Simple User Guide for Smart Boot Manager 3.x

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This simple documentation briefly introduces the usage of Smart Boot Manager 3.x.

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1. Introduction

This section is the brief introduction of Smart Boot Manager 3.x.

1.1 Copyright

Smart Boot Manager is a free software; you can redistribute it and/or modify it under the terms of the GNU General Public License as published by the Free Software Foundation; either version 2 of the License, or (at your option) any later version.

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You should have received a copy of the GNU General Public License along with this program; if not, write to the Free Software Foundation, Inc., 675 Mass Ave, Cambridge, MA 02139, USA.
1.2 What is Smart Boot Manager 3.x and what it’s not?

Smart Boot Manager or briefly SmartBtmgr (SBM), is an OS independent Boot Manager - a program that is loaded by the BIOS before any operating system and allows you to choose which operating system to boot. It’s like OS/2 Boot Manager and many other similar programs, e.g. System Commander, Bootit, Bootstar, PQBoot etc.

But it’s NOT an OS Loader; it’s not a replacement for LILO or other OS Loaders. In other words, you must use LILO (or other similar programs) to boot Linux while using SmartBtmgr to give you an easy to use interface to Boot Multiple OSes.

1.3 The features of Smart Boot Manager 3.x

SmartBtmgr is intended to be easy to use, flexible and small. It has a nice windows-like user interface, online help and an easy-to-use command menu. It needs no configuration file or program. All actions can be done from within the program; for example, it can automatically search all drives and partitions when it first runs, or you can let it research them later. The name of each boot record can be modified in its interface. The installation program is only used after once, unless the program is damaged. It can be installed not only onto a hard disk but also to a floppy.

SmartBtmgr is small enough that it can be installed into the first track of a hard disk (the hidden sectors), no special partition is needed. It is absolutely OS independent, unlike System Commander, OS/2 BootManager and PQBoot Linux is of course not required.

Although it is very small, it is very powerful. It has many other useful features, such as password protection, auto delay boot, direct boot (same as the "single-shot autoboot" of Choose-OS), multi-language user interface, boot schedule, preload keystrokes, swap drive id, etc.

The style and language of its interface is easily customized. The interface datafile is independent from the program, so it can be changed, and the program does not need to be recompiled. There are two interface datafiles supplied with this version, one is Chinese and another is English.

Summarize:

The Main Features of Smart Boot Manager are:

- **Very Small Size** The size of Smart Boot Manager is small enough that it can be installed into the first track of a hard disk (the hidden track).

- **Absolutely OS Independent** Smart Boot Manager does *NOT* need any partitions, and it has online installation and uninstallation functions, so it’s absolutely OS independent.

- **Easy to Use** Smart Boot Manager has a window like interface, online help and easy-to-use command menu, it does *NOT* need any configuration file.

- **Smart Search Drives and Partitions** Smart Boot Manager can automatically search out all of the floppy/hard drives and partitions that could be booted.

- **Powerful Password Protection** Two types of password and three security modes can give you very flexible security configuration.

- **Auto Delay Boot** Boot particular drive or partition automatically if none of keys are pressed within a certain number of seconds.
2. How to compile and customize Smart Boot Manager 3.x?

This section introduces the method of compiling and customizing Smart Boot Manager 3.x.

2.1 How to compile Smart Boot Manager 3.x?

2.1.1 What software is needed to compile SmartBtmg?

For Linux users, you need gcc, make and nasm (Netwide Assembler, URL: http://www.web-sites.co.uk/nasm/ <http://www.web-sites.co.uk/nasm/>). For DOS users, you must have DJGPP (a DOS porting of GCC, URL: http://www.delorie.com/djgpp/ <http://www.delorie.com/djgpp/>), and nasm.

You also must have UCL compression library (URL: http://wildsau.idv.uni-linz.ac.at/mfx/ucl.html <http://wildsau.idv.uni-linz.ac.at/mfx/ucl.html>) to compile Smart BootManager.

2.1.2 How to compile it?

Edit the Makefile, change the line that including 'TARGET_OS=xxx'. If you are using Linux, change the line to TARGET_OS=linux, if you are using DOS, change it to TARGET_OS=dos.

Then just type make to compile it.

The executable file is placed in release/ directory.

Type make install to install it. For Linux, the default binary installation dir is /usr/sbin/, themes will be stored into /usr/share/btmg/ and documentation is placed in /usr/share/doc/btmg/ if you want to change them, edit the Makefile.

2.2 How to customize and install the theme file?

You can start your own theme file from one of the two standard theme files provided with the program. These are placed in manager/themes/ dir.

In order to change it, please refer to the comments in the theme file.
You must have *nasm* to compile the theme file. The compile method is very simple, for example, assume that the new theme file is *mytheme.asm*, the following command will generate a binary version of *mytheme.asm*:

```
% nasm -fbin -o mytheme.bin mytheme.asm
```

If you want to compile the theme file with a non-standard keyboard map, use the command:

```
% nasm -DKEYMAP_XXX -fbin -o mytheme.bin mytheme.asm
```

Where KEYMAP_XXX can be one of the following four symbols:

- **KEYMAP_AZERTY** (AZERTY Keyboard)
- **KEYMAP_QWERTZ** (QWERTZ Keyboard)
- **KEYMAP_DVORAK** (Dvorak Keyboard)
- **KEYMAP_DVORAK_ANSI** (ANSI Dvorak Keyboard)

Be sure that the keymap files (*azerty.kbd ...*) are in the current directory.

Now you can use installation program to install Smart Boot Manager with the new theme(see section 3 ()):

for *linux*:

```
% sbminst -t mytheme.bin -d /dev/hda
```

or for *dos*:

```
> sbminst -t mytheme.bin -d 128
```

## 3 How to install Smart Boot Manager 3.x?

### 3.1 The usage of installation program.

Now there is an installation program for Linux and DOS. The installation programs are placed in the installer/ dir. There is only one source file for DOS and Linux, and the usage is very similar:

The usage of installation program is:

```
sbminst [-t theme] [-d drv] [-b backup_file] [-u backup_file]
```

- **-t theme** select the theme to be used, in which the theme could be:
  - us = English theme
  - hu = Hungarian theme
  - ru = Russian theme
  - es = Spanish theme
  - pt = Portuguese theme
  - zh = Chinese theme
  - cz = Czech theme
  - fr = French theme

  or a filename of user customized theme.

- **-d drv** set the drive that you want to install Smart BootManager on;
for Linux:
/dev/fd0 is the first floppy driver,
/dev/hda is the first IDE hardisk driver.
/dev/sda is the first SCSI hardisk driver.

for DOS:
0 is the first floppy drive
128 is the first hard drive;

-c disable CD-ROM booting feature;

-b backup_file backup the data that will be overwritten for
future uninstallation;

-u backup_file uninstall Smart BootManager, should be used alone;

-y do not ask any question or warning.

for example, use command 'sbminst -z h -d /dev/hda -b sbm-bak.dat' under linux to install a Chinese version
to the first hard disk and backup the original data to file sbm-bak.dat.

Use command 'sbminst -u sbm-bak.dat' to uninstall it.

3.2 Installation notes for specific OSes.

3.2.1 Notes for Linux

If you want to boot linux with Smart BootManager, you must install LILO into the Superblock of your linux
partition, instead of into MBR!

Edit /etc/lilo.conf file, change the line that include "boot=/dev/hda" to "boot=/dev/hda?", /dev/hda? is the partition where your linux kernel placed. Then run /sbin/lilo.

3.2.2 Notes for Windows NT, Windows 2000, FreeBSD, OS/2 and Solaris

You should install these OSes into a primary partition of the first hard disk. Although the second (and later)
hard disk and logical partitions may also be supported by SmartBtmgr (by using 'Swap drive ID' feature) I don't suggest doing so.

You should turn on the Auto Active flag of these partitions. If not, errors might occur while booting the OS.

If you installed these OSes into the second or later hard disk, you also should turn on the Swap drive ID flag
(CTRL+X).

3.2.3 Notes for DOS, Windows 9X

You should install these OSes into a primary partition of the first hard disk. Although it is possible to install
DOS and Windows 9X into a logical partition or the second (or later) hard disk, it is not recommended. See
section 4.5 () for more information.
4 How to use Smart Boot Manager 3.x?

This section briefly introduces the usage of Smart Boot Manager 3.x.

4.1 How to run it?

After installation, please reboot the computer. If it was installed onto a floppy disk, please insert the disk into the floppy drive and boot from this disk. The main interface of this program will appeared if everything is correct. Press F1 for online help.

4.2 The Smart Boot Manager 3.x interface

There is a Boot Menu at the center of the screen containing a list of all partitions and floppy drives found by SmartBtmgr. I call each partition (or floppy drive) a "Boot Record", for example:

<table>
<thead>
<tr>
<th>Flags</th>
<th>Number</th>
<th>Type</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>------</td>
<td>-------</td>
<td>---------</td>
<td>-------</td>
</tr>
<tr>
<td>------</td>
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<td>------</td>
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</tr>
<tr>
<td>------</td>
<td>-------</td>
<td>---------</td>
<td>-------</td>
</tr>
</tbody>
</table>

The first record in above sample is a floppy drive (A:). The second and third records are the two hard disks (the MBRs). The next is a IDE CD-ROM. The next record is the first primary partition in the first hard disk, and so on.

The meaning of each column in Boot Menu is:

Flags : Attribute flags of each boot record, the meaning of each flag is:

* : indicates that it’s the default boot record.
   When the auto boot delay time is up, or the ESC key is pressed, this boot record will be automatically booted.

p : indicates that it has password protection.
   Press F9 to change the password of the boot record. This password is noneffective unless the root password is set. Press F10 to set the root password. (The root password here has nothing to do with the root password in Linux!)

S : indicates that this boot record was added to the schedule table, if the current time falls
into this record's schedule, SmartBMgr will set it as default boot record. Press Ctrl-S to set/unset the schedule of current record.

k : indicates that this boot record has some keystrokes to be preloaded into the keyboard buffer before booting it. Press Ctrl-K to set/unset it.

X : indicates that the swap drive id flag is set. While booting this record, its drive will be swapped with the bootable drive of the same type. For example, if this flag is set for a partition in the second hard disk (drv id=129), the drive with id 128 (0x80) and 129 (0x81) will be swapped while booting this partition. This feature is very useful if you want to boot DOS/Windows 9x/NT from the second or later hard disk. Press Ctrl+X to toggle this flag.

a : indicates that this boot record will be automatically marked as active when booting it. Usually, the primary partition that installed DOS/Windows 9x/Windows NT should set this flag. Press F6 to toggle this flag.

A : indicates that this primary partition was marked as active. Press F4 to mark it.

h : indicates that this boot record will be automatically hidden when booting other records. This flag only affects the FAT and NTFS partitions. Press F7 to toggle this flag.

H : indicates that this partition was already hidden. Press F5 to hide/unhide a partition.

l : indicates that this boot record is a logical partition.

D : indicates that this boot record is a disk drive, it can be a floppy drive or hard disk (MBR) in the current version.

Number : The Drive No. and Partition No. of this boot record. The left column is Drive No., the right one is Partition No. For a floppy drive, the Drive No. is F00 or F01 (A: or B:), the Partition No. is always 0. For partitions, the Drive No. of the first hard disk is HD0, the Partition No. is same as the Linux convention. The CD-ROM Drive Number starts from CD0.
4. How to use Smart Boot Manager 3.x?

Type : The partition type. For a disk drive, it's always NONE.

Name : The name of the boot record. Press F3 to change it.

The global flags and information of Smart Boot Manager are displayed at the right bottom corner of the screen, it looks like:

| HD0 | PSALE | 28: 30 |

The first area (HD0) is the BIOS ID of the current boot drive, the second area (PSALE) are the global flags, which mean:

P : Administrator password is available.
S : Smart Boot Manager is in Security Lock Mode.
A : Smart Boot Manager is in Administration mode.
L : "Remember the last boot record" feature is turned on.
E : Extended Int 13H is turned on.

The third area (28: 30) is the delay time counter.

4.3 The hot keys

SmartBtmgr has following hot keys:

F1 Show Help window
Ctrl+F1 Show About window
F2 Save changes
F3 Rename the boot record
F4 Mark the primary partition active
F5 Hide/unhide the partition
F6 Toggle auto active (only for primary partitions)
F7 Toggle auto hide (only for partitions)
F8 Set default boot record
Shift+F8 Unset default boot record
F9 Change boot record password
F10 Change root password
Ctrl+F10 Enter/leave the administrator mode
Alt+F10 Enter/leave the Security Lock mode

Ctrl+D Delete the boot record
Ctrl+T Set delay time (seconds)
Ctrl+I Rescan all boot records
Ctrl+H Rescan all partitions

Ctrl+P Duplicate the boot record
Ctrl+U Move the boot record up
Ctrl+N Move the boot record down
4. How to use Smart Boot Manager 3.x?

- **Ctrl+S**: Set / unset the record's boot schedule
- **Ctrl+K**: Set / unset the preload keystrokes
- **Ctrl+X**: Toggle swap drive id flag
- **Ctrl+F**: Change the style of Boot Menu
- **Ctrl+L**: Toggle "Remember the last booted record" (If this feature is turned on, there will be a Red 'L' at right bottom of the screen.)
- **Ctrl+Q**: Exit to BIOS

**Keypad +**

<table>
<thead>
<tr>
<th>Key</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-9</td>
<td>Change Video mode, available video modes are 80x25 and 90x25.</td>
</tr>
</tbody>
</table>

**Command Menu Keys**

- **Up, Down**: Move the focus bar
- **Enter**: Show information box
- **Delete**: Boot it
- **Ctrl+PageDown**: Move the Boot Menu Window.
- **F12**: Power Off.
- **Tab(Alt)**: Open / Close the command menu.
- **Alt-S**: Open / Close the System Settings Menu.
- **Alt-R**: Open / Close the Record Settings Menu.

When the command menu is opened, following hot keys can be used:

- **Up, Down**: Move the command menu’s focus bar.
- **Enter**: Execute the focused command.
- **Ctrl+Up**: Move the boot menu’s focus bar.
- **Ctrl+Down**: Move the boot menu’s focus bar.
- **Home**: Move the command menu.
- **Delete**: Move the command menu.
- **PageDown**: Move the command menu.
- **Ctrl+Home**: Move the Boot Menu Window.
- **Ctrl+Del**: Move the Boot Menu Window.
- **Ctrl+End**: Move the Boot Menu Window.
- **Ctrl+PgDn**: Move the Boot Menu Window.
4.4 Command menus

Use Tab key to open or close the command menu, there are three command menus available: Main Menu, Record Settings Menu and System Settings Menu.

4.4.1 Main Menu

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Help</td>
<td>Open the Help window</td>
</tr>
<tr>
<td>About</td>
<td>Open the About window</td>
</tr>
<tr>
<td>Save Changes</td>
<td>Save the changes</td>
</tr>
<tr>
<td>Boot it</td>
<td>Boot the focused boot record</td>
</tr>
<tr>
<td>Boot Previous MBR</td>
<td>Boot the original MBR (before Smart Btmgr was installed)</td>
</tr>
<tr>
<td>Record Settings</td>
<td>Open the Record Settings Menu</td>
</tr>
<tr>
<td>System Settings</td>
<td>Open the System Settings Menu</td>
</tr>
<tr>
<td>Quit</td>
<td>Quit to BIOS (Try to boot the next bootable device)</td>
</tr>
<tr>
<td>Power Off</td>
<td>Turn the computer off (Needs Mother Board with APM)</td>
</tr>
</tbody>
</table>

4.4.2 Record Settings Menu

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information</td>
<td>Show the boot record’s information</td>
</tr>
<tr>
<td>Name</td>
<td>Change the boot record’s name</td>
</tr>
<tr>
<td>Password</td>
<td>Change the boot record’s password</td>
</tr>
<tr>
<td>Schedule</td>
<td>Set/unset the Schedule time</td>
</tr>
<tr>
<td>Keystrokes</td>
<td>Set/unset the Keystrokes</td>
</tr>
<tr>
<td>Mark Active</td>
<td>Mark the boot record as active</td>
</tr>
<tr>
<td>Hide/unhide</td>
<td>Hide/unhide the boot record</td>
</tr>
<tr>
<td>Auto Active</td>
<td>Set/unset the Auto Active flag</td>
</tr>
<tr>
<td>Auto Hide</td>
<td>Set/unset the Auto Hide flag</td>
</tr>
<tr>
<td>Swap Drive ID</td>
<td>Set/unset the Swap Drive ID flag</td>
</tr>
<tr>
<td>Delete</td>
<td>Delete the boot record</td>
</tr>
<tr>
<td>Duplicate</td>
<td>Duplicate the boot record</td>
</tr>
<tr>
<td>Move Up</td>
<td>move the boot record up</td>
</tr>
<tr>
<td>Move Down</td>
<td>move the boot record down</td>
</tr>
</tbody>
</table>

4.4.3 System Settings Menu

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Root Password</td>
<td>Set the Root (Administrator) Password</td>
</tr>
<tr>
<td>Toggle Admin Mode</td>
<td>Enter/Leave the administration mode</td>
</tr>
<tr>
<td>Toggle Security Mode</td>
<td>Enter/Leave the security mode</td>
</tr>
<tr>
<td>Set Default Record</td>
<td>Set focused boot record as the default record</td>
</tr>
<tr>
<td>Unset Default Record</td>
<td>Unset default boot record</td>
</tr>
<tr>
<td>Set Delay Time</td>
<td>Set the delay time</td>
</tr>
<tr>
<td>Change Boot Menu Style</td>
<td>Change the style of Boot Menu</td>
</tr>
<tr>
<td></td>
<td>(Hide Flags, Number, Type from Boot Menu).</td>
</tr>
</tbody>
</table>
4. How to use Smart Boot Manager 3.x?

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toggle Remember Last</td>
<td>Toggle &quot;Remember the last boot record&quot;. There is a red 'L' at the bottom of the screen to indicate this switch.</td>
</tr>
<tr>
<td>Toggle Extended Int13H</td>
<td>Turn on/off BIOS Extended Int13H.</td>
</tr>
<tr>
<td>Rescan All Boot Records</td>
<td>Rescan all boot records and rebuild the boot menu</td>
</tr>
<tr>
<td>Rescan All Partitions</td>
<td>Rescan all partitions and rebuild the boot menu</td>
</tr>
<tr>
<td>Set CD-ROM I/O Ports</td>
<td>Set the I/O ports of IDE CD-ROM by hand.</td>
</tr>
<tr>
<td>Set year (fix Y2K BIOS bug)</td>
<td>Set the correct year for old buggy BIOS.</td>
</tr>
<tr>
<td>Install Smart BootManager</td>
<td>Install Smart BootManager onto a selected drive</td>
</tr>
<tr>
<td>Uninstall Smart BootManager</td>
<td>Uninstall current Smart BootManager</td>
</tr>
</tbody>
</table>

4.5 Advanced usage

4.5.1 Password protection

The password scheme of SmartBtmgr is very flexible. One root password can be set for administrator. Different access passwords can be assigned to each boot record to restrict access to this record.

If the root password was set, there will be a 'P' character displayed at the right bottom of the screen.

There are three security modes available:

- **Normal mode**
  
  In this mode, following operations need the Boot Record Password:
  
  - Change Name
  - Change the Boot Record Password
  - Toggle the Auto Active flag
  - Toggle the Auto Hide flag
  - Toggle the Swap drive ID flag
  - Active the Boot Record
  - Hide / unhide the Boot Record
  - Boot the Record

  All other operations except "Save Changes" need the Root Password.

- **Security Lock mode**
  
  In this mode, all operations except "Boot the Record" need the Root Password. The Boot Record Password is needed to boot the record. This mode is the most secure mode, you should switch SmartBtmgr into this mode after you finish configuring it. When SmartBtmgr is in this mode, there will be a 'S' char displayed at the right bottom of the screen.

  Use Alt-F10 key to Enter or Leave this mode.
4. How to use Smart Boot Manager 3.x?

- Administrator mode

In this mode, all operations do not need any password! This mode is only used to configure SmartBtmgr! When SmartBtmgr is in this mode, there will be a 'A' char displayed at the right bottom of the screen.

Use Ctrl-F10 key to Enter or Leave this mode.

4.5.2 Delay time

If no key is pressed within the delay time, the default boot record will be booted automatically.

If the delay time is set to zero, the user interface will not be displayed and the default boot record will be booted automatically. Hold the Ctrl key while rebooting the computer to enter the user interface of SmartBtmgr again.

If the delay time is set to 255, there is no time limit to boot the default boot record.

4.5.3 Boot Schedule

A boot record can be assigned a scheduled time/days range. When booting the computer each time, if the current time falls within the scheduled time range of a boot record, Smart Btmgr will set this boot record as the default record.

If the delay time was set to zero, this boot record will be booted automatically.

Use Ctrl-S key to set or unset a boot record’s scheduled time range.

The minimal unit of a scheduled time range is a minute, and the format must be:

`hh:mm-hh:mm;days`

The first `hh:mm` is the beginning time, the second `hh:mm` is the ending time. It uses 24 hour format. The days field is a set of number ranging from 0 to 6, each number indicates a day (0-6, indicate Sunday-Saturday). If the days field is missing, all of the days will be selected. For example, if a boot record will be used between 8:00 am to 2:30 pm every Monday to Friday, the time range must be entered as:

`08:00-14:30;12345`

4.5.4 Preload Keystrokes

Smart Btmgr can store some keystrokes into keyboard buffer before booting an OS. This feature may be used to control the boot configuration of the OS. For example, storing the Alt-F5 key combination into the keyboard buffer before booting Windows 9x, will have it go into command prompt mode directly.

Using this feature together with the Ctrl-P (Duplicate Boot Record) hot key, you can create multiple boot records for an OS, each boot record boots the OS into a special environment.

For example, you can create three boot records for your Windows 9x System, one is the normal boot record, another one is a safe mode boot record and the last one is the command prompt mode.

Use Ctrl-K key to set or disable this feature of a boot record.
While setting the keystrokes of a boot record, there will be an information box at the center of the screen, which indicates the key code of the last pressed key and how many keys been pressed. Smart Bmgr can only store a maximum of 13 keys for each boot record. Press <Scroll Lock> keys to finish the input.

*First edit the Makefile, add "-DNODRAIN" at the end of the line "CONFIG = ...":

    CONFIG = .... -DNODRAIN

*Second recompile and install LILO:

    $ make; make install
    $ lilo

You must be root to do this!

4.5.5 Swap drive ID

If you want to boot DOS, Windows 9x/NT/2000 or some other OS from the second or later hard disk, you will find that this feature is very useful.

If you turn on this flag for a partition on the second or later hard disk, this drive will be swapped with the bootable drive (ID = 0x80) while booting this partition. Then the OS will run as if it is on the first hard disk.

4.5.6 Online installation and uninstallation

If you want to install Smart Boot Manager from the user interface, first select a disk drive’s boot record, then use the command "Install Smart BootManager" (in System Settings Menu). A dialog will appear to let you confirm, press Y to continue the installation.

You can only install Smart BootManager onto a disk drive, installation into a partition is not allowed.

If you want to uninstall current Smart Boot Manager, just use command "Uninstall Smart BootManager" (in System Settings Menu). But, be careful, this uninstallation command can only restore the MBR area, any other hidden sectors occupied by Smart BootManager will not be restored.

4.5.7 Boot from CD-ROM

Smart BootManager supports booting from almost all kinds of IDE ATAPI CD-ROM, including PCMCIA CD-ROM. But some special IDE controllers may have different I/O ports, which prevent Smart BootManager from finding the CD-ROM. In this case, you can set the I/O ports by hand. Run the command "Set CD-ROM I/O Ports" (in System Settings Menu). An input box will appear to let you input the I/O ports. Each IDE controller has two I/O ports, e.g. 0xF0,0xF6 (the master IDE controller). Input those I/O ports exactly in the following format:

$ 1F0,3F6

(uppercase hex numbers with a comma in the middle)
5. Compatibility

After entering the I/O ports, you must use the command "Rescan All Drives" (Ctrl-I) to find the CD-ROM. When you boot a CD disc with multiple boot images, there will be a menu to let you choose an image to boot.

4.5.8 How to install DOS, Windows 9x into a logical FAT partition?

SmartBumgr allows you to boot DOS/Windows 9X from a logical FAT partition. But the setup program of DOS/Windows 9X is too poor to install it into a logical FAT partition.

I have no any idea of how you install DOS/Windows 9X into a logical FAT partition directly, but you can transfer a working copy of DOS/Windows 9X from a primary FAT partition to a logical one, by using some other utility such as Norton Ghost.

In order to boot a DOS/Windows 9X that is installed in a logical FAT partition, you must hide all FAT partitions before it.

You can toggle on the Auto Hide switch of each FAT partition, if you tired of hiding partitions every time.

If this partition is on the second or later hard disk, the Swap drive ID flag might be turned on as well.

4.5.9 How to install DOS, Windows 9x/NT/2000 into the second (or later) HD?

One of common methods of installing DOS/Windows 9x into the second (or later) HD is to unplug all other HDs that are before this hard disk OSes, plug all the HDs back in, then you can use Smart BootManager to boot the OSes on the second or later HD by turning on the Swap drive ID flag of the partition.

5 Compatibility

5.1 Hardware compatibility

Smart BootManager supports the Intel i386 platform only. Extended Int 13h (LBA standard) for Large disk (over 8G) is supported. Old CHS standard is supported as well.

5.2 Known bugs of Smart Boot Manager 3.0

There are following known bugs available in current version:

- I found that there are some kind of mother boards that have buggy BIOS's, which can cause Smart Boot Manager to fail to find all of the drives and partitions.

5.3 Compatible OSes

The following OSes are tested to be able to boot via Smart BootManager:

- GNU/Linux x86
- FreeBSD
6. TODO list

- BeOS
- OS/2
- QNX
- Solaris x86 (only Solaris 8 was tested)
- Novell Netware
- Microsoft DOS, Windows 9x, Windows NT and Windows 2000

Other Operating Systems should be supported as well, but I have not had a chance to test them. If you can test them, please let me know the results.

6 TODO list

The following features are sorted by priority:

I. Features should be added to this major version:

- More Documentation. Because of my poor English, the documents are far from complete. I wish someone could help me write some documentation.
- Flexible and smart installation programs for multiple OSes, such as Windows 9X, Linux, FreeBSD and DOS.
- Makefiles and/or automake/autoconf scripts for multiple OSes. I have not learned to write a Makefile. I hope someone could help me.
- Utilities for multiple OSes that realize the "Direct Boot" feature in SmartBtmgr.
- Bug fixes and optimization.
- More themes for different languages and looks.

II. Features for later versions:

- Online installation and uninstallation. (DONE)
- More powerful weekly boot schedule. (DONE)
- Support for non-standard keyboards (azerty, dvorak etc.). (DONE)
- Easy-to-use Command Menu. (DONE)
- Swap drive ID. (DONE)
- Preload keystrokes (Send keystrokes to OS). (DONE)
- Boot Schedule (Auto boot different OS at different time). (DONE)
- Support Booting from CD-ROM. (DONE)
7. Contacting the author

If you have any new ideas and suggestions please let me know, or help me implementing them.

7 Contacting the author

If you have any great ideas or suggestions, don’t hesitate to tell me! If you made some improvement for this program or some wonderful themes, send them along, and I will add them to the next release version.

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See section 9 () for other authors' address.

8 Thanks

I would like to thank everyone that helped and supported me to develop this program. Special thanks to:

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