

# **The KMix Handbook**

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# The KMix Handbook

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### **Abstract**

KMix is an application to allow you to change the volume of your sound card.

# Chapter 1

## Introduction

KMix is KDE's soundcard mixer program. Though small, it is full-featured. The program should give controls for each of your soundcards.

KMix supports several platforms and sound drivers:

- The ALSA soundcard driver.
- All Open Sound System platforms. Explicitly tested are Linux®, FreeBSD, NetBSD and BSDI.
- Solaris™ based machines.
- IRIX® based machines.
- HP-UX® based machines.

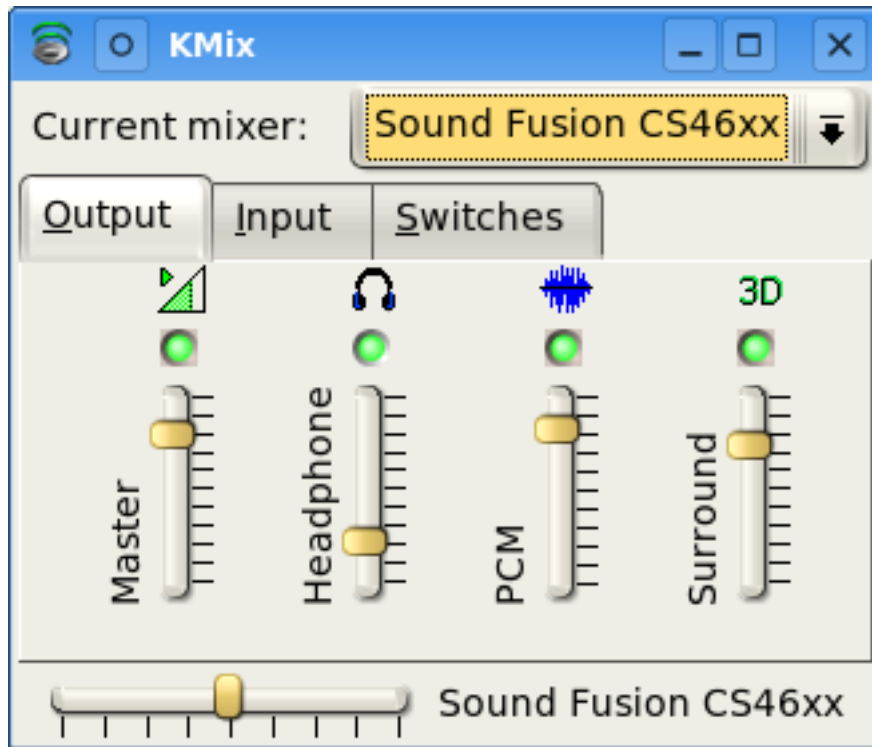
If you have both ALSA and Open Sound System drivers installed, KMix will use the ALSA driver.

## Chapter 2

# Working with KMix

### 2.1 Basics

KMix usage is straightforward. Every mixer control that your soundcard provides is represented by a volume slider. Mono controls have a single slider, stereo controls can have either one or two sliders, depending on your choice. Additionally there is a panning slider at the bottom of the KMix window. If you have more than one soundcard, a list will be displayed on the top of the window, where you can choose between your soundcards.



The Window can have up to three sections with different soundcard controls: Output, Input and Switches. Those sections contain volume sliders, switches for enabling/disabling record or playback, and multiple-choice selectors.

Output: This holds the controls that are most likely playback related, like the Master volume control.

Input: This holds all controls that are most likely record related, like Capture.

Switches: This holds all controls, that allows only to switch some functionality ON or OFF (like "Mic Boost").

Besides volumes controls, KMix also features LED's. The general coloring rule is:

Green: A LED dealing with playback

Red: A LED dealing with recording

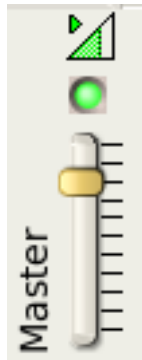
Yellow: A LED dealing with special soundcard capabilities

These 3 colors come in two flavours: A lit LED means ON, a non-lit LED means OFF.

## 2.2 Volume controls

The volume controls in section Output and Input consist of (top to bottom):

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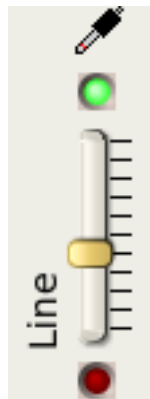
An icon, representing the function of the control.

A volume value indicator (optional).

A Green Mute LED, that allows you to mute a control (light goes off/gets dark) or unmute it again (light goes on).

A slider, for volume control (Hint: You can hide the label on the slider, for example if the mixer takes too much space).

If a control supports recording, there will be a red Record LED. If the LED is lit (bright red), the control is set to record.



Most of these controls have a context menu, accessible by right clicking on the control or device icon. Several entries are possible in the context menu, but only those applicable are shown.

**Split Channels** Show either one or two sliders. This is only applicable to stereo devices. The right slider controls right side volume, and the left controls left side volume.

**Muted** Mute or unmute the device

**Hide** If you are not interested in regulating this device you can hide it with this option. If you want to show it again, you can only do this by selecting the Channels option (see below)

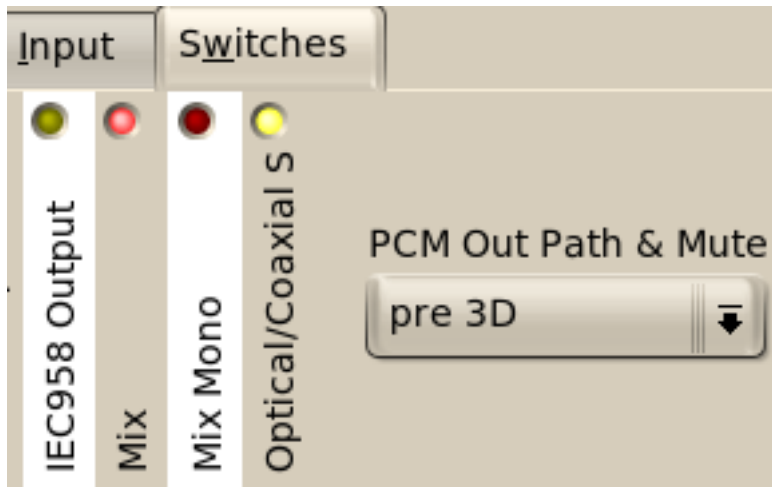
**Configure Global Shortcuts...** You can control a device with your keyboard. Use this menu option to show the KDE Configure Shortcuts dialog. Here you can define keys for increasing and decreasing volume and for muting the device. The keys are global and operate also when KMix is iconified or docked.

**Channels** You will get a dialog box where you can configure per section (Output, Input, Switches), which channels you want to see.

**Show/Hide Menubar** This option is not device specific, but affects the mixer window. You can hide and show the menubar with this option. You can also do this by pressing the shortcut (usually Ctrl+M)

## 2.3 Switches and Multiple-Choice selectors

The controls in the section Switches consist of a LED and a short label describing the function. The Switches section can also contain Multiple-Choice selectors. Please note that these controls are often very special and usually don't need to be changed by the average user. The context menu contains the Channels and Show/Hide Menubar entries already described.



Please remember, red LED's are recording related, yellow LED's control special soundcard capabilities. The screenshot above shows from left to right an unlit IEC958 Output LED (yellow = special control), a lit Mix LED (red = Recording related), an unlit recording related LED, a lit special control and one multiple-choice selector (PCM Out Path & Mute). If you are uncertain about the meaning of a control, please ask your soundcard driver supplier (for most current Linux® distributions this is [ALSA](#)).

## 2.4 Panning slider

With this slider you can control the volume distribution between left and right speaker. This slider is an overall regulator, which affects the Master Volume. The middle position is the default. Dragging the slider to the left lowers the

volume of the right speaker, dragging it to the right vice versa. Of course, these might be swapped if your speakers aren't positioned correctly.

For Surround Systems please be aware that the Master device often regulates only the Front Speakers. This is a limitation of your Soundcard driver.

If your soundcard has no Master device, some other device might get picked by KMix - for most people this is the Wave (or PCM) control.

## 2.5 Configuration options

Use Settings → Configure KMix... from the menubar to choose preferences. These items are:

**Dock into panel** If checked, KMix will dock in the systray when pressing the window close button. If not checked, KMix will quit on pressing the window close button. Attention: After quitting you will not be able to control the volume if you have assigned keys for this.

**Enable system tray volume control** If enabled, a left-clicking the KMix dock icon will show a popup window with a volume control for the preferred device (Hint: currently you cannot change this device - it is selected by KMix instead). If the option is disabled, the KMix Main Window will be shown on a left-click on the KMix dock icon.

**Show tickmarks** Show lines to mark positions on the sliders.

**Show labels** Display labels for each of the sound devices. Whether this item is checked or not, by holding the mouse over the icon for each device, you can see this information.

**Restore volumes on login** Let KDE restore the volumes when you Login: This restores your personal volume levels, stored when you last logged out. If your Operating System saves the volume levels, you might not need this option (but on a computer with multiple users it is still needed).

**Volume Values:** Select if and how volume values are displayed: None, Absolute or Relative.

**Slider Orientation** With this option you can turn the KMix main window content by 90 degrees. Sliders, texts and everything else (if applicable) is rotated. There are some exclusions to this rule, most notably the menubar, the mixer selector (if shown at all), the panning slider and the multiple-choice selectors.

## Chapter 3

# The KMix panel applet

The KMix panel applet is an alternative interface to KMix. You can add it to the KDE panel by selecting **Add Applet to Panel...** in the Panel Menu or context menu. Choose **Sound Mixer** and click the **Add to Panel** or double click **Sound Mixer**.

You can work with the KMix applet as described for the [main window](#) - including the context menu. Due to the limited space in the panel there are differences:

- No main menu available.

- If you have multiple soundcards, you cannot change the selected mixer after the initial selection.

- No dock icon. If you want to use the dock item you must additionally start KMix with **K-Menu → Multimedia**.

- Icons only available when panel is big enough.

- No device name labels available.

- Configuration is done via panel menu - you can configure colors and slider direction there.

- No automatic volume saving. If you want your volumes saved when you logout for later restoration, you

## Chapter 4

# Advanced KMix features

### WARNING

This chapter describes KMix functionality that is targeted at the experienced user. Most users will never have a need for this functionality, so you can safely skip this chapter

## 4.1 The DCOP Interface

Sometimes you want to do specialized things. Things like controlling the mixer from another application or muting the master device every day at 10pm. KMix has a DCOP interface that allows you to achieve much with minimal work. You can start a shell and type `dcop kmix` to start exploring the KMix DCOP interface. The KMix specific interfaces are:

**Mixer0** Allows manipulating the first mixer. You can set volume levels, mute the device, change balance, retrieve the mixer name and much more. Type `dcop kmix Mixer0` if you want to explore all the features. There are more entries like **Mixer1** in case multiple soundcards are installed.

**kmix-mainwindow#1** The GUI window can be controlled with this command. You can hide and show the window, resize it and much more. Type `dcop kmix kmix-mainwindow#1` if you want to explore all the features.

## 4.2 DCOP Examples

`dcop kmix kmix-mainwindow#1 hide` Hides the GUI window. Use `dcop kmix kmix-mainwindow#1 show` or the dock icon to show it again.

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**dcop kmix kmix-mainwindow#1 resize 1 1** Resizes the GUI window to the smallest size possible. This is the size so that all sliders (and other GUI elements) will fit into the window.

**dcop kmix Mixer0 mixerName** Tells the name of the first Mixer, for example Sound Fusion CS46xx.

**dcop kmix Mixer1 setVolume 0 10** Sets the volume on the second mixer, device 0 to 10 percent. Device 0 is often the master device, but not always. If you want to quiet down the (first) master device on your second soundcard, you can use **dcop kmix Mixer1 setMasterVolume 0**

You can directly execute these commands from a shell that you started from inside KDE. If you need to execute dcop commands from somewhere else, for example from a crontab script, you need to define the DCOPSERVER environment variable (as seen in the first line of your `/.DCOPserver_hostname_:0` file), for example:

```
#!/bin/sh
DCOPSERVER='cat /home/yourhome/.DCOPserver_yourhostname_:0 | ←
grep local`
export DCOPSERVER
dcop kmix Mixer0 setMasterVolume 0
```

## 4.3 Tips and Tricks

### 4.3.1 Using ALSA and OSS driver at the same time

KMix on Linux® can use either the ALSA driver or the OSS driver, not both. If you really need to use both drivers at the same time (a very rare situation), you can do it as follows: Quit KMix and add the following line to your `kmixrc` file in the global configuration section.

```
MultiDriver=true
```

Start KMix again. If you click Help → Hardware Information you should see Sound drivers used: ALSA0.9 + OSS and Experimental multiple-Driver mode activated.

#### WARNING

You will probably see all of your mixers doubled.  
There is no support for this kind of configuration.

## Chapter 5

# Credits and License

Main developers

- Copyright 1996-2000 Christian Esken
- Copyright 2000-2003 Christian Esken & Stefan Schimanski
- Copyright 2003-2005 Christian Esken & Helio Chissini de Castro

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Updated 7/2005 to match KMix V2.6 by Christian Esken [esken@kde.org](mailto:esken@kde.org)

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# Appendix A

## Installation

### A.1 How to obtain KMix

KMix is part of the KDE project <http://www.kde.org/> .

KMix can be found in the kdemultimedia package on <ftp://ftp.kde.org/pub/kde/> , the main FTP site of the KDE project.

### A.2 Requirements

Obviously, KMix is only of use if you have a soundcard. KMix supports several platforms and sound drivers:

- All Open Sound System platforms. Explicitly tested are Linux®, FreeBSD, NetBSD and BSDI.
- Solaris™ based machines.
- IRIX® based machines.
- The ALSA soundcard driver.
- HP-UX® based machines.

### A.3 Compilation and Installation

For detailed information on how to compile and install KDE applications see [Building KDE4 From Source](#)

Since KDE uses **cmake** you should have no trouble compiling it. Should you run into problems please report them to the KDE mailing lists.