# Calculator Manual

## Pied Piper

20. 4. 2020

**Table of contents**

**Dependences:**

For both installing the calculator or trying the calculator without installation, **GTK3 libraries** are required. If they are not already installed on your machine, then use command ***'sudo apt-get install libgtk-3-dev'*** to install them. To build the software from source code, it is also necessary to have the **CMake** tool installed. Use commands ***'sudo apt-get install cmake'*** and ***'sudo apt-get install pkg-config'*** to accomplish that.

**Trying out without installation:**

To try the software before installing, navigate to the **'src'** directory and use command ***'make run'*** or ***'make run_dynamic'*** for launching the static or the dynamic version of the calculator, respectively. Note, that the source codes will be compiled and a **'build'** directory will be created. To revert the changes, use command ***'make clean'.***

**Installer installation:**

The current version supports installation from Debian packages, which are located in the **'install'** directory. The **'PP_calc-1.0.0-Linux.deb'** package offers a static installation and the **'PP_calc_dynamic-1.0.0-Linux.deb'** package offers a dynamic installation. To install either version, enter the **'install'** directory. For the static version installation use command ***'sudo dpkg -i ./PP_calc-1.0.0-Linux.deb'*** or use command ***'sudo dpkg -i ./PP_calc_dynamic-1.0.0-Linux.deb'*** for the dynamic version installation. Note, that only one version can be installed at a time.

**Uninstallation:**

The static version of the software can be uninstalled with command ***'PP_calc_uninstaller'*** or use command ***'PP_calc_dynamic_unistaller'*** for the dynamic version uninstallation. Both commands can be used from any directory. It is also necessary to uninstall the current version of the software, when switching to a different one.

**Calculator manual:**

Pied Piper Calculator can operate in two separate modes. Basic mode, which provides basic arithmetic operation, and PRO mode, which enables you to see the development of a calculation in real time. It also offers additional

functionality such as calculations with brackets and goniometric functions. To switch between the two modes, you can either use the dark-blue button **'PRO/Basic mode'** or you can navigate to the top menu bar and use the section **'View'** to change the mode there. Note, that changing any mode will reset the ongoing calculation.

To calculate the result in Basic mode or to get the current result in PRO mode use the **'='** button. To reset the ongoing calculation, use the **'C'** button. And to delete the last character of the calculation use the **'backspace button'**. The **'x^y'** button can be also used as a root function, when the absolute value of **'y'** is between **0** and **1**. Other buttons have expected functionalities as their labels describes.

To view the calculator manual, while using the calculator, double-click the **'Help'** button on the top menu bar.

## Building the executable files from the source code:

Navigate to the **'src'** directory and use command **'make help_exe'** to view the building options for all the executable files. Choose the desired option and follow the instructions. The compiled files will be located in a newly created **'build'** directory, which will contain, apart from others, two subdirectories **'bin'** and **'lib'**. The subdirectory **'bin'** will contain the executable files and libraries will be located in the **'lib'** subdirectory. Ignore other directories and files.

## Installation from the source code:

Navigate to the **'src'** directory and use command **'make install_static'** for the static installation, or **'make install_dynamic'** for the dynamic installation. It is necessary to repeat the process after any change of the source codes. Note, that the executable files will be generated and a new build directory will be created. To remove all the unnecessary files, use command **'make clean'**.

## Uninstallation from the source code:

Similarly, as with the installation enter the **'src'** directory and use command **'make uninstall'** for uninstalling either of the software versions. Or follow the instructions in section **Uninstallation**. Perform this task also when changing the software version or its name.

**Other Makefile options:**

To view all the **'Makefile'** options use command ***'make help'*** in the **'src'** directory.

**Icon change:**

To change the program icon, it is necessary to move the new icon to the **'installation'** directory. The name of the new icon must be **'calc_icon.ico'** and the software must be reinstalled. Follow sections **Uninstallation, Uninstallation from the source code, Installer installation** or **Installation from the source code.**

**Product name change:**

To change the name of the product, navigate to the **'src'** directory, open the **'Makefile'** and change the variable **'EXE_NAME'**. The suffix of the dynamic version can be changed similarly by editing the **'DYNAMIC_NAME_SUFF'**. After saving the changes, use command ***'make install_static'*** or ***'make install_dynamic'*** to install the newly named calculator, or follow the instructions in section **Installation from the source code.** Be aware, that in prior to this action any other version of the software must be uninstalled, to accomplish that see section **Uninstallation** or **Uninstallation from the source code.**
To uninstall the renamed calculator use either commands ***'make uninstall'*** or follow the **Uninstallation** section, but note, that the uninstaller name also changes to **[new_name]**_uninstaller, where the **[new name]** is the name of the renamed calculator.
Any change of the product name and installation will result in compilation of the source codes (if they are not already compiled), to delete all generated files use command ***'make clean'.*** If the newly named calculator does not show up in the Application menu immediately, then system restart is necessary.

**Creating installers:**

After modifying the source codes, it is possible to create new installers for both versions. Save your changes and navigate to the **'src'** directory. Then use command ***'make installer_static'*** to create installer for the static version or ***'make installer_dynamic'*** to create the dynamic version installer. Both installers will be located in the **'install'** directory. For installation see the **Installer installation** section.