

How to Install JSindo for Mac

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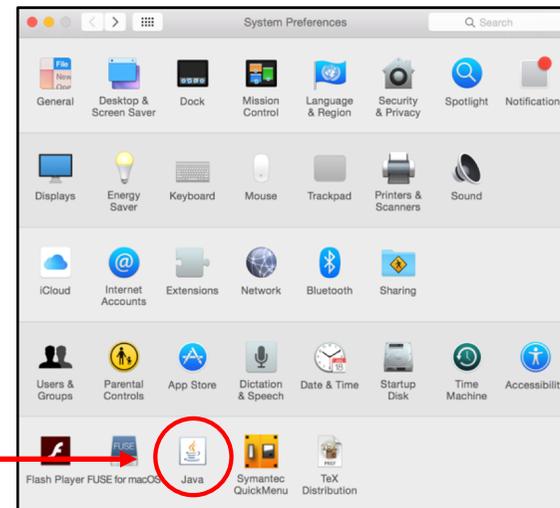
2019/05/14

1. Install Java

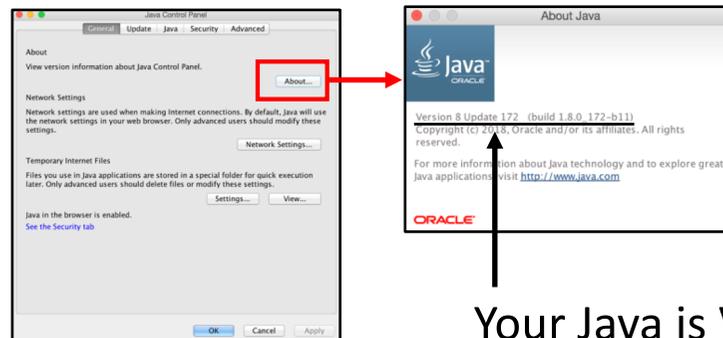
STEP1: Let's check if your Mac has Java installed or not, and the version of Java if you have.

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>

Oracle Technology Network / Java / Java SE / Downloads

Overview Downloads Documentation Community Technologies Training

Java SE Downloads

Java Platform (JDK) 10 NetBeans with JDK 8

Java SE 10.0.1
Java SE 10.0.1 is the latest feature release for the Java SE Platform.
Not this!

Which Java package

- **Software Developers:** **JDK** (Java SE Development Kit). For Java Developers. Includes a complete JRE plus tools for developing, debugging, and monitoring Java applications.
- **Administrators running applications on a server:** **Server JRE** (Server Java Runtime Environment). For deploying Java applications on servers. Includes tools for JVM monitoring and tools commonly required for server applications, but does not include browser integration (the Java plug-in), auto-update, nor an installer. [Learn more](#)
- **End user running Java on a desktop:** **JRE** (Java Runtime Environment). Covers most end-users needs. Contains everything required to run Java applications on your system.

Java SE 8u171/8u172
Java SE 8u171 includes important bug fixes. Oracle strongly recommends that all Java SE 8 users upgrade to this release. Java SE 8u172 is a patch-set update, including all of 8u171 plus additional bug fixes (described in the release notes). [Learn more](#)

JDK DOWNLOAD
Server JRE DOWNLOAD
JRE DOWNLOAD

accept

Java SE Development Kit 8u172
You must accept the [Oracle Binary Code License Agreement for Java SE](#) to download this software.

Accept License Agreement Decline License Agreement

Product / File Description	File Size	Download
Linux ARM 32 Hard Float ABI	77.99 MB	jdk-8u172-linux-arm32-vfp-hflt.tar.gz
Linux ARM 64 Hard Float ABI	74.9 MB	jdk-8u172-linux-arm64-vfp-hflt.tar.gz
Linux x86	170.07 MB	jdk-8u172-linux-i586.rpm
Linux x86	184.91 MB	jdk-8u172-linux-i586.tar.gz
Linux x64	167.15 MB	jdk-8u172-linux-x64.rpm
Linux x64	182.08 MB	jdk-8u172-linux-x64.tar.gz
Mac OS X x64	247.87 MB	jdk-8u172-macosx-x64.dmg
Solaris SPARC 64-bit (SVR4 package)	140.05 MB	jdk-8u172-solaris-sparcv9.tar.Z
Solaris SPARC 64-bit	99.35 MB	jdk-8u172-solaris-sparcv9.tar.gz
Solaris x64 (SVR4 package)	140.63 MB	jdk-8u172-solaris-x64.tar.Z
Solaris x64	97.06 MB	jdk-8u172-solaris-x64.tar.gz
Windows x86	199.11 MB	jdk-8u172-windows-i586.exe
Windows x64	207.3 MB	jdk-8u172-windows-x64.exe

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>

The screenshot shows the JogAmp website homepage. The navigation bar includes links for Home, Gluegen, JOAL, JOGL, JOCL, Wiki, Blogs, Streams, and Forum. The 'Wiki' link is highlighted with a green dashed box. A green arrow points from the 'Wiki' link to the 'jogamp-all-platforms.7z' file in the archive index on the right. Another green arrow points from the 'Builds / Downloads' section to the same file. A third green arrow points from the 'click here' text to the 'jogamp-all-platforms.7z' file. The 'click here' text is also highlighted with a green dashed box.

Index of /deployment/jogamp-current/archive

Name	Last modified	Size	Description
Parent Directory		-	
API-Changes/	2015-10-10 05:56	-	
ChangeLogs/	2015-10-10 05:43	-	
Sources/	2015-10-10 05:45	-	
gluegen-javadoc.7z	2015-10-09 06:20	393K	
joal-demos.7z	2015-10-10 05:01	1.2M	
joal-javadoc.7z	2015-10-09 06:21	107K	
jocl-demos.7z	2015-10-10 05:02	553K	
jocl-javadoc.7z	2015-10-10 03:27	182K	
jogamp-all-platforms.7z	2015-10-10 05:03	53M	
jogamp-fat-all.7z	2015-10-10 05:02	31M	
jogl-demos.7z	2015-10-10 05:02	25M	
jogl-javadoc.7z	2015-10-10 03:25	2.1M	
test-results/	2015-10-10 05:03	-	

Apache/2.4.25 (Debian) Server at jogamp.org Port 443

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

Go back to the main page, then go to Wiki page,

Scroll down the Wiki page,

Main Page

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

⋮ ↓ Scroll down

Related Projects

Java3D

- [Overview](#)
- [Downloading and installing](#)
- [Tutorial](#)
- [API Documentation](#)
- [FAQ](#)

Ji Gong

- [Overview](#)
- [Motivation](#)
- [FAQ](#)

click here

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.

⋮ ↓ Scroll down

The Package

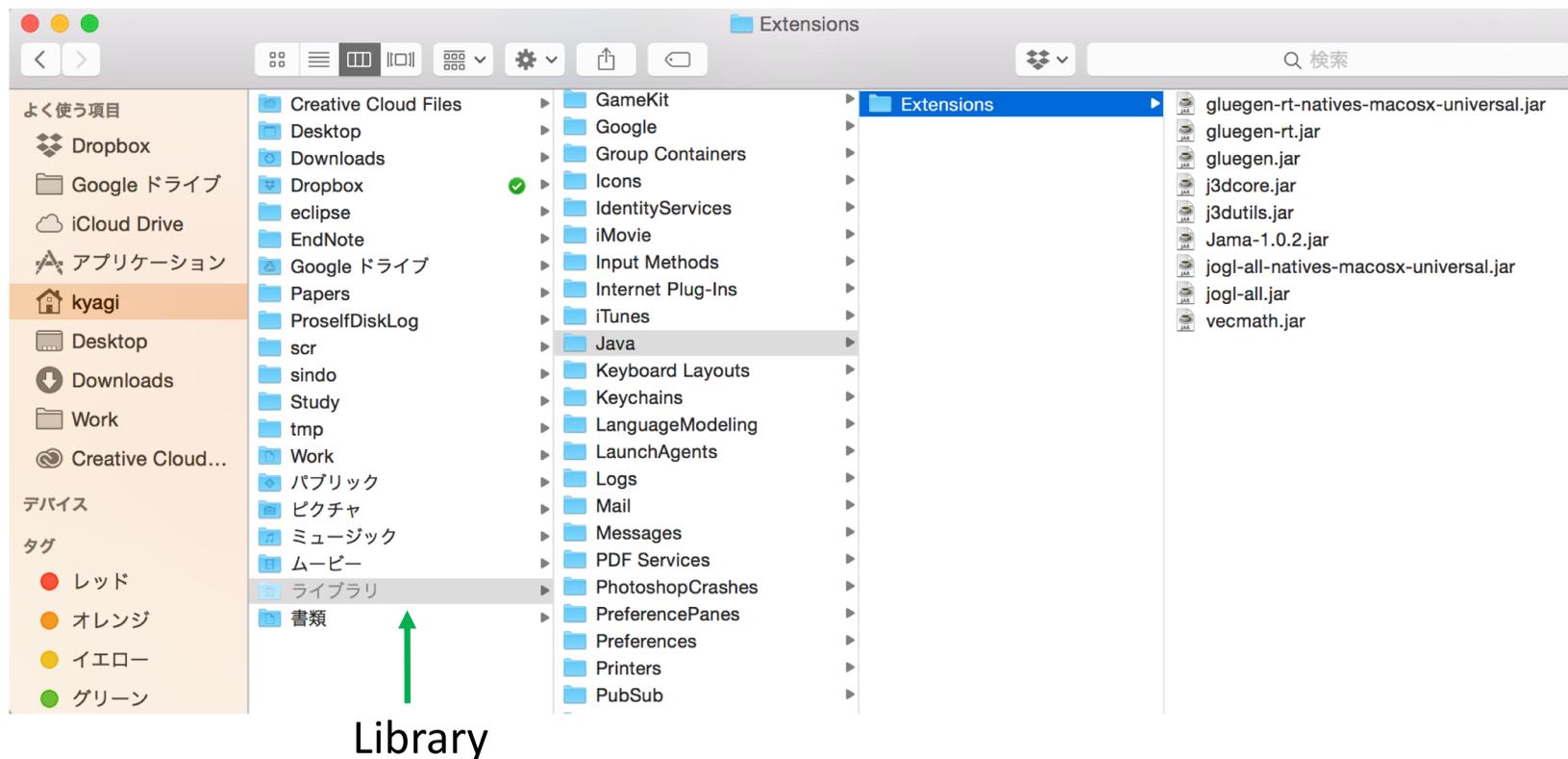
Version 1.0.3 (November 9, 2012)

- [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 sindo-4.0.zip from our website:

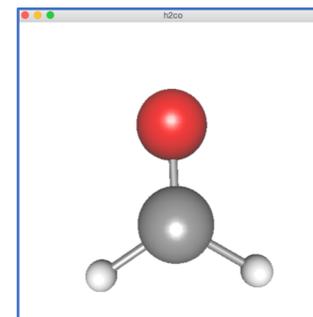
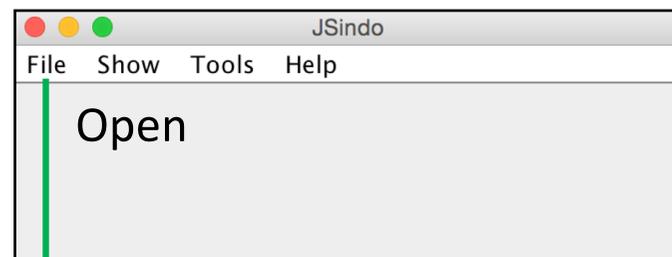
<http://www.riken.jp/TMS2012/tms/en/research/software/sindo/index.html>

Double click to unzip the file. Then, find sindo-4.0/jar/JSindo-4.0.jar. Double click the jar file, and you should see a control panel of JSindo. If you don't see the panel, review the installation of Java.

Let's test the program. Sample files are included in sindo-4.0/doc/JSindo/sample_JSindo.

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.



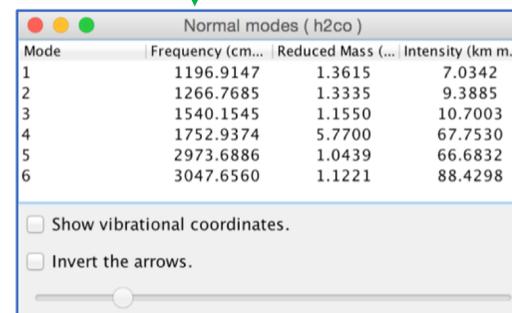
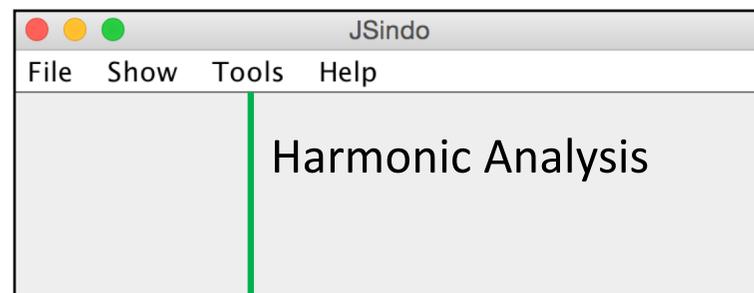
Finally, goto Tools -> Harmonic Analysis. This should create a panel of “Normal modes”.

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!

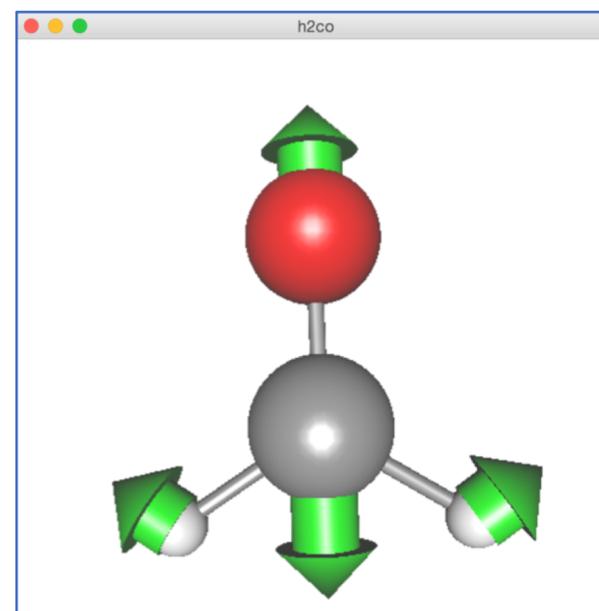
Check on “show vibrational coordinates”, and choose a mode you want to see. Vibrational motion will be indicated by arrows. You can “Invert the arrows” by a check box, and change the magnitude using a slider.

Thanks for using JSindo!
Enjoy!



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: []



Appendix

How to 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/sindo-4.0/jar/JSindo-4.0.jar JSindo
```

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

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

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

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