

Phyphox and Arduino Tutorial

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Download the Arduino IDE



ARDUINO 1.8.13
The open-source Arduino Software (IDE) makes it easy to write code and upload it to the board. It runs on Windows, Mac OS X, and Linux. The environment is written in Java and based on Processing and other open-source software.
This software can be used with any Arduino board. Refer to the [Getting Started](#) page for Installation instructions.

Windows Installer, for Windows 7 and up
Windows ZIP file for non admin install

Windows app Requires Win 8.1 or 10
[Get](#)

Mac OS X 10.10 or newer

Linux 32 bits
Linux 64 bits
Linux ARM 32 bits
Linux ARM 64 bits

[Release Notes](#)
[Source Code](#)
[Checksums \(sha512\)](#)

Download and install the Arduino IDE on [their website](#).

Download our program on [our site](#).

Connect the board to one of your computer's USB ports.

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← Extraire les dossiers compressés

Sélectionner une destination et extraire les fichiers

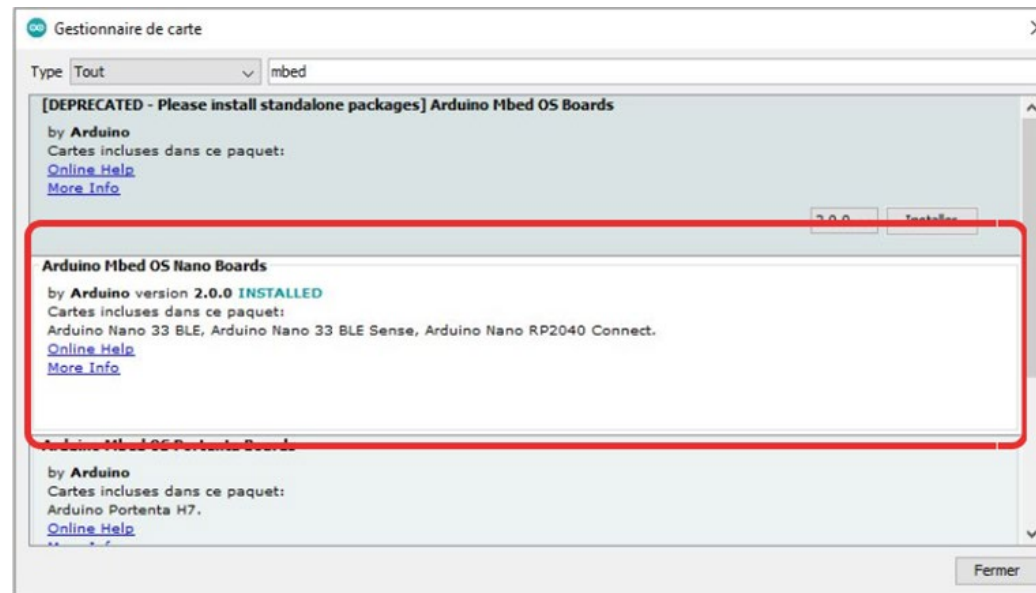
Les fichiers seront extraits dans ce dossier :

Parcourir...

Afficher les dossiers extraits une fois l'opération terminée

Extract our program (Right click → Extract all) then launch « nano_phyphox_v1.ino ».

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Gestionnaire de carte

Type: Tout | mbed

[DEPRECATED - Please install standalone packages] Arduino Mbed OS Boards
by Arduino
Cartes incluses dans ce paquet:
[Online Help](#)
[More Info](#)

Arduino Mbed OS Nano Boards
by Arduino version 2.0.0 **INSTALLED**
Cartes incluses dans ce paquet:
Arduino Nano 33 BLE, Arduino Nano 33 BLE Sense, Arduino Nano RP2040 Connect.
[Online Help](#)
[More Info](#)

Arduino Mbed OS Portenta Boards
by Arduino
Cartes incluses dans ce paquet:
Arduino Portenta H7.
[Online Help](#)

Fermer

Go to Tools → Board → Boards Manager, then use the search bar to find and install the last version of Arduino Mbed OS Nano Boards by Arduino.

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Go to Tools → Manage Libraries, then use the search bar to find and install the last versions of these 5 libraries:

- phyphox BLE by RWTH Aachen University
- Arduino_LSM9DS1 by Arduino
- Arduino_LPS22HB by Arduino
- Arduino_HTS221 by Arduino
- Arduino_APDS9960 by Arduino

Go to Tools → Port and choose the port COMX to which an Arduino Nano 33 BLE is connected.

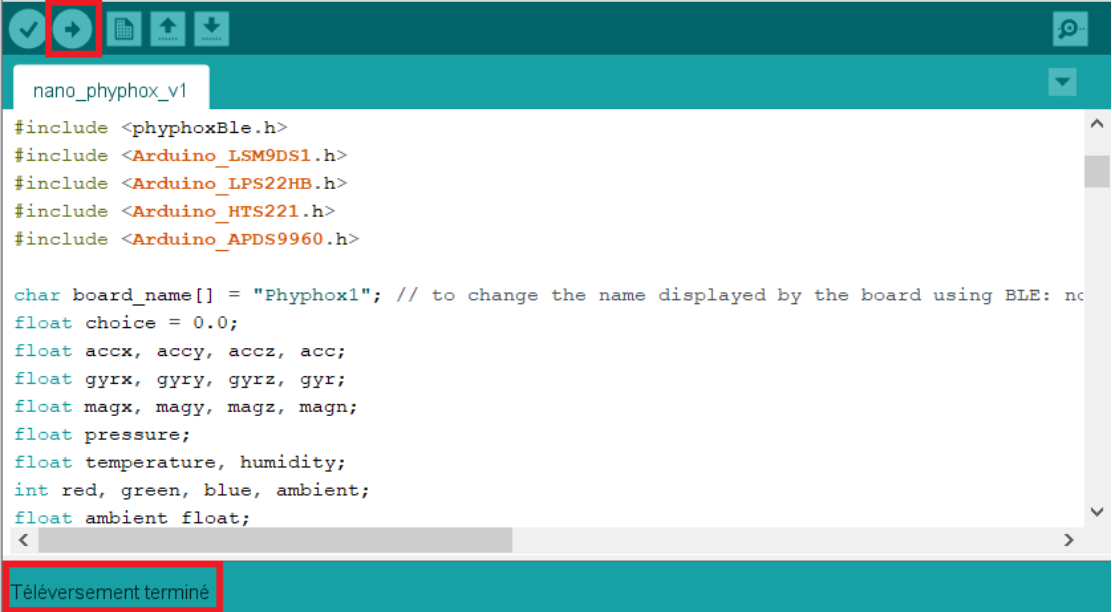
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```
#include <phyphoxBle.h>
#include <Arduino_LSM9DS1.h>
#include <Arduino_LPS22HB.h>
#include <Arduino_HTS221.h>
#include <Arduino_APDS9960.h>

char board_name[] = "Phyphox1"; // to change the name displayed by the board
float choice = 0.0;
float accx, accy, accz, acc;
--
```

If needed, change the name displayed by the board (mostly useful if there are several boards in the same room).

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Click on Upload ("→" icon under File and Edit).

Wait for the end of the loading, which will be indicated by "Done uploading" at the bottom of the window.



Download the phyphox app by RWTH Aachen on Google Play or App-Store.

Launch the phyphox app, click on "+" then "Add an experiment with a QR code". Flash the following QR code. (Alternatively, you can go to our site and click on "Phyphox experiments" under Tutorials and program.)

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Ouverture d'une série d'expériences

Cette ressource contient plusieurs expériences. Vous pouvez en choisir une pour l'ouvrir et éventuellement l'enregistrer dans votre collection, ou utiliser le bouton ci-dessous pour les enregistrer toutes en même temps dans votre collection.

Arduino Nano 33 BLE Sense

AAc	Absolute Acceleration Plots absolute acceleration measure...
AGy	Absolute Angular Velocity... Plots absolute angular velocity mea...
Acc	Acceleration Plots acceleration measured by the...
Gyr	Angular Velocity (Gyroscop... Plots angular velocity measured by t...
Ill	Illuminance Plots illuminance measured by the A...
Mag	Magnetic Field Plots magnetic field measured by th...
Pre	Pressure Plots pressure measured by the Ard...
Tem	Temperature and Humidity Plots temperature and humidity mea...

ANNULER ENREGISTRER TOUT

Select Save all.

In the list of phyphox experiments, ours are now available under "Arduino Nano 33 BLE Sense".

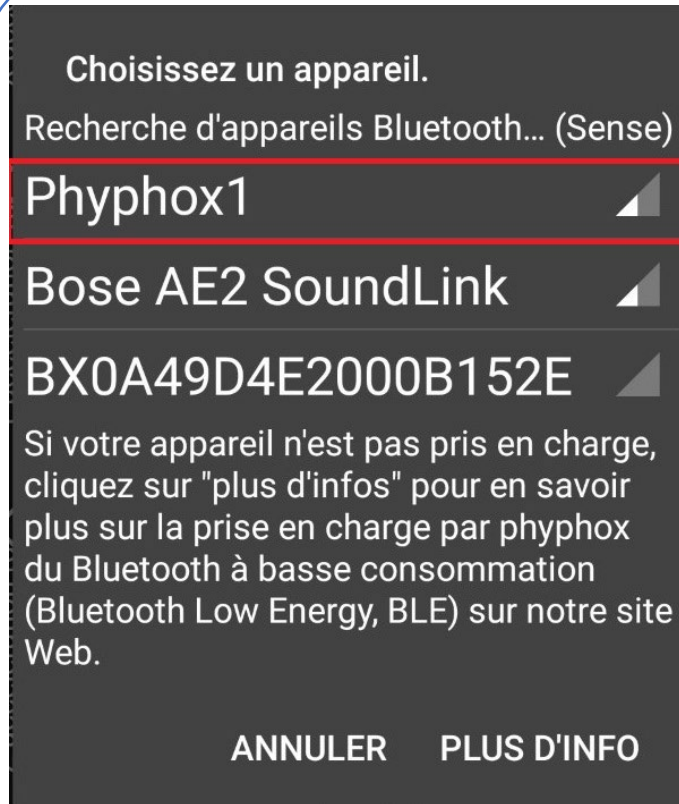
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Acc	Acceleration Plots acceleration measured by the Arduin...
Pre	Analog Input Plots A0 analog input.
Gyr	Angular Velocity (Gyroscope) Plots angular velocity measured by the Ard...
Ill	Illuminance Plots illuminance measured by the Arduino...
Mag	Magnetic Field Plots magnetic field measured by the Ardu...
Pre	Pressure Plots pressure measured by the Arduino c...
Tem	Temperature and Humidity Plots temperature and humidity measured...

To start using the experiments, power your board, and activate Bluetooth and GPS on your smartphone.

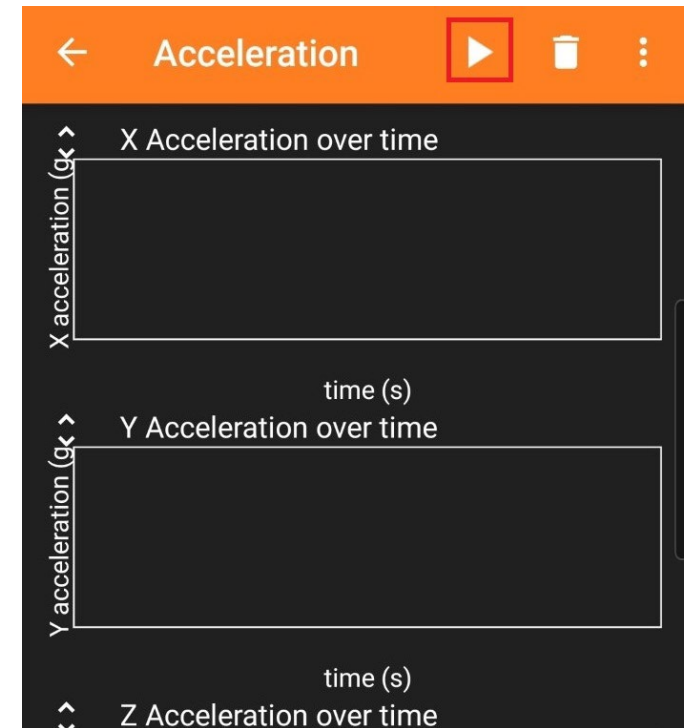
Launch phyphox and select an experiment under Arduino Nano 33 BLE Sense.

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Select the board to which the smartphone should connect (Phyphox1 here).

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Run the experiment.

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