

LibreOffice
The Document Foundation

Calc Guide

Preface

Copyright

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Who is this book for?

This book is for beginners to advanced user of Calc, the spreadsheet component of LibreOffice. You may be new to spreadsheet software, or you may be familiar with another program. If you have never used LibreOffice before, or you want an introduction to all of its components, you might like to read *Getting Started with LibreOffice* first. If you have never used spreadsheets before, you might also like to read a book or find some tutorials about the use of spreadsheets.

What's in this book?

This book introduces the features and functions of LibreOffice Calc. It is not a tutorial on using spreadsheets. Some chapters assume familiarity with basic spreadsheet usage when describing how to use Calc.

You can enter data (usually numerical) in a spreadsheet and then manipulate this data to produce certain results. Alternatively, you can enter data and then use Calc in a 'What if...' manner by changing some of the data and observing the results without having to retype all of the data. Functions can be used to create formulas to perform complex calculations on data.

Some of the other features provided by Calc include:

- Database functions, to arrange, store, and filter data.
- Dynamic charts: a wide range of 2D and 3D charts.
- Macros, for recording and executing repetitive tasks; scripting languages supported include LibreOffice Basic, Python, BeanShell, and JavaScript.
- Ability to open, edit, and save Microsoft® Excel® and other spreadsheets.
- Import of spreadsheets from multiple formats, including HTML, CSV, and PostScript.
- Export of spreadsheets into multiple formats, including HTML, CSV, and PDF.

Where to get more help

This guide, the other LibreOffice user guides, the built-in Help system, and user support systems assume that you are familiar with your computer and basic functions such as starting a program, opening and saving files.

Help system

LibreOffice comes with an extensive Help system. This is your first line of support for using LibreOffice Calc.

To display the full Help system, press *F1* or go to **Help > LibreOffice Help** on the main menu bar. In addition, you can choose whether to activate *Tips*, *Extended tips*, and the *Help Agent* by going to **Tools > Options > LibreOffice > General** on the main menu bar.

If *Tips* are enabled, place the mouse pointer over any of the icons to see a small box (tooltip) with a brief explanation of the icon function. For a more detailed explanation, select **Help > What's This?** On the main menu bar and hold the pointer over the icon.

Free online support

The LibreOffice community not only develops software, but provides free, volunteer-based support. See Table 1 and this web page: <http://www.libreoffice.org/get-help/>

Users can get comprehensive online support from the community through mailing lists and the Ask LibreOffice website, <http://ask.libreoffice.org/en/questions/>. Other websites run by users also offer free tips and tutorials.

This forum provides community support for LibreOffice: <http://en.libreofficeforum.org/>

This site provides support for LibreOffice, among other programs:
<http://forum.openoffice.org/en/forum/>

Table 1: Free support for LibreOffice users

Free LibreOffice support	
Ask LibreOffice	Questions and answers from the LibreOffice community http://ask.libreoffice.org/en/questions/
Documentation	User guides, how-tos, and other documentation http://www.libreoffice.org/get-help/documentation/ https://wiki.documentfoundation.org/Documentation/Publications
FAQs	Answers to frequently asked questions http://wiki.documentfoundation.org/Faq
Mailing lists	Free community support is provided by a network of experienced users http://www.libreoffice.org/get-help/mailling-lists/
International support	The LibreOffice website in your language http://www.libreoffice.org/international-sites/ International mailing lists http://wiki.documentfoundation.org/Local_Mailing_Lists
Accessibility options	Information about available accessibility options http://www.libreoffice.org/get-help/accessibility/

Paid support and training

Alternatively, you can pay for support services. Service contracts can be purchased from a vendor or consulting firm specializing in LibreOffice.

What you see may be different

Illustrations

LibreOffice runs on Windows, Linux, and Mac OS X operating systems, each of which has several versions and can be customized by users (fonts, colors, themes, window managers). The illustrations in this guide were taken from a variety of computers and operating systems. Therefore, some illustrations will not look exactly like what you see on your computer display.

Also, some of the dialogs may be different because of the settings selected in LibreOffice. You can either use dialogs from your computer system (default) or dialogs provided by LibreOffice. To change to using LibreOffice dialogs:

- 1) On Linux and Windows operating systems, go to **Tools > Options > LibreOffice > General** on the main menu bar to open the dialog for general options.
On a Mac operating system, go to **LibreOffice > Preferences > General** on the main menu bar to open the dialog for general options.

- 2) Select *Use LibreOffice dialogs* in *Open/Save dialogs* and, in Linux and Mac OS X operating systems only, in *Print dialogs* to display the LibreOffice dialogs on your computer display.
- 3) Click **OK** to save your settings and close the dialog.

Icons

The icons used to illustrate some of the many tools available in LibreOffice may differ from the ones used in this guide. The icons in this guide have been taken from a LibreOffice installation that has been set to display the Galaxy set of icons.

If you wish, you can change your LibreOffice software package to display Galaxy icons as follows:

- 1) On Linux and Windows operating systems, go to **Tools > Options > LibreOffice > View** on the main menu bar to open the dialog for view options.
On a Mac operating system, go to **LibreOffice > Preferences > View** on the main menu bar to open the dialog for view options.
- 2) In *User interface > Icon size and style* select *Galaxy* from the options available in the drop-down list.
- 3) Click **OK** to save your settings and close the dialog.

Note

Some Linux operating systems, for example Ubuntu, include LibreOffice as part of the installation and may not include the Galaxy set of icons. You should be able to download the Galaxy icon set from the software repository for your Linux operating system.

Using LibreOffice on a Mac

Some keystrokes and menu items are different on a Mac from those used in Windows and Linux. The table below gives some common substitutions for the instructions in this chapter. For a more detailed list, see the application Help.

<i>Windows or Linux</i>	<i>Mac equivalent</i>	<i>Effect</i>
Tools > Options menu selection	LibreOffice > Preferences	Access setup options
<i>Right-click</i>	<i>Control+click</i> or <i>right-click</i> depending on computer setup	Open a context menu
<i>Ctrl (Control)</i>	⌘ (<i>Command</i>)	Used with other keys
<i>F5</i>	<i>Shift+⌘+F5</i>	Open the Navigator
<i>F11</i>	⌘+T	Open the Styles and Formatting window

What are all these things called?

The terms used in LibreOffice for most parts of the *user interface* (the parts of the program you see and use, in contrast to the behind-the-scenes code that actually makes it work) are the same as for most other programs.

A *dialog* is a special type of window. Its purpose is to inform you of something, or request input from you, or both. It provides controls for you to use to specify how to carry out an action. The technical names for common controls are shown in Figure 1. In most cases we do not use the

technical terms in this book, but it is useful to know them because the Help and other sources of information often use them.

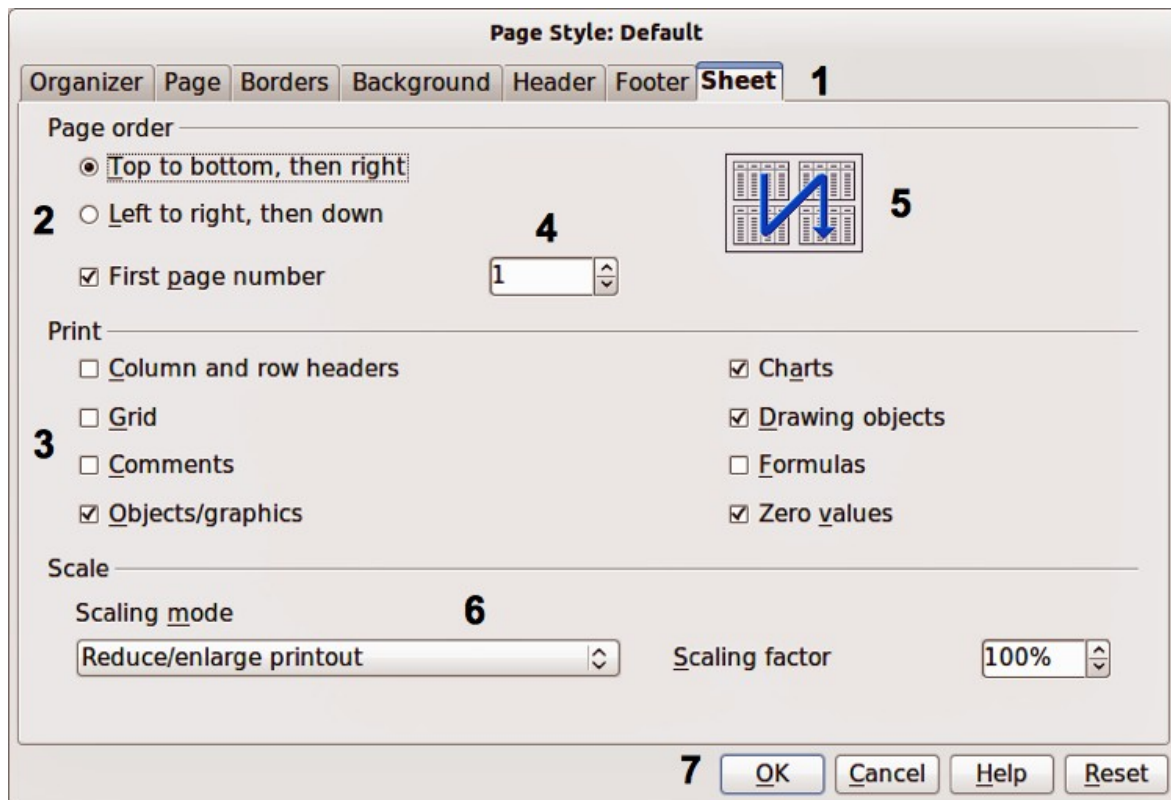


Figure 1: Dialog showing common controls

- 1) Tabbed page (not strictly speaking a control).
- 2) Radio buttons (only one can be selected at a time).
- 3) Checkbox (more than one can be selected at a time).
- 4) Spin box (click the up and down arrows to change the number shown in the text box next to it, or type in the text box).
- 5) Thumbnail or preview.
- 6) Drop-down list from which to select an item.
- 7) Push buttons.

In most cases, you can interact only with the dialog (not the document itself) as long as the dialog remains open. When you close the dialog after use (usually, clicking **OK** or another button saves your changes and closes the dialog), then you can again work with your document.

Some dialogs can be left open as you work, so you can switch back and forth between the dialog and your document. An example of this type is the Find & Replace dialog.

Who wrote this book?

This book was written by volunteers from the LibreOffice community. Profits from sales of the printed edition will be used to benefit the community.

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Frequently asked questions

How is LibreOffice licensed?

LibreOffice is distributed under the Open Source Initiative (OSI) approved Lesser General Public License (LGPL). The LGPL license is available from the LibreOffice website:

<http://www.libreoffice.org/download/license/>

May I distribute LibreOffice to anyone?

Yes.

How many computers may I install it on?

As many as you like.

May I sell it?

Yes.

May I use LibreOffice in my business?

Yes.

Is LibreOffice available in my language?

LibreOffice has been translated (localized) into over 40 languages, so your language probably is supported. Additionally, there are over 70 *spelling*, *hyphenation*, and *thesaurus* dictionaries available for languages and dialects that do not have a localized program interface. The dictionaries are available from the LibreOffice website at www.libreoffice.org.

How can I contribute to LibreOffice?

You can help with the development and user support of LibreOffice in many ways, and you do not need to be a programmer. For example, you can help with producing and maintaining written user documentation, producing video tutorials, and other user support services. To start, see <http://www.documentfoundation.org/contribution/>

You can also contribute by donating money, either when downloading the program or at any other time. See <http://donate.libreoffice.org/>

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What's new in LibreOffice Calc 4.0?

General

- Improved performance of ODS (OpenDocument Spreadsheet) document import.
- When opening ODS and XLSX files, the values of formulas can optionally be shown as they were saved in the files without recalculating the formula. This option is found in **Tools > Options > LibreOffice Calc > Formula > Recalculation on file load**. This makes opening of larger files faster, and showing the values as they were last edited may be an advantage when opening spreadsheets saved in Excel.
- Automatically rotate chart axis labels if they are overlapping. This fix also improves detection of overlap while rotating labels
- Save settings of Text Import Dialog for Text to Columns and Paste Unformatted Text from Clipboard (in addition to Text File Import).
- Export color scales and data bars to XLSX (also supports Excel 2010+ extensions for databars).
- Increased size limit on (uncompressed) ODF documents from 2Gb to 4Gb.
- Support "type-ahead" search in the autofilter popup. It is now possible to search for specific entry using key input.
- Enhanced chart visualisation: better quality rendering for printing and PDF export of charts.
- New conditional formats: date formats, top/bottom rules, string rules.
- Improved conditional format dialogs.
- Overlapping conditional formats.
- Exporting a single chart as an image (PNG, JPG).
- XML Source dialog to quickly import arbitrary XML content.

Formula engine

- New configuration option to toggle handling of empty strings when used in arithmetic expressions.
- New pricing add-In containing spreadsheet functions for option pricing, in particular barrier (OPT_BARRIER(...)) and touch (OPT_TOUCH(...)) options.
- New spreadsheet functions XOR, AVERAGEIF, SUMIFS, AVERAGEIFS and COUNTIFS as defined in ODF OpenFormula.
- Re-implemented RAND() function with better random number generation algorithm.
- New spreadsheet functions IFERROR and IFNA as defined in ODF OpenFormula.

Pivot table

- Support for multiple selections in the page field of a pivot table.

What's new in LibreOffice Calc 4.1?

General

- Embedding fonts in a Calc spreadsheet.
- Added a stepped lines type to Line and XY (Scatter) graphs.
- Counting the number of selected cells.

Formula engine

- New spreadsheet function NUMBERVALUE as defined in ODF OpenFormula.
- New spreadsheet function SKEWP as defined in ODF OpenFormula.
- Import/export functions new in Excel 2013 for ODF OpenFormula compatibility.
- The following functions are handled, name specialties are given as (in parentheses the Calc en-US UI name) [in brackets the ODF name]
ACOT, ACOTH, ARABIC, BASE, BINOM.DIST.RANGE (B) [BINOM.DIST.RANGE],
BITAND, BITLSHIFT, BITOR, BITRSHIFT, BITXOR, COMBINA, COT, COTH, CSC, CSCH,
DAYS, DECIMAL, FORMULATEXT (FORMULA) [FORMULA], GAMMA, GAUSS, IFNA,
IMCOSH, IMCOT, IMCSC, IMCSCH, IMSEC, IMSECH, IMSINH, IMTAN, ISFORMULA,
MUNIT, NUMBERVALUE, PDURATION (DURATION) [PDURATION], PERMUTATIONA,
PHI, RRI, SEC, SECH, SHEET, SHEETS, SKEW.P (SKEWP) [SKEWP], UNICHAR,
UNICODE, XOR