

If a maxiubootloader is installed, ART allows you the set/edit the bootargs.

Reverting to an original software is also supported as changing the reseller id to use other branded software.

A recovery image is included to flash back the receiver if necessary.

ART communicates with the receiver using the uboot console via serial and network interface.

ART can not be used like a telnet client (i.e. Putty or Hyperterminal).

So running commands as used in a telnet/SSH session cant be done!

Therefore ART cant perform a backup of the current software used in the flash!

If your receiver is not haltet during startup at the uboot console, ART can not communicate with the receiver.

Please shutdown the receiver, power on again and use ART to establish a connection with the receiver.

Note:

All build-in images/bootloaders are for an Atevio branded receiver.

Other branded images can be installed easily using this manual.

Using the ART feature [Original U-Boot Install](#) will set the reseller id back to Atevio!

If you need to flash back your brands original bootloader (i.e. Octagon), you need to download the “ubootflasherOrg.app” file designed for your model and copy it into the ART program directory.

**You must not use an original bootloader image (i.e. created with cat /dev/mtdblock0) this will crash your receiver!!!**

If you cant find this file, please ask in the AAF-board for more information/support!





The description of the ART features refers to the sequence as the panes are available in ART.

It does not refer to a sequence of any workflow or installation process!

Most of the options are only available is the maxiubootloader is installed.

So this part refers to a receiver which is using the maxiubootloader.

Differences if the receiver is using the original bootloader are marked in the text.

The maxiubootloader boots very fast, compared to the original bootloader.

To make sure that ART connects properly to the receiver, use following sequence:

First start ART, select the correct com port and than start the receiver.and click at the "Connect" button.

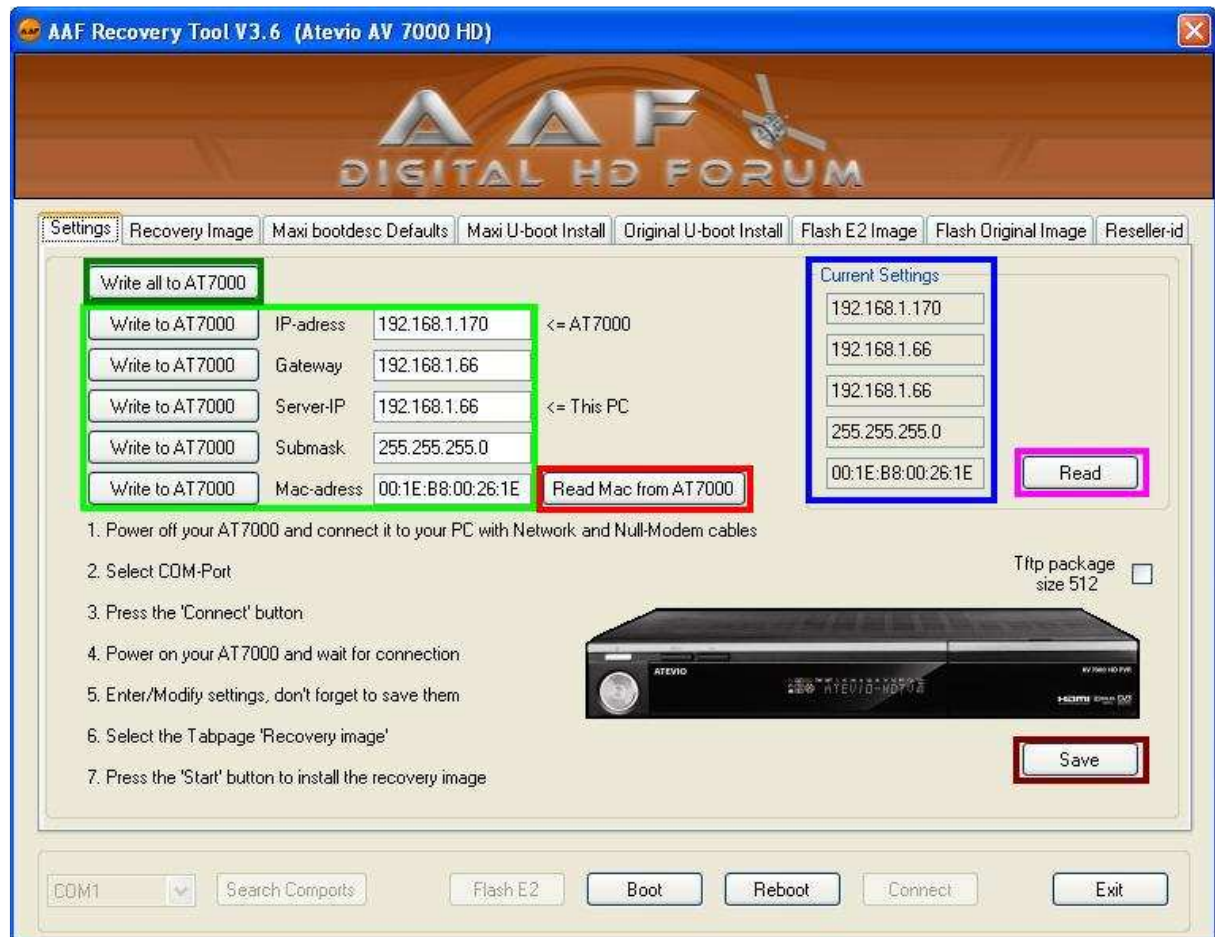
As long as ART is not connected to the recveiver the current settings are not displayed and the receiver **power led** remains red (V3.1b and above).





## The “Settings” pane

This is your “entrance” to ART.



One of the most important buttons are the “Write to AT7000” buttons (use each Write to AT7000 or Write all to AT7000).

Using these you will write/modify the environment variables of the bootloader.

**Note: the original bootloader does not have an environment. So the “Write...” buttons for the Gateway and Subnetmask are greyed and not selectable.**

If you installed the maxiubootloader a default Mac ID is used, masking the original Mac ID. With the “Read Mac from AT7000” button you can read your original Mac ID from the receiver and restore it using the “Write to AT7000” button next to it.

To store your settings for future steps, click the “Save” button. The “Save” button does NOT write anything to the AT7000, the settings are stored locally for ART. You can enter the Gateway IP and Subnetmask also, but you cant write these two to the receiver without the maxiubootloader!





The “**Current Settings**” fields shows the currently in the bootloader environment used values for the displayed variables.

If nothing is displayed (mainly if the receiver runs the original bootloader), click at the “**Read**” button to show the current values for the selected variables.



Another important item is the “**Tftp package size 512**” checkbox.

If you encounter permanent problems, (i.e. CRC errors) when installing the bootloader or an image, start the installation again after checking this checkbox.

Only than you should use this option, it will slow down the installation process, but ensures the installation!

All buttons in the lower line are available at all panes of ART.

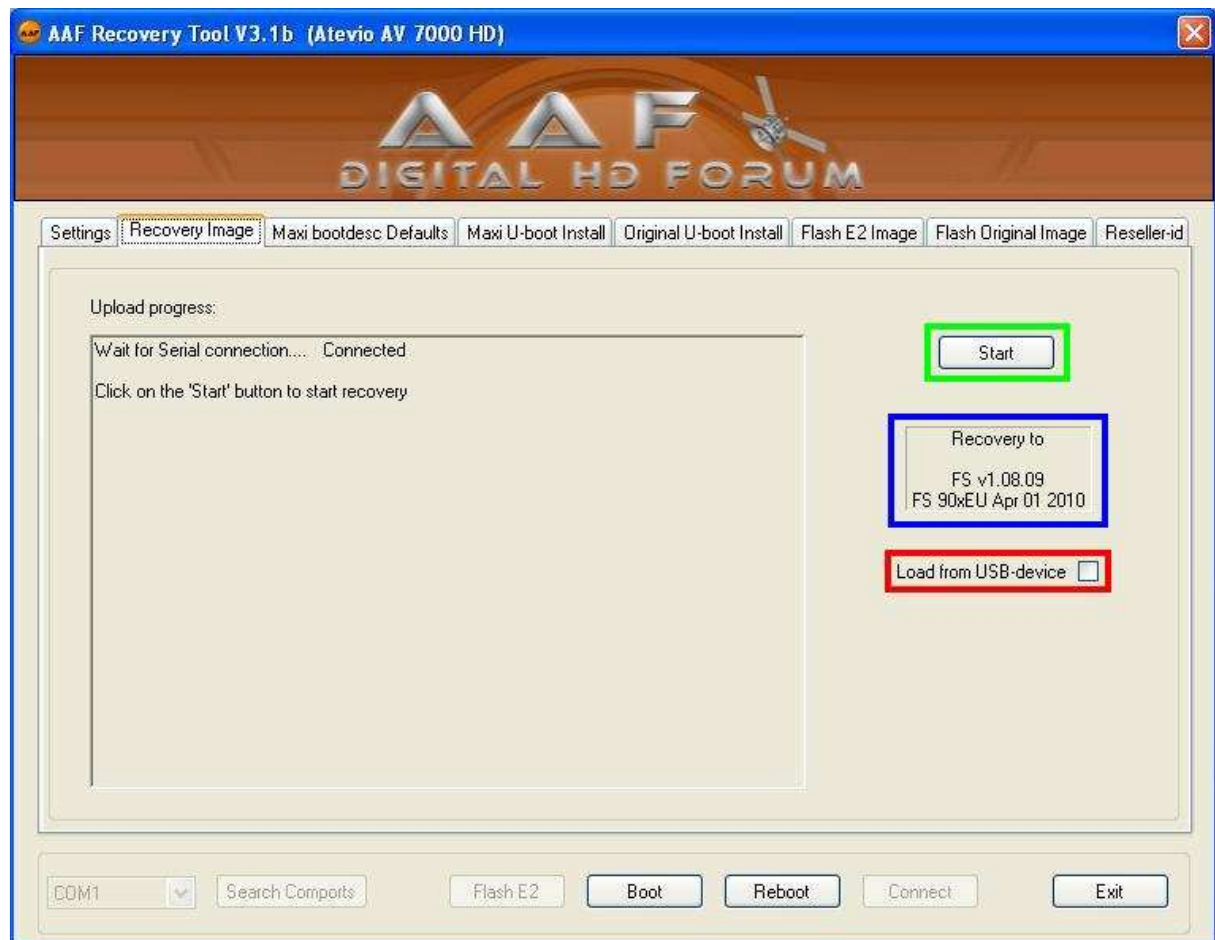
So the “**Boot**” and “**Reboot**” buttons. “**Boot**” will cause the receiver to proceed its startup, “**Reboot**” causes a complete reboot.

After the “**Reboot**” button ART will reconnect to the receiver (V3.1b and above), except after changing the bootloader. In that case you need to exit ART and restart it. Also you need to powercycle the receiver. This is necessary for a safe installation!

The “**Exit**” button does not need an explanation! ☺



## The “Recovery Image” pane



If something has gone wrong or to reset your receiver to a default state, ART provides a build-in recovery image. The recovery image version depends on the version of ART.

Note: in the some versions older than 3.1b is a typo. The recovery image version is displayed as **v1.08.08!**

Also, ensure, that you are using the correct ART version for your receiver!

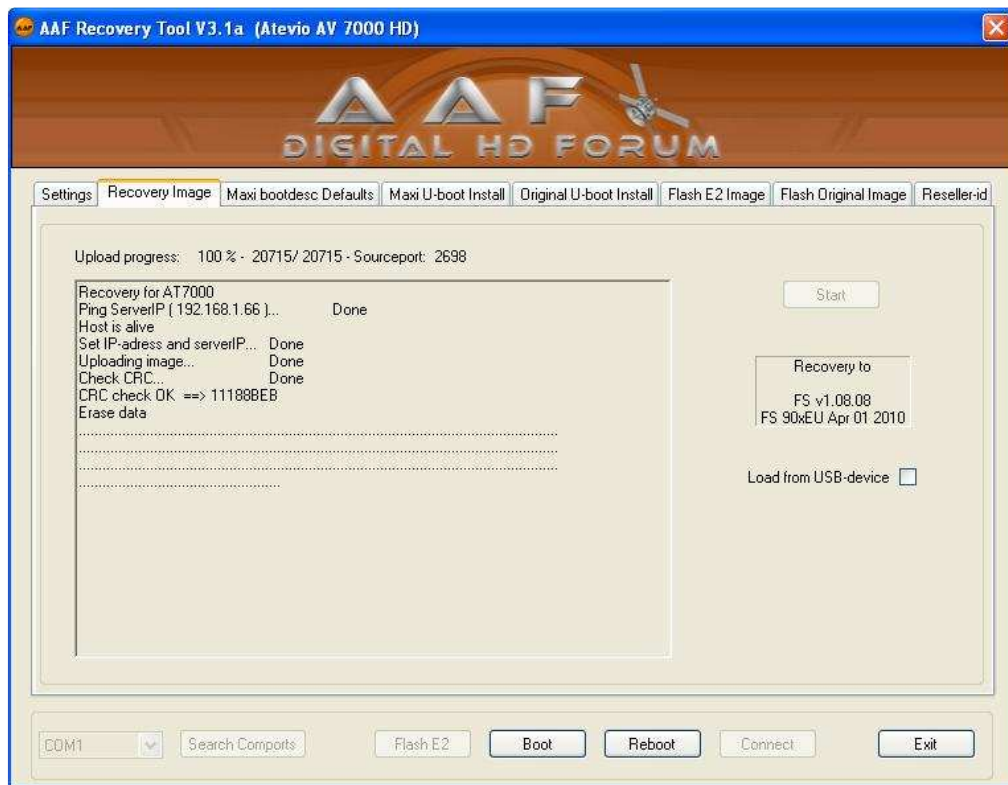
To install the recovery image just click the “**Start**” button.  
The recovery process will start immediately

Writing the recovery image to the receiver will not touch the bootloader.  
The maxiubootloader is still running after the recovery is done!

As an option, the image can be loaded from an USB device, check the “**Load from USB device**” checkbox.

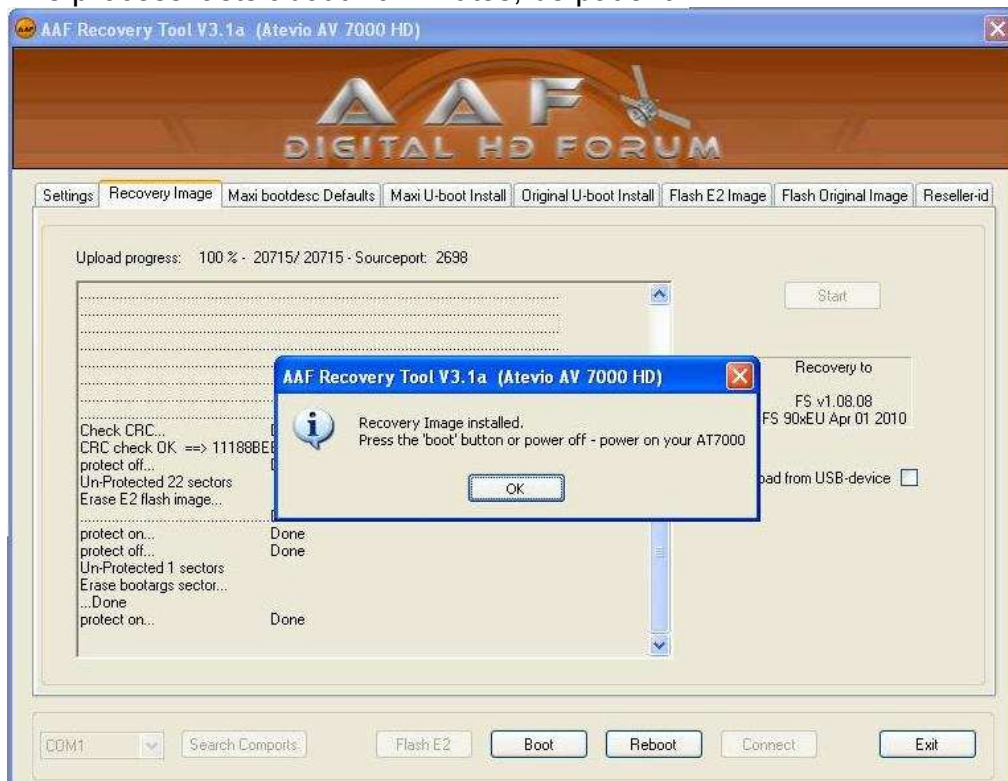


The recovery image installation is started...



and has finished.

The process lasts about 20 minutes, be patient!





When the recovery image has been installed you need to rewrite your bootargs!

The environment of the maxiubootloader is cleared by the recovery process.  
You can verify this by connecting via the serial interface:

```
COM1 - PuTTY
*
Board: STb7200-HDBOX [29-bit mode]

U-Boot 1.3.1 (Mar 23 2010 - 19:41:39) - stm23-0032
---created by TDT for general purpose---

DRAM: 128 MB
Flash: 32 MB
*** Warning - bad CRC, using default environment

In: serial
Out: serial
Err: serial
init frontpanel... done
Hit any key to stop autoboot: 0
HDBOX>
HDBOX> printenv
bootdelay=1
baudrate=115200
autoload=n
board=mb411
hwnfconf=set nwhwnet device:eth0,hwaddr:$ethaddr
ipconf=set netcfg $ipaddr:$serverip:$gatewayip:$netmask
bootcmd=bootmenu $menutimeout $default
menutimeout=2000
ipaddr=192.168.178.77
serverip=192.168.178.10
gatewayip=192.168.178.1
netmask=255.255.255.0
ethaddr=00:1d:ec:00:12:34
bootdesc U=---Flash---
bootcmd_0=run hwnfconf;run ipconf; run bootargs_0;bootm a0300000
bootargs_0=setenv bootargs console=ttyAS1,115200 root=/dev/mtdblock3 rootfstype=squashfs ip=$netcfg nwhwnet=$nwhwnet bi
gphysarea=4060 stmmaceth=msglvi:0,watchdog:4000,rxsize:16 loglevel=0
stdin=serial
stdout=serial
stderr=serial

Environment size: 648/65532 bytes
HDBOX>
```

Clearly seen: "Warning – bad CRC, writing default environment"

This message is typical when no bootargs are defined.

Also note that the network settings are again the maxiuboot default settings





Also this is clearly shown in the art\_log.txt: (some blank lines removed for better readability)

```
22.04.2010 21:36:17 Started AAF Recovery Tool V3.1a (Atevio AV 7000 HD)
22.04.2010 21:36:18 Opening port COM1 settings: 115200,8,N,1
22.04.2010 21:36:18 Send first stop
22.04.2010 21:36:22 Send stop 0
22.04.2010 21:36:22 In: serial
22.04.2010 21:36:22 Connected
22.04.2010 21:36:22 Start Tftp listener thread
22.04.2010 21:36:22 Out: serial...Err: serial
init frontpanel... done
22.04.2010 21:36:22 Hit any key to stop autoboot: 1 0 0 0
HDBOX> printenv ipaddr
22.04.2010 21:36:22 HDBOX>
22.04.2010 21:36:22 printenv ethaddr
22.04.2010 21:36:22 ethaddr=00:1e:b8:00:26:1e
HDBOX> printenv gatewayip
22.04.2010 21:36:22 printenv serverip
22.04.2010 21:36:22 serverip=192.168.1.66
HDBOX> printenv netmask
22.04.2010 21:36:23 netmask=255.255.255.0
HDBOX> md a00000e0 4a00000e0: 6978616d 6f6f6275 65722074 302e3176 maxiuboot rev1.0
HDBOX> md a00000f0 4a00000f0: 00000220 00012100 00000000 00000000 .....!.....
HDBOX> ping 192.168.1.66
22.04.2010 21:37:26 Using MAC Address 00:1E:B8:00:26:1E
STMAC: RTL8020/1 found
STMAC: 100Mbps full duplex link detected
22.04.2010 21:37:26 host 192.168.1.66 is alive
22.04.2010 21:37:26 HDBOX> set serverip 192.168.1.66;set ipaddr 192.168.1.170;set netmask 255.255.255.0
22.04.2010 21:39:33 crc a5000000 1d000000
22.04.2010 21:39:40 CRC32 for a5000000 ... a6cffff => 11188beb
22.04.2010 21:39:40 HDBOX> erase A0300000 A1FFFFFF. done...Erased 232 sectors
HDBOX> cp.b a5000000 A0300000 1d000000 .done
22.04.2010 21:48:21 HDBOX> crc A0300000 1d000000
22.04.2010 21:48:39 CRC32 for a0300000 ... a1ffffff => 11188beb
22.04.2010 21:48:39 HDBOX> protect off A0040000 A02FFFFFF..... done Un-Protected 22 sectors
22.04.2010 21:48:39 HDBOX> erase A0040000 A02FFFFFF done Erased 22 sectors
HDBOX> protect on A0040000 A02FFFFFF..... done Protected 22 sectors
HDBOX> protect off A0020000 A003FFFF . done Un-Protected 1 sectors
HDBOX> erase A0020000 A003FFFF . done Erased 1 sectors
HDBOX> protect on A0020000 A003FFFF
22.04.2010 21:49:40 Boot 1.3.1 (Mar 23 2010 - 19:41:
22.04.2010 21:49:40 39) - stm23-0032
22.04.2010 21:49:40 ---created by TDT for general purpose---
DRAM: 128 MB
Flash: 32 MB
22.04.2010 21:49:40 *** Warn22.04.2010 21:49:40 ing - bad CRC, using def22.04.2010 21:49:40 ault environment
In: serial
22.04.2010 21:49:40
Out: serial
Err: serial
Frontpanel got PowerOn reset...
22.04.2010 21:49:40 init frontpanel... done
22.04.2010 21:49:40 Hit any key to stop autoboot: 1
22.04.2010 21:49:44 bootmenu_timeout:2000,default:0
22.04.2010 21:49:44 add entry:0 - ---flash---
22.04.2010 21:49:44 add entry:1 - empty
22.04.2010 21:49:44 add entry:2 - empty
add entry:3 - empty
22.04.2010 21:49:44 add entry:4 - empty
22.04.2010 21:49:44 add entry:5 - empty
22.04.2010 21:49:44 add entry:6 - empty
22.04.2010 21:49:44 add entry:7 - empty
22.04.2010 21:49:44 add entry:8 - empty
22.04.2010 21:49:44 add entry:9 - empty
22.04.2010 21:49:44 entering bootmenu - default:0 - ---flash---
22.04.2010 21:49:46 selected bootdesc_9
22.04.2010 21:49:46 selected: ---flash---
22.04.2010 21:49:47 selected: bootdesc_9
22.04.2010 21:49:47 selected: ---flash---
22.04.2010 21:49:48 selected: ---flash---
22.04.2010 21:49:49 selected: ---flash---
22.04.2010 21:49:52 Exit button pressed
```

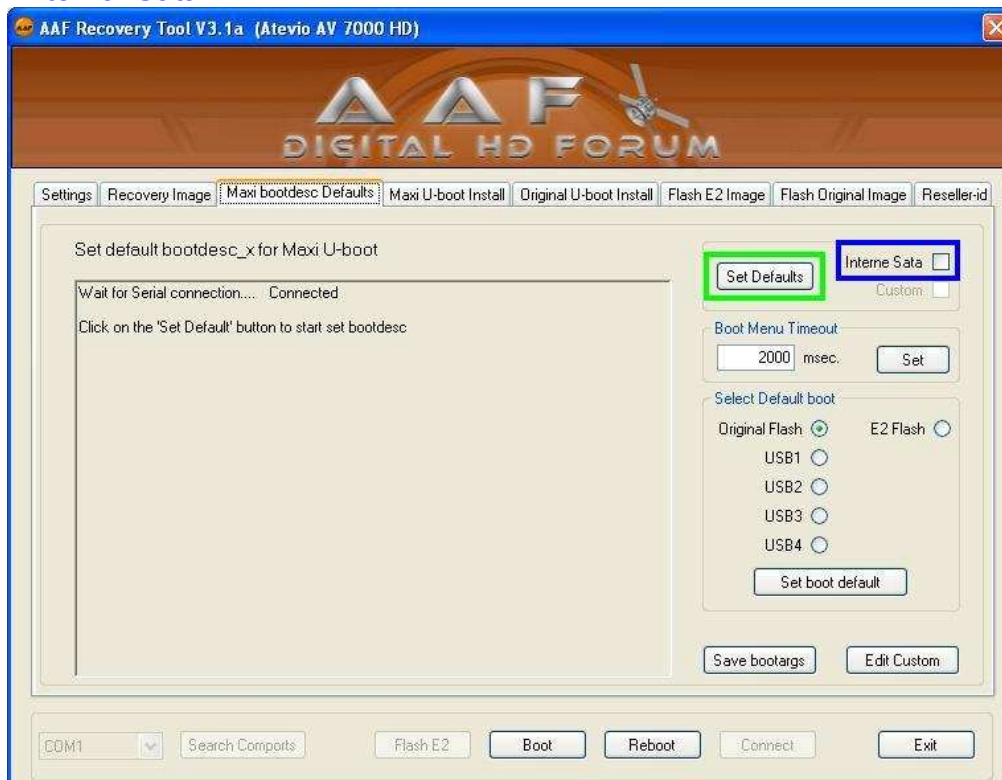


Now **rewrite** all network settings to the receiver and press “**Save**”



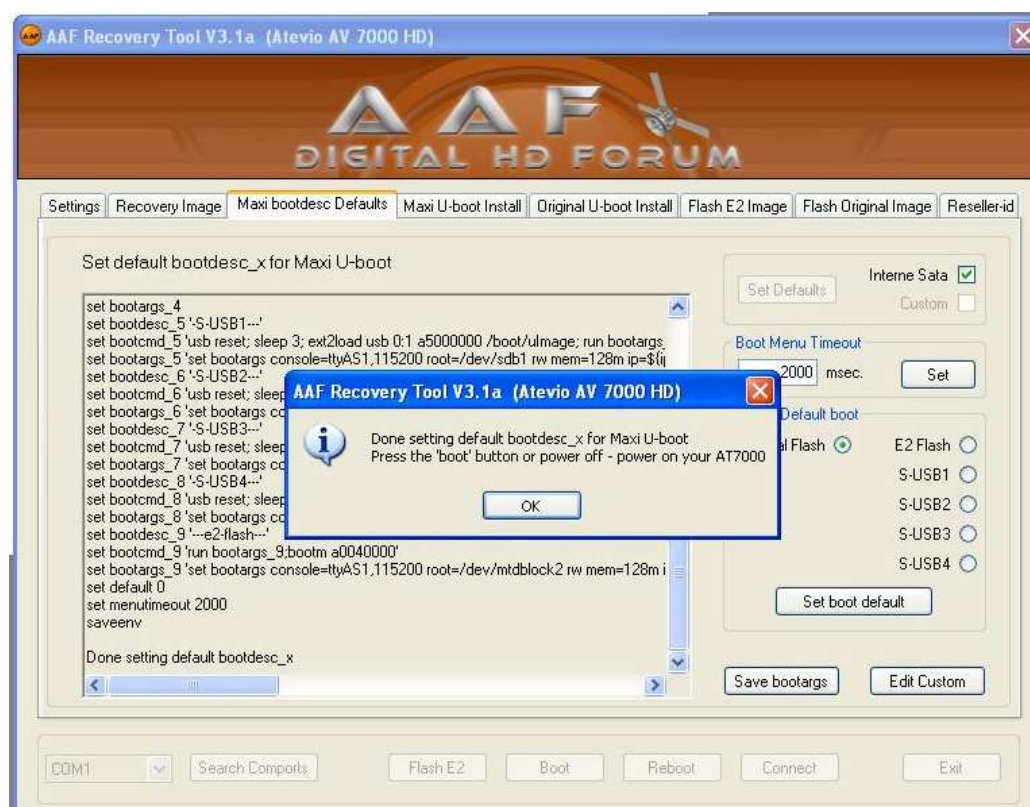
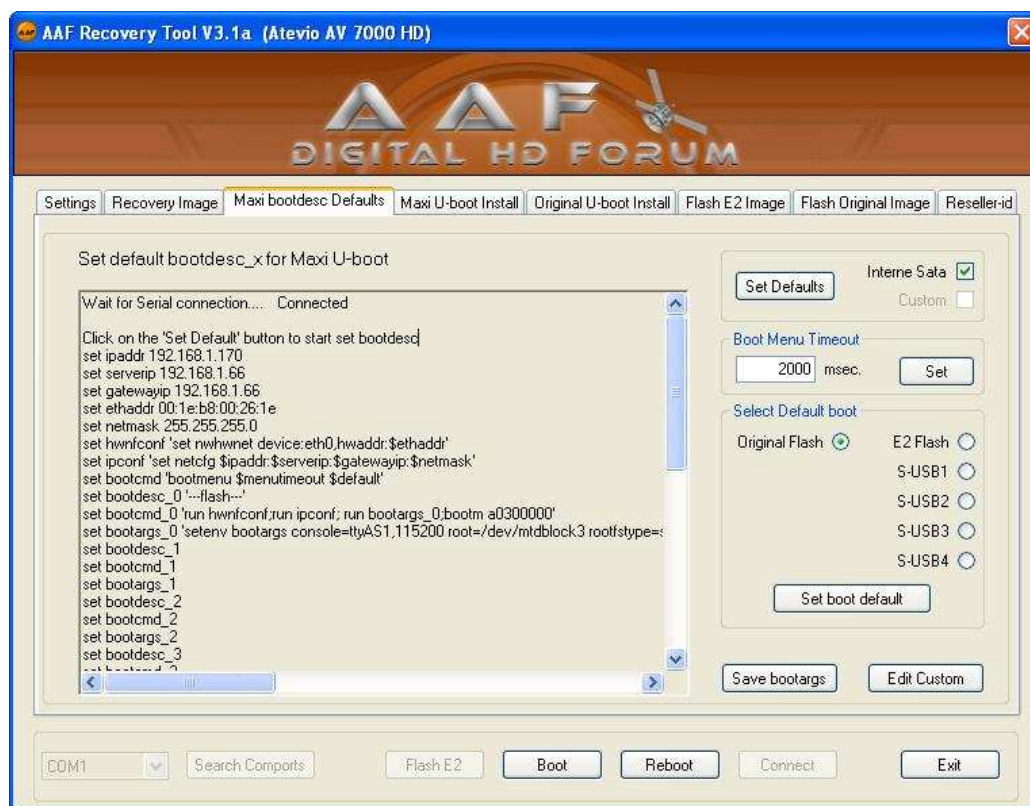
Move to the “Maxi bootdesc Defaults” pane and click at “**Set Defaults**” to set the default bootargs.

If your receiver is equipped with an internal SATA HDD, check the checkbox for “**Internal Sata**”!





The default bootargs are written to the maxiubootloader.

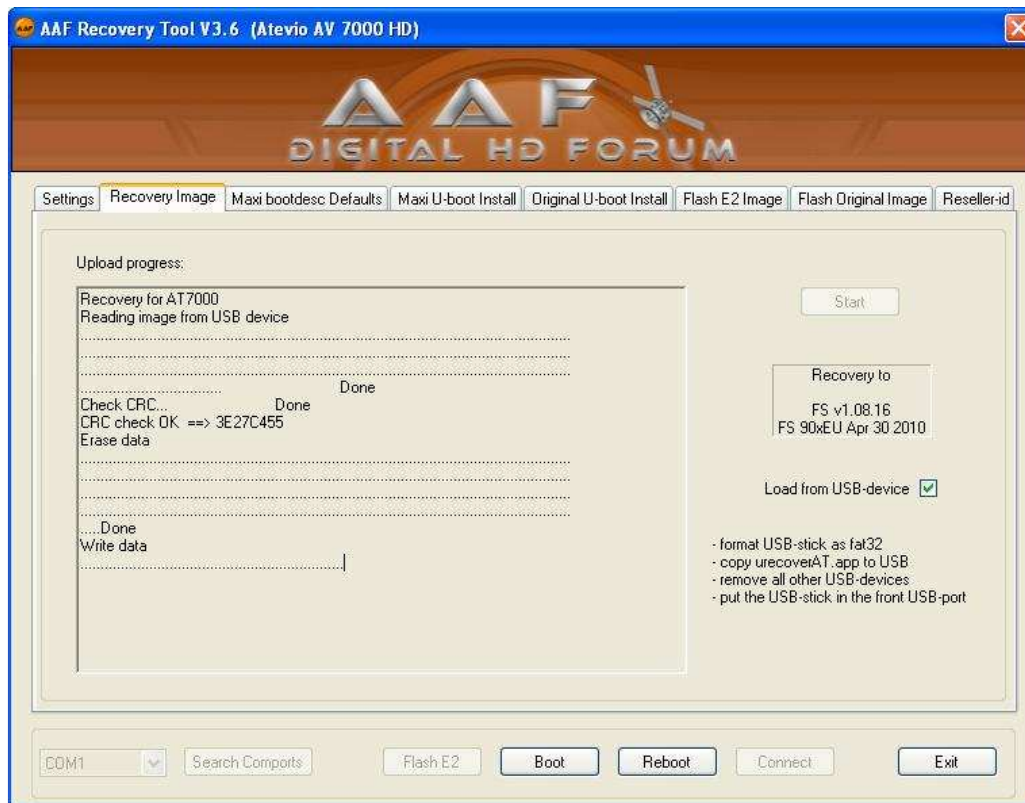


Reboot the receiver for activating the new settings!

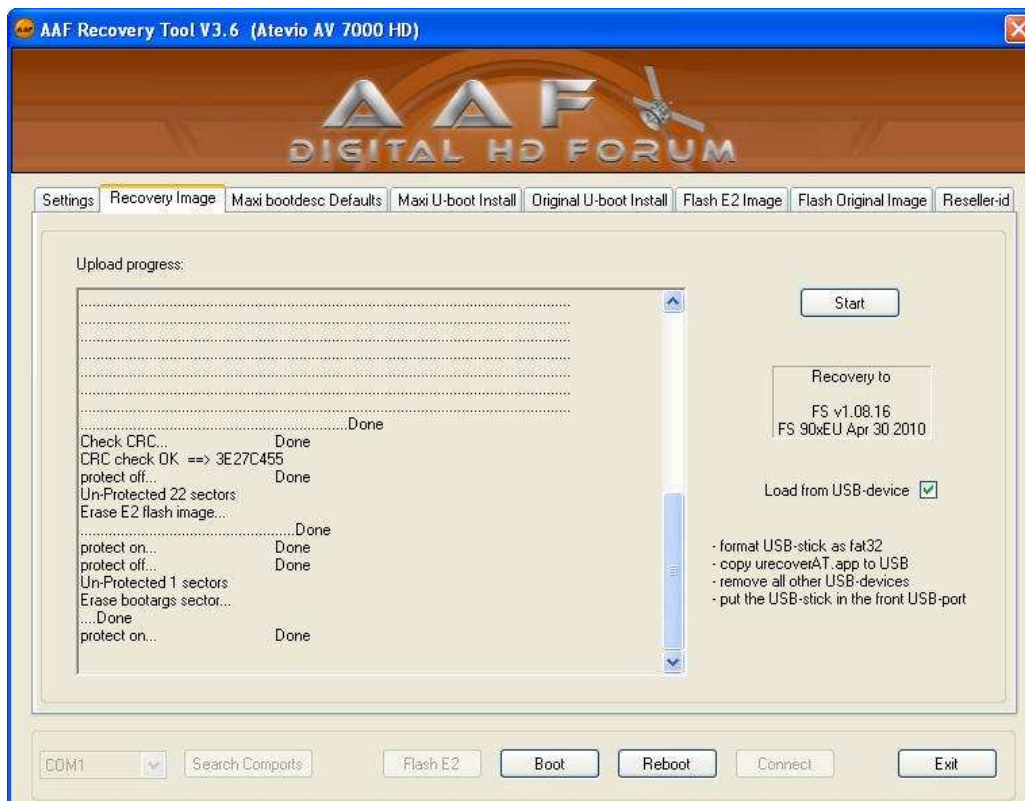




The Recovery Image can also be done using the option „Load from USB-device“.



Be patient, the task lasts about 20 minutes.







The art\_log.txt file shows (some empty lines removed):

```
03.05.2010 23:17:26 Started AAF Recovery Tool V3.6 (Atevio AV 7000 HD)
03.05.2010 23:17:27 Opening port COM1 settings: 115200,8,N,1
03.05.2010 23:17:27 Send first stop
03.05.2010 23:17:31 Send stop 0
03.05.2010 23:17:31 Connected
03.05.2010 23:17:31 Start Tftp listener thread
03.05.2010 23:17:31 Board: STb7200-HDBOX [29-bit mode]
U-Boot 1.3.1 (Apr 28 2010 - 15:01:04) - stm23-0032
---created by TDT for general purpose---
DRAM: 128 MB
Flash: 32 MB
In: serial
Out: serial
Err: serial
init Frontpanel... done, AV7000
Hit any key to stop autoboot: 1  0
HDBOX>
HDBOX> printenv ipaddr
03.05.2010 23:17:31
ipaddr=192.168.1.170
HDBOX> printenv ethaddr
ethaddr=00:1e:b8:00:26:1e
HDBOX> printenv gatewayip
gatewayip=192.168.1.66
HDBOX> printenv serverip
serverip=192.168.1.66
HDBOX> printenv netmask
netmask=255.255.255.0
HDBOX> md a00000e0 4
a00000e0: 6978616d 6f6f6275 65722074 312e3176  maxiuboot rev1.1
HDBOX> md a00000f0 4
30408704 bytes read
HDBOX> crc a5000000 1d00000
03.05.2010 23:19:16 CRC32 for a5000000 ... a6cffff ==> 3e27c455
03.05.2010 23:19:16 erase A0300000 A
03.05.2010 23:19:16 1FFFFFFF
03.05.2010 23:20:55 . done
03.05.2010 23:20:55 HDBOX>
03.05.2010 23:20:56 cp.b a5000000 A0300000 1d00000
03.05.2010 23:28:38 .done
HDBOX> crc A0300000 1d00000
03.05.2010 23:28:57 CRC32 for a0300000 ... a1ffffff ==> 3e27c455
HDBOX> protect off A0040000 A02FFFFFFF
03.05.2010 23:28:57
..... done
Un-Protected 22 sectors
HDBOX> erase A0040000 A02FFFFFFF
03.05.2010 23:29:07 . done
Erased 22 sectors
HDBOX> protect on A0040000 A02FFFFFFF
..... done
Protected 22 sectors
HDBOX> protect off A0020000 A003FFFFF
. done
Un-Protected 1 sectors
HDBOX> erase A0020000 A003FFFFF
. done
Erased 1 sectors
HDBOX> protect on A0020000 A003FFFFF
03.05.2010 23:30:47 Exit button pressed
04.05.2010 00:15:22 Started AAF Recovery Tool V3.6 (Atevio AV 7000 HD)
04.05.2010 00:15:23 Opening port COM1 settings: 115200,8,N,1
04.05.2010 00:15:23 Send first stop
04.05.2010 00:15:27 Send stop 0
Board: STb7200-HDBOX [29-bit mode]
U-Boot 1.3.1 (Apr 28 2010 - 15:01:04) - stm23-0032
---created by TDT for general purpose---
04.05.2010 00:15:40 Send stop 13
04.05.2010 00:15:40
DRAM: 128 MB
Flash: 32 MB
*** Warning - bad CRC, using default environment
```



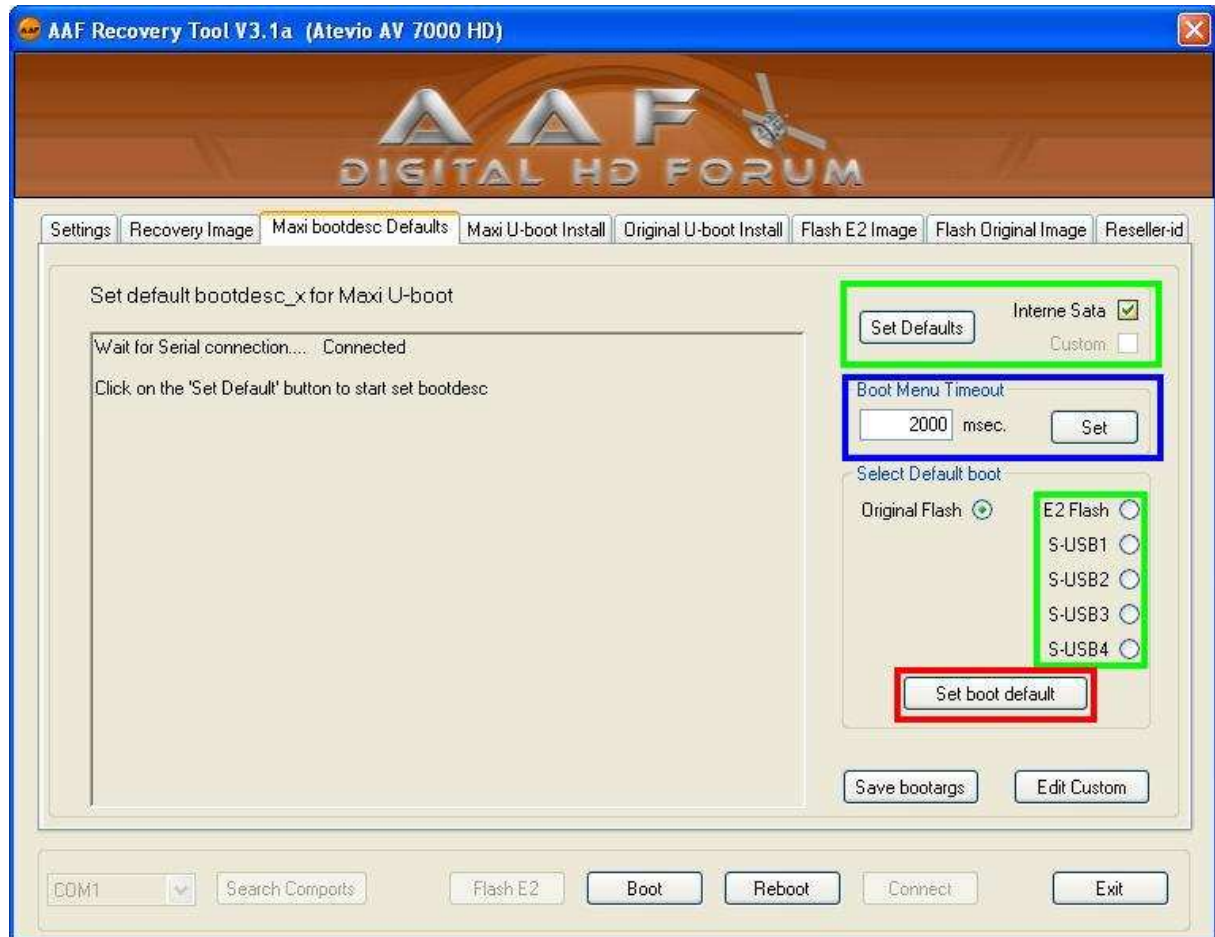
```
04.05.2010 00:15:40 Frontpan
04.05.2010 00:15:40 Connected
04.05.2010 00:15:40 Start Tftp listener thread
04.05.2010 00:15:40 el got PowerOn reset...
04.05.2010 00:15:40
init Frontpanel... done, AV7000
Hit any key to stop autoboot: 1  0
HDBOX> printenv ethaddr
ethaddr=00:1d:ec:00:12:34
HDBOX> printenv gatewayip
gatewayip=192.168.178.1
HDBOX> printenv serverip
serverip=192.168.178.10
HDBOX> printenv netmask
04.05.2010 00:15:41
netmask=255.255.255.0
```

The maxiubootloader starts with its default settings. Don't forget to set your network settings after the task.



## The “Maxi bootdesc Defaults” pane

### The default bootargs



Here you decide which bootargs are written to the environment. The “**Set Defaults**” is used in most common cases, you only need to take care if you are using an internal SATA drive or not.

The testreceiver was equipped with an internal SATA, so the checkbox is checked. Corresponding to this checkbox the boot options “**S-USBx**” are displayed (without SATA: **USBx**).

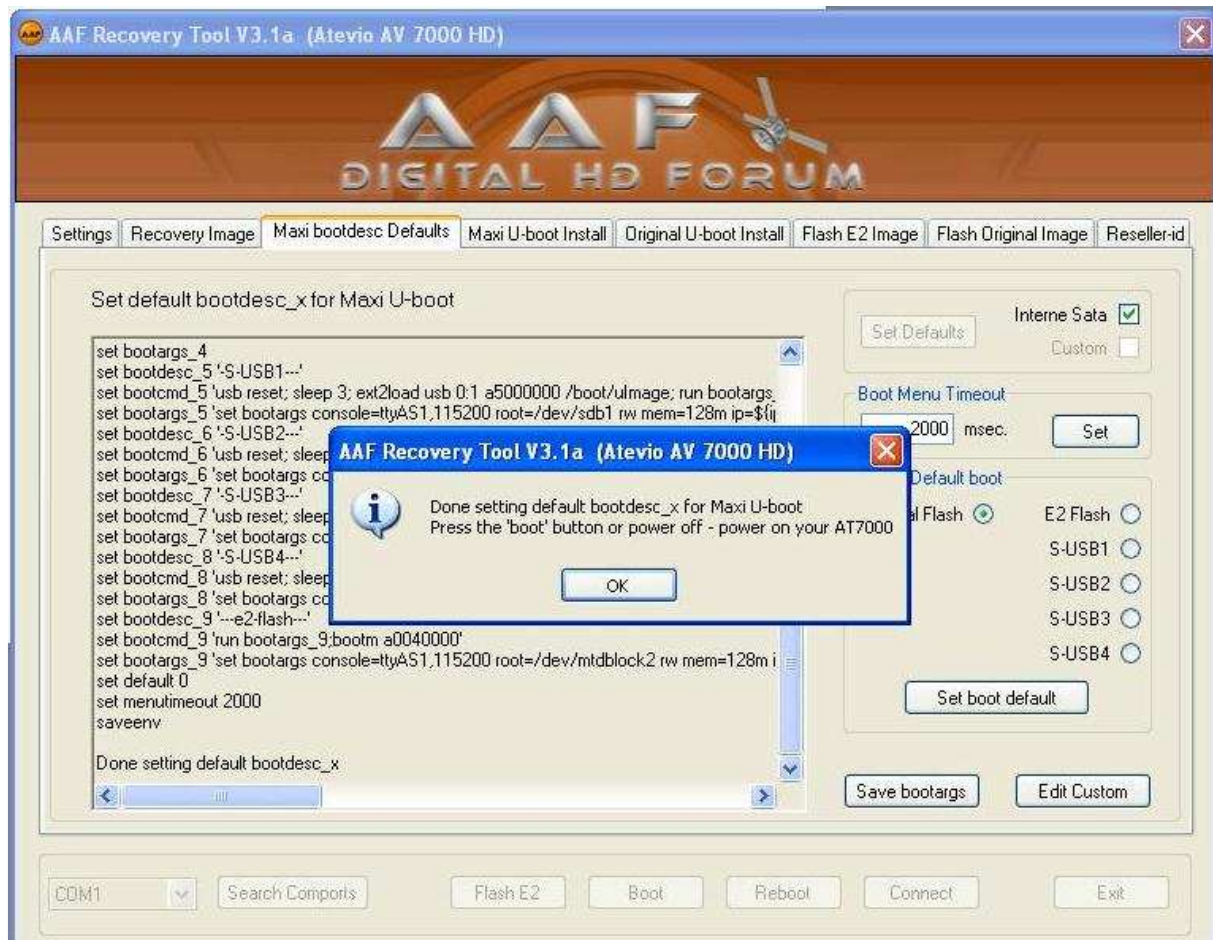
To write the bootargs click on “**Set Defaults**”.

If you dont change the **Boot Menu Timeout** and/or the **Set boot default** values they will used as shown.

If you like to set custom bootargs, please refer to the “[The custom bootargs](#)” section of this manual.

#### Note:

The “Save bootargs” button cant be used for saving the bootargs of the original bootloader. The original bootloader does not have bootargs!



The bootargs are written to the environment. You need to reboot the receiver to set the settings active.

The art\_log.txt for this task (some blank lines removed)

```
22.04.2010 21:09:35 Started AAF Recovery Tool V3.1a (Atevio AV 7000 HD)
22.04.2010 21:09:36 Opening port COM1 settings: 115200,8,N,1
22.04.2010 21:09:36 Send first stop
22.04.2010 21:09:40 Send stop 0
22.04.2010 21:09:40 In: serial
22.04.2010 21:09:40 Connected
22.04.2010 21:09:40 Start Tftp listener thread
22.04.2010 21:09:40 Out: serial Err: serial init frontpanel... done
Hit any key to stop autoboot: 1 0
HDBOX> printenv ipaddr
22.04.2010 21:09:40 ipaddr=192.168.1.170
HDBOX> printenv ethaddr
22.04.2010 21:09:40 ethaddr=00:1e:b8:00:26:1e
HDBOX> printenv gatewayip
22.04.2010 21:09:41 gatewayip=192.168.1.66
HDBOX> printenv serverip
22.04.2010 21:09:41 serverip=192.168.1.66
HDBOX> printenv netmask
22.04.2010 21:09:41 netmask=255.255.255.0
HDBOX> md a00000e0 4a00000e0: 6978616d 6f666275 65722074 302e3176 maxiuboot rev1.0
HDBOX> md a00000f0 4a00000f0: 00000920 00012100 00000000 00000000 .....
22.04.2010 21:09:48 HDBOX> set ipaddr 192.168.1.170
22.04.2010 21:09:48 HDBOX> set serverip 192.168.1.66
22.04.2010 21:09:48 HDBOX> set gatewayip 192.168.1.66
22.04.2010 21:09:48 HDBOX> set ethaddr 00:1e:b8:00:26:1e
22.04.2010 21:09:49 HDBOX> set netmask 255.255.255.0
```

```

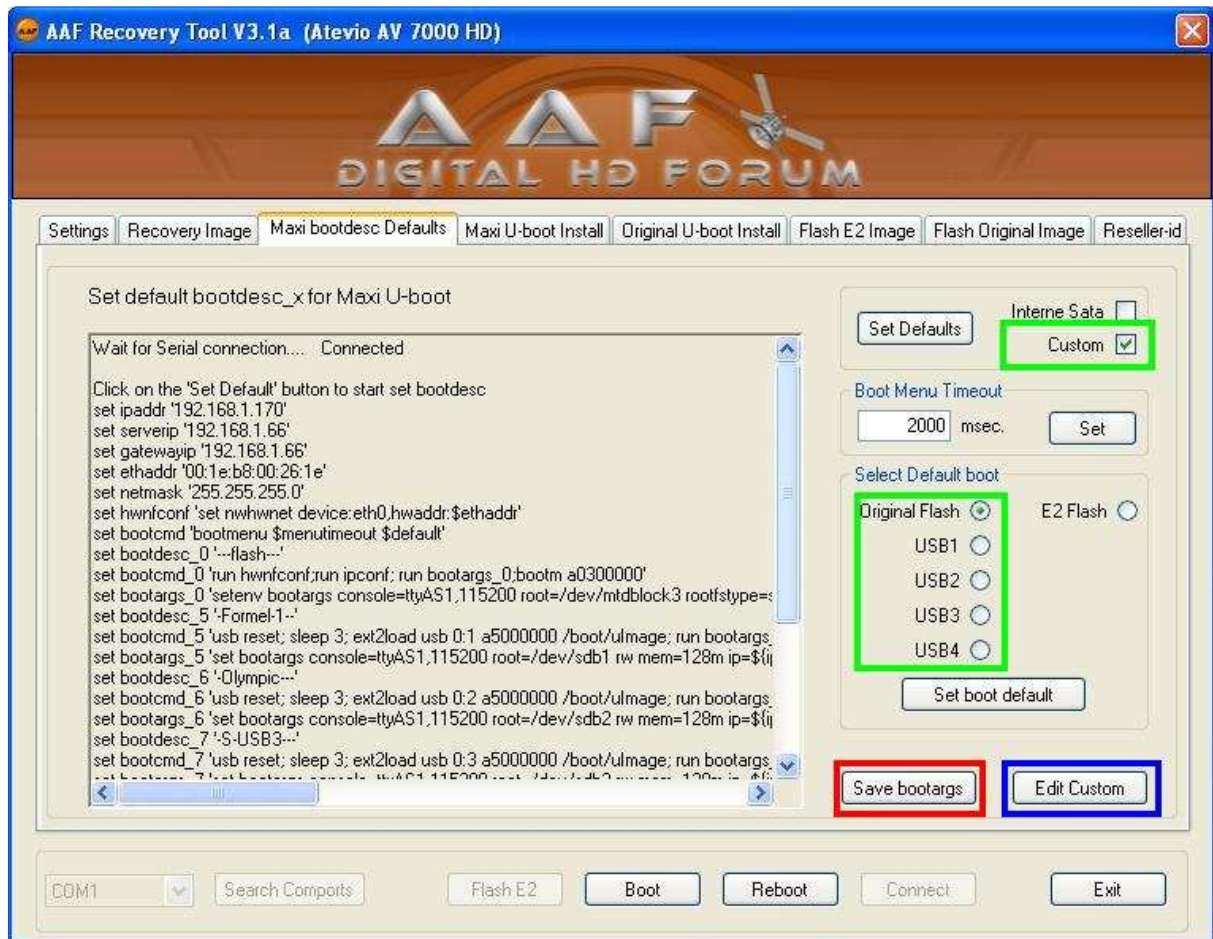
22.04.2010 21:09:49 HDBOX> set nwhwconf 'set nwhwnet device:eth0,hwaddr:$ethaddr'
22.04.2010 21:09:49 HDBOX> set ipconf 'set netcfg $ipaddr:$serverip:$gatewayip:$netmask'
22.04.2010 21:09:49 HDBOX> set bootcmd 'bootmenu $menutimeout $default'
22.04.2010 21:09:50 HDBOX> set bootdesc_0 '---flash---'
22.04.2010 21:09:50 HDBOX> set bootcmd_0 'run nwhwconf;run ipconf; run bootargs_0;bootm a0300000'
22.04.2010 21:09:50 set bootargs_0 'setenv bootargs console=ttyAS1,115200 root=/dev/mtdblock3 rootfstype=squashfs
ip=$netcfg nwhwconf=$nwhwnet bigph
22.04.2010 21:09:50 ysarea=4060 stmmaceth=msglvi:0,watchdog:4000,rxsize:16 loglevel=0'
22.04.2010 21:09:50 HDBOX> set bootdesc_1
22.04.2010 21:09:51 HDBOX> set bootcmd_1
22.04.2010 21:09:51 HDBOX> set bootargs_1
22.04.2010 21:09:51 HDBOX> set bootdesc_2
22.04.2010 21:09:51 HDBOX> set bootcmd_2
22.04.2010 21:09:52 HDBOX> set bootargs_2
22.04.2010 21:09:52 HDBOX> set bootdesc_3
22.04.2010 21:09:52 HDBOX> set bootcmd_3
22.04.2010 21:09:52 HDBOX> set bootargs_3
22.04.2010 21:09:52 HDBOX> set bootdesc_4
22.04.2010 21:09:53 HDBOX> set bootcmd_4
22.04.2010 21:09:53 HDBOX> set bootargs_4
22.04.2010 21:09:53 HDBOX> set bootdesc_5 '-S-USB1---'
22.04.2010 21:09:53 HDBOX> set bootcmd_5 'usb reset; sleep 3; ext2load usb 0:1 a5000000 /boot/ulmage; run bootargs_5;
bootm a5000000'
22.04.2010 21:09:54 set bootargs_5 'set bootargs console=ttyAS1,115200 root=/dev/sdb1 rw mem=128m
ip=${ipaddr}:${serverip}:${gateway
22.04.2010 21:09:54 ip}:${netmask}:at7000:eth0:off coprocessor_mem=4m@0x10000000,4m@0x10400000 rootdelay=5
nwhwconf=device:eth0,hwaddr:${ethaddr} init=/bin/devinit'
22.04.2010 21:09:54 HDBOX> set bootdesc_6 '-S-USB2---'
22.04.2010 21:09:54 HDBOX> set bootcmd_6 'usb reset; sleep 3; ext2load usb 0:2 a5000000 /boot/ulmage; run bootargs_6;
bootm a5000000'
22.04.2010 21:09:54 set bootargs_6 'set bootargs console=ttyAS1,115200 root=/dev/sdb2 rw mem=128m
ip=${ipaddr}:${serverip}:${gatewayip}:${netmask}:at7000:et
22.04.2010 21:09:54 h0:off coprocessor_mem=4m@0x10000000,4m@0x10400000 rootdelay=5
nwhwconf=device:eth0,hwaddr:${ethaddr} init=/bin/devinit'
22.04.2010 21:09:55 HDBOX>
22.04.2010 21:09:55 set bootdesc_7 '-S-USB3---'
22.04.2010 21:09:55 HDBOX> set bootcmd_7 'usb reset; sleep 3; ext2load usb 0:3 a5000000 /boot/ulmage; run bootargs_7;
bootm a5000000'
22.04.2010 21:09:55 set bootargs_7 'set bootargs console=ttyAS1,115200 root=/dev/sdb3 rw mem=128m
ip=${ipaddr}:${serverip}:${gatewayip}:${netmask}:at7000:et
22.04.2010 21:09:55 h0:off coprocessor_mem=4m@0x10000000,4m@0x10400000 rootdelay=5
nwhwconf=device:eth0,hwaddr:${ethaddr} init=/bin/devinit'
22.04.2010 21:09:55 HDBOX>
22.04.2010 21:09:56 set bootdesc_8 '-S-USB4---'
22.04.2010 21:09:56 HDBOX> set bootcmd_8 'usb reset; sleep 3; ext2load usb 0:4 a5000000 /boot/ulmage; run bootargs_8;
bootm a5000000'
22.04.2010 21:09:56 set bootargs_8 'set bootargs console=ttyAS1,115200 root=/dev/sdb4 rw mem=128m
ip=${ipaddr}:${serverip}:${gatewayip}:${netmask}:a
22.04.2010 21:09:56 t7000:eth0:off coprocessor_mem=4m@0x10000000,4m@0x10400000 rootdelay=5
nwhwconf=device:eth0,hwaddr:${ethaddr} init=/bin/devinit'
22.04.2010 21:09:56 HDBOX> set bootdesc_9 '---e2-flash---'
22.04.2010 21:09:57 HDBOX> set bootcmd_9 'run bootargs_9;bootm a0040000'
22.04.2010 21:09:57 set bootargs_9 'set bootargs console=ttyAS1,115200 root=/dev/mtdblock2 rw mem=128m
ip=${ipaddr}:${serverip}:${gatewayip}:${netmask}:at7000:eth0:
22.04.2010 21:09:57 off coprocessor_mem=4m@0x10000000,4m@0x10400000 rootdelay=0
nwhwconf=device:eth0,hwaddr:${ethaddr} init=/bin/devinit'
22.04.2010 21:09:57 HDBOX>
22.04.2010 21:09:57 set default 0
22.04.2010 21:09:57 HDBOX> set menutimeout 2000
22.04.2010 21:09:58 HDBOX> saveenv
22.04.2010 21:09:58 Saving Environment to Flash.... done
22.04.2010 21:09:58 Un-Protected 1 sectors
Erasing Flash.... done
22.04.2010 21:10:00 Erased 1 sectors
Writing to Flash.... done
22.04.2010 21:10:00 . done
Protected 1 sectors
22.04.2010 21:10:06 Exit button pressed

```





## The custom bootargs



If the default bootargs will not apply to your environment, ART offers the option “Custom” to set your own, custom bootargs.

Using ART for the custom bootargs minimizes the risk of setting wrong bootargs, causing the receiver - in a worst case scenario – not to boot any more.

Anyhow: using the “Custom” option, you **should always know** what are you doing!

It is recommended to write the default bootargs first as described before in this manual.

Click at the “Save bootargs” button. A popup window appears, asking for a location where to store the file “custombootargs.txt”. The filename is mandatory for writing the custom bootargs. Do not change it.

The default path is %programdir%\ART Recovery tool\logs.

Click at the “save” button to save the file.

Copy (don’t move!) this file to %programdir%\ART Recovery tool (one directory level above).



**Note:**

As long as no file “custombootargs.txt” is present in the ART program directory, the checkbox remains unselectable!

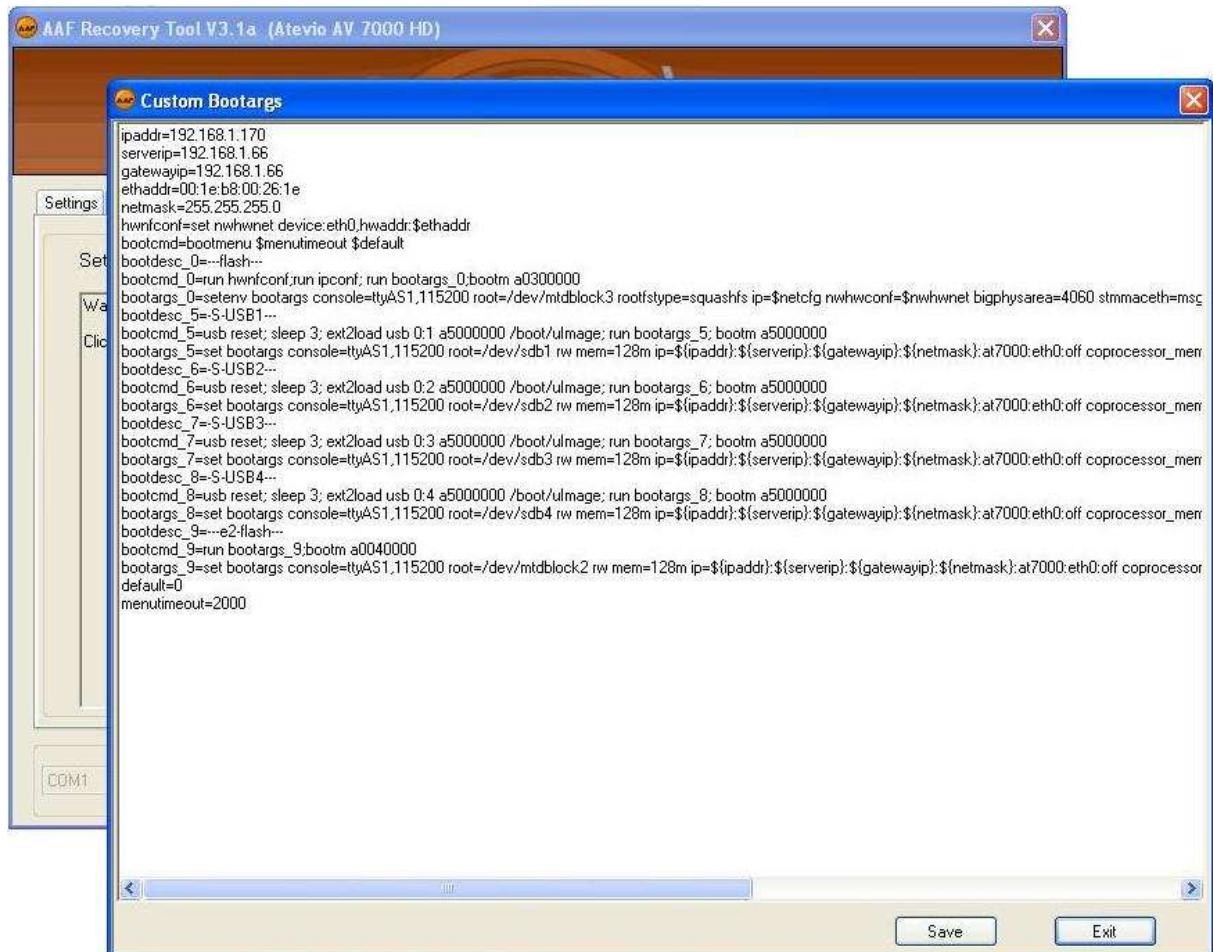
Then check the “**Custom**” checkbox. When checked, all settings prior made to this (i.e. checking the “Internal SATA”, changing the Default boot or menu timeout) will be obsolete.



Now click at the “Edit Custom” button.

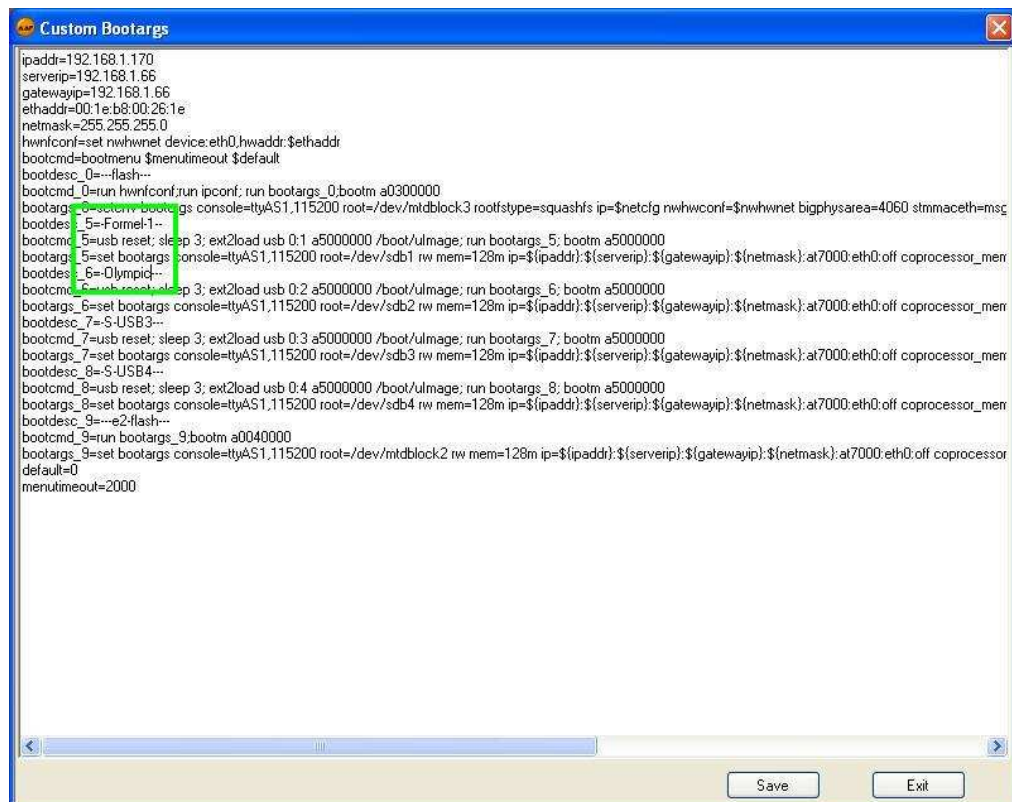
A new window opens, providing you to edit the text file.

**Again: be sure what you are doing!**



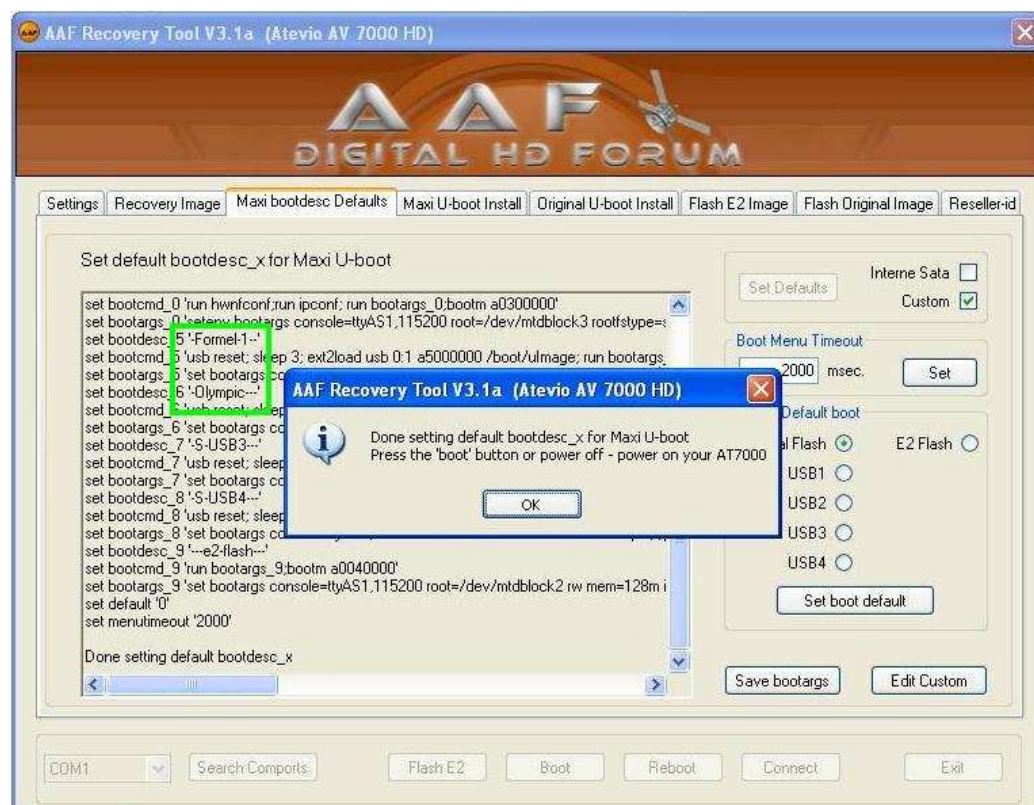
In this window edit the bootargs that they apply to your environment.  
For example: the boot description will be changed.





Press the “Save” button of the editor window and then the “Set defaults” button.

The customized bootargs will be written to the receiver environment.





Booting the receiver offers now:



and



Naming your boot descriptions referring to the installed images is forcing you to modify your bootargs every time when you change an image

### **Change the default boot option**

If you like to modify your default boot option any time after flashing the maxiubootloader, you need not to reconnect with ART again.

Select the desired boot option during boot up of the receiver using the UP/DOWN keys of your remote control.

If the desired boot option is shown in the VFD (i.e. -S-USB1-), press the RED key (not the record key) at your RC.



The word "Saving" will be seen in the VFD for some seconds. You have changed the default boot option successfully.

### **Note for AV700:**

**Only capital letters and no numbers can be selected for the bootdesc values (i.e. -USB-I--, -USB-II--, FORMEL-I)**

**If maxiuboot v0.7 or higher is installed, the "space" and numbers 0...9 can be used too.**

The art\_log.txt for this task:

```

22.04.2010 21:19:55 Started AAF Recovery Tool V3.1a (Atevio AV 7000 HD)
22.04.2010 21:19:56 Opening port COM1 settings: 115200,8,N,1
22.04.2010 21:19:56 Send first stop
22.04.2010 21:20:00 Send stop 0
22.04.2010 21:20:00 Connected
22.04.2010 21:20:00 Start Tftp listener thread
22.04.2010 21:20:00
22.04.2010 21:20:00 HDBOX>
22.04.2010 21:20:00 HDBOX>
HDBOX> printenv ipaddr
22.04.2010 21:20:00 ipaddr=192.168.1.170
HDBOX> printenv ethaddr
22.04.2010 21:20:00 ethaddr=00:1e:b8:00:26:1e
HDBOX> printenv gatewayip
22.04.2010 21:20:00 gatewayip=192.168.1.66
HDBOX> printenv serverip
22.04.2010 21:20:00 serverip=192.168.1.66
HDBOX> printenv netmask
22.04.2010 21:20:01 netmask=255.255.255.0
HDBOX> md a00000e0 4
22.04.2010 21:20:01 a00000e0: 6978616d 6f6f6275 65722074 302e3176  maxiuboot rev1.0
HDBOX> md a00000f0 422.04.2010 21:20:01 a00000f0: 00000920 00012100 00000000 00000000  ....!.....
22.04.2010 21:20:06 Save Bootargs button pressed
22.04.2010 21:20:07 printenv
bootdelay=1
baudrate=115200
autoload=n
board=mb411
ipaddr=192.168.1.170
serverip=192.168.1.66
gatewayip=192.168.1.66
ethaddr=00:1e:b8:00:26:1e
netmask=255.255.255.0
hwnfconf=set nwhwnet device:eth0,hwaddr:$ethaddr
22.04.2010 21:20:07 ipconf=set netcfg $ipaddr:$serverip:$gatewayip:$netmask
22.04.2010 21:20:07 bootcmd=bootmenu $menutimeout $default
bootdesc_0=---flash---
bootcmd_0=run hwnfconf;run ipconf; run bootargs_0;bootm a0300000
bootargs_0=setenv bootargs console=ttyAS1,115200 root=/dev/mtdblock3 rootfstype=squashfs ip=$netcfg
nwhwconf=$nwhwnet bigphysarea=4060 stmmaceth=msglgl:0,watchdog:4000,rxsize:16 loglevel=0
bootdesc_5=-S-USB1---
bootcmd_5=usb reset; sleep 3; ext2load usb 0:1 a5000000 /boot/ulmage; run bootargs_5; bootm a5000000
bootargs_5=set bootargs console=ttyAS1,115200 root=/dev/sdb1 rw mem=128m
ip=${ipaddr}:${serverip}:${gatewayip}:${netmask}:at7000:eth0:off coprocessor_mem=4m@0x10000000,4m@0x10400000
rootdelay=5 nwhwconf=device:eth0,hwaddr:${ethaddr} init=/bin/devinit
bootdesc_6=-S-USB2---
bootcmd_6=usb reset; sleep 3; ext2load usb 0:2 a5000000 /boot/ulmage; run bootargs_6; bootm a5000000
bootargs_6=set bootargs console=ttyAS1,115200 root=/dev/sdb2 rw mem=128m
ip=${ipaddr}:${serverip}:${gatewayip}:${netmask}:at7000:eth0:off coprocessor_mem=4m@0x10000000,4m@0x10400000
rootdelay=5 nwhwconf=device:eth0,hwaddr:${ethaddr} init=/bin/devinit
bootdesc_7=-S-USB3---
bootcmd_7=usb reset; sleep 3; ext2load usb 0:3 a5000000 /boot/ulmage; run bootargs_7; bootm a5000000
bootargs_7=set bootargs console=ttyAS1,115200 root=/dev/sdb3 rw mem=128m
ip=${ipaddr}:${serverip}:${gatewayip}:${netmask}:at7000:eth0:off coprocessor_mem=4m@0x10000000,4m@0x10400000
rootdelay=5 nwhwconf=device:eth0,hwaddr:${ethaddr} init=/bin/devinit
bootdesc_8=-S-USB4---
bootcmd_8=usb reset; sleep 3; ext2load usb 0:4 a5000000 /boot/ulmage; run bootargs_8; bootm a5000000
bootargs_8=set bootargs console=ttyAS1,115200 root=/dev/sdb4 rw mem=128m
ip=${ipaddr}:${serverip}:${gatewayip}:${netmask}:at7000:eth0:off coprocessor_mem=4m@0x10000000,4m@0x10400000
rootdelay=5 nwhwconf=device:eth0,hwaddr:${ethaddr} init=/bin/devinit
22.04.2010 21:26:05 bootdesc_9=---e2-flash---
bootcmd_9=run bootargs_9;bootm a0040000
bootargs_9=set bootargs console=ttyAS1,115200 root=/dev/mtdblock2 rw mem=128m
ip=${ipaddr}:${serverip}:${gatewayip}:${netmask}:at7000:eth0:off coprocessor_mem=4m@0x10000000,4m@0x10400000
rootdelay=0 nwhwconf=device:eth0,hwaddr:${ethaddr} init=/bin/devinit
default=0
menutimeout=2000
stdin=serial
stdout=serial
stderr=serial

```

```

Environment size: 2472/65532 bytes
HDBOX> set ipaddr '192.168.1.170'
22.04.2010 21:26:05 HDBOX> set serverip '192.168.1.66'
22.04.2010 21:26:05 HDBOX> set gatewayip '192.168.1.66'
22.04.2010 21:26:05 HDBOX> set ethaddr '00:1e:b8:00:26:1e'
22.04.2010 21:26:05 HDBOX> set netmask '255.255.255.0'
22.04.2010 21:26:06 HDBOX> set hwnfconf 'set nwhwnet device:eth0,hwaddr:$ethaddr'
22.04.2010 21:26:06 HDBOX> set bootcmd 'bootmenu $menutimeout $default'
22.04.2010 21:26:06 HDBOX> set bootdesc_0 '---flash---'
22.04.2010 21:26:06 HDBOX> set bootcmd_0 'run hwnfconf;run ipconf; run bootargs_0;bootm a0300000'
22.04.2010 21:26:07 set bootargs_0 'setenv bootargs console=ttyAS1,115200 root=/dev/mtdblock3 rootfstype=squashfs
ip=$netcfg nwhwconf=$nwhwnet bigphysarea=4060 stmm
22.04.2010 21:26:07 aceth=msglvl:0,watchdog:4000,rxsize:16 loglevel=0'
22.04.2010 21:26:07 HDBOX> set bootdesc_5 '-Formel-1--'
22.04.2010 21:26:07 HDBOX> set bootcmd_5 'usb reset; sleep 3; ext2load usb 0:1 a5000000 /boot/ulmage; run bootargs_5;
bootm a5000000'
22.04.2010 21:26:07 set bootargs_5 'set bootargs console=ttyAS1,115200 root=/dev/sdb1 rw mem=128m
ip=${ipaddr}:${serverip}:${gatewayip}:${netmask}:at7000:eth0:off c
22.04.2010 21:26:07 h0:off coprocessor_mem=4m@0x10000000,4m@0x10400000 rootdelay=5
nwhwconf=device:eth0,hwaddr:${ethaddr} init=/bin/devinit'
22.04.2010 21:26:08 HDBOX>
22.04.2010 21:26:08 set bootdesc_6 '-Olympic---'
22.04.2010 21:26:08 HDBOX> set bootcmd_6 'usb reset; sleep 3; ext2load usb 0:2 a5000000 /boot/ulmage; run bootargs_6;
bootm a5000000'
22.04.2010 21:26:08 set bootargs_6 'set bootargs console=ttyAS1,115200 root=/dev/sdb2 rw mem=128m
ip=${ipaddr}:${serverip}:${gatewayip}:${netmask}:at7000:eth0:off c
22.04.2010 21:26:08 oprocessor_mem=4m@0x10000000,4m@0x10400000 rootdelay=5
nwhwconf=device:eth0,hwaddr:${ethaddr} init=/bin/devinit'
22.04.2010 21:26:09 HDBOX> set bootdesc_7 '-S-USB3---'
22.04.2010 21:26:09 HDBOX> set bootcmd_7 'usb reset; sleep 3; ext2load usb 0:3 a5000000 /boot/ulmage; run bootargs_7;
bootm a5000000'
22.04.2010 21:26:09 set bootargs_7 'set bootargs console=ttyAS1,115200 root=/dev/sdb3 rw mem=128m
ip=${ipaddr}:${serverip}:${gatewayip}:${netmask}:a
22.04.2010 21:26:09 t7000:eth0:off coprocessor_mem=4m@0x10000000,4m@0x10400000 rootdelay=5
nwhwconf=device:eth0,hwaddr:${ethaddr} init=/bin/devinit'
22.04.2010 21:26:09 HDBOX>
22.04.2010 21:26:09 set bootdesc_8 '-S-USB4---'
22.04.2010 21:26:10 HDBOX> set bootcmd_8 'usb reset; sleep 3; ext2load usb 0:4 a5000000 /boot/ulmage; run bootargs_8;
bootm a5000000'
22.04.2010 21:26:10 HDBOX>
22.04.2010 21:26:10 set bootargs_8 'set bootargs console=ttyAS1,115200 root=/dev/sdb4 rw mem=128m
ip=${ipaddr}:${serverip}:${gateway
22.04.2010 21:26:10 ip}:${netmask}:at7000:eth0:off coprocessor_mem=4m@0x10000000,4m@0x10400000 rootdelay=5
nwhwconf=device:eth0,hwaddr:${ethaddr} init=/bin/devinit'
22.04.2010 21:26:10 HDBOX> set bootdesc_9 '---e2-flash---'
22.04.2010 21:26:10 HDBOX> set bootcmd_9 'run bootargs_9;bootm a0040000'
22.04.2010 21:26:11 set bootargs_9 'set bootargs console=ttyAS1,115200 root=/dev/mtdblock2 rw mem=128m
ip=${ipaddr}:${serverip}:${gatewayip}:${netma
22.04.2010 21:26:11 sk}:at7000:eth0:off coprocessor_mem=4m@0x10000000,4m@0x10400000 rootdelay=0
nwhwconf=device:eth0,hwaddr:${ethaddr} init=/bin/devinit'
22.04.2010 21:26:11 HDBOX>
22.04.2010 21:26:11 set default '0'
22.04.2010 21:26:11 HDBOX> set menutimeout '2000'
22.04.2010 21:26:11 HDBOX> saveenv
22.04.2010 21:26:12 Saving Environment to Flash...
. done
22.04.2010 21:26:12 Un-Protected 1 sectors
Erasing Flash.... done
22.04.2010 21:26:14
Erased 1 sectors
Writing to Flash.... done
22.04.2010 21:28:21 Reboot button pressed
22.04.2010 21:28:23 Exit button pressed

```



## Other examples for customizing the bootargs.

Without testing, just theoretically.

Scenario 1:

Use of the internal SATA for installing USB images

Assumption: the internal SATA is partitioned with four partitions, the first using jfs for recording (to be compatible with Ori-FW), partition two and three are for USB Images, partition four is for swap.

Also you are using an USB stick with two partitions for testing.

Your bootargs need to be (changes are highlighted):

```
bootcmd=bootmenu $menutimeout $default
bootdesc_0=---flash---
bootcmd_0=run hwnfconf;run ipconf; run bootargs_0;bootm a0300000
bootargs_0=setenv bootargs console=ttyAS1,115200 root=/dev/mtdblock3 rootfstype=squashfs ip=$netcfg
nwhwconf=$nwhwnet bigphysarea=4060 stmmaceth=msglvi:0,watchdog:4000,rxsize:16 loglevel=0
bootdesc_5=---SATA1---
bootcmd_5=ide reset; sleep 3; ext2load ide 0:2 a5000000 /boot/ulmage; run bootargs_5; bootm a5000000
bootargs_5=set bootargs console=ttyAS1,115200 root=/dev/sda2 rw mem=128m
ip=${ipaddr}:${serverip}:${gatewayip}:${netmask}:at7000:eth0:off
coprocessor_mem=4m@0x10000000,4m@0x10400000 rootdelay=5 nwhwconf=device:eth0,hwaddr:${ethaddr}
init=/bin/devinit
bootdesc_6=---SATA2---
bootcmd_6=ide reset; sleep 3; ext2load ide 0:3 a5000000 /boot/ulmage; run bootargs_6; bootm a5000000
bootargs_6=set bootargs console=ttyAS1,115200 root=/dev/sda3 rw mem=128m
ip=${ipaddr}:${serverip}:${gatewayip}:${netmask}:at7000:eth0:off
coprocessor_mem=4m@0x10000000,4m@0x10400000 rootdelay=5 nwhwconf=device:eth0,hwaddr:${ethaddr}
init=/bin/devinit
bootdesc_7=---S-USB1---
bootcmd_7=usb reset; sleep 3; ext2load usb 0:1 a5000000 /boot/ulmage; run bootargs_7; bootm a5000000
bootargs_7=set bootargs console=ttyAS1,115200 root=/dev/sdb1 rw mem=128m
ip=${ipaddr}:${serverip}:${gatewayip}:${netmask}:at7000:eth0:off
coprocessor_mem=4m@0x10000000,4m@0x10400000 rootdelay=5 nwhwconf=device:eth0,hwaddr:${ethaddr}
init=/bin/devinit
bootdesc_8=---S-USB2---
bootcmd_8=usb reset; sleep 3; ext2load usb 0:2 a5000000 /boot/ulmage; run bootargs_8; bootm a5000000
bootargs_8=set bootargs console=ttyAS1,115200 root=/dev/sdb2 rw mem=128m
ip=${ipaddr}:${serverip}:${gatewayip}:${netmask}:at7000:eth0:off
coprocessor_mem=4m@0x10000000,4m@0x10400000 rootdelay=5 nwhwconf=device:eth0,hwaddr:${ethaddr}
init=/bin/devinit
```





## Scenario 2:

Use of two USB devices, each with three partitions (no internal SATA installed):

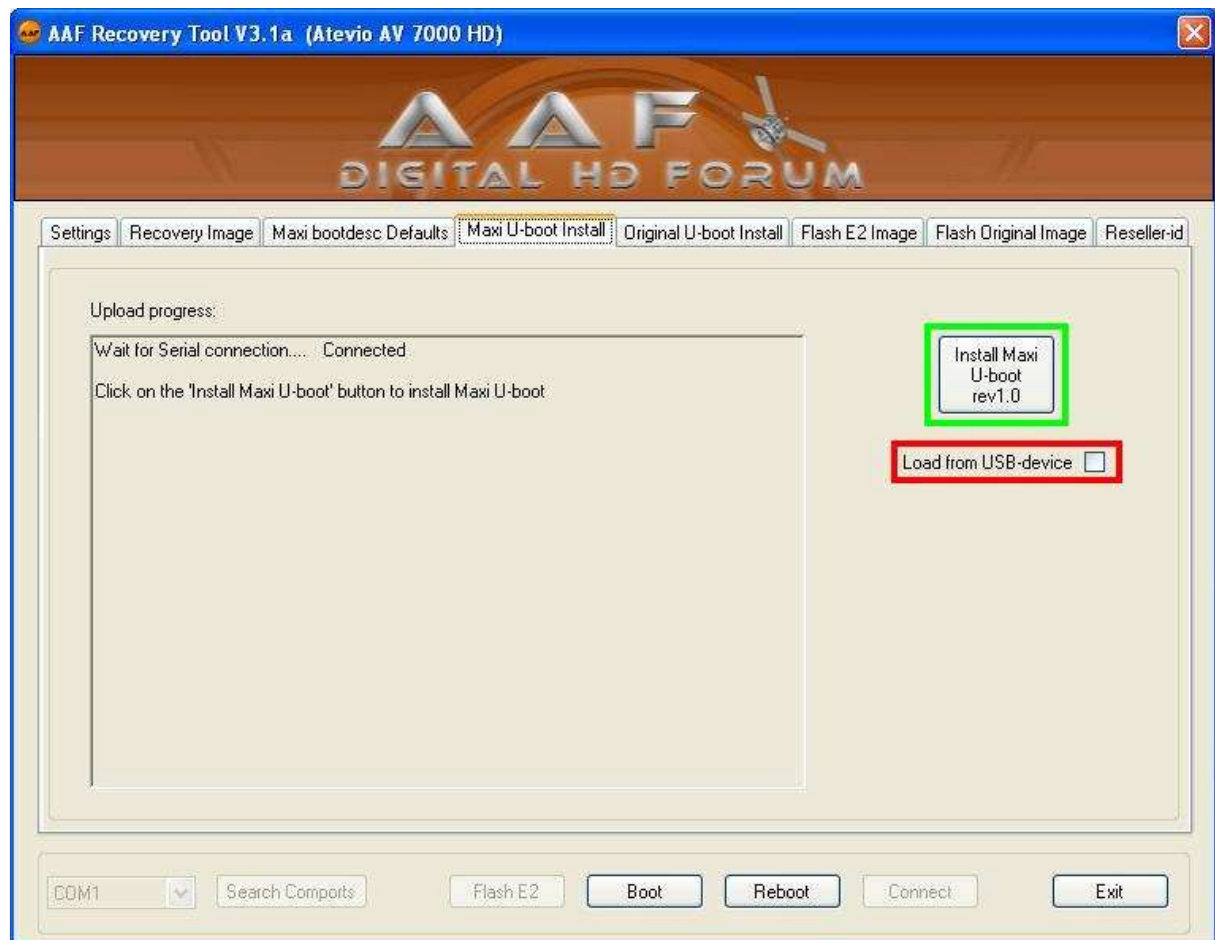
```
bootcmd=bootmenu $menutimeout $default
bootdesc_0=---flash---
bootcmd_0=run hwnfconf;run ipconf; run bootargs_0;bootm a3000000
bootargs_0=setenv bootargs console=ttyAS1,115200 root=/dev/mtdblock3 rootfstype=squashfs ip=$netcfg
nwhwconf=$nwhwnet bigphysarea=4060 stmmaceth=msglvi:0,watchdog:4000,rxsize:16 loglevel=0
bootdesc_1=-S-USB1---
bootcmd_1=usb reset; sleep 3; ext2load usb 0:1 a5000000 /boot/ulmage; run bootargs_1; bootm a5000000
bootargs_1=set bootargs console=ttyAS1,115200 root=/dev/sda1 rw mem=128m
ip=${ipaddr}:${serverip}:${gatewayip}:${netmask}:at7000:eth0:off
coprocessor_mem=4m@0x10000000,4m@0x10400000 rootdelay=5 nwhwconf=device:eth0,hwaddr:${ethaddr}
init=/bin/devinit
bootdesc_2=-S-USB2---
bootcmd_2=usb reset; sleep 3; ext2load usb 0:2 a5000000 /boot/ulmage; run bootargs_2; bootm a5000000
bootargs_2=set bootargs console=ttyAS1,115200 root=/dev/sda2 rw mem=128m
ip=${ipaddr}:${serverip}:${gatewayip}:${netmask}:at7000:eth0:off
coprocessor_mem=4m@0x10000000,4m@0x10400000 rootdelay=5 nwhwconf=device:eth0,hwaddr:${ethaddr}
init=/bin/devinit
bootdesc_3=-S-USB3---
bootcmd_3=usb reset; sleep 3; ext2load usb 0:3 a5000000 /boot/ulmage; run bootargs_3; bootm a5000000
bootargs_3=set bootargs console=ttyAS1,115200 root=/dev/sda3 rw mem=128m
ip=${ipaddr}:${serverip}:${gatewayip}:${netmask}:at7000:eth0:off
coprocessor_mem=4m@0x10000000,4m@0x10400000 rootdelay=5 nwhwconf=device:eth0,hwaddr:${ethaddr}
init=/bin/devinit
bootdesc_4=-S-USB4---
bootcmd_4=usb reset; sleep 3; ext2load usb 1:1 a5000000 /boot/ulmage; run bootargs_4; bootm a5000000
bootargs_4=set bootargs console=ttyAS1,115200 root=/dev/sdb1 rw mem=128m
ip=${ipaddr}:${serverip}:${gatewayip}:${netmask}:at7000:eth0:off
coprocessor_mem=4m@0x10000000,4m@0x10400000 rootdelay=5 nwhwconf=device:eth0,hwaddr:${ethaddr}
init=/bin/devinit
bootdesc_5=-S-USB5---
bootcmd_5=usb reset; sleep 3; ext2load usb 1:2 a5000000 /boot/ulmage; run bootargs_5; bootm a5000000
bootargs_5=set bootargs console=ttyAS1,115200 root=/dev/sdb2 rw mem=128m
ip=${ipaddr}:${serverip}:${gatewayip}:${netmask}:at7000:eth0:off
coprocessor_mem=4m@0x10000000,4m@0x10400000 rootdelay=5 nwhwconf=device:eth0,hwaddr:${ethaddr}
init=/bin/devinit
bootdesc_6=-S-USB6---
bootcmd_6=usb reset; sleep 3; ext2load usb 1:3 a5000000 /boot/ulmage; run bootargs_6; bootm a5000000
bootargs_6=set bootargs console=ttyAS1,115200 root=/dev/sdb3 rw mem=128m
ip=${ipaddr}:${serverip}:${gatewayip}:${netmask}:at7000:eth0:off
coprocessor_mem=4m@0x10000000,4m@0x10400000 rootdelay=5 nwhwconf=device:eth0,hwaddr:${ethaddr}
init=/bin/devinit
```

If you have customized your bootargs, save the file custombootargs.txt at a save location!

Note: dont place this file in the default path ART wants to store the file when you press the **"Save bootargs"** button, otherwise the file will be overwritten!



## The “Maxi U-boot Install” pane



Click “Install Maxi U-Boot” to install the maxiubootloader. The latest version of ART installs the maxiubootloader v1.0.

Even it is not mandatory to upgrade the maxiubootloader versions, it is recommended to use always the latest, released version.

### Note:

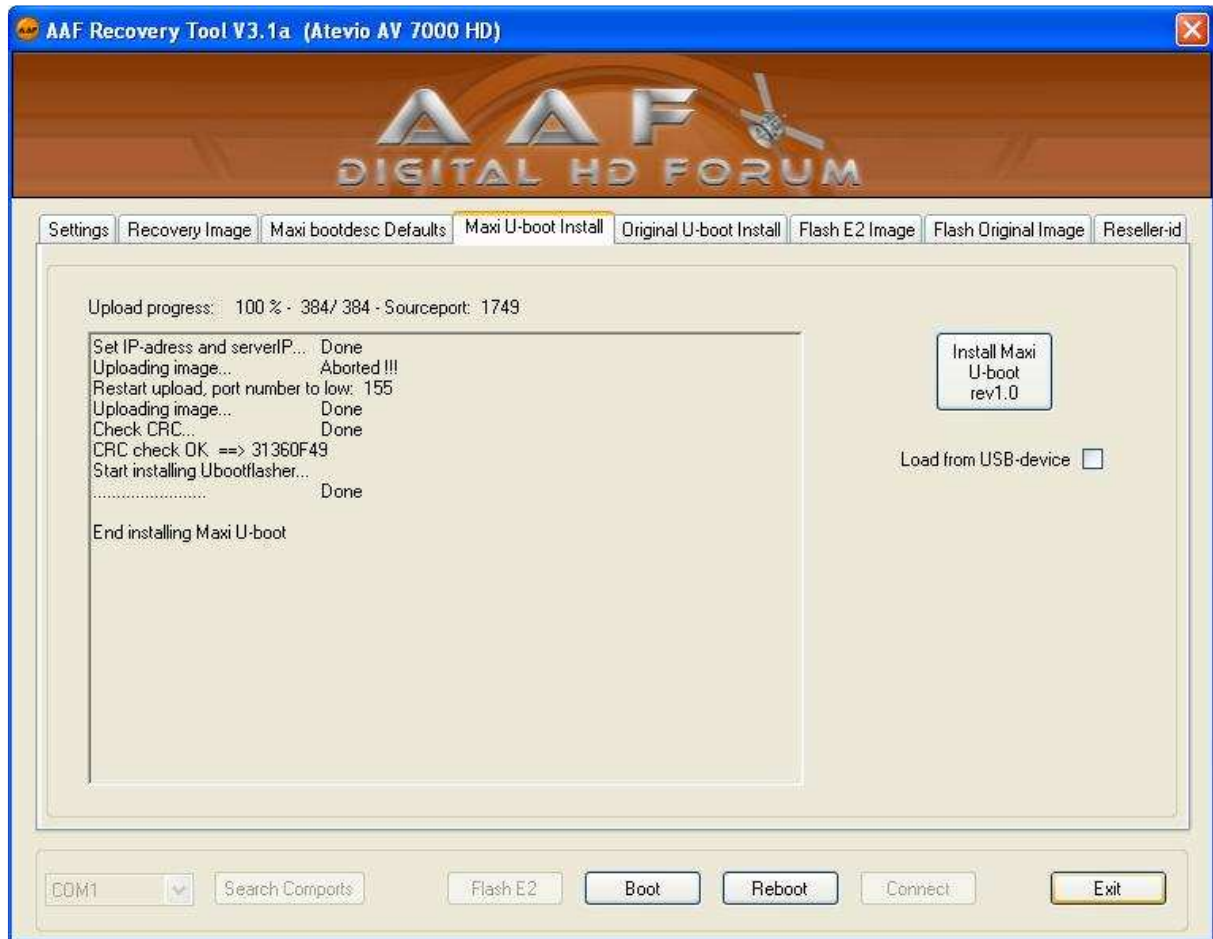
All known original firmware versions running with all maxiubootloader versions, except version 1.07.97. For this firmware version a maxiubootloader version > v0.7 is mandatory!

**If you are using a version previous V 3.5:  
Before flashing your receiver ensure that you are using the correct program  
version of ART!!!**

The bootloader flash routine of ART V 3.5 supports hardware recognition.  
So always the correct bootloader is flashed to your box!



When the installation is finished, the receiver reboots automatically, you don't need to trigger the reboot.



**Note:**

At the screenshot seen above the upload of the images fails first. The tftp protocol has connected using a port number which is too low. A new port is negotiated and uploading resumes. This is not a problem.

The Maxi U-boot Installation should be ended within 2 minutes.

The reboot procedure is necessary to install the bootloader safely!

Exit and restart ART, wait until the receiver is fully started up. Power off the receiver. Power on the receiver again and click **Connect**.



The art\_log.txt file for this task (some blank lines removed):

```

23.04.2010 21:02:14 Started AAF Recovery Tool V3.1a (Atevio AV 7000 HD)
23.04.2010 21:02:15 Opening port COM1 settings: 115200,8,N,1
23.04.2010 21:02:15 Send first stop
23.04.2010 21:02:19 Send stop 0
23.04.2010 21:02:19 FrTs□□ □ 0
23.04.2010 21:02:19 FrTs□□ □ 1
23.04.2010 21:02:20 Send stop 1
23.04.2010 21:02:21 Connected
23.04.2010 21:02:21 Start Tftp listener thread
STi710x> md a00000e0 4a00000e0: 00000000 00000000 00000000 00000000 .....
STi710x> md a00000f0 4
23.04.2010 21:02:21 0x>
23.04.2010 21:02:21 printenv ethaddr
23.04.2010 21:02:21 ethaddr=00:1e:b8:00:26:1e
STi710x> printenv serverip
23.04.2010 21:02:26 serverip=192.168.001.066
STi710x> ipaddr 192.168.1.170
23.04.2010 21:02:26 set ipaddr 192.168.001.170
STi710x> serverip 192.168.1.66
23.04.2010 21:02:28 set serverip 192.168.001.066
23.04.2010 21:02:29 Write MAC button pressed
STi710x> ethaddr 00:1e:b8:00:26:1e
23.04.2010 21:02:29 set ethaddr 00:1e:b8:00:26:1e
STi710x> printenv ipaddr
ipaddr=192.168.001.170
STi710x> printenv ethaddr
23.04.2010 21:02:34 ethaddr=00:1e:b8:00:26:1e
STi710x> printenv serverip
23.04.2010 21:02:36 Read MAC button pressed
23.04.2010 21:02:36 serverip=192.168.001.066
STi710x> printenv ethaddr
23.04.2010 21:02:36 ethaddr=00:1e:b8:00:26:1e
23.04.2010 21:02:38 Save button pressed
STi710x> set serverip 192.168.1.66;set ipaddr 192.168.1.170
23.04.2010 21:02:41 STi710x>
23.04.2010 21:02:41 tftp a4000000 uflasherHDbox.app
23.04.2010 21:02:41 Restart upload, port number to low: 90
Using MAC Address 00:1E:B8:00:26:1E
STMAC: PHY ADDR: 2 RTL8201CP found
TFTP from server 192.168.1.66; our IP address is 192.168.1.170
Filename 'uflasherHDbox.app'.
Load address: 0xa4000000
23.04.2010 21:02:41 710x>
23.04.2010 21:02:41 tftp a4000000 uflasherHDbox.app
23.04.2010 21:02:41 TFTP from server 192.168.1.66; our IP address is 192.168.1.170
23.04.2010 21:02:42 Sourceport: 3352
23.04.2010 21:02:42 Filesize: 196608 - crc32: 31360F49
23.04.2010 21:02:42 Memory CRC32: 31360F49
23.04.2010 21:02:42 Send Block Again 1 size: 512/ 196608 - Sourceport: 3352
23.04.2010 21:02:42 #
23.04.2010 21:02:42 #
23.04.2010 21:02:42 #
23.04.2010 21:02:42 #
23.04.2010 21:02:42 #
23.04.2010 21:02:42 #
23.04.2010 21:02:43 #
23.04.2010 21:02:43 #
23.04.2010 21:02:43 #
23.04.2010 21:02:43 #
23.04.2010 21:02:43 #
23.04.2010 21:02:43 #
23.04.2010 21:02:43 #
23.04.2010 21:02:43 #
23.04.2010 21:02:44 #
23.04.2010 21:02:44 #

```



```
23.04.2010 21:02:44 #
23.04.2010 21:02:44 #
23.04.2010 21:02:44 #
23.04.2010 21:02:44 #
...
23.04.2010 21:02:46 #
23.04.2010 21:02:46 #
23.04.2010 21:02:46 #
23.04.2010 21:02:46 #
23.04.2010 21:02:47 #
23.04.2010 21:02:47 #
23.04.2010 21:02:47 #
23.04.2010 21:02:47 #
23.04.2010 21:02:47 #
23.04.2010 21:02:47 #
23.04.2010 21:02:47 #
23.04.2010 21:02:48 #
23.04.2010 21:02:48 Send ACK 385 - 0181
23.04.2010 21:02:48 Using Port: 3352
23.04.2010 21:02:48 Close listenTrace1
23.04.2010 21:02:49 done
Bytes transferred = 196608 (30000 hex)
STi710x> crc a4000000 30000
23.04.2010 21:02:49 CRC32 for a4000000 ... a402ffff ==> 31360f49
STi710x> bootm a4000000
23.04.2010 21:02:50 *DRAM: 128 MB
flashing now... stay tuned :-)
checksum = 4ada0dff 4ada0dff
test image ok. done
Un-Protected 1 sectors. done
Erased 1 sectors
Copy to Flash... done
Board: STb7200-HDBOX [29-bit mode]
U-Boot 1.3.1 (Mar 23 2010 - 19:41:39) - stm23-0032
---created by TDT for general purpose---
DRAM: 128 MB
Flash: 32 MB
*** Warning - bad CRC, using default environment
In: serial
Out: serial
Err: serial
init frontpanel... done
Hit any key to stop autoboot: 1  0
bootmenu_timeout:2000,default:0
add entry:0 - ---flash---
add entry:1 - empty
add entry:2 - empty
add entry:3 - empty
add entry:4 - empty
add entry:5 - empty
add entry:6 - empty
add entry:7 - empty
add entry:8 - empty
add entry:9 - empty
entering bootmenu - default:0 - ---flash---
23.04.2010 21:03:01 Exit button pressed
```

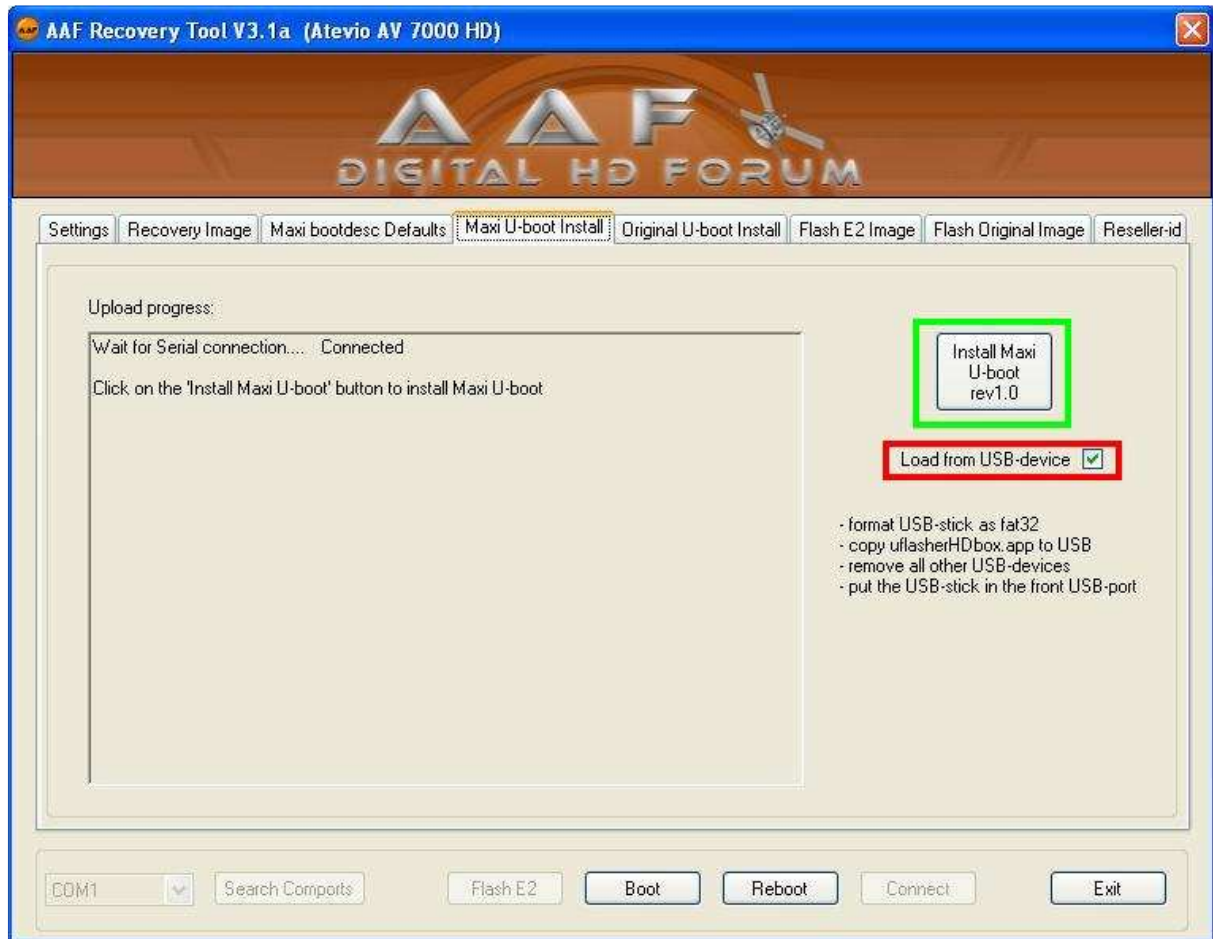
Clearly seen: after installing the maxiubootloader uses its default environment settings.

You need to write the bootargs!

Please refer to [The "Maxi bootdesc Defaults" pane](#)



If you encounter problems installing the maxiubootloader with the network connection, choose the option “**Load from USB device**”.



The USB device **must** be formatted in FAT32, do not use FAT16!  
Copy the file “uflasherHDbox.app” from the ART program directory into the root directory of the USB device.

### **Disconnect all other USB devices!**

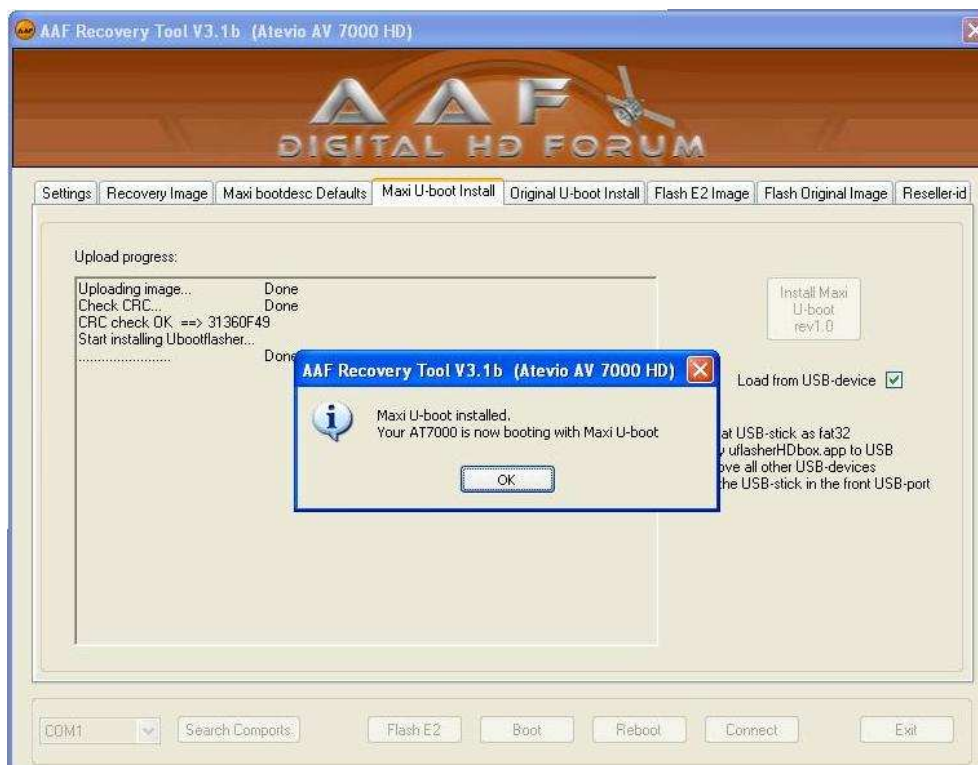
Plug in the USB stick to the front port (recommended, but it works also at the rear port)

Click at “**Install Maxi U-Boot**”

After the installation is finished, the receiver reboots.



After the installation is finished, the receiver reboots.



The art\_log.txt file for this task (some blank lines removed):

```

25.04.2010 16:45:38 Started AAF Recovery Tool V3.1b (Atevio AV 7000 HD)
25.04.2010 16:45:39 Opening port COM1 settings: 115200,8,N,1
25.04.2010 16:45:39 Send first stop
25.04.2010 16:45:43 Send stop 0
25.04.2010 16:45:43 FrTs□□ □ 0
25.04.2010 16:45:43 FrTs□□ □ 1
25.04.2010 16:45:44 Send stop 1
25.04.2010 16:45:45 Connected
25.04.2010 16:45:45 Start Tftp listener thread
25.04.2010 16:45:45 □□□ 0
25.04.2010 16:45:45 STi710x> md a00000e0 4
25.04.2010 16:45:45 : 00000000 000000
25.04.2010 16:45:45 000 00000000 00000000 .....
25.04.2010 16:45:45 STi710x> md a00000f0 4
25.04.2010 16:45:45 a00000f0: 00000920 00012100 00000000 00000000 ....!.....
STi710x> printenv ethaddr
25.04.2010 16:45:45 ethaddr=00:1e:b8:00:26:1e
STi710x> printenv serverip
25.04.2010 16:45:57 serverip=192.168.001.066
STi710x> usb reset
25.04.2010 16:45:57 scanning bus for devices...
25.04.2010 16:46:00 3 USB Device(s)
25.04.2010 16:46:01 found
25.04.2010 16:46:01
    scanning bus for storage devices... 1 Storage Device(s) found
25.04.2010 16:46:06 STi710x> fatload usb 0:1 a4000000 uflasherHDBox.app
25.04.2010 16:46:06 reading uflasherHDBox.app
25.04.2010 16:46:09 196608 bytes read
STi710x> crc a4000000 30000
25.04.2010 16:46:09 CRC32 for a4000000 ... a402ffff ==> 31360f49
25.04.2010 16:46:09 STi710x> bootm a4000000
25.04.2010 16:46:09 *DRAM: 128 MB
25.04.2010 16:46:10 flashing now... stay tuned :) checksum = 4ada0dff 4ada0dff test image ok
. done
Un-Protected 1 sectors
. done
25.04.2010 16:46:13 Erased 1 sectors
Copy to Flash... .done
25.04.2010 16:46:18 Board: STb7200-HDBOX [29-bit mode]
U-Boot 1.3.1 (Mar 23 2010 - 19:41:39) - stm23-0032
25.04.2010 16:46:20 ---created by TDT for general purpose---
DRAM: 128 MB
Flash: 32 MB
*** Warning - bad CRC, using default environment
In: serial
Out: serial
Err: serial
init frontpanel... done
Hit any key to stop autoboot: 1 □□□ 0
bootmenu_timeout:2000,default:0
add entry:0 - ---flash---
add entry:1 - empty
add entry:2 - empty
add entry:3 - empty
add entry:4 - empty
add entry:5 - empty
add entry:6 - empty
add entry:7 - empty
add entry:8 - empty
add entry:9 - empty
entering bootmenu - default:0 - ---flash---
## Booting image at a0300000 ...
    Image Name: Linux 2.6
    Image Type: SH-4 Linux Kernel Image (gzip compressed)

```



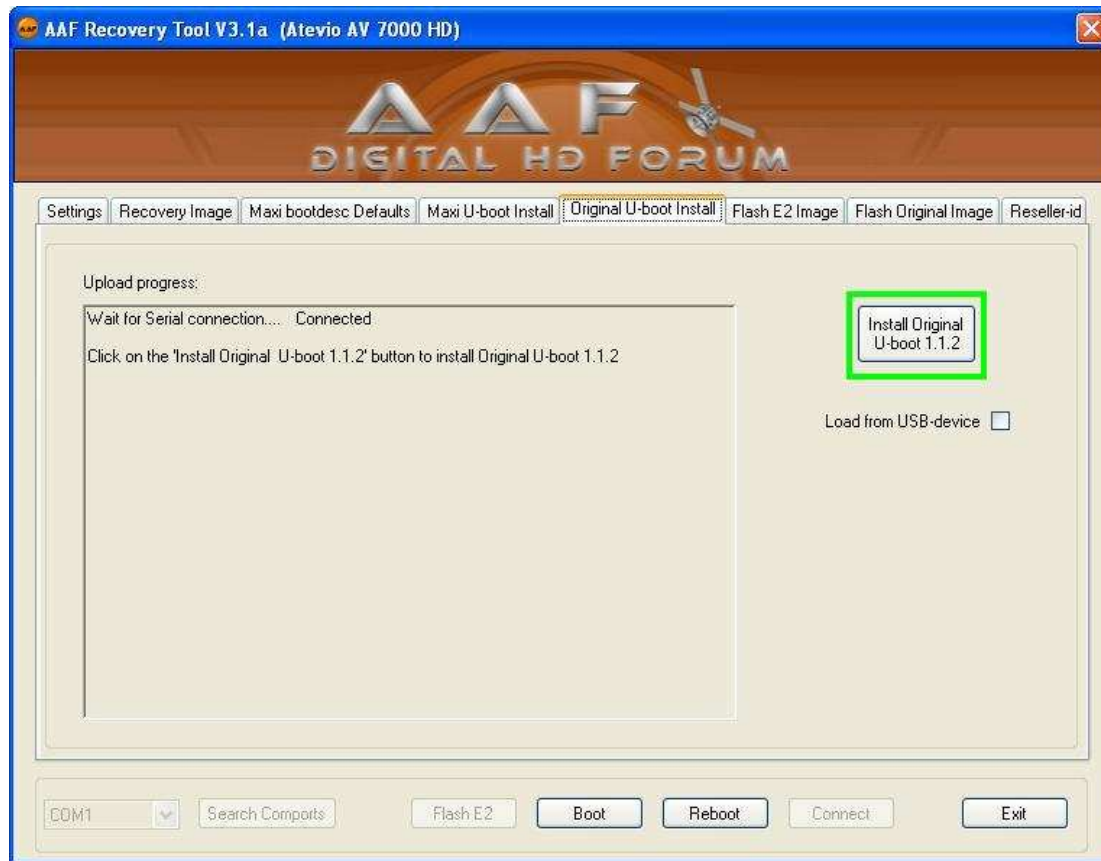
```

Data Size: 1773327 Bytes = 1.7 MB
Load Address: 84601000
25.04.2010 16:46:23 OK
25.04.2010 16:46:25 Uncompressing Kernel Image ... OK
25.04.2010 16:46:25 ermel console=ttyAS1,115200 root=/dev/mt
25.04.2010 16:46:25 dblock3 rootfstype=squashfs ip=192.168.1
25.04.2010 16:46:25 78.77:192.168.178.10:192.168.178.1:255.255.255.0
25.04.2010 16:46:25 nwhwconf=device:eth0,hwaddr:00:1d:ec:00
25.04.2010 16:46:25 :12:34 bigphysarea=4060 stmmaceth=msglvl:0,watch
25.04.2010 16:46:25 dog:4000,rxsize:16 loglevel=0 - 0x000000
25.04.2010 16:46:25 00 - 0 ...init started: BusyBox v1.14.2 (2009-12-14 17:23:28 KST)
25.04.2010 16:46:30 ACTION = add, DEVPATH = /block/sda, MAJOR = 8, MINOR = 0
25.04.2010 16:46:30 Send usb add /dev/sda
25.04.2010 16:46:30 Setting hostname HD_PVR
25.04.2010 16:46:31 ==> not found rt73
25.04.2010 16:46:32 ==> not found rt2870
25.04.2010 16:46:32 LOAD Unified modules
25.04.2010 16:46:33 LOAD embxshell
25.04.2010 16:46:34 Starting FTP server:
25.04.2010 16:46:34 Starting app:
25.04.2010 16:46:34 vsftpd.
25.04.2010 16:46:35 ACTION = add, DEVPATH = /block/sdb, MAJOR = 8, MINOR = 16
25.04.2010 16:46:35 Send usb add /dev/sdb
25.04.2010 16:46:36 =====
== Start Main Application =====
////////////////////
25.04.2010 16:46:36
STFAE_Init.....
////////////////////
25.04.2010 16:46:36 Inappropriate ioctl for device: Inappropriate ioctl for device
25.04.2010 16:46:38 Appl>
25.04.2010 16:46:38 Thu Jan 1 00:49:59 UTC 2009
25.04.2010 16:46:39 /dev/sda: ATA WDC WD7500AAVS-0
25.04.2010 16:46:39 01.0
change_mode_page: failed fetching page: Power condition
25.04.2010 16:46:39 /usr/sbin/fsck.jfs version 1.1.13, 17-Jul-2008
processing started: 1/1/2009 0.50.0
The current device is: /dev/sda1
Block size in bytes: 4096
Filesystem size in blocks: 183143000
**Phase 0 - Replay Journal Log
Filesystem is clean.
25.04.2010 16:46:41 Starting DYNDNS client:
25.04.2010 16:46:41 inadyn.
25.04.2010 16:48:16 /var: 65c
25.04.2010 16:48:18 Exit button pressed

```



## ***The “Original U-Boot Install” pane***



This pane is used to reinstall the original bootloader.

**If you are using a version previous V 3.5:  
Before flashing your receiver ensure that you are using the correct program  
version of ART!!!**

The bootloader flash routine of ART V 3.5 supports hardware recognition.  
So always the correct bootloader is flashed to your box!

The only reason to flash back to original bootloader we imagine is sending the receiver back to your dealer for warranty reasons!  
All other issues which may be will occur (i.e. image installation issues, freezes, video/audio interference) is not caused from the maxiubootloader.

**If you encounter such problems there is no need to flash back to the original  
bootloader!!!**

Click at “**Install Original U.Boot**” and installation starts.

Note:

Using the ART feature [Original U-Boot Install](#) will set the reseller id back to Atevio!

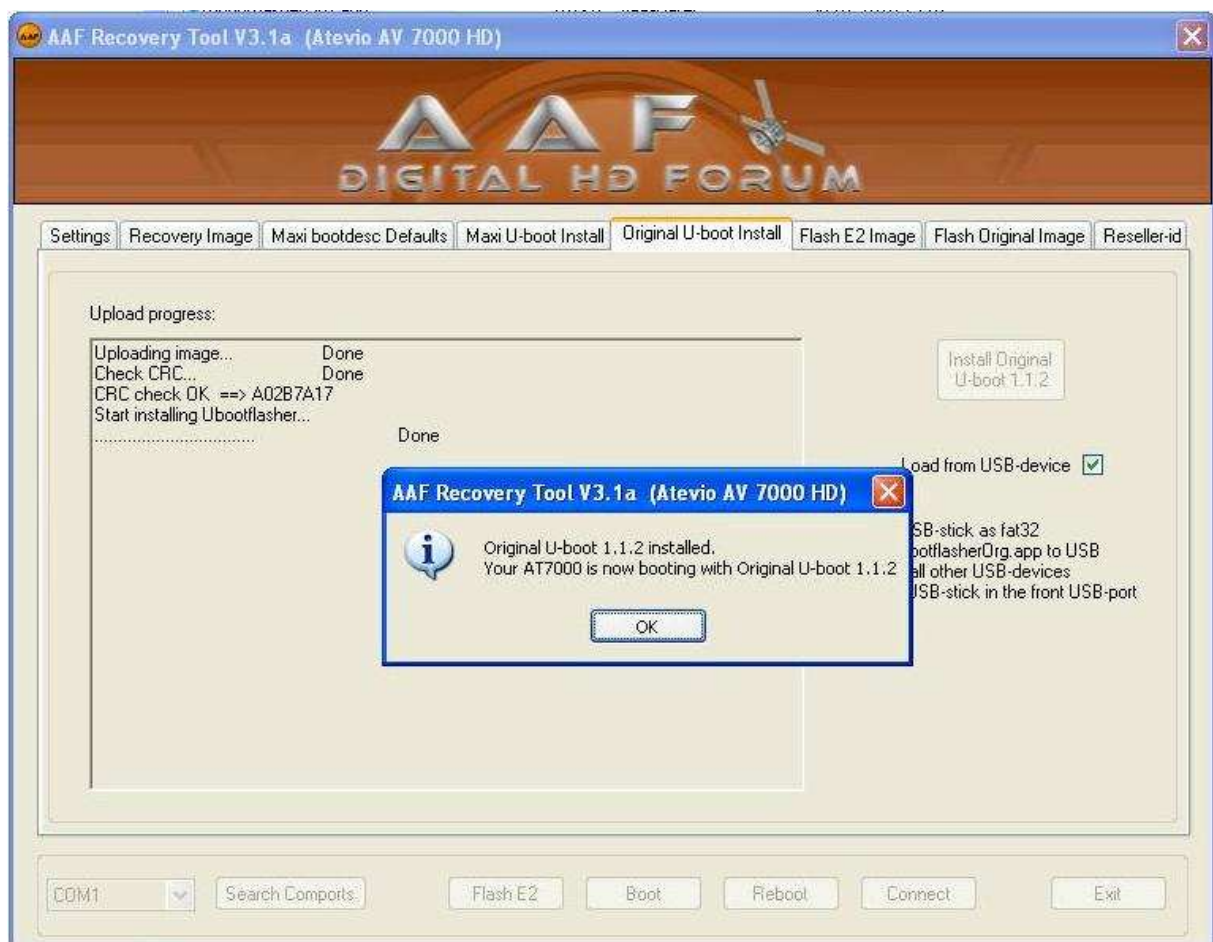


If you need to flash back your brands original bootloader (i.e. Octagon), you need download the “ubootflasherOrg.app” file designed for your model and copy it into the ART program directory.

**You must not use an original bootloader image (i.e. created with cat /dev/mtdblock0), this will crash your receiver!!!**

If you cant find this file, please ask in the AAF-board for more information/support!

After installation is finished the receiver reboots.



The reboot procedure is necessary to install the bootloader safely!

Exit and restart ART, wait until the receiver is fully started up. Power off the receiver. Power on the receiver again and click “**Connect**”.



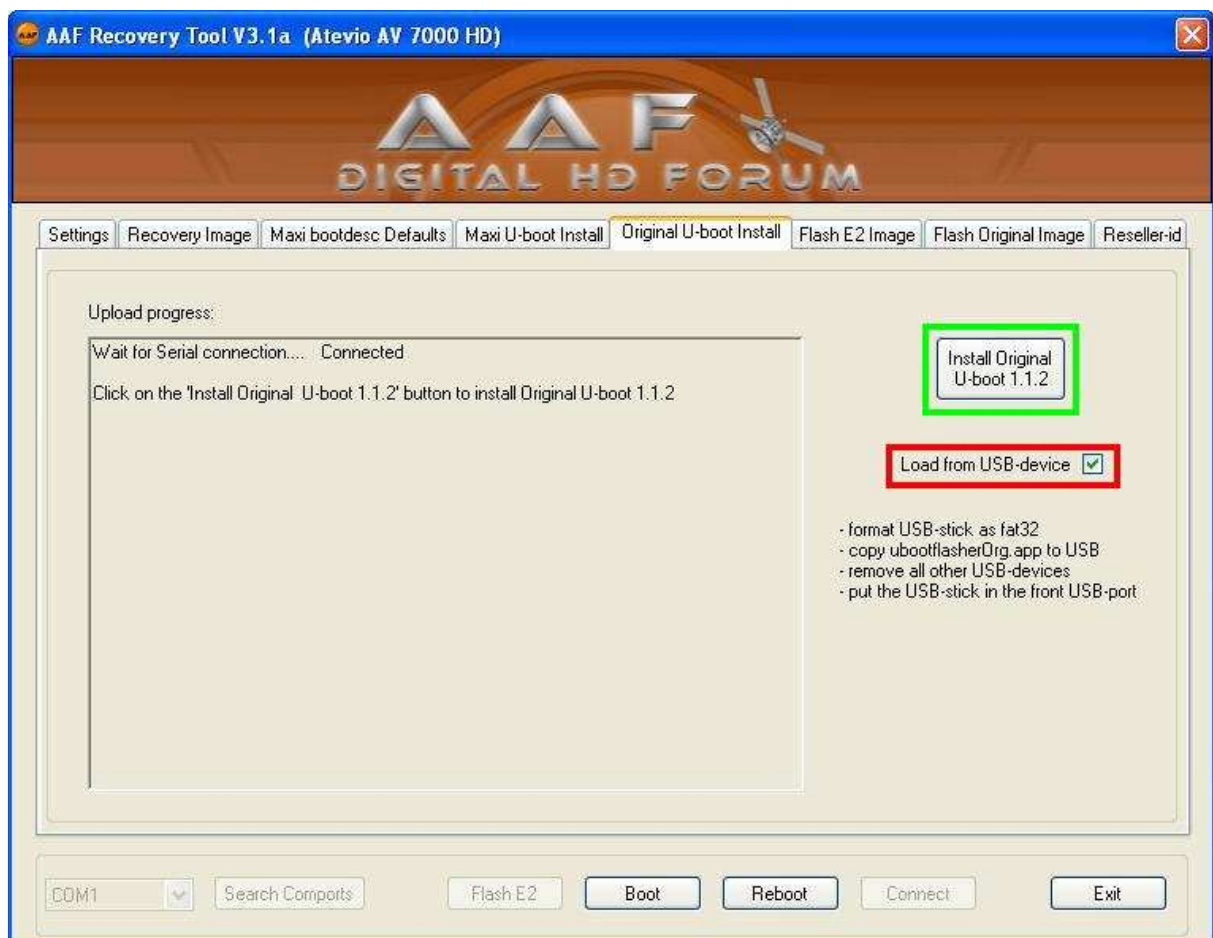
The art\_log.txt for this task (empty lines removed):

[illegible]

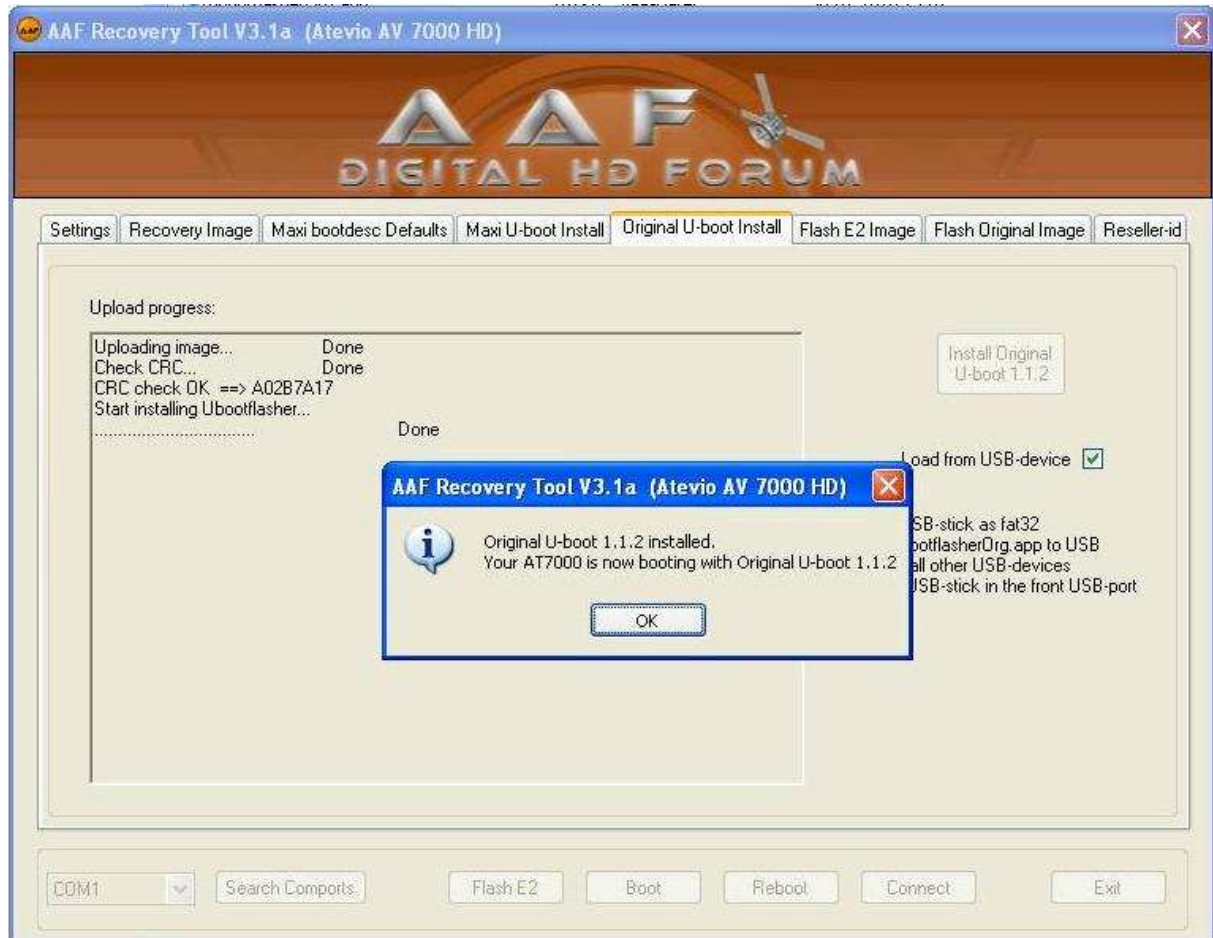


```
23.04.2010 21:08:36 #
23.04.2010 21:08:36 #
23.04.2010 21:08:36 #
23.04.2010 21:08:36 #
23.04.2010 21:08:36 HDBOX>
23.04.2010 21:08:36 crc a4000000 50000
23.04.2010 21:08:36 CRC32 for a4000000 ... a
23.04.2010 21:08:36 404ffff ==> a02b7a17
HDBOX> bootm a4000000
23.04.2010 21:08:37 ## Booting image at a4000000 ...
  Image Name:  atevio ubootflasher
  Image Type:  SuperH Linux Standalone Program (gzip compressed)
23.04.2010 21:08:38 -
flashing now... stay tuned :-)
checksum  = 54a1367b 54a1367b
test image ok
.. done
Un-Protected 2 sectors
23.04.2010 21:08:39 . done
23.04.2010 21:08:39 Erased 2 sectors
23.04.2010 21:08:43 .done
23.04.2010 21:08:47 U-Boot 1.1.2 (Jul  3 2009 - 12:01:20) - st2.0-14
23.04.2010 21:08:50 FrTs
23.04.2010 21:08:50 FrTs
23.04.2010 21:08:51 FrTs
23.04.2010 21:08:54 Exit button pressed
```

Also like the maxiubootloader the original bootloader can be installed using the “**Load from USB Device**” option.







The art\_log.txt for this task (empty lines removed):

```

24.04.2010 23:48:14 Started AAF Recovery Tool V3.1a (Atevio AV 7000 HD)
24.04.2010 23:48:14 Opening port COM1 settings: 115200,8,N,1
24.04.2010 23:48:14 Send first stop
24.04.2010 23:48:18 Send stop 0
24.04.2010 23:48:18 *
24.04.2010 23:48:18 Connected
24.04.2010 23:48:18 Start Tftp listener thread
24.04.2010 23:48:18
Board: STb7200-HDBOX [29-bit mode]
U-Boot 1.3.1 (Mar 23 2010 - 19:41:39) - stm23-0032
---created by TDT for general purpose---
24.04.2010 23:48:18
DRAM: 128 MB
Flash: 32 MB
In: serial
Out: serial
Err: serial
init frontpanel... done
Hit any key to stop autoboot: 1 □□□ 0
HDBOX>
HDBOX> printenv ipaddr
24.04.2010 23:48:19 DBOX>
24.04.2010 23:48:19 printenv ethaddr
24.04.2010 23:48:19 ethaddr=00:1e:b8:00:26:1e
HDBOX> printenv gatewayip
gatewayip=192.168.1.66
HDBOX> printenv serverip

```

```

24.04.2010 23:48:19 serverip=192.168.1.66
HDBOX> printenv netmask
24.04.2010 23:48:19 netmask=255.255.255.0
HDBOX> md a00000e0 4a00000e0: 6978616d 6f6f6275 65722074 302e3176   maxiuboot rev1.0
HDBOX> md a00000f0 4
24.04.2010 23:49:48 usb reset
24.04.2010 23:49:48 scanning bus for devices...
24.04.2010 23:49:50 3 USB Device(s) found
24.04.2010 23:49:50 us for storage devices...
24.04.2010 23:49:51 1 Storage Device(s) found
HDBOX> fatload usb 0:1 a4000000 ubootflasherOrg.app
24.04.2010 23:49:56 reading ubootflasherOrg.app
24.04.2010 23:49:57 crc a400
24.04.2010 23:49:57 0000 50000
24.04.2010 23:49:57 CRC32 for a4000000 ... a404ffff ==> a02b
24.04.2010 23:49:57 7a17
HDBOX> bootm a4000000
## Booting image at a4000000 ...
   Image Name:   atevio ubootflasher
   Image Type:   SuperH Linux Standalone Program (gzip compressed)
24.04.2010 23:49:58 -
24.04.2010 23:49:59 ..
24.04.2010 23:49:59 . done
24.04.2010 23:50:04 .done
24.04.2010 23:50:08 U-Boot 1.1.2 (Jul  3 2009 - 12:01:20) - st2.0-14
24.04.2010 23:50:11 FrTs
24.04.2010 23:50:11 FrTs
24.04.2010 23:50:12 FrTs
24.04.2010 23:50:17
24.04.2010 23:50:23 Booting Linux
init started: BusyBox v1.14.2 (2009-12-14 17:23:28 KST)
24.04.2010 23:50:24 ACTION = add, DEVPATH = /block/sda, MAJOR = 8, MINOR = 0
24.04.2010 23:50:24 Send usb add /dev/sda
24.04.2010 23:50:25 Setting hostname HD_PVR
24.04.2010 23:50:26 ==> not found rt73
24.04.2010 23:50:26 ==> not found rt2870
24.04.2010 23:50:26 LOAD Unified modules
24.04.2010 23:50:27 LOAD embxshell
24.04.2010 23:50:28 Starting app:
24.04.2010 23:50:28 Starting FTP server:
24.04.2010 23:50:28 vsftpd.
24.04.2010 23:50:30 ACTION = add, DEVPATH = /block/sdb, MAJOR = 8, MINOR = 16
24.04.2010 23:50:30 Send usb
24.04.2010 23:50:30 add /dev/sdb
24.04.2010 23:50:30 =====
24.04.2010 23:50:30 ==  Start Main Application =====
////////////////////
STFAE_Init.....
////////////////////
24.04.2010 23:50:30 Inappropriate ioctl for device: Inappropriate ioctl for device
24.04.2010 23:50:32 Appl>
24.04.2010 23:50:32 Thu Jan  1 01:20:49 UTC 2009
24.04.2010 23:50:33 /dev/sda: ATA   WDC WD7500AAVS-0 01.0
24.04.2010 23:50:33 change_mode_page: failed fetching page: Power condition
24.04.2010 23:50:33 /usr/sbin/fsck.jfs version 1.1.13, 17-Jul-2008
24.04.2010 23:50:34 processing started: 1/1/2009 1.20.50
The current device is: /dev/sda1
Block size in bytes: 4096
24.04.2010 23:50:34 Filesystem size in blocks: 183143000
**Phase 0 - Replay Journal Log
Filesystem is clean.
24.04.2010 23:50:35 Starting DYNDNS client:
24.04.2010 23:50:35 inadyn.
24.04.2010 23:51:10 Exit button pressed

```



## ***The “Flash E2 Image” pane***

(see also in part I of the manual)

An installed maxiubootloader and correctly set bootargs are mandatory before flashing an E2 image!

## **Saving the original image**

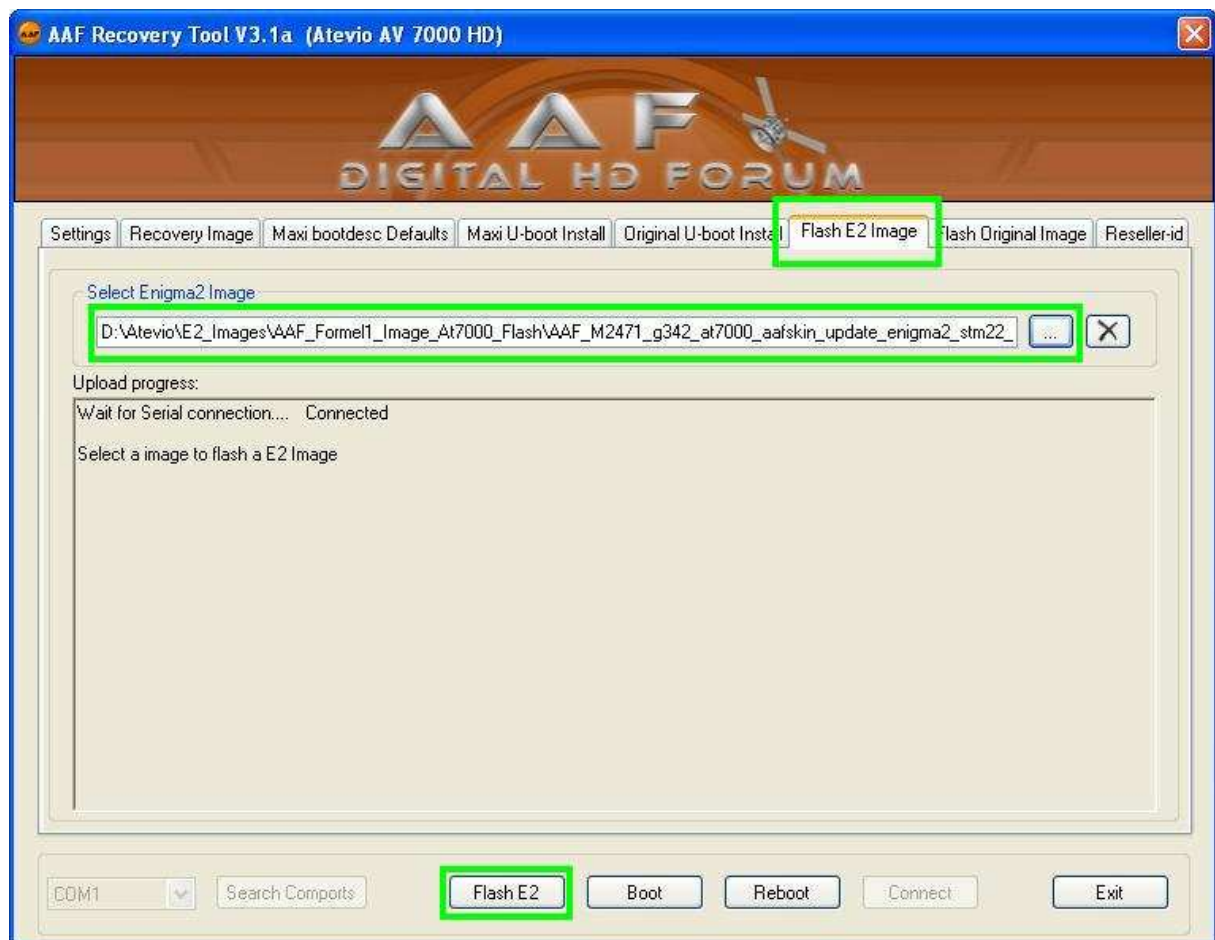
Before flashing an E2 image you should save your original image.

Start the receiver with its original firmware.

Connect using a telnet/SSH session and run the following command:

```
cat /dev/mtd7 > /dev/sda1/original.img or  
cat /dev/mtd7 > /dev/sdb1/original.img
```

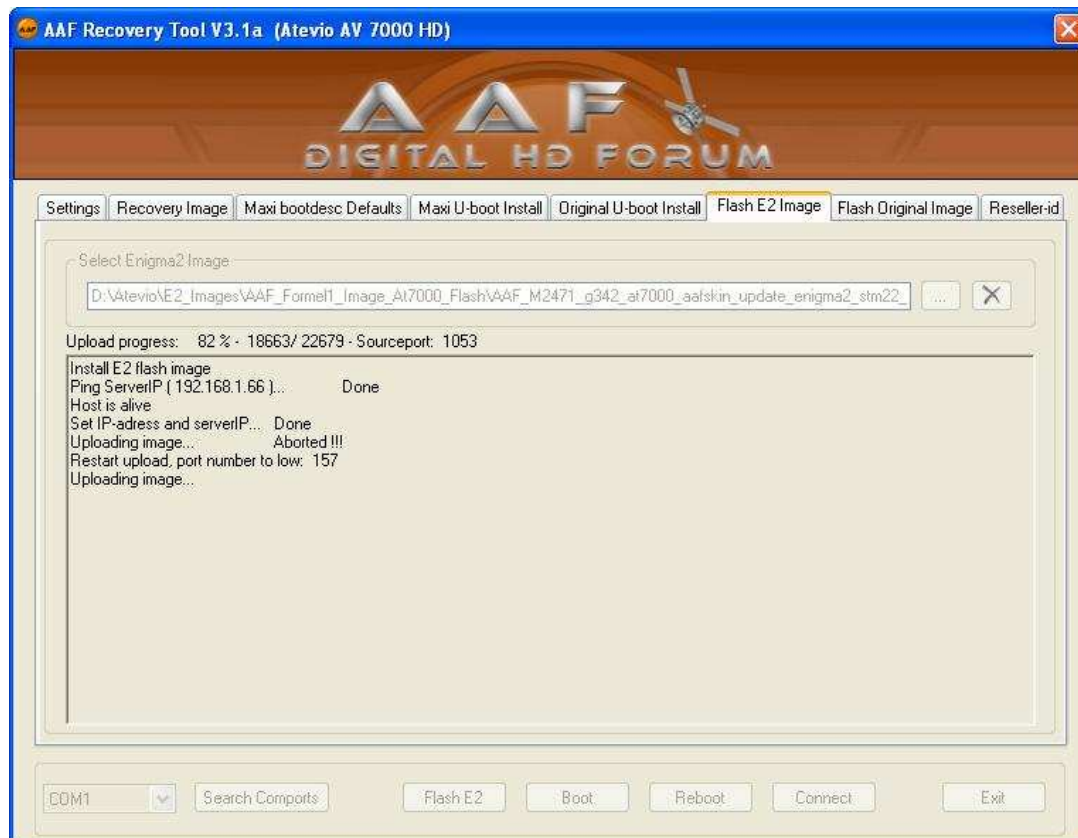
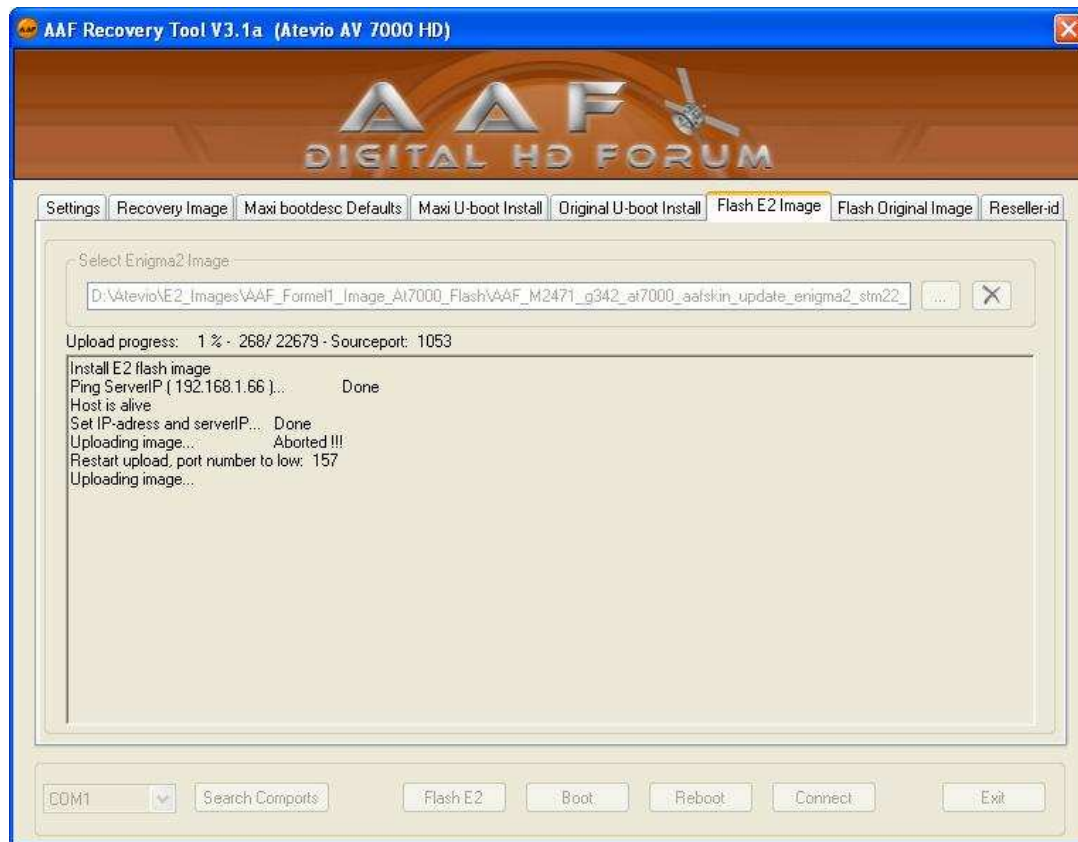
Copy the image file using ftp to your computer and store it at safe place!



Browse to the location where your E2 flash image is stored, select it and then press the “Flash E2” button.



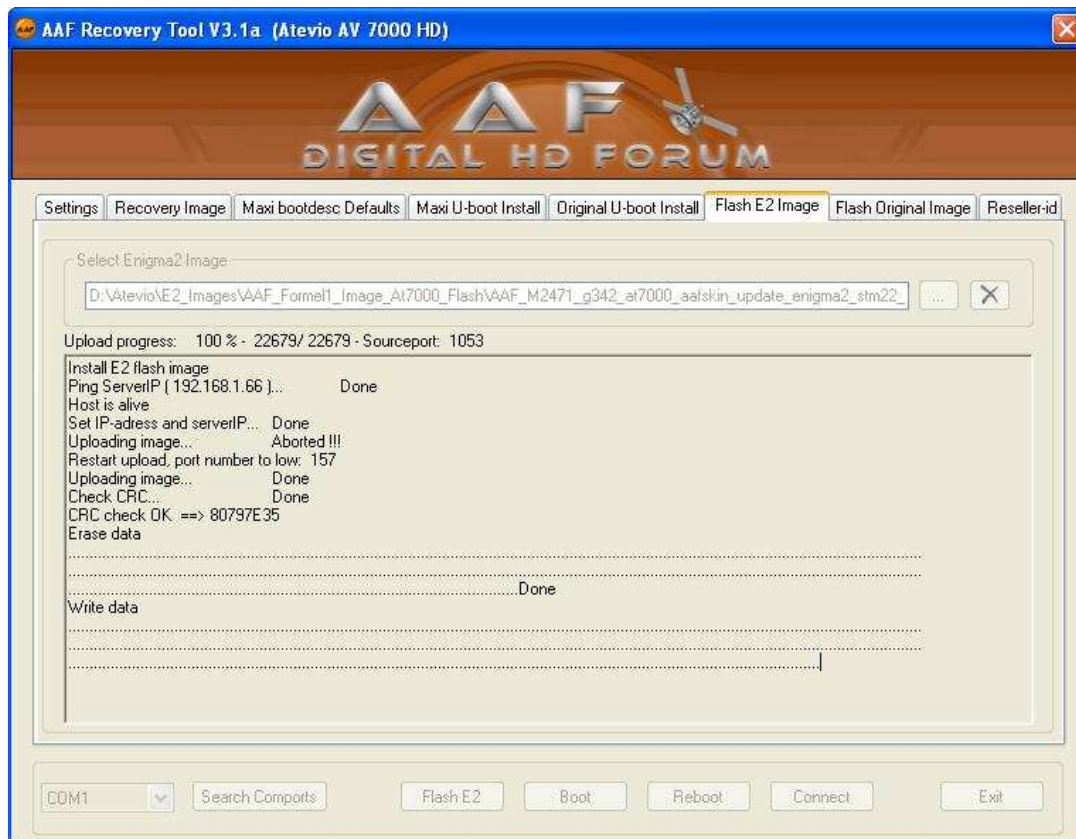
Flashing...



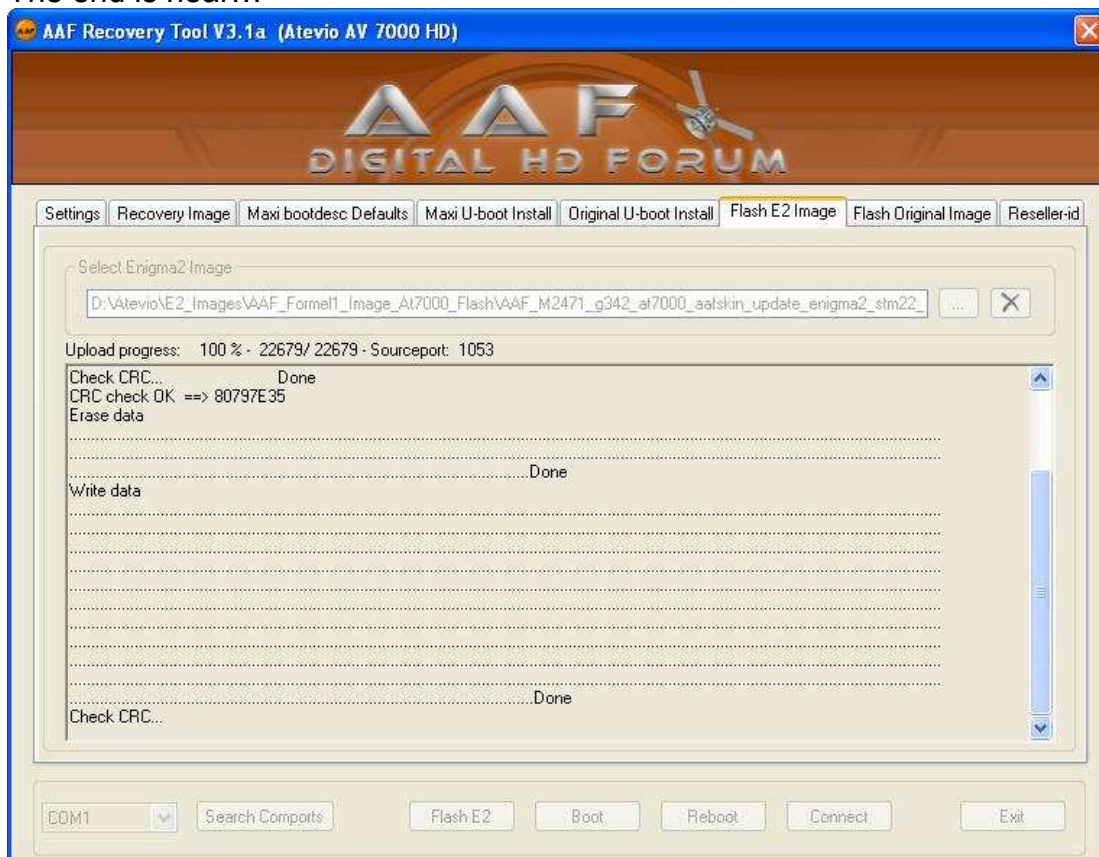




Still flashing...



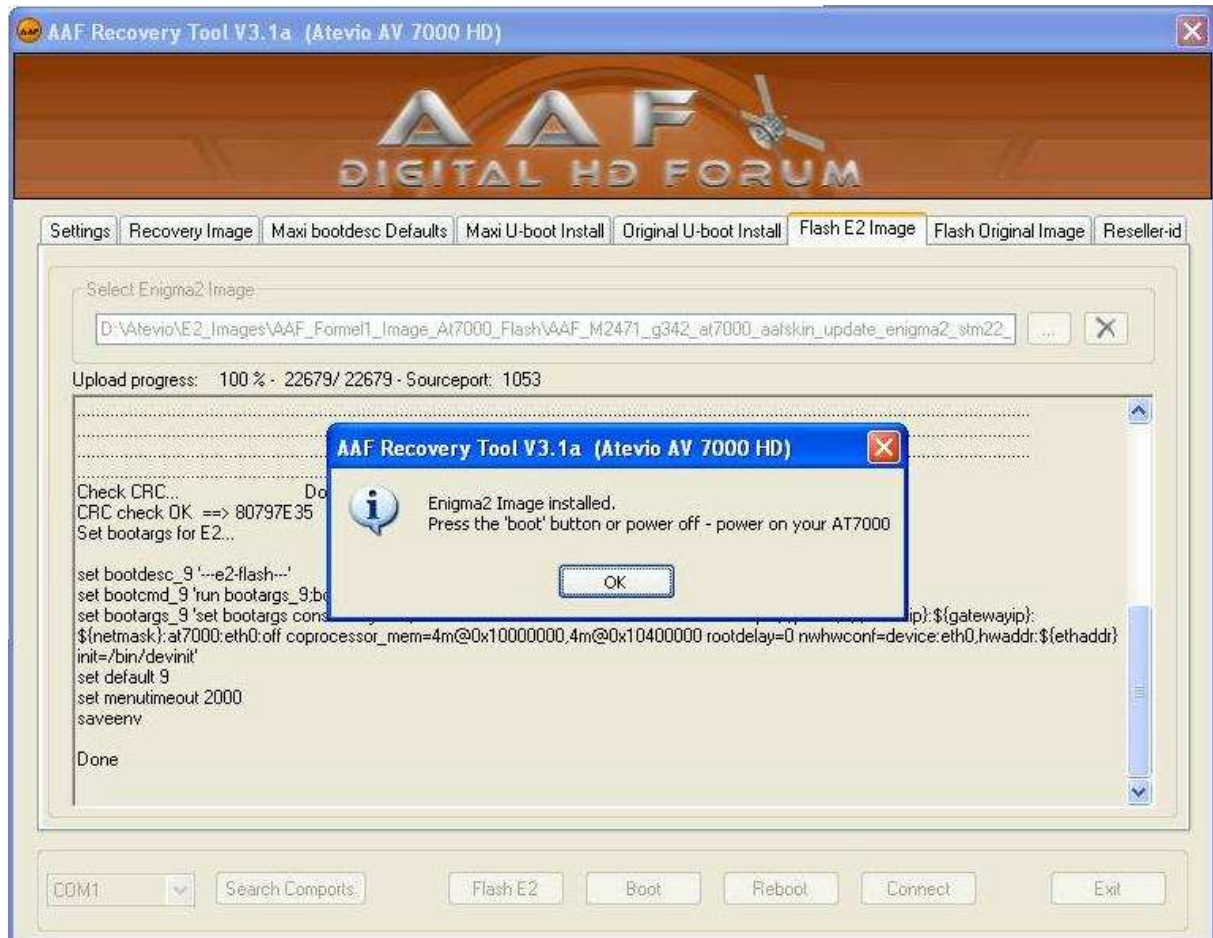
The end is near...







Done!



Seen in the background, the bootargs are modified for use with E2 in the flash.

Restart your receiver, set up E2 and enjoy...

The art\_log.txt for this task (empty lines removed):

```

22.04.2010 23:12:38 Started AAF Recovery Tool V3.1a (Atevio AV 7000 HD)
22.04.2010 23:12:38 Opening port COM1 settings: 115200,8,N,1
22.04.2010 23:12:38 Send first stop
22.04.2010 23:12:42 Send stop 0
22.04.2010 23:12:42 init fro
22.04.2010 23:12:42 Connected
22.04.2010 23:12:42 Start Tftp listener thread
22.04.2010 23:12:42 ntpanel... done
22.04.2010 23:12:42 Hit any key to stop autoboot: 1 0 0 0
HDBOX>
HDBOX> printenv ipaddr
22.04.2010 23:12:43 ipaddr=192.168.1.170
HDBOX> printenv ethaddr
22.04.2010 23:12:43 ethaddr=00:1e:b8:00:26:1e
HDBOX> printenv gatewayip
22.04.2010 23:12:43 X>
22.04.2010 23:12:43 printenv serverip
22.04.2010 23:12:43
serverip=192.168.1.66
HDBOX> printenv netmask

```

```

22.04.2010 23:12:43 netmask=255.255.255.0
HDBOX> md a00000e0 4a00000e0: 6978616d 6f6f6275 65722074 302e3176   maxiuboot rev1.0
HDBOX> md a00000f0 4
22.04.2010 23:18:37
a00000f0: 00000920 00012100 00000000 00000000   ....!.....
HDBOX> ping 192.168.1.66
22.04.2010 23:18:37 Using MAC Address 00:1E:B8:00:26:1E
STMAC: RTL8020/1 found
STMAC: 100Mbps full duplex link detected
host 192.168.1.66 is alive
HDBOX> set serverip 192.168.1.66;set gatewayip 192.168.1.66;set ipaddr 192.168.1.170;set netmask
255.255.255.0
22.04.2010 23:18:37 HDBOX>
22.04.2010 23:18:37 saveenv
22.04.2010 23:18:37
Saving Environment to Flash.... done
22.04.2010 23:18:38 Un-Protected 1 sectors...Erasing Flash.... done
22.04.2010 23:18:40 Erased 1 sectors..Writing to Flash... .done
22.04.2010 23:18:40 . done
Protected 1 sectors
22.04.2010 23:24:15 crc a5000000 1FC0000
22.04.2010 23:24:22 CRC32 for a5000000 ... a6fbffff ==> 80797e35
22.04.2010 23:24:22 HDBOX> erase A0040000 A1FFFFFF
22.04.2010 23:26:05 . done
22.04.2010 23:26:05 Erased 254 sectors
HDBOX> cp.b a5000000 A0040000 1FC0000
22.04.2010 23:33:15 .done
22.04.2010 23:33:15
HDBOX> crc A0040000 1FC0000
22.04.2010 23:33:35 CRC32 for a0040000 ... a1ffffff ==> 80797e35
22.04.2010 23:33:35
HDBOX> set bootdesc_9 '---e2-flash---'
22.04.2010 23:33:35
HDBOX> set bootcmd_9 'run bootargs_9;bootm a0040000'
22.04.2010 23:33:36 set bootargs_9 'set bootargs console=ttyAS1,115200 root=/dev/mtdblock2 rw mem=128m
ip=${ipaddr}:${serverip}:${gatewayip}:${netmask}:at7000:eth0:off coprocessor_
22.04.2010 23:33:36 mem=4m@0x10000000,4m@0x10400000 rootdelay=0
nwhwconf=device:eth0,hwaddr:${ethaddr} init=/bin/devinit'
22.04.2010 23:33:36 HDBOX> set default 9
22.04.2010 23:33:36 HDBOX> set menutimeout 2000
22.04.2010 23:33:36 HDBOX> saveenv
22.04.2010 23:33:36 Saving Environment to Flash.... done
22.04.2010 23:33:37 Un-Protected 1 sectors Erasing Flash.... done
22.04.2010 23:33:39 Erased 1 sectors..Writing to Flash... .done
22.04.2010 23:35:00 Exit button pressed

```



## The “Flash Original Image” pane

If you like to flash back your receiver to an original image use that pane.

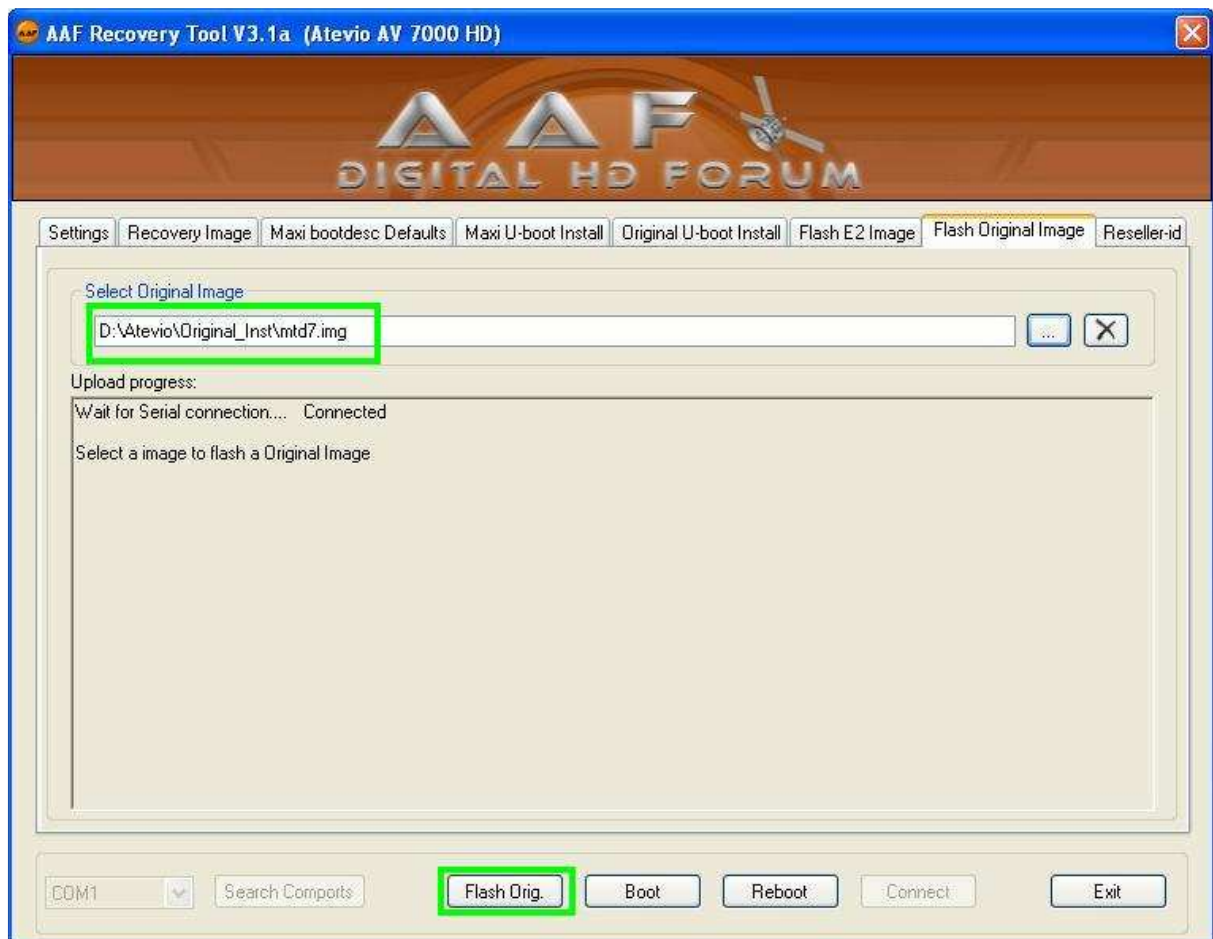
Note:

**You cant use any \*.IRD files for updating the original firmware as an flash image!**

Never try this!

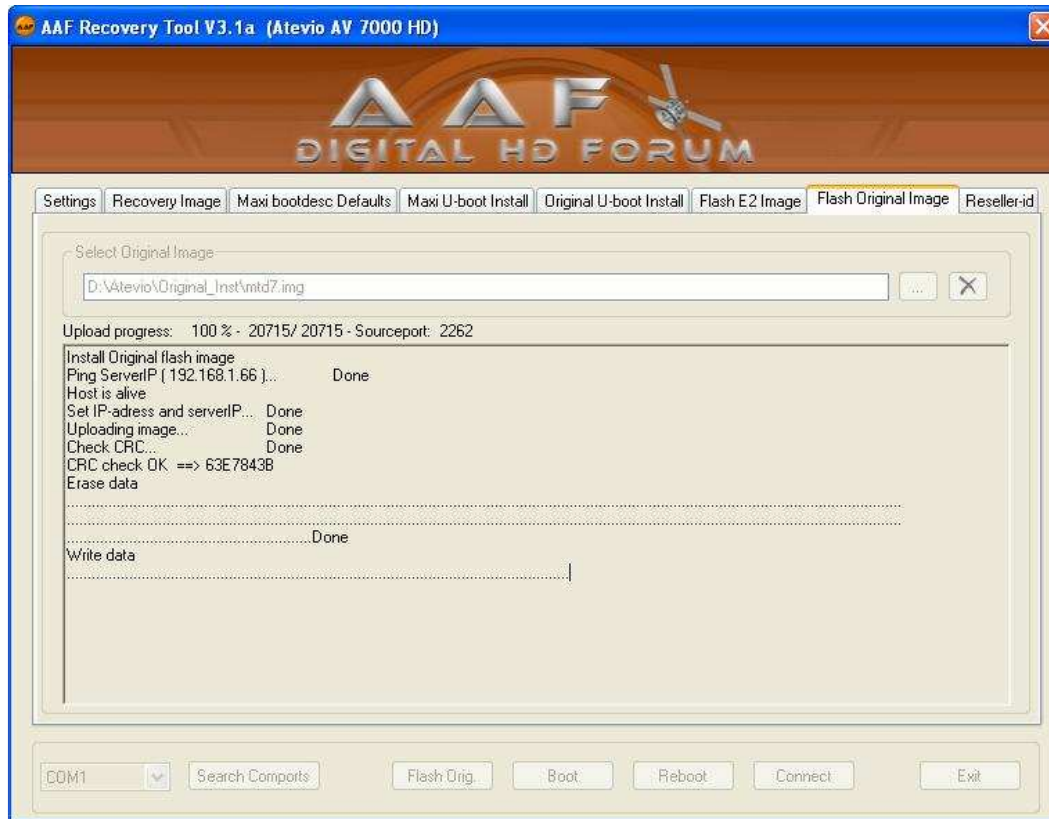
If you created an original image in the past (see [Saving the original image](#)) you can use this image for flashing.

Browse to the location, select the image and press “Flash Orig.”

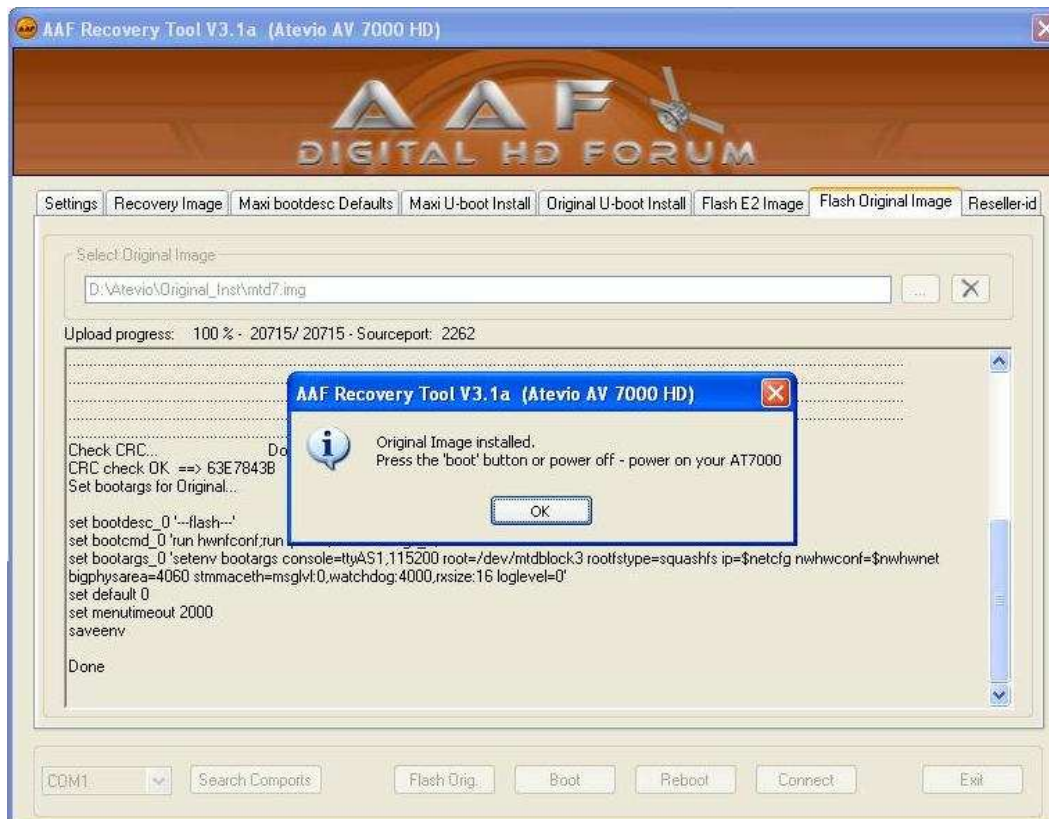




Wait...



...and you will get your reward!



The art\_log.txt for this task (empty lines removed):

```

23.04.2010 00:07:37 Started AAF Recovery Tool V3.1a (Atevio AV 7000 HD)
23.04.2010 00:07:38 Opening port COM1 settings: 115200,8,N,1
23.04.2010 00:07:38 Send first stop
23.04.2010 00:07:42 Send stop 0
23.04.2010 00:07:42 Connected
23.04.2010 00:07:42 Start Tftp listener thread
23.04.2010 00:07:42 0
23.04.2010 00:07:42 HDBOX>
23.04.2010 00:07:42 printenv
23.04.2010 00:07:42 ipaddr
ipaddr=192.168.1.170
HDBOX> printenv ethaddr
23.04.2010 00:07:42 ethaddr=00:1e:b8:00:26:1e
HDBOX> printenv gatewayip
23.04.2010 00:07:42 gatewayip=192.168.1.66
HDBOX> printenv serverip
23.04.2010 00:07:42 serverip=192.168.1.66
HDBOX> printenv netmask
23.04.2010 00:07:43 netmask=255.255.255.0
HDBOX> md a00000e0 4a00000e0: 6978616d 6f6f6275 65722074 302e3176 maxiuboot rev1.0
HDBOX> md a00000f0 4a00000f0: 00000920 00012100 00000000 00000000 .....!.....
HDBOX> ping 192.168.1.66
23.04.2010 00:08:53 Using MAC Address 00:1E:B8:00:26:1E
STMAC: RTL8020/1 found
STMAC: 100Mbps full duplex link detected
host 192.168.1.66 is alive
HDBOX> set serverip 192.168.1.66;set gatewayip 192.168.1.66;set ipaddr 192.168.1.170;set netmask
255.255.255.0
23.04.2010 00:08:53 HDBOX>
23.04.2010 00:08:53 saveenv
23.04.2010 00:08:53
Saving Environment to Flash.... done
Un-Protected 1 sectors Erasing Flash... done
Erased 1 sectors
Writing to Flash... .done
23.04.2010 00:14:06 crc a5000000 1D000000
23.04.2010 00:14:12 CRC32 for a5000000 ... a6cffff ==> 63e7
23.04.2010 00:14:12 843b
23.04.2010 00:14:12 HDBOX> erase A0300000 A1FFFFFF
23.04.2010 00:15:47 . done
Erased 232 sectors
HDBOX> cp.b a5000000 A0300000 1d000000
23.04.2010 00:22:56 .done
HDBOX> crc A0300000 1D000000
23.04.2010 00:23:14 CRC32 for a0300000 ... a1ffff ==> 63e7843b
23.04.2010 00:23:14 BOX>
23.04.2010 00:23:14 set bootdesc_0 '---flash---'
HDBOX> set bootcmd_0 'run hwnfconf;run ipconf; run bootargs_0;bootm a0300000'
23.04.2010 00:23:15 set bootargs_0 'setenv bootargs console=ttyAS1,115200 root=/dev/mtdblock3
rootfstype=squashfs ip=$netcfg nwhwconf=$nwhwnet bigphysarea=4060 stmmaceth=msglvl:0,w
23.04.2010 00:23:15 atchdog:4000,rxsize:16 loglevel=0'
23.04.2010 00:23:15 HDBOX> set default 0
23.04.2010 00:23:15 HDBOX> set menutimeout 2000
HDBOX> saveenv
23.04.2010 00:23:15 Saving Environment to Flash.... done
Un-Protected 1 sectors Erasing Flash.... done
23.04.2010 00:23:16 Erased 1 sectors
23.04.2010 00:23:16 g to Flash...
23.04.2010 00:23:18 .done
23.04.2010 00:24:32 Reboot button pressed
23.04.2010 00:24:32 reset?
23.04.2010 00:24:33 *
Board: STb7200-HDBOX [29-bit mode]

```





U-Boot 1.3.1 (Mar 23 2010 - 19:41:39) - stm23-0032

---created by TDT for general purpose---

DRAM: 128 MB

Flash: 32 MB

In: serial

3.04.2010 00:24:33

Out: serial

Err: serial

init frontpanel... done

23.04.2010 00:24:33 boot: 1

23.04.2010 00:24:34 ☐☐☐ 0

23.04.2010 00:24:35 Exit button pressed



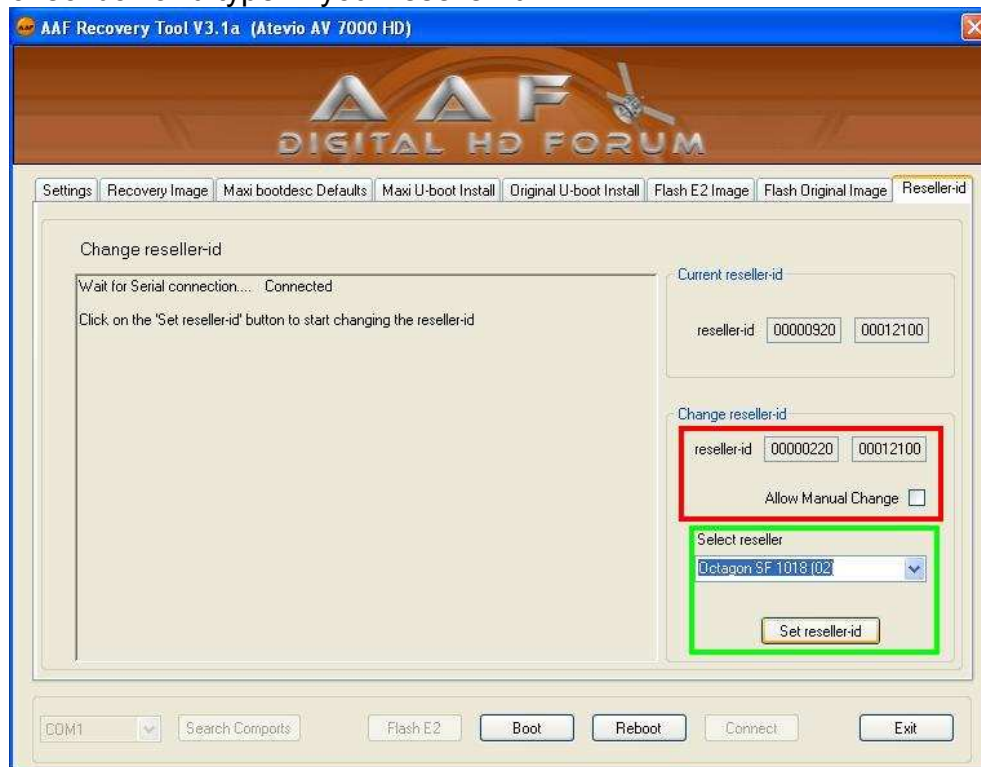
## The “Reseller id” pane

This pane allows to change your reseller id in a very simple way.

Just choose the model for the reseller you would like to set and click at “**Set reseller-id**”.

After changing the reseller ID the receiver reboots!

If your reseller id is not already known by ART, check the **Allow Manual Change** checkbox and type in your reseller id.



Why changing the reseller ID?

If you like to install another original firmware (i.e. Octagon or Tiviar) you need to change the reseller id.

During the firmware update process the reseller id is checked. If it does not match the update will fail.

As long as you do not an update, you can set the reseller id whatever you like!

Note:

Using the ART feature [Original U-Boot Install](#) will set the reseller id back to Atevio!

If you need to flash back your brands original bootloader (i.e. Octagon), you need download the “ubootflasherOrg.app” file designed for your model and copy it into the ART program directory.

**You must not use an original bootloader image (i.e. created with cat /dev/mtdblock0), this will crash your receiver!!!**

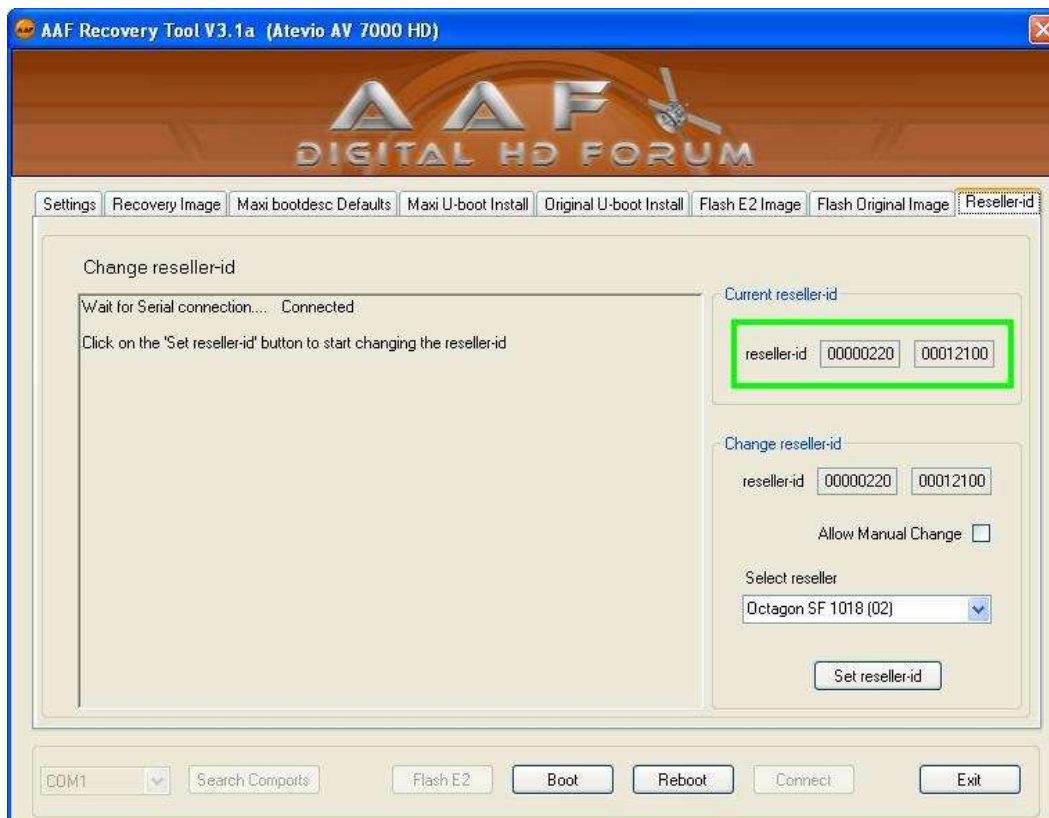
If you cant find this file, please ask in the AAF-board for more information/support!



The receiver starts after modifying the reseller id.



After rebooting the reseller id is changed.





## **General note for flashing from an USB device**

If you choose to install a loader/image file using the “Load from USB device” option make sure that the USB device is formatted with FAT32!

The file for installing must exist at the USB device AND in the ART program directory! ART checks the file transfer by verifying the checksum with that one from the file in the ART program directory. If there is no matching, a “CRC checksum error” is reported!



## **Please download/use PART I of the manual.**

Part I contains basic informations about installing the maxiubootloader and installing an E2 image (Flash and USB) to your receiver

## **Please download/use PART III of the manual.**

Part III lists alternative methods of installing the bootloaders/images and hints for troubleshooting.





For future use...