

# XGngeo documentation

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Version 15, released on 2005-07-14.

## The Choplair-network

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# 1 Introduction

Great emulator + nice GUI:  
**GNU/Linux Neo Geo**  
**emulation made easy!**



This is the official documentation for **XGneo**, a frontend (graphical user interface) for **Gneo**, a command line **Neo Geo** (arcade game playing system made by SNK) emulator for the *GNU/Linux* operating system (and may be some other Unices) with high speed performance and many configurable options. Both are free/libre softwares released under the terms of the *GNU General Public License*.

XGneo is written in *Python* and uses the *PyGTK* library to provide a complete, practical and user-friendly *GTK+* interface! With its multiple configuration panels, designed in an intuitive way, emulator behaviour can be regulated both precisely and easily; while Rom selection is made simple thanks to a full featured list with preview image and various game information, etc.

This program development is conducted by the **Choplair-network** crew, the latest version and information about XGneo are available from our website (see chapter 4 section 1.1). Although we are not directly taking part in the Gneo development (and are not the official frontend too), we follow it closely and try to implement all its functionalities in the most correct way possible, in accordance with the author (Mathieu Peponas) who gently encourages interactions between frontends and its emulator.

This paper, which is supposed to grow up with each new XGneo release, provides a sort of *Newbie Guide* to get started with easy Neo Geo emulation combining these two programs, and also some details about this frontend's features and its functioning.

## 2 Getting started

This is the complete procedure about how to get the dynamic combination of Gngeo and XGngeo fully functional from scratch, step by step!

### 2.1 Prerequisites

#### 2.1.1 Emulator and Bios

XGngeo is a frontend for Gngeo, so this must be installed somewhere on your computer! You can download the last version from its home page (see chapter 4 section 1.1). Although the emulator is available in various binary formats (deb, RPM...), keep in mind that these packages may be older than the classic source code archive. For this release, we do recommend the use of Gngeo version **0.6.4**. But consider that any previous 0.6.x version should be fine for being used under XGngeo.

Before installing Gngeo, you have to check for the some dependencies: Gngeo graphical rendering is based over the **SDL** (*Simple Directmedia Layer*) library (version 1.2 or more), which is thus required, with **OpenGL** headers for its OpenGL blitter. It also needs **zlib** to extract Rom zip archives. Optionally, you may install the **NASM** package (version 0.98 or more) in order to provide assembler optimisations. Their home page address, for informational purposes, are given on chapter 4 section 1.

Once this is okay, you can install Gngeo, corresponding to the format it was grabbed into. If, for some reasons, the installation does not work, you may ask for help from the Gngeo mailling list (chapter 4 section 2).

To be able to launch Roms, Gngeo will need a Neo Geo Bios. It is an archive which consists of the following files: `'neo-geo.rom'`, `'ng-sfix.rom'` and `'ng-lo.rom'`. They have to be put into the same directory as your Roms (the so called *Rom and Bios directory*!).

#### 2.1.2 Other requirements

Especially for XGngeo, you also need the following softwares to be installed:

- The **Python** programming language: version 2.2 or more.
- The **Gimp Tool Kit** aka GTK+: version 2.6 or more.
- The **PyGTK** library: version 2.6 or more.

That's perhaps already the case. Otherwise, you'll find the links to their home page on chapter 4 section 1.2.

## 2.2 Getting and launching XGngeo

It's show time! You are now ready to taste the power of XGngeo. ^^

If you didn't obtain this documentation as a part of an XGngeo package, you have to get one! You'll find download links for the last version on the Choplair-network homepage (see

chapter 4 section 1.1). Thereafter, unpack the archive, then move to the directory which have just been created (something like ‘`xgnggeo-XX`’ where `XX` is the version number).

**At this time, we *do* assume that you have installed everything indicated above.** Since Python code is interpreted, XGnggeo doesn’t require any compilation phase. To launch it, simply enter: `python xgnggeo.py`. If you get an error doing so, please refer to the chapter 4 section 2.

## 2.3 First time important path configuration

At the beggining, XGnggeo should invite you to set up some important parameters that are required to build up basic configuration files with three important options required for a working emulation. The first one, the path to your Rom driver file (‘`romrc`’), is set with the default value, like the path to the Gnggeo executable. Actually, you would just have to tell the directory where are located your Neo Geo Roms and Bios.

Once you have finished, press `SAVE`. Of course, these parameters can be modified at any time thereafter, using the same configuration window.

If for some reason you want to skip this important path check at boot time, it is possible by just giving `--nobootcheck` as a command line parameter. But this is definitely **not** recommended!

## 2.4 Main window

Unless you obtained a warning dialog because some parameters looked invalid, the XGnggeo main window should appear...

### 2.4.1 Status bar

First, you might be pleased by the welcome message at bottom of the main window. However, the message in this status bar may change and provide some information which is not so useless for the user. For example, it confirms that configuration has been saved or not, and also indicate which Rom you have selected, and it’s status (stopped/running). In one word: marvellous!

### 2.4.2 Menu bar

Of course, you may fall in love with the great logo, but actually your attention should go to the menu bar, on the upper part, which you’ll be able to control everything with!

It is primarily composed of the `FILE` menu, which permits you do simple operations such as loading Rom, starting or stopping it, and exiting the program.

Next to that is, comes the `CONFIGURATION` menu, from where you can modify the parameters which you entered at the XGnggeo first load and also some other little options, mostly related to XGnggeo’s own behaviour. But the most interesting thing here is the `GLOBAL EMULATION` sub-menu which allows you to set the default Gnggeo emulation configuration

(graphic, audio, keys, etc.) for every game (but it is also possible to set specific game configuration). These emulation configuration panels are detailed in the section 2 of the next chapter.

At last, on the very right-hand, from the INFO menu you can look at the credits or read again and again the holy GNU General Public Licence whom XGngeo is released under!

## 2.5 Playing a game

Okay, you can set emulation options as you want, then it's time to launch a game! There are 3 ways to select a Rom for playing : through the Rom list, a file chooser, or the recent Rom history. The file chooser is useful only if the Rom you want to load is located in another place than the *Rom and Bios directory*, and the recent Rom history is just a menu providing quick selection for some Roms you have previously chosen.

Actually, you would probably use the Rom list window which allows you to see all the Roms available in your *Rom and Bios directory*, in a clean way, and select one from those. From there, you can also set specific emulation configuration for any Rom, and even see game preview or information (see chapter 3 section 2.1)

Once you have selected a Rom, it should be launched by Gngeo and playable only a few seconds later! *The future is now*, enjoy the Neo Geo! :-D

While playing, you still can perform some special actions in the emulator, like toggling between fullscreen/windowed mode, saving/loading state, etc. (see chapter 3 section 3). By the way, you can also disable the auto Rom execution feature (if you prefer to do so manually) in the OTHER THINGS configuration window.

## 3 Details

### 3.1 Used files

#### 3.1.1 Main configuration files

XGngeo's configuration interface actually manages options of 2 main configuration files at the same time. Both using the same syntax, which is just lines of a variable name followed, after a space, by its corresponding value. :p

##### 3.1.1.1 'gngeorc'

This is the Gngeo's global configuration file, situated in the '`~/gngeo/`' directory. It lets you customize many params of the emulator, some of which are highly important (path to the '`romrc`' file, etc.), which will be the default for any Rom.

##### 3.1.1.2 'xgngeo.conf'

This is the XGngeo's own configuration file, situated in the '`data/`' directory which is in the XGngeo's. This second file is less important, there are only options related to XGngeo (size of history, preview images' directory, etc.). That's why most of these options are modifiable in the OTHER THINGS section.

#### 3.1.2 Rom-specific configuration files

Since its version 0.6, Gngeo is able to perform emulation in a specific way for each Rom.

That's quite simple: before loading the Rom, the emulator looks for a file, in the '`~/gngeo/`' directory, which is named in the form of '`name_name.cf`' (where *name\_name* is the Mame name of the game). If it does exist, the emulation parameters from are taken from, without taking care of the ones set in the '`gngeorc`', which is used otherwise. The syntax for these files is still the same.

Rom-specific configuration files can be easily handled through XGngeo, as detailed in the next section...

##### 3.1.3 Rom driver file

The Rom driver file (named '`romrc`') is very important as it contains all the instructions for the emulator to correctly handle the Roms. All technical specifications required for them to work are all put together in that (very big!) Rom driver file.

##### 3.1.4 History file

This simple ASCII file ('`~/gngeo/history`') contains, in descending order, lines of the full name (between double quotes) and the absolute path of recently loaded Roms, in order to be displayed in the HISTORY menu of XGngeo. Note that although it is placed in the Gngeo user directory, this file was created for XGngeo and is thus not directly updated by the emulator but by the frontend.

## 3.2 Particular windows

### 3.2.1 Rom list add-ons

There are also optional features (add-on) which bring you a more comfortable game selection in the Rom list window. Here they are...

#### 3.2.1.1 Preview images

XGngeo is able to display a preview image of any of the games selected in the list. It is fully compatible with the preview images used by other frontends such as **GGF** (*GnGeo Frontend*), which implemented it formerly.

Thus, a preview image pack archive can be easily obtained from the Gngeo, GGF or Choplair-network home page. You will need to unpack them somewhere, then to indicate the directory where they are located in the `OTHER THING CONFIGURATION` window, in order to get it working instantly!

#### 3.2.1.2 Rom information

GGF's developpers created an XML file containing information (description, manufacturer, year, etc.) about loads of Roms in order to be displayed by frontends. This is the perfect addition to preview images and it's fully supported by XGngeo! Moreover, because of the small size of this file, it is already included in our packages and this add-on is activated by default.

**Note:** the game reviews are not ours, but have been performed by the *Ultimate Neo Gaming Ressource* (UNGR). You can read them online and find other interesting things on their homepage (see chapter 4 section 1.3).

### 3.2.2 Emulation configuration panels

The options which can be set in global or the rom-specific emulation configuration window are exactly the same. As XGngeo provides graphical management for a lot of Gngeo parameters, they have been divided in several panels according to which emulation domain they are dealing with, for the sake of clarity.

#### 3.2.2.1 Graphic panel

You can activate many options here: fullscreen mode, frame skipping (real-time speed), interpolation (smoother animation), etc. Moreover, you may select your preferred blitter (software, OpenGL, YUV) and choose to apply an effect upon it (scanline, HQX, etc.).

Please note that effects are currently not supported by the YUV blitter of Gngeo. Thus, the effect list becomes disabled in XGngeo when you select this blitter.

#### 3.2.2.2 Sound / Joystick panel

There are few options for sound and joystick, which is why they are regrouped in one panel. You may set support for them and, if enabled, specify some options (sound sample rate, joystick devices).



### 3.2.2.3 Keyboard panel

This panel is a **keyboard** (not joystick! :p) control configurator which permits you to easily customize the 2 player controls. To modify a key, just click on the corresponding button then push your new key.

**Warning:** since Gngeo (SDL's) and XGngeo (GTK's) keymaps are different, some special keys might be not recognized by XGngeo. If it occurs, please tell us (refer to the chapter 2 section 2)!

### 3.2.2.4 System panel

Here you can set some Neo Geo core preference. You can change the region (Japan, USA, Europe), which often modifies the game language, and also the Neo Geo type: *arcade* (classic mode with credit given by coins) or *console* (usually more complete and permitting configuration through an option menu).

## 3.3 Special actions in Gngeo

Using function keys, you can perform some special actions while playing a Rom in Gngeo. Here comes the list of what you can do by pressing these keys:

- **[Escape]**: exit game.
- **[F1]**: reset game.
- **[F2]**: take a screenshot (BMP file saved in your home directory).
- **[F3]**: enter Neo Geo Bios configuration interface.
- **[F4]**: enable/disable display of pressed key value.
- **[F5]**: enable/disable display of FPS value.
- **[F6]**: enable/disable slow motion.
- **[F8]**: save current game state (to a slot you thereafter specify, from the one hundred possible!).
- **[F9]**: load a saved game state (from a slot you thereafter specify).
- **[F10]**: enable/disable auto frame skip.
- **[F11]**: enable/disable sleep mode when Gngeo is idle.
- **[F12]**: enable/disable fullscreen mode.

## 3.4 Internationalization

XGngeo is multilingual! Translations are currently available in the following languages:

- English (default)
- French
- Polish\*
- Portuguese of Brazil
- Spanish

**Note:** a language followed by an asterisk means that its translation is unfortunately not up-to-date with the current release original strings. Don't hesitate to update it! You can even make a new translation, just look bellow...

### 3.4.1 Making a new translation

If you want to create a new translation of XGngeo into your language, follow these generic instructions:

1. Get the current XGngeo development version from its CVS by doing the following command (on a single line):  

```
cvs -z3 -d:pserver:anonymous@cvs.xgngeo.berlios.de:/cvsroot/xgngeo  
checkout xgngeo
```
2. Go to the ‘lang/’ directory which is in ‘xgngeo/data/’.
3. Create a directory named like your language code (usually the one returned by `echo $LANG`). See [http://www.gnu.org/software/gettext/manual/html\\_chapter/gettext\\_15.html#SEC221](http://www.gnu.org/software/gettext/manual/html_chapter/gettext_15.html#SEC221) for an exhaustive list.
4. Into this one, create a new directory named ‘LC\_MESSAGES’.
5. Go back to the ‘lang/’ directory then open the translation template ‘xgngeo.pot’ with your favorite translation tool (KBabel, GTranslator, Poedit, etc.).
6. Once you’ve finished translating. Save it as ‘XX/LC\_MESSAGES/xgngeo.po’ (where XX is your language code).
7. Go to ‘XX/LC\_MESSAGES/’ then do: `msgfmt xgngeo.po -o xgngeo.mo`. This will create a binary file (‘xgngeo.mo’) readable by the program.
8. Launch XGngeo, which is now translated in your language!

Every time you update your translation, don’t forget to repeat step number 7. When you feel it’s perfect, you may send your *po* file to [chopinou\[AT\]choplaire.org](mailto:chopinou@choplaire.org).

## 4 Web links and ML

### 4.1 Home pages

#### 4.1.1 Websites of the great duo

- Gngeo: <http://m.peponas.free.fr/gngeo/>.
- Choplair-network (for XGngeo): <http://www.choplair.org/>.

#### 4.1.2 Their dependencies

- SDL: <http://www.libsdl.org/>.
- Zlib: <http://www.zlib.org/>.
- NASM (optional): <http://nasm.2y.net/>.
- Python: <http://www.python.org/>.
- GTK+: <http://www.gtk.org/>.
- PyGTK: <http://www.pygtk.org/>.

#### 4.1.3 Miscellaneous

- Gngeo Brazil (Brazilian website about Gngeo): <http://www.gngeo.hpg.ig.com.br/>.
- Ultimate Neo Gaming Ressource (Neo Geo fan site): <http://ungr.emuunlim.com/>.
- GGF (first Gngeo frontend): <http://gngeofrontend.sourceforge.net/>.

### 4.2 Gngeo mailling list

If you encounter any problem using Gngeo, directly or through a frontend such as XGngeo, the best way is certainly to ask for help on the official Gngeo mailling list, where you should get quick and effective answers from its little community, including XGngeo developers.

Here is how to:

- **Suscribe:** send a blank email, with the word *subscribe* as a subject, to [gngeo-request@ml.free.fr](mailto:gngeo-request@ml.free.fr). Note that prior subscribtion is mandatory before posting any new message.
- **Post:** send your messages to [gngeo@ml.free.fr](mailto:gngeo@ml.free.fr).

By the way, list archives are available on the web at the following address: <http://www.mail-archive.com/gngeo@ml.free.fr/>. Please check that your problem hasn't already been adressed, disscussed and solved before posting a new help request message.

## 5 Credits

XGngeo forms a part of the projects conducted by the Choplair-network, an independant libre software development crew. Here comes the people involved in the making of this program since the beginning:

- **Choplair** ([chopinou\[AT\]choplair.org](mailto:chopinou@choplair.org)): development director and main programmer, French translator.
- **Pachilor** ([pachilor\[AT\]choplair.org](mailto:pachilor@choplair.org)): assistant programmer.
- **Ms. Marie-Claire** ([marie-claire\[AT\]choplair.org](mailto:marie-claire@choplair.org)): documentation editor.
- **hori**<sup>1</sup> ([x\\_psyence\[AT\]hotmail.com](mailto:x_psyence@hotmail.com)): English spelling corrector.
- **Shilon** ([sheng.long.gradilla\[AT\]gmail.com](mailto:sheng.long.gradilla@gmail.com)): Spanish translator.
- **Matma** ([matma\[AT\]irc.pl](mailto:matma@irc.pl)): Polish translator.
- **Matheus Villela** ([villela\[AT\]inf.ufsc.br](mailto:villela@inf.ufsc.br)): Brazilian translator.
- **Paulo Eduardo Chiva** ([paulo.chiva\[AT\]ig.com.br](mailto:paulo.chiva@ig.com.br)): previous Brazilian translator.

Special thanks to the Gngeo authors, **Mathieu Peponas** and others, for writing such a great emulator!

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<sup>1</sup> The wonderful, the magnificent and most excellent blooming rose!