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## BootOptions

### Introduction

This page discusses the options available to alter the boot of an installed Ubuntu or an Ubuntu CD. It briefly details the main start options and then focuses on various options to alter the boot process. Changing the boot command may be necessary to fix problems with system freezes or video displays when trying to install Ubuntu. It may also be helpful when an existing installation will not boot or otherwise needs adjustment.

Some remedies, such as using the F1-F6 keys, are specific to the CD boot process. Other procedures, such as editing the boot menu lines, can be used on either the LiveCD or on an installed system.

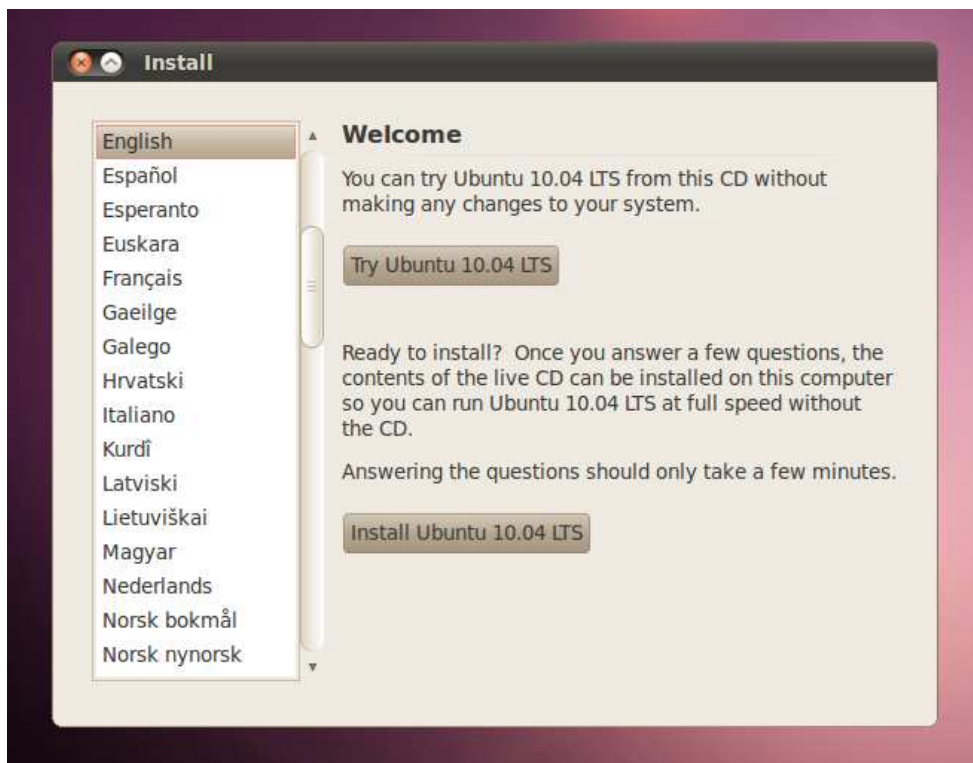
For help with directly editing the Grub configuration files or other installation issues please refer to the links at the bottom of this page.

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### Ubuntu CD Welcome Page Options

When the Ubuntu CD is started and not interrupted the CD will boot to a welcome screen which gives the user the option to install or try Ubuntu. This screen will remain visible until a selection is made.

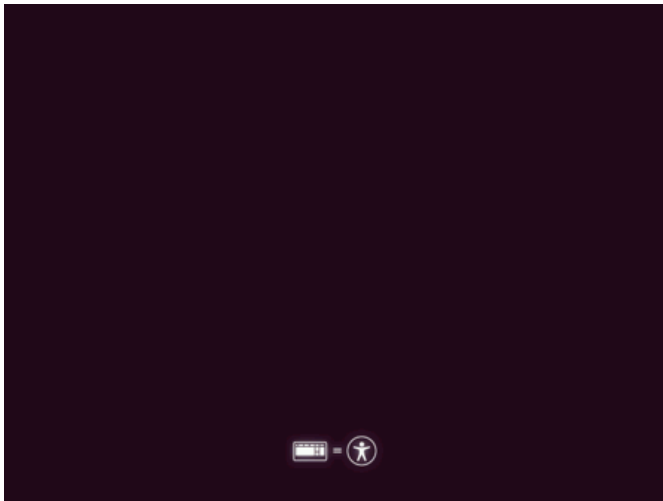


- **Try Ubuntu**
  - The CD will boot to the Ubuntu Desktop. The user may use the system, install applications and drivers, connect to the Internet, access other partitions, and use many of Ubuntu's features.
  - Changes made during the session are not persistent. Any changes made will be lost when the user exits Ubuntu.
- **Install Ubuntu**
  - Clicking on the install button or double-clicking a language selection will start the installation process.
  - For more information on the installing Ubuntu, refer to ....

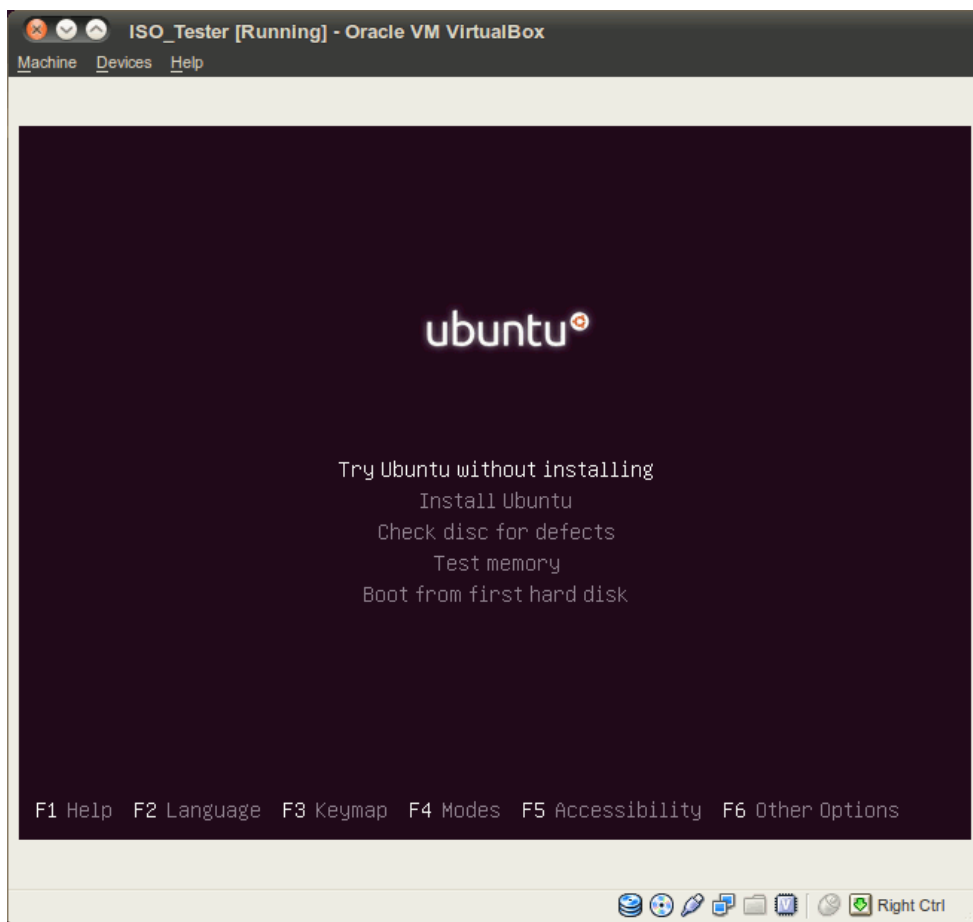
### Ubuntu CD Advanced Welcome Page Options

As the CD boots, the user can gain access to the advanced page and its options by pressing any key when the small logo appears

at the bottom of your screen:



Here is the advanced welcome page:



Here is a brief explanation of each main option:

- **Try Ubuntu without installing.**

As indicated, selecting this option will boot to the Ubuntu desktop. Ubuntu will attempt to identify and use system hardware and allow the user to connect to the Internet. Default software such as *OpenOffice* and *Firefox* are available and the user can install additional software via Internet download. An "Install" icon is available on the Desktop should the user wish to begin the standard installation without rebooting. *At the end of a LiveCd session, unless a installation is completed, none of the changes you have made will be retained.*

- **Install Ubuntu**

Begin the standard Ubuntu installation on the user's computer or external drive.

- **Check disc for defects**

- **Test memory**

- Initiates a *Memtest86+* test.
- Pressing *ESC* terminates the test.

- **Boot from first hard disk**

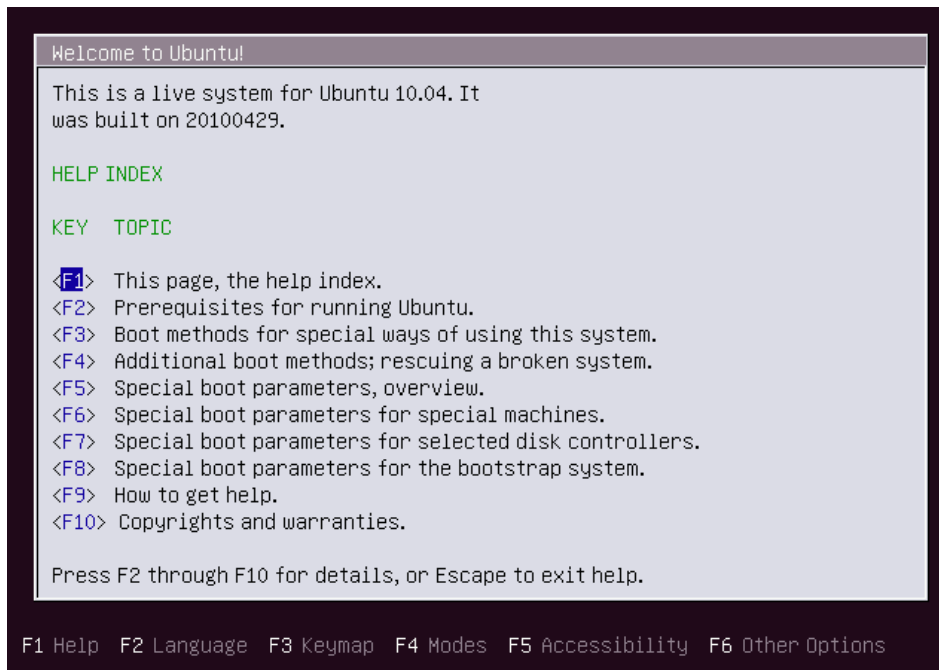
## Changing the CD's Default Boot Options

F1 Help F2 Language F3 Keymap F4 Modes F5 Accessibility F6 Other Options

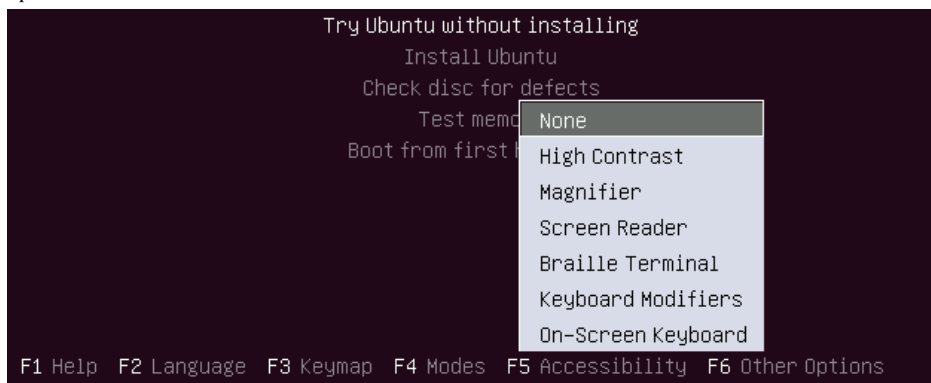
To supplement the main boot options, the F1-F6 keys provide additional information and boot options for special circumstances. These options are accessed by pressing any key before the *Welcome* screen appears. Pressing the *ESC* key or selecting a language will display the main screen.

Although they are not normally needed, these options provide additional assistance in getting the CD to boot for a variety of issues. *Any changes made will affect the current boot only and must be made each time the CD is booted.*

- **F1.** Help index presenting information regarding prerequisites for running Ubuntu, boot methods and special boot parameters.

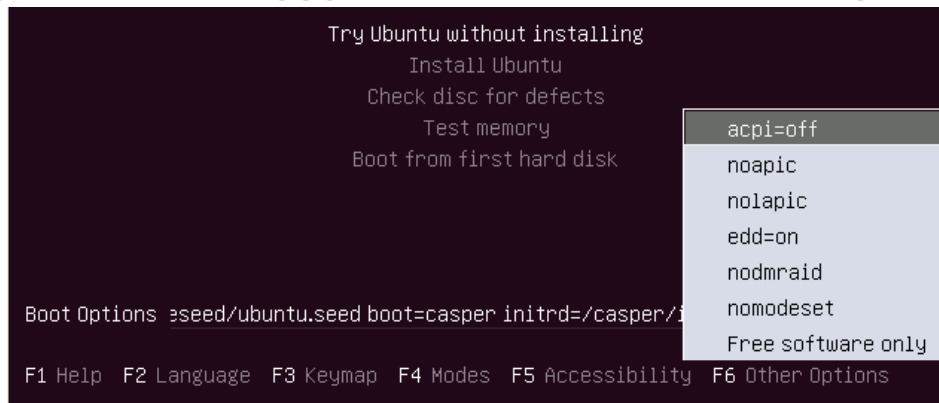


- Special Information: F1 > F6 & F7
  - After pressing F1, pressing the F6 or F7 key provides additional information which might be useful for users having problems booting the CD.
  - F1, then F6: Kernel parameters for booting IBM PS/2, disabling USB ports, computers locking up during boot, and more.
  - F1, then F7: Kernel parameters for Adaptec, BusLogic and certain Dell hardware.
- **F2.** Language selection. This displays the same screen as is presented initially.
- **F3.** Keymap selections by country.
- **F4.** Modes. Use this option when a specific driver must be loaded to allow installation or booting to the LiveCD Desktop. Once Ubuntu is installed or booted, the user can permanently install the required drivers.
- **F5.** Accessibility Options. Various options to assist users with visual impairment, as well as an onscreen keyboard option and keyboard modifiers. To employ these features use the arrow keys to highlight the option and press *ENTER*. Repeat this for each additional option desired. To remove all options, highlight "None" and press *ENTER*. **Selected options will be loaded during boot.** Accessibility options may also be added after installation. Look for *Assistive Technologies* and *at-spi* in Synaptic.



- **F6.** Other Options. ACPI (Advanced Configuration and Power Interface) and EDD (Enhanced Disk Drive) options which may help if your computer does not support or has problems with these systems. Highlight the selection and press the

*ENTER* key or *SPACE* key to select it. An "X" will appear, indicating selection. Multiple items can be selected from this popup menu. Hit *ESC* to leave the popup menu. The selections are retained at the time the user presses the *ESC* key.

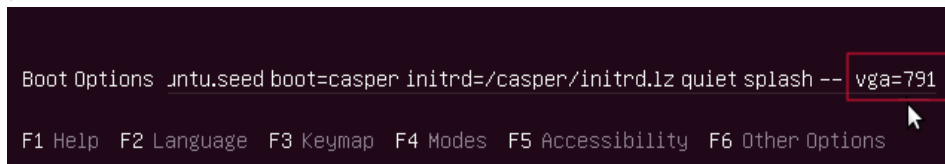


- In addition to displaying preset boot options, pressing the F6 key also opens the "Boot Options" line for manual editing once the popup window is closed. (See next section).

## Changing the CD Boot Option Configuration Line

In addition to displaying a popup menu, the F6 key also activates in-line editing of the boot command. Pressing F6 brings up the popup menu. Pressing *ESC*, whether selections were made or not, removes the popup window but opens the boot command for editing. The phrase "**Boot Options**" is fixed on the left side of the screen. The command scrolls off to the left to leave the right end available for appending. The user may add additional inputs after the "--". Allow one space between each additional input.

- Editing the boot command line.



- Press the **F6** key.
  - If desired, select one or more options with the arrow keys, then press *ENTER* or the *SPACE* key to select them.
  - Any popup menu option enabled when *ESC* is pressed is retained.
- Press *ESC* to remove the popup screen. The boot command line is now available for editing and will remain so as long as no popup menu is visible.
- Leave a space following the "--" and add the desired option (A list of Common Boot Options which can be added to the command line is presented later on this page.). If entering multiple options leave a space between each entry.
- The command will be executed when *ENTER* is pressed and the boot sequence will begin.
- The F1-F6 keys will still respond and the user can make additional menu selections.
- The command line will be accessible for appending until *ENTER* is pressed.
- Pressing *ENTER* will start the boot sequence.
- Example Entry.
  - Above is an example of adding the `vga=771` option to the end of the Boot Options line.
  - Note there is a space following "--" and before the added option.
  - Ubuntu now uses Grub 2 as its bootloader. The "vga=" option shown in the example is deprecated in Grub 2 but will still work. After Ubuntu is installed on a system the user should make the appropriate graphics mode entries in the Grub 2 configuration files.

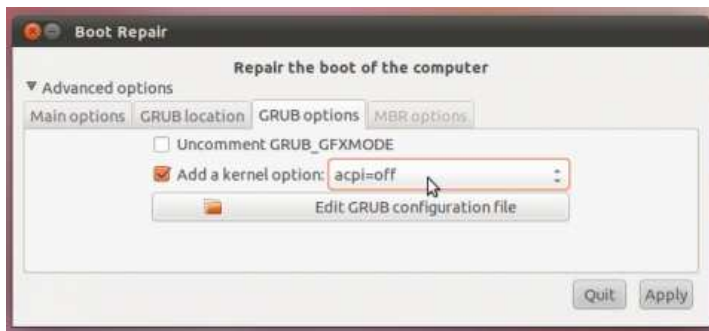
## Changing boot options Temporarily for an Existing Installation

See the Grub2 page.

## Changing boot options Permanently for an Existing Installation

This can be done by :

- manually editing GRUB2 configuration file then updating GRUB
- or using the "GRUB options" tab of Boot-Repair then Apply.



## Common Kernel Options

This list is not comprehensive but it contains some common boot options which may be added to the end of the boot command.

Option	Impact
vga=xxx	Set your framebuffer resolution to VESA mode xxx. Check here for a list of possible modes.
acpi=off OR noacpi	This parameter disables the whole ACPI system. This may prove very useful, for example, if your computer does not support ACPI or if you think the ACPI implementation might cause some problems (for instance random reboots or system lockups).
acpi=force	Activates the ACPI system even if your computer BIOS date is older than 2000. This parameter overrides acpi=off and can also be used with current hardware if the ACPI support is not activated despite apm=off.
pci=noacpi OR acpi=noirq	These parameters disable the PCI IRQ routing
pci=acpi	This parameter activates the PCI IRQ routing
acpi_irq_balance	ACPI is allowed to use PIC interrupts to minimize the common use of IRQs.
acpi_irq_nobalance	ACPI is not allowed to use PIC interrupts.
acpi=oldboot	Deactivates the ACPI system almost completely; only the components required for the boot process will be used.
acpi=ht	Impact Deactivates the ACPI system almost completely; only the components required for hyper threading will be used.
noapic	Disable the "Advanced Programmable Interrupt Controller (APIC)".
no lapic	Disable the "local APIC".
apm=off OR noapm	Disable the Advanced Power Management.
irqpoll	Changes the way the kernel handles interrupt calls (set it to polling). Can be useful in case of hardware interrupt issues.
acpi.power_nocheck=1 OR acpi_osi=linux	Disable the check of power state or changes the OS compatibility reported to the BIOS. Necessary on some broken BIOSes to make temperature/fan control work.

## See Also

- LiveCD
- Pre-Installation Hardware and Operating System Setup
- BurningIsoHowto
- BootFromCD - Common CD Booting Problems
- CDIntegrityCheck
- Grub2
- Accessibility
- Kernel Parameters - An exhaustive list of kernel boot parameters from kernel.org

### CategoryInstallation

BootOptions (last edited 2011-10-06 12:56:21 by yannubuntu @ p36245-ipngn401funabasi.chiba.ocn.ne.jp[180.14.5.245]:yannubuntu)

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