

# The Kfloppy Formatter Handbook

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# The Kfloppy Formatter Handbook

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### **Abstract**

Kfloppy Formatter is a utility that provides a straightforward graphical means to format 3.5" and 5.25" floppy disks.

# Chapter 1

## Introduction

Kfloppy Formatter is a utility that provides a straightforward graphical means to format 3.5" and 5.25" floppy disks.

**NOTE**

Kfloppy depends on external programs and therefore currently works *only* with Linux<sup>®</sup> and BSD<sup>™</sup>. Depending if you are using Kfloppy on Linux<sup>®</sup> or on BSD<sup>™</sup>, Kfloppy has slightly different features.

**CAUTION**

Make sure that your floppy disk is *not* mounted. Kfloppy cannot format a mounted floppy disk.

## Chapter 2

# Using Kfloppy

Starting Kfloppy opens a single window by which the user may choose appropriate settings and control the formatting process. These options and controls are detailed below.

**CAUTION**

Make sure that your floppy disk is *not* mounted. Kfloppy cannot format a mounted floppy disk.

### 2.1 Control Settings

The settings are chosen by means of three drop down boxes located at the top left center of Kfloppy.

#### 2.1.1 Floppy Drive

Clicking on the top drop down box, which is labeled **Floppy drive:**, offers the user the following two choices:

- Primary
- Secondary

Clicking on the second drop down box from the top, which is labeled **Size:**, offers the user the following four choices:

- 3.5" 1.44MB
- 3.5" 720KB
- 5.25" 1.2MB
- 5.25" 360KB

The Linux<sup>®</sup> version of Kfloppy has also a choice of size named:

- Auto-Detect

**NOTE**

The 800KB disk format used by Mac<sup>®</sup> floppy drives cannot be supported on PC floppy drives since they are not capable of formatting disks in that fashion.

## 2.1.2 File Systems

The third drop down box, labeled File System, offers the user the following choices, if they are applicable:

### Dos

This selection will have Kfloppy place the MS-DOS/Windows<sup>®</sup> type of file system on the diskette. The user will most likely want to choose this system if she or he will be using the diskette with those operating systems as they do not recognize other system types. (This is supported for Linux<sup>®</sup> and BSD<sup>™</sup>.)

### ext2

This selection will have Kfloppy place the type of file system on the diskette which is most commonly used with Linux<sup>®</sup>, however seldomly on floppy disks. (This is supported for Linux<sup>®</sup> and BSD<sup>™</sup>.)

### UFS

This selection will have Kfloppy place the type of file system on the diskette which is most commonly used with FreeBSD<sup>®</sup>. The user will likely want to choose this system if he or she will only be using the floppy disk with FreeBSD<sup>®</sup>. (This is supported for BSD<sup>™</sup> only.)

### Minix<sup>™</sup>

This selection will have Kfloppy place the type of file system on the diskette which often used on floppy disks used with Linux<sup>®</sup>, (This is supported for Linux<sup>®</sup> only.)

## 2.2 Formatting Options

Within the outline of a box in the left center of Kfloppy the user may find a set of five formatting options. The top two are a pair of radio buttons.

### NOTE

This term (radio buttons) indicates a set of options among which only one can be selected - in the same way that only one preset channel selection may be set on a car radio.

The bottom two options are for labeling the diskette. All are explained below:

### 2.2.1 Formatting Method

Kfloppy can format a disk in the following two ways:

#### Quick Format

This simply puts the new file system on the disk.

### WARNING

All data on the disk will be lost, even if the data itself will not be erased.

#### Zero out and quick format

This format first puts zeros on the disk and then creates the new file system.

**WARNING**  
All data on the disk will be erased.

### Full Format

A full format reallocates the tracks and sectors, puts the selected file system on the disk, and then verifies the format, blocking out any bad sectors it finds.

**WARNING**  
All data on the disk will be erased.

### 2.2.2 Verify Integrity

This tells Kfloppy to check that the formatting was correctly written to the floppy. This allows bad sectors to be identified.

**NOTE**  
If bad sectors are found during the verify phase of a Full Format, the formatting is aborted and the file system is not written!

### 2.2.3 Volume Label

The bottom two features allow the user to add (or change) a label to the diskette. If the **Volume label:** check box is selected then the user can enter a name (label) for the diskette that is to be formatted in the text box located immediately below. When the diskette is subsequently formatted the label will be written to the diskette.

**NOTE**  
Due to a limitation of the DOS file system, a label can only be at most 11 characters long. For simplification, Kfloppy assumes that this limit is true for all file systems.

**NOTE**  
The file system Minix™ cannot have any volume label. In this case, Kfloppy will ignore the volume label.

## 2.3 The Buttons

There are three buttons located vertically along the right side of Kfloppy.

### Format

This button initiates the formatting process. Once the user is sure that all the settings are correct he or she may begin the process by clicking on this button. There will be a change in the two long rectangular boxes that span the bottom of Kfloppy.

The upper box is a status indicator that gives information about the process underway, especially the error encountered during the processing.

The lower box is a progress bar. This displays both graphically and numerically the progress of first the formatting and then the verification. Before starting it appears to be empty - showing only the figure 0% in the center. As each process takes place the progress is tracked graphically as the box fills from left to right. At the same time the number in the center will increase reflecting the precise percentage of the process that has been completed.



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### NOTE

As Kfloppy uses external programs to format the floppy disk, it has to rely on these programs to give the right information for being able to display the progress bar. Unfortunately, this is not the case. Especially, the programs writing the file systems do not return enough data, so that the progress bar will remain at 0%.

### IMPORTANT

Make sure that your floppy disk is *not* mounted. Kfloppy cannot format a mounted floppy disk.

### NOTE

Kfloppy does *not* unmount the floppy by itself, as this could mean that the user may overwrite a floppy disk with important data on it.

### Help

This invokes a popup menu with actions to open this handbook, report a bug, switch the application language and display author and version of Kfloppy and KDE.

### Quit

Clicking on this button will close Kfloppy.

## Chapter 3

# Command line options

Though Kfloppy may most often be started from the KDE program menu, or a desktop icon, it can also be opened at the command line prompt of a terminal window. There are a few options that are available when doing this. They are:

**kfloppy --help**

This lists the options available at the command line.

**kfloppy --author**

Lists Kfloppy's author in the terminal window

**kfloppy --license**

Shows license information for Kfloppy in the terminal window

**kfloppy --version**

Lists version information for Kfloppy. Also available through **kfloppy -v**

**kfloppy device**

Device to format.

This will directly format the given device using the saved settings. Only supported at the moment are /dev/fd0 and /dev/fd1.

## Chapter 4

# Credits and License

Kfloppy Formatter Program Copyright 1997 - 2000 Bernd Johannes Wuebben  
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## Appendix A

# Needed External Programs

As already written earlier in this handbook, Kfloppy works with the help of external programs to do the different formatting tasks.

**NOTE**

If one of the programs is missing, Kfloppy tries to work nevertheless. However the corresponding option will not be available.

**fdformat**

This program is needed for low-level formatting, on Linux<sup>®</sup> and on BSD<sup>™</sup>. If it is missing, **Full format** will be disabled.

**dd**

This program is needed for zeroing-out, on Linux<sup>®</sup> and on BSD<sup>™</sup>. If it is missing, **Zero out and quick format** will be disabled.

**mkdosfs**

This program is needed for DOS formatting, on Linux<sup>®</sup>.

**newfs\_msdos**

This program is needed for DOS formatting, on BSD<sup>™</sup>.

**newfs**

This program is needed for UFS formatting, on BSD<sup>™</sup>.

**mke2fs**

This program is needed for ext2 formatting, on Linux<sup>®</sup> and on BSD<sup>™</sup>.

**mkfs.minix**

This program is needed for Minix<sup>™</sup> formatting, on Linux<sup>®</sup>.

## Appendix B

# User-Given Devices

### B.1 Introduction

“User Given Devices” is the work title of a still experimental feature of Kfloppy. It allows the user to give a device name and to use it nearly as if it was a floppy drive.

This feature is mainly intended as a work-around for users having USB floppy drives of any kind (including ZIP™ disk drives) or any other non-legacy floppy drives.

#### NOTE

Unfortunately at the time of writing this documentation, the feature is not very user friendly, as it does not offer any help to the user on how a device is called and Kfloppy does not even remember the device name from call to call. (This is partially a security, as the device of the floppy drive might change between reboots.)

#### NOTE

As this feature was developed under Linux®, the BSD™ version of Kfloppy offers less choices than Kfloppy under Linux®.

### B.2 Using It

Using “User Given Devices” is quite simple, you just need to enter a device name, for example `/dev/sdz4` in the **Floppy drive**: combobox instead of selecting Primary or Secondary.

#### NOTE

You need to enter the `/dev/` part of the device for two reasons:

- It is how Kfloppy recognizes the “User Given Devices” mode.
- It is a security, to avoid that the user writes anything in the combobox that is by chance a device name.

Unfortunately, using any device instead of a floppy device has a few consequences. The major one is that **Full Format** cannot be selected anymore. Doing so will result in an error message box when trying to start the format. However you can use **Zero out and quick format** instead. It will not format the device, just zeroing it out, but in practice it is nearly the same; especially all data on the device will be erased.

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### WARNING

Be careful when entering the device name. Kfloppy will pass the device name as is to the external programs. Especially it does not check (and the external programs do not check either) if the device is a floppy drive device. If you give your any of your main disk partitions as device, it will be accepted. (If the partition is mounted or if you cannot write on this device, you will probably get an error message nevertheless, avoiding the worst.)

### NOTE

Even if you can specify a floppy device like `/dev/fd0u2880`, Kfloppy will refuse to make a **Full Format** on it.

On Linux<sup>®</sup>, you can select any file system that you want. On BSD<sup>™</sup>, only UFS is currently supported (and not tested at time of writing this documentation).

When you are ready to format, click on the **Format** button as usual. You will get a message box asking you to verify the device name.

### WARNING

This is the last chance to check the device name before formatting. After it, it is too late.