

SIFON INDUSTRIES



# User guide

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1.0

**Vladan Kudláč**  
**Marek Musil**  
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## 1 License

This software is distributed under GNU General Public License v3.0.

## 2 System requirements

Operating system:	Windows XP or newer (32 or 64 bit)
Java Runtime Environment:	1.8.0 and newer Download here: <a href="http://java.com/download">http://java.com/download</a>

## 3 Getting started

### 3.1 Installation

You can run installation by *setup.exe* file, which is a part of archive. For installation you need administrator rights. Follow the instructions of installer.

### 3.2 Uninstall

Software can be uninstalled using OS tools (Control panel -> Programs and functions or Applications) or you can run uninstall manually from installation folder (default: *C:\Program Files\Calc*) by running *unins000.exe* file.

## 4 Usage

### 4.1 Run

If you checked "*Create a desktop shortcut*" in installer, you can run the program by this desktop shortcut.



Installator also creates shortcut in Start. Eventually you can find *Calc.exe* in you instalation folder.

## 4.2 Interface description



## 4.3 Inserting numerical values

Numerical values can be inserted by keyboard or using numerical buttons 0-9.

For negative numbers press button -, or press minus on keyboard and then insert number.

For decimal numbers press comma button or point/comma on keyboard and then insert decimal part.

Decimal and negative numbers are not allowed for some operations. In that case the buttons are disabled.

## 4.4 Function back and reset

If you have inserted wrong number, you can delete it using backspace key on keyboard.

In case you don't want to use keyboard or you want to change operation, you have to reset calculator to default state by button **C** (eventually key ESC).

## 4.5 Mathematical operations

### 4.5.1 Operations with one argument

#### 4.5.1.1 Factorial

Insert positive integer number, from which will be counted factorial and press **x!** button. When button is pressed, the result will be shown in VALUE panel

### 4.5.2 Operations with two arguments

Operations **Mod**, **÷**, **x^y**, **√**, **×**, **-**, **+** requires inserting two numbers. Insert first number, choose your desired operation and then insert second number. Result will be counted and shown after pressing **=** button (eventually ENTER key).

#### 4.5.2.1 Modulo

The modulo operation finds the remainder after division. Insert integer dividend. Press **Mod** button and insert integer divisor. For result press **=** button.

#### 4.5.2.2 Division

Enter your number (dividend), press  $\div$  button, or **/** on keyboard and then enter your second number (divisor). Divisor can't be 0. For result press **=** button or **Enter** on your keyboard.

#### 4.5.2.3 Exponentiation

Calculator can count power of any base and integer exponent. First enter your base number, press **x^y** button and then enter your integer exponent. For result press **=** button or **Enter** on your keyboard.

#### 4.5.2.4 nth root

First you have to enter degree ( $n$ ) of root, then press  **$\sqrt[n]{\phantom{x}}$**  button to select operation. Then you can enter the number under root. In case of even degree, the number under root have to be positive number. In case of odd degree of root, there's no restrictions for number under root. For result press **=** button or **Enter** on your keyboard.

#### 4.5.2.5 Multiplication

Enter first number, press **x** button or **\*** on your keyboard and then enter the second number. As usually for result press **=** button or **Enter** on your keyboard.

#### 4.5.2.6 Subtraction

Enter first number, press **-** button for selecting operation and then enter the second number, which will be subtracted from the first number. Then for result press **=** button or **Enter** on your keyboard.

#### 4.5.2.7 Addition

Enter first number, choose **+** operation and then enter the second number, that will be added to the first one. Addition is commutative operation. It means, that the order of numbers doesn't really matter. For result press **=** button or **Enter** on your keyboard.

## 5 Advanced

### 5.1 Manual installation

#### 5.1.1 Compiling

Source code is available on <https://github.com/kudlav/Sifon-Industries>. It's a private repository, if you are interested and want to gain access to our Calculator, you have to contact directly SIFON INDUSTRIES team leader by sending email to [xkudla15@vut.cz](mailto:xkudla15@vut.cz). Content of repository have to be downloaded to your computer (git clone or Download -> Download ZIP).

Source files can be compiled using *make* command. Command is not part of Windows and it is necessary to have installed emulator like *Cygwin* (download: <https://cygwin.com/install.html>) and during installation install *make* tool. Run *Cygwin* and move to the *src* folder (path can be obtained by drag and drop the folder to terminal).

Enabling commands:

- doxygen: Doxygen-setup.exe - <http://www.stack.nl/~dimitri/doxygen/download.html>
- latex: Basic MiKTeX Installer - <https://miktex.org/download>