

S.Ha.R.K. Installation HowTo



Tullio Facchinetti
University of Pavia - Italy





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Tools

- Linux **fdisk** utility
- A copy of **Linux installation CD**
- A copy of **Windows® installation CD**
- Some **FreeDOS** utilities
- A copy of S.Ha.R.K.

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Knoppix live CD



Download ISO from
<http://www.knoppix.org>

- **boot** from the CD
- **open** a command shell
- type "su" (**become root**), password is empty
- start fdisk (ex. **fdisk /dev/hda**)

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Linux fdisk

```


Command action
a  toggle a bootable flag
b  edit bsd disklabel
c  toggle the dos compatibility flag
d  delete a partition
l  list known partition types
m  print this menu
n  add a new partition
o  create a new empty DOS partition table
p  print the partition table
q  quit without saving changes
s  create a new empty Sun disklabel
t  change a partition's system id
u  change display/entry units
v  verify the partition table
w  write table to disk and exit
x  extra functionality (experts only)

Command (m for help):

```

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HD partitioning



Primary	1st	FreeDOS	➔	FAT32
	2nd	Windows®	➔	FAT32
	3rd	Linux /	➔	extX
Extended		Data 1	➔	FAT32
		...		
		Data n	➔	FAT32
	last	Linux swap	➔	swap

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HD partitioning



FreeDOS must be installed into the first partition of your HD or it will not boot



do format all the data partitions as FAT32, so that you can share your data between Linux, Windows® and FreeDOS

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HD partitioning

Windows® partition type



FAT32 (LBA)



do change the Windows® partition type only to make Windows® leaving all the booting stuff into its own partition

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Windows® installation

Do install Windows®...



only tested for Windows® 2000 and above

Windows® 98 or older **should not work** if not installed into the 1st partition

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FreeDOS installation

After Windows® installation:

- **reboot** with Knoppix CD inserted
- change the 1st partition type to
 - **FAT32** for normal usage
 - **FAT16** to use S.Ha.R.K.'s filesystem functions
- **format** the 1st partition

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FreeDOS installation

Install

FreeDOS 

download the packages from <http://www.freedos.org>



download the packages and copy them manually into the partition, avoiding the Installation CD or floppy

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FreeDOS bootsector image

- build a FreeDOS boot floppy
 - type **"sys a:"**
- copy sys.com on the floppy
- boot from the floppy
- create the boot sector image
 - type **"sys x: x:\fdosboot.img"**

"x:" is the drive letter of the partition in which FreeDOS were installed as **seen by FreeDOS** after the boot from floppy

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Linux installation



reboot and install your favourite Linux distro

After the installation, the GRUB boot manager should be installed in your MBR



I did not tried other boot managers, like LILO or XOSL

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Modify grub.conf

You can find it in `/boot/grub/grub.conf`

```
title Win2000
  rootnoverify (hd0,1)
  chainloader +1

title FreeDOS - Shark
  rootnoverify (hd0,0)
  makeactive
  chainloader /fdosboot.img
  boot
```

Windows®

FreeDOS with S.Ha.R.K.

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Example of modified grub.conf

```
default=0
timeout=10
splashimage=(hd0,2)/boot/grub/splash.xpm.gz
title Fedora Core (2.6.8-1.521)
  root (hd0,2)
  kernel /boot/vmlinuz-2.6.8-1.521 ro root=LABEL-/ rhgb quiet
  initrd /boot/initrd-2.6.8-1.521.img
title FreeDOS
  rootnoverify (hd0,0)
  makeactive
  chainloader /fdosboot.img
  boot
title Win2000
  rootnoverify (hd0,1)
  chainloader +1
```

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A full-optional alternative

ULTIMATE BOOT CD

Download ISO from

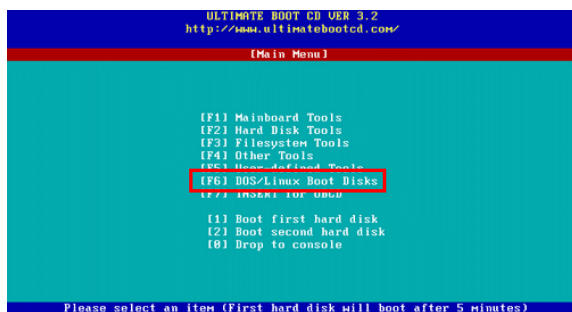
<http://ubcd.sourceforge.net>

- DOS version of the **Linux fdisk**
- an already installed **FreeDOS** distribution
- many low-level **diagnostic tools**

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A full-optional alternative



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Installing S.Ha.R.K.

- Download the full package from <http://shark.sssup.it/>
- It includes
 - S.Ha.R.K. **source code**
 - The **eXtender**
 - **Unzip** utility
 - **DJGPP** compiler
 - **DOSLFN** utility to manage long file names

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Installing S.Ha.R.K.



Do follow the instructions
contained in
instnew.txt
to correctly build your S.Ha.R.K.
distribution

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S.Ha.R.K. boot CD-ROM



- **No HD installation** required
- Burn the **ISO image** on a CD
- Boot S.Ha.R.K. **from CD**
- Write your own **project data** on HD
- Optional resizable **RAM disk**

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