

How to Install JSindo for Mac

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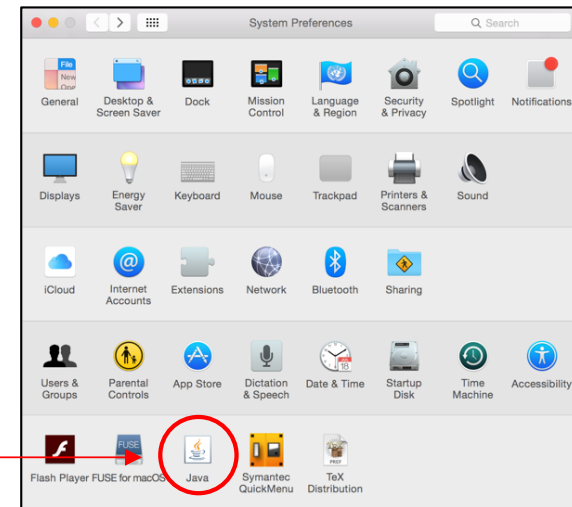
2018/06/01

1. Install Java

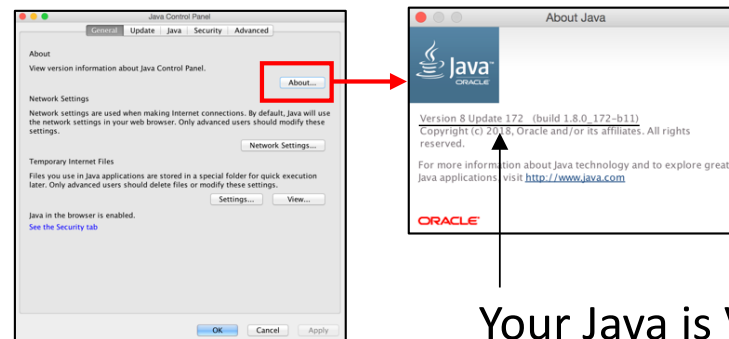
STEP1: Let's check if your Mac has Java installed or not, and the version of Java if you have.

Open the "System Preference".

- If you don't find an icon of Java, your Mac doesn't have a Java yet. In this case, goto **STEP2**.
- If you find the icon, click the icon to open Java Control Panel, where you can check the version of Java.



If your Java is Version 8, then you can skip the installation and go to Chap. 2.



Your Java is Version 8 Update 172!

If your Java is a newer one (version 9 and later), it is unfortunately **NOT** compatible with Java3D library, which JSindo use for visualization. In this case, uninstall Java and re-install version 8.



Unfortunately, your Java is Version 10.0.1...

To uninstall Java (version 10), type the following commands to remove the folders. You will be prompted to enter an administrator password.

```
> sudo rm -rf /Library/Internet% Plug-Ins/JavaAppletPlugin.plugin  
> sudo rm -rf /Library/PreferencePanes/JavaControlPanel.prefPane  
> sudo rm -rf /Library/Java/JavaVirtualMachines/jdk-10.0.1.jdk
```

WARNING!

Be sure to type the right folders. You cannot redo this command!

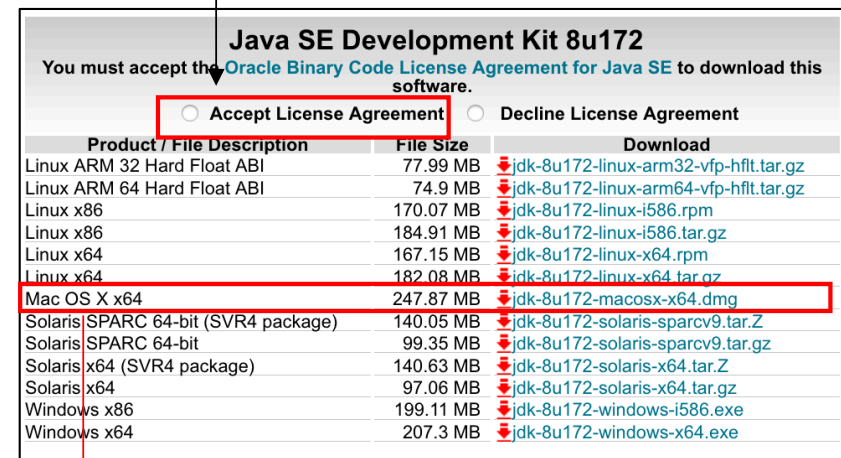
STEP2: Install Java8.

Search “Java SE download” in Google and goto the following website.

<http://www.oracle.com/technetwork/java/javase/downloads/index.html>



accept



download and double click the dmg file



Click here, follow the instruction, and you're done.

You may do STEP1 to double check you've got the right Java installed.

*) If you don't have enough space, JRE is also OK. But, JDK is recommended since it let you use Java from a command line.

2. Download Java3D

JSindo uses Java3D for visualization. A stable version, 1.6.0, is available from JogAmp. Goto <http://jogamp.org>



Main Page

Welcome to the [JogAmp](#) wiki. It documents JOGL, JOCL and JOAL, the cross-platform bindings to the OpenGL, OpenCL, and OpenAL APIs.

click here

Getting Started

- [Downloading and installing](#)
- [Versioning and Releases](#)
- [Setting up a JogAmp project in your favorite IDE](#)
- [Source Code Repositories](#)
- [Tracking Reports](#)
- [Build and Test Server](#)

Community

- [Contribute to JogAmp](#)
- [Build JogAmp](#)
- [Maintainer and Contacts](#)
- [Report a bug](#)
 - [Bugzilla](#)
- [Ask a question in the forum](#)
- [JogAmp IRC](#)

Downloading and installing JOGL

Before you can build a project that uses JOGL [in your IDE](#) or [on the command line](#), you'll need to download and install the JOGL JAR files and native JARs or native library files (.dll/.so/.jni.lib files).

You have a choice of JOGL versions to download. The [latest stable version](#) is the safest, but lags behind in features. The [latest automatic build](#) contains all checked-in code, but may be failing some tests.

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Downloading the latest stable version

Go to [this page](#) and download the all-in-one 7z archive file:

[jogamp-all-platforms.7z](#)

click here and download
jogamp-all-platforms.7z

Go back to the Main page and scroll down

Main Page

Welcome to the [JogAmp](#) wiki. It documents JOGL, JOCL and JOAL, the cross-platform bindings to the OpenGL, OpenCL, and OpenAL APIs.

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Related Projects

Java3D

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Ji Gong

- Overview
- Motivation
- FAQ

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Page Discussion

Downloading and installing Java3D

Downloading the latest stable version

Go to [this page](#) and download the 7z archive file:

[jogamp-java3d.7z](#)

Do the same for JogAmp as it is indicated [here](#).

click here and download
jogamp-java3d.7z

Unarchive the two files you've just downloaded. 7z files can be unarchived using, for example, "The Unarchiver",



The Unarchiver
MacPaw Inc.

You will find jar files in jogamp-all-platforms/jar and in jogamp-java3d. The following jar files are needed for JSindo:

```
jogamp-all-platforms/jar/  
  gluegen-rt.jar  
  gluegen.jar  
  gluegen-rt-natives-macosx-universal.jar  
  jogl-all.jar  
  jogl-all-natives-macosx-universal.jar
```

```
jogamp-java3d/  
  j3dcore.jar  
  j3dutils.jar  
  vecmath.jar
```

3. Download JAMA

JAMA is a linear algebra library for JAVA. We use it for matrix multiplications, diagonalization, and so on. It can be downloaded from,

<https://math.nist.gov/javanumerics/jama/>

JAMA : A Java Matrix Package

[\[Background \]](#) [\[The Package \]](#) [\[Request for Comments \]](#) [\[Authors \]](#) [\[Related Links & Libraries \]](#)

Background

JAMA is a basic linear algebra package for Java. It provides user-level classes for constructing and manipulating real, dense matrices. It is meant to provide sufficient functionality for routine problems, packaged in a way that is natural and understandable to non-experts. It is intended to serve as *the* standard matrix class for Java, and will be proposed as such to the [Java Grande Forum](#) and then to [Sun](#). A straightforward public-domain reference implementation has been developed by the [MathWorks](#) and [NIST](#) as a strawman for such a class. We are releasing this version in order to obtain public comment. There is no guarantee that future versions of JAMA will be compatible with this one.

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The Package

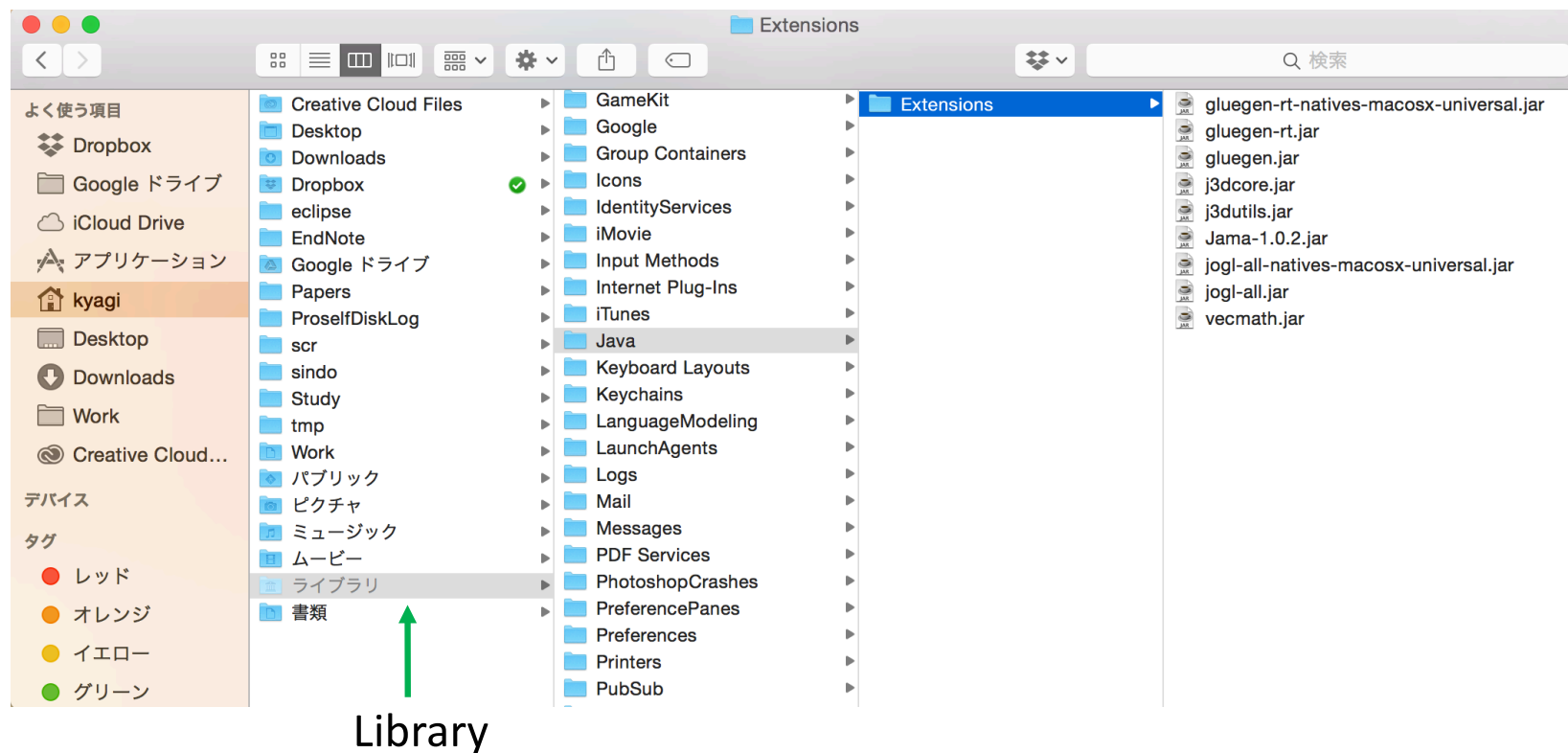
Version 1.0.3 (November 9, 2012)

- [Documentation](#)
- [Example](#)
- Source [[Jama-1.0.3.zip](#)] [[Jama-1.0.3.tar.gz](#)]
- Jar file [[Jama-1.0.3.jar](#)]
- [ChangeLog](#)

→ click here and download a jarfile.

4. Copy jar files

Copy the jar files to an extension folder, which is set to `~/Library/Java/Extensions`. Click Go menu of finder with option key pressed (`~/Library` is hidden) and choose Library. Create the folder if you don't have it yet, then copy the jar files in this folder.



5. Download and test JSindo

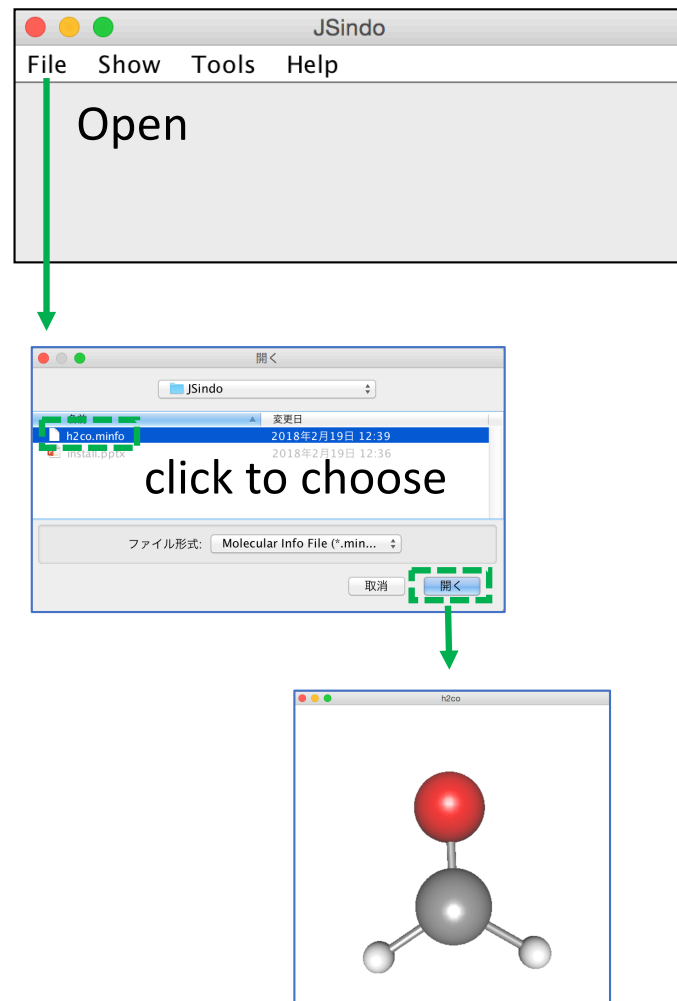
Download JSindo-4.x.jar and sample.zip (or sample.tar.gz) from our website:
<http://www.riken.jp/TMS2012/tms/en/research/software/sindo/index.html>

Now, double click JSindo-4.0.jar. You should see a control panel of JSindo. If you don't see the panel, review the installation of Java.

Let's open "sample/h2co.minfo" included in sample.zip. Double click sample.zip to unzip the file.

In JSindo control panel, click File -> Open, choose "h2co.minfo", and click Open. If you see formaldehyde, you're done with the first step!

If this step fails, it is highly likely that JogAmp/Java3D has a problem. Double check if the right jarfiles are located in the folder.



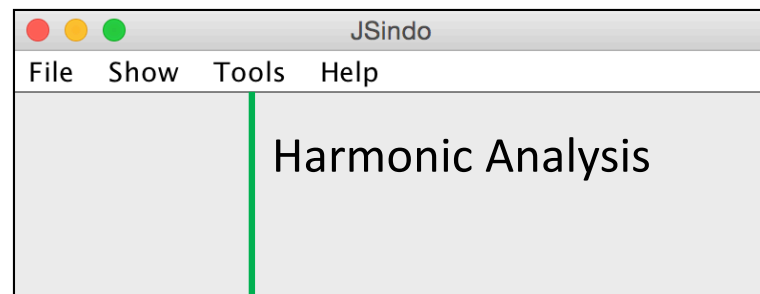
Finally, goto Tools -> Harmonic Analysis. This should create a panel of “Normal modes”.

If you don't see this panel, JAMA isn't working. Check if the jarfile of JAMA is set correctly.

If the panel appears, you're all set! Congratulations!

Check on “show vibrational coordinates”, and choose a mode you want to see. Vibrational motion will be indicated by arrows. You can “Invert the arrows” by a check box, and change the magnitude using a slider.

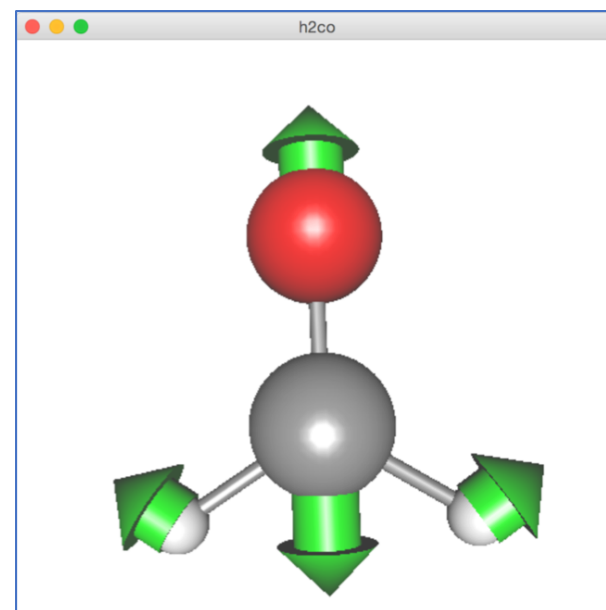
Thanks for using JSindo!
Enjoy!



Normal modes (h2co)

Mode	Frequency (cm...	Reduced Mass (...)	Intensity (km m...
1	1196.9147	1.3615	7.0342
2	1266.7685	1.3335	9.3885
3	1540.1545	1.1550	10.7003
4	1752.9374	5.7700	67.7530
5	2973.6886	1.0439	66.6832
6	3047.6560	1.1221	88.4298

☐ Show vibrational coordinates.
☐ Invert the arrows.
[Slider]



FAQ

1. How do I use JSindo from a command line?

Make sure you have installed JDK, not JRE, which let you use java from a command line. Type “java –version” in the terminal. If you get a version info, then you’re OK. If not, install JDK (see Chap. 1).

Then, you can start JSindo by

```
>java -cp /path/to/JSindo-4.0.jar JSindo
```

You may add the following line in your ~/.bashrc,

```
alias jsindo='java -cp /path/to/JSindo-4.0.jar JSindo'
```

After source, you can invoke the program by typing “jsindo” in the command.

```
> . ~/.bashrc  
> jsindo
```

2. Is it possible NOT to use the extension folder?

Create a new folder (`${HOME}/JSindo/jar` in the example below), and copy all jar files in there,

```
> jsindo_jar=${HOME}/JSindo/jar
> mkdir -p $jarfiles

> cp /path/to/jogamp-all-platforms/jar/gluegen.jar      $jsindo_jar
> cp /path/to/jogamp-all-platforms/jar/gluegen-rt.jar  $jsindo_jar
> cp /path/to/jogamp-all-platforms/jar/jogl-all.jar   $jsindo_jar
> cp /path/to/jogamp-all-platforms/jar/gluegen-rt-natives-macosx-universal.jar $jsindo_jar
> cp /path/to/jogamp-all-platforms/jar/jogl-all-natives-macosx-universal.jar $jsindo_jar

> cp /path/to/jogamp-java3d/j3dutils.jar $jsindo_jar
> cp /path/to/jogamp-java3d/j3dcore.jar  $jsindo_jar
> cp /path/to/jogamp-java3d/vecmath.jar  $jsindo_jar

> cp /path/to/Jama-1.0.3.jar $jsindo_jar
> cp /path/to/JSindo-4.0.jar $jsindo_jar
```

Then, type the following command to invoke JSindo:

```
> java -cp "$jsindo_jar/*" JSindo
```

3. Is it possible to retain the installed Java, and use Java8 only for JSindo?

Probably, yes. You need to invoke java8 directly from a command line. (See FAQ #1)

I could run JSindo with Java8 executable by the following command:

```
> /Library/Java/JavaVirtualMachines/jdk1.8.0_172.jdk/Contents/Home/bin/java ¥  
-cp /path/to/JSindo-4.0.jar JSindo
```

Note that the folder name may be different, and check carefully the location of the Java8 executable.