

Karto help

Version 2.0

Installation guide

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If you need a hard copy of this documentation, please print the file:

[install_en.pdf](#)

1 Introduction

Karto is a mapping program for positioning points on a map from their coordinates.

This program has been designed by and for speleologists. It is therefore not surprising that the examples in this document often refer to "entrances of cavities", caves, or other avens. It can however also be used for other undertakings where it is believed necessary to place points accurately on a map.

2 Installation

2.1 If you already have another Karto version

If you already have a version of Karto installed on your computer, you can leave it installed, both versions can work independently of each other, each installed in its own folder.

Install the new version in a directory different from the directory used by your previous version. Test this new version and after 2 or 3 days / weeks of use remove the directory of the old version of Karto (possibly recovering any data that may be there!).

Practical tip:

After installing the new version of Karto, copy your old karto.ini (or karto.xml) located in the old Karto folder, and place it in the new Karto folder (replacing the karto.ini or karto.xml provided with this version). This will allow you to keep using the Karto configuration you had in the old version.

2.2 Installation procedure (Windows or Linux)

Karto uses the Java program. This program is available for free on the net. It's up to you to install the version you require (version provided by IBM or others). In the past, Java was provided with the Karto program. This is no longer the case today.

2.2.1 Test if Java is already present

First of all, check if Java is installed and which version has been implemented. In order to do that :

- On Windows: "Start" menu / Run and type "cmd". The old DOS window on a black background will open
- On Linux: open a shell console

On your window (DOS or linux shell) type :

```
java -version
```

The system will answer either with something like :

```
java version "1.8.0_131"
Java(TM) SE Runtime Environment (build 1.8.0_131-b11)
Java HotSpot(TM) 64-Bit Server VM (build 25.131-b11, mixed mode)
```

Which means that Java is well installed, and that its version is version 1.8.0 (**java version "1.8.0_131"**)

or with something like :

```
'java' is not a known internal or external command,
or an executable, or a command file.
```

Which means that Java is not installed (and must be installed).

The minimum version for Karto is Java 1.8.0 (the current known java version is 1.10).

2.2.2 Java Installation

If your version of Java is too old, or not installed, connect to the Internet and go to <http://java.sun.com/j2se/1.8/> or <http://java.sun.com/products> to download and install the Java version of your choice. The Java Runtime Execution (JRE) is all you need. there is no need to install the JDK version which is much bigger and which is only required for computer developers needing to recompile part of Karto.

2.2.3 Karto Installation

Download from our website the file KartoV2.zip ;.

Unzip the zip file which will automatically create your KartoV2 directory.

located in the KartoV2 folder are two scripts, karto.sh and karto.bat. Use one or the other depending on your environment (.bat for Windows, .sh for Linux).

The scripts Karto.bat or Karto.sh can be edited as required to make them fit your environment (memory, configuration files ...)

You can also create a launch shortcut and associate it with the Karto icon (Karto.ico) which is located in the Karto folder (this operation is not performed automatically).

Once everything is ready, open Karto, possibly by using the shortcut which you have created

2.2.4 Language configuration

Karto is translated into several languages.

You can define the language you want to use (for the interface of the program, as well as for the log file), directly in the launching options (compatibility with the old version of Karto).

To set your language code, add the options:

- "--Lang <code>" : to define the language (fr for french, en for english, es for spanish, it for italian, de for german). For other language codes, refer to the official list of international codes ([code langue iso.txt](#))
- "--Countries <code>" : to define the particular country, when several countries speak the same language, but with variants (FR for France, GB for the United Kingdom, ES for Spain, IT for Itale , DE for Germany). For other country codes, refer to the official list of international codes ([codes payse ISO.html](#))

For a list of languages (and countries) provided as standard in your version of Karto, refer to the general documentation of the application (Karto.html). This documentation will also tell you how to add your own translation file (and flags).

Another solution is to define the language of the application at the time the application is launched. A popup will open automatically and ask you for the language of use for Karto (see chapter **Configuring the language** on the full doc). The choice you make is saved in Karto.xml, and can be modified later (see the **Karto Options** chapter on the full doc).

2.3 Screen Configuration

Karto automatically displays the scale of the map displayed on the screen. In order to do this there is a need to know the number of DPI of your screen, and since this information cannot be automatically obtain, a small manual operation has been incorporated in the Karto options.

This is not mandatory for this information to be provided, and Karto will work fine if you do not provide it. If the configuration is not (or has been badly) provided, the scale information given by Karto (this is for information purposes only) will be wrong.

After starting Karto, go to the "Karto options" menu, in the "constants" window

Modification des paramètres Karto

Fichiers Avancés **Constantes** Langue Couleurs

Constantes de Karto

Coefficient de conversion Unité de mesure VTopo/unité de calibration 1000

Coefficient de conversion centimètre/unité de calibration 100000

Coefficient de conversion en pouces 2.54

Nombre de Dpi de l'écran 127.000

A ————— B

Distance entre A et B 6.000 ☒ cm ou pouce ☐

Liste des échelles de carte disponibles

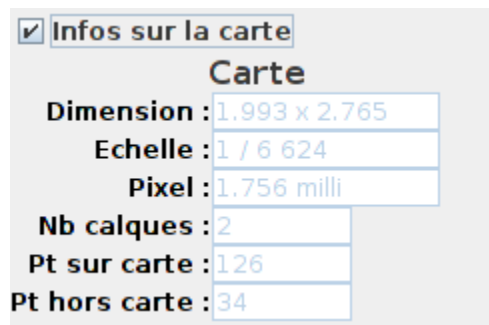
- 25
- 50
- 75
- 100
- 125
- 150
- 200
- 250
- 300
- 400
- 600
- 1000

Ouvrir Enregistrer Annuler Valider Aide

Using a ruler, measure the distance between the "A" and "B" marks as shown on the screen (5.5 cm in this case), and enter this value in the field below (Distance between A and B) . Please state whether centimeters or inches are used (check box on the right).

Validate the entry. The exact number of Dpi of your screen is then displayed for information.

The calculation of the scale at the top right of the map will then be correct:



Infos sur la carte	
Carte	
Dimension :	1.993 x 2.765
Echelle :	1 / 6 624
Pixel :	1.756 milli
Nb calques :	2
Pt sur carte :	126
Pt hors carte :	34

2.4 Installations under other OS

Follow the same procedure as above, but you will need to find a compatible version of Java, and manually update your launch scripts (to adapt them to your OS).

2.5 Content of Karto

The KartoV2 home directory contains:

- the karto.jar file containing the Karto java program, as well as the launch scripts (karto.sh and karto.bat). It also contains style files (style * .fpt) and a parameter file (karto.xml).
- a « demo » directory containing examples: Refuge.jpg, Refuge.cto, Refuge + holes.jpg, Margua.tab. This is a complete example based on data published in 2000 on the French side of the Marguareis mountain area.
- A « log » directory containing the application's trace files (in case of bug, to help correct the program).
- A « doc » directory containing karto documentation in Open Office (.odt) and in PDF. It also contains the Open Source License File (GNU GPL 3.0).
- A « html » directory containing karto documentation in web format (html)

In the current version, the "KartoV2" directory takes up about 14 MB.

2.6 The different data files of Karto

The Karto application uses several different file types to store its data:

- Karto file "carte.cto": these are the files containing all the information of the map, its calibration, the topos points and their formats
- image.jpg file (images in jpg and / or ppm format): this is the scanned map on which are displayed the topos points. We also have exported images including a portion (or all) of the map, with the topo points, the grid,
- topos points file "points.tab": these are the topos points which will be placed on the map. It is a text file that can be generated by itself (from a database, or from a spreadsheet). The file format is described in the chapter on topos point files.

- dot style file: This file contains a list of display styles for topos points (color, symbol used, symbol size and text). These styles are editable and you can create your own styles. The Point Styles chapter shows how to modify these styles and create new styles.
- style file for a map: For a given map, some points may have a particular shape or color (light color if the point is in a dark area). This information is stored in a particular file (one file per map). This file is located in a special directory set in the Karto options. You can refer to the chapter Default Directories in the Options Documentation.
- plane layer file: this file contains the calibration information of an image (gif, png) which we want to project on a map.

2.7 Installation Issues

When Karto is first launched you may get an error and Karto does not start. If this happens, the DOS window remains open and allows you to identify the problem.

Refer to the Bugs and Known Issues chapter if you have a problem launching Karto.

3 Tips for managing your data

Before starting to use Karto, there is a need to reflect on the potential data storage problem .

You can quickly end up having to manage a large number of cards and files. You must therefore find a way to order them in order to quickly find the information which is of interest to you. The Karto application gives you the option to save the default directories where you will search for your documents.

3.1 Practical advice

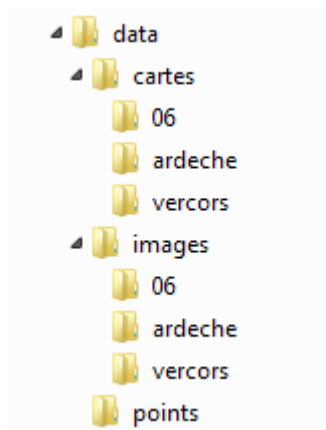
We therefore recommend that you:

- store all your scanned map images in the same directory ; and if you have a large number of images, create a subdirectory by geographical area (mountain area, parc area, ...). All you have to do is specify this folder in the Karto options (see the options documentation).
- save your calibrated cards (file created by Karto) in the same directory as the card images. If you have stored your images on a CD-ROM, save your cards on your hard disk in a special directory (or store them, after calibration, on the CD-ROM with the scanned cards).
- create a directory to store your topographic point file. Normally you will use only one file of points, so you will have only one file in this directory. If you want to create several point files (for example one per mountain area, such as Vercors, Pyrenees, Ardèche, ...), you will install them all in this same directory.

By setting these 3 directories in the Karto options page, the selection window will automatically be in the right directory when you ask to open an image, a map, or a point file.

3.2 Tree Example

Here is an example of a tree:



The 3 directories (images, maps, points), are all registered under the same directory "data". This simplifies searches, and it also allows you to copy all files on a CD Rom and then open the cards from the CD ROM. This directory can be installed in the Karto directory (next to the "demo" directory), or in another directory.

in this example, we have created 3 subdirectories for images and maps to separate maps from very different geographical areas. If you work on only one sector, it is then useless (for you) to create the subdirectories (as here 06, ardeche and vercors).

Once your data is organized, you will be able, in Karto, to configure the folders in the Karto options menu (see the **Karto options** chapter on the full doc) in order to have an automatic pre-selection of the right folder when searching for documents.

3.3 Internationalization of Karto

3.3.1 The language

To choose the language of the program, edit the file Karto.bat and change the options "lang" and "country" to use those which correspond to your country. Check that the ".properties" file exists (in the same directory as Karto.bat or in standard delivery: see below)

The language and country codes are standardized, if you want to translate Karto into another language, you can use the international codes:

- for the language, the code is defined on 2 lowercase letters, the list of codes is defined on <http://www.ics.uci.edu/pub/ietf/http/related/iso639.txt> or in the document code_langue_iso639.txt located in the doc folder of Karto
- for the Country, the code is defined on 2 letters in upper case, the list of the codes is defined on http://www.chemie.fu-berlin.de/diverse/doc/ISO_3166.html or in the document codes_payse_ISO_3166.html located in the doc folder of Karto

The language and country codes define the name of the translation file that will be used.

Examples :

- Lang fr country FR: KartoTexte_fr_FR.properties file
- Lang en contry GB: KartoTexte_en_GB.properties file

This file must be present in the file karto.jar or in the directory Karto (with the Karto.bat)

The languages supplied as standard are:

- French: Lang fr country FR: KartoTexte_fr_FR.properties file

- English: Lang en contry GB: KartoTexte_en_GB.properties file
- Spanish : Lang es contry ES : KartoTexte_es_ES.properties file
- Italian: Lang it contry IT : KartoTexte_it_IT.properties file
- Portuguese: Lang pt contry PT : KartoTexte_pt_PT.properties file
- German: Lang de contry DE : KartoTexte_de_DE.properties file

For other translations, refer to the Karto website (<http://karto.free.fr/Karto>).

Note: by default, the French language is always chosen.

For any other language (or language variant) you can generate the file yourself (from a file that you update). See the next chapter

3.3.2 The country (flags)

With the language, the country's flags are displayed at the bottom left of the screen. You can add your flags by putting them in the "resources / flags" folder that you create in the karto installation folder (as for the language). The file should be named "flag_XX.png" where XX is the international code of the country in question. This option can be changed in the Karto configuration options.

3.3.3 Add or correct a language

If you want to add a new translation, or correct an existing translation:

- download the ressources.zip file from the Karto website
- unzip this file into the Karto installation folder (the KartoV2 folder containing the Karto.bat)
- go to the resources / lang folder and edit the file to update, or duplicate it to create a new file. Attention to the respect of the naming with the international codes for the countries (see the files code_langue_iso.txt and codes_pays_ISO.html situated in the folder "doc")
- Update the file by modifying only the translation to the right of the "=="

example:

Points présents sur la carte == Points located on the map

Becomes:

Points présents sur la carte == Punkti, kas atrodas kartē

- Update the entire file, ideally to the "#About messages" block around line 300
- Save your files
- Add or not a flag in the "resources / flag" folder (always respecting the country codes).
- Launch Karto, open the options tool (Style Menu / Karto Options)
- On the "Language" tab, update your new language code. Click on "Verfier" to verify that everything is OK.
- Click "Save" and close Karto
- Restart Karto: it uses your new language file.

3.4 Setting up Karto

Once the architecture is defined, you have to update some Karto options. This will be done by launching the Karto program and populating the application's default directories in the options page (see the Karto Options chapter).

The directory paths can be indicated in relative (relative to the file karto.bat) or in absolute (by pointing to the hard disk).

According to our previous example, if we assume that the data directory is located on disk C (c: \ data) we will have:

1. Image directory : c:\data\images
2. Card directory : c:\data\cartes
3. Points directory : c:\data\points

Note :

If we want to create several configuration files for Karto, this can be done by creating a configuration file and by indicating each time the directory of the mountain area (06, Ardèche, Vercors) for images and maps. This function should only be used by advanced users.