ArcaOS 5.0

AiR-BOOT Supplementary Guide

May 2017
(revision 1)

AiR-BOOT Boot Manager

ArcaOS comes with the AiR-BOOT Boot Manager, which is capable of starting ArcaOS from either primary or logical partitions as well as starting other operating systems.

The AiR-BOOT Boot Manager is an alternative boot loader which aims to address some of the issues inherent in the IBM Boot Manager on modern systems.

AiR-BOOT Features

AiR-BOOT does not need a primary partition

AiR-BOOT is a TRACK0 loader, so it does not require a partition of its own. Thus, it does not consume one of the four primary partitions available in an MBR partitioning scheme.

This does not mean it is always possible to use AiR-BOOT. The size of the first track needs to be at least 63 sectors of 512 bytes. Furthermore, aside from the presence of the MBR, the first track has no official designation and it is known that other disk management software may utilize the first track for its own purposes. AiR-BOOT cannot be used if such other disk management software uses the space in the first track.

AiR-BOOT supports huge disks

AiR-BOOT is very much OS/2-aware, and thus ArcaOS-aware and is capable of handling the extended geometry used by ArcaOS on disks larger than 512GB. For this it uses the LVM information, so it is mandatory that is information is correct and adequately resembles the disk geometry used by ArcaOS.

AiR-BOOT is an on-the-fly boot loader

When AiR-BOOT starts, it scans all disks and enumerates all partitions on them. This means that any new partitions are automatically added to the menu and any partitions that were removed will no longer be displayed in the menu. This means that AiR-BOOT is always in sync with the current layout of the hard disks when it is active and there is no need to manually add new systems or remove those which are no longer installed.

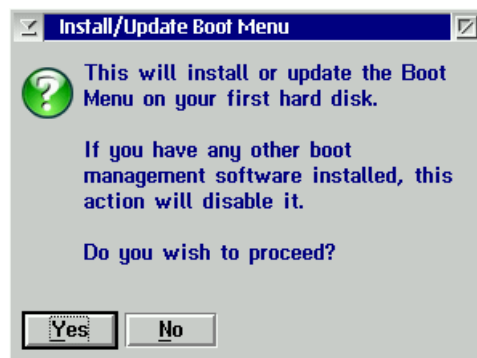### AiR-BOOT active for the very first time

A sometimes confusing aspect of AiR-BOOT is that it shows almost all partitions, including those containing only data, when active for the very first time. This has to do with the fact that AiR-BOOT cannot determine whether a partition contains a bootable operating system or not. Rather than making uneducated guesses about bootability, AiR-BOOT presents all partitions and requires the user to specify which of them should be hidden from the menu. This is configured using AiR-BOOT SETUP, discussed below.

AiR-BOOT has a built-in SETUP program

AiR-BOOT has several configurable options which may be changed using its built-in SETUP program. To access AiR-BOOT SETUP, press **F10** when the normal selection menu is displayed. This will show the setup screen with its main entries.

Installing AiR-BOOT

1. Boot from the ArcaOS Installation Disc

2. Click on the System Maintenance button

3. From the menu, select *Disk→Manage (Graphical)*

4. From the Installation Volume Manage menu, select *System→Boot Menu(AiR-BOOT)→Install/Update*

5. Confirm the dialog below:

AiR-BOOT is now installed and will be shown at the next boot.

AiR-BOOT Main Menu

A sample disk layout is shown in the appendix of the ArcaOS 5.0 Installation Guide. Such a sample layout would appear in the main AiR-BOOT menu similar to the image shown below. Note that the HPFS and JFS data partitions are also shown respectively as *hpfsdata* on H: and *jfsdata* using the J: drive letter. As explained earlier, this is because AiR-BOOT cannot make educated guesses whether partitions are bootable or not, so a first (one time) action is to configure AiR-BOOT to hide these data partitions from the menu. Also note that the spanned volume visible in the sample layout is not shown. This is because spanned volumes are never bootable and thus are automatically hidden by AiR-BOOT.

Configuring AiR-BOOT

AiR-BOOT is a boot loader with many features, which may be customized using the built-in SETUP program. When the menu for selecting the operating system to start is displayed, press **F10** to enter the SETUP program, which will look similar to the image below.

Because a full coverage of AiR-BOOT is beyond the scope if this supplement, only a few basic settings will be discussed here.

```
PARTITION SETUP                DEFINE MASTER PASSWORD

BASIC OPTIONS                  DEFINE BOOT PASSWORD

ADVANCED OPTIONS               SAVE & EXIT SETUP

EXTENDED BOOT OPTIONS          EXIT WITHOUT SAVING


↑ ↓ → ← : Choose Action        F10 : Save&Exit Setup
Enter   : Select Action        Esc : Quit Setup
```

F1 Context -sensitive help

The AiR-BOOT SETUP has context-sensitive help which is accessed by pressing **F1** when the cursor is on a specific item.

Hiding the data partitions from the main menu

This is accomplished using PARTITION SETUP of which an image is shown below:

```
No Hd | Label      | Flags | Type       No Hd | Label    | Flags | Type

01/01 | pc-dos7    | BVHLP | FAT16Big   02/01 | Windows  | BVHLP | NTFS
03/01 | OS2 BootMgr| BVHLP | OS2-BMGR   04/01 | hpfsdata | BVHLP | HPFS
05/01 | jfsdata    | BVHLP | JFS        06/01 | lvmdata  | BVHLP | LVM-Data
07/01 | lvmdata    | BVHLP | LVM-Data   08/01 | ArcaOS   | BVHLP | JFS


↑ ↓ → ← : Choose partition              F1  : Flags (press key to toogle)
Enter   : Edit label                    Esc : Return to main-menu
```

In the *Flags* field, note the highlighted **B** letters, which indicate AiR-BOOT should regard the corresponding partition as bootable and thus show it in the main menu. Putting the cursor on a specific partition by using the arrow keys and pressing the **B** key will toggle this flag. Making this change to the *hpfsdata* and *jfsdata* partitions, the screen will then look similar to this:

```
No Hd   Label       Flags   Type         No Hd   Label       Flags   Type

01/01   pc-dos7     BUHLP   FAT16Big     02/01   Windows     BUHLP   NTFS
03/01   OS2 BootMgr BUHLP   OS2-BMGR     04/01   hpfsdata    BUHLP   HPFS
05/01   jfsdata     BUHLP   JFS          06/01   lvmdata     BUHLP   LVM-Data
07/01   lvmdata     BUHLP   LVM-Data     08/01   ArcaOS      BUHLP   JFS




   ↑ ↓ → ← : Choose partition          F1  : Flags (press key to toogle)
   Enter   : Edit label                Esc : Return to main-menu
```

Press the **Esc** key to go back to the main setup screen and press **F10**, which will ask for confirmation:

```
      SAVE & EXIT NOW
      ARE YOU SURE?
         (Y/N)
```

Pressing the **Y** key will return to the AiR-BOOT Main Menu, this time excluding the data partitions:

```
        No   Hd   Label:      Type:

        01   01   pc-dos7     FAT16Big
        02   01   Windows     NTFS
        03   01   ArcaOS      JFS         on drive 0:
```

The hiding of non-bootable partitions is usually a one-time action.

When partitions are added, AiR-BOOT will show them by default in the Main Menu, therefor it is necessary to use SETUP to hide any newly-created data partitions from the Main Menu.

Timeout

The menu timeout before boot may be modified in BASIC OPTIONS where the space bar toggles timeout active or not and the **PgUp** and **PgDn** keys are used to adjust the timeout.

More information on AiR-BOOT

See http://svn.netlabs.org/air-boot for further information regarding AiR-BOOT.