

Setup for the Raspberry Pi Pico

If the Pico has already been flashed, skip straight to Step 2. If the Pico has had a first time setup run before, continue to Step 1.

Step 1: Flashing the Pico

Download the MicroPython UF2 file from the following link:

<https://micropython.org/download/rp2-pico/rp2-pico-latest.uf2>

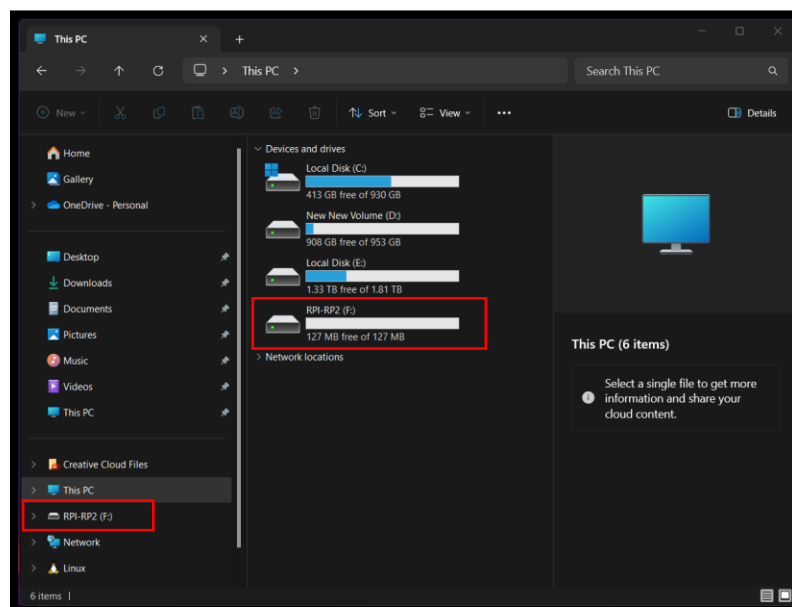
If you are using a Wi-Fi and Bluetooth enabled board, use the following link instead:

<https://micropython.org/download/rp2-pico-w/rp2-pico-w-latest.uf2>

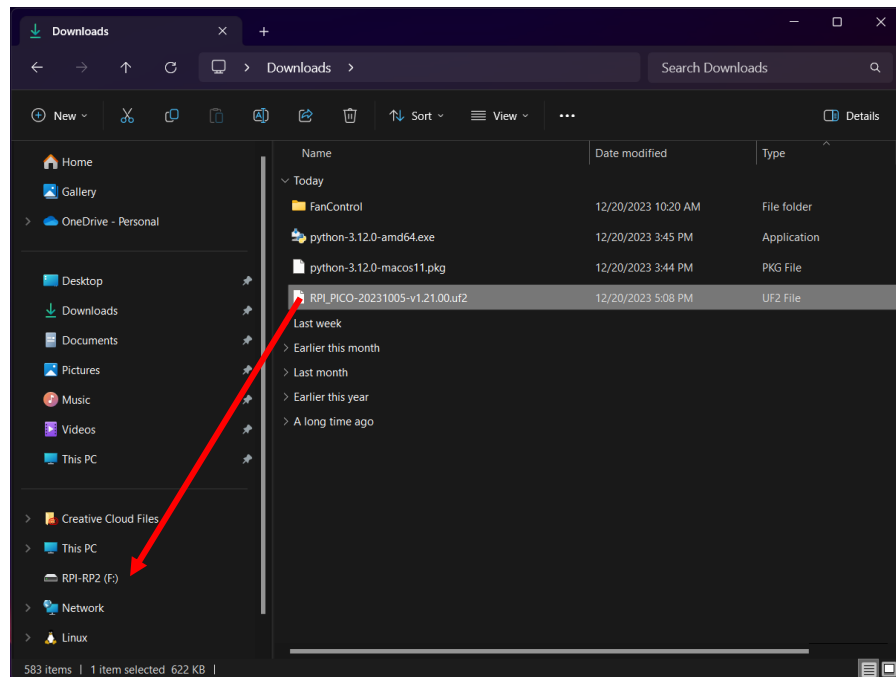
Once the UF2 file is downloaded, we need to plug in the Pico. While holding the BOOTSEL button, plug the Pico into the microUSB cable. This will cause the Pico to show up in your File Explorer like a flash drive would.



Doing this correctly will cause the Pico to show up in your File Explorer like a flash drive would with a name similar to “RPI-RP2”.



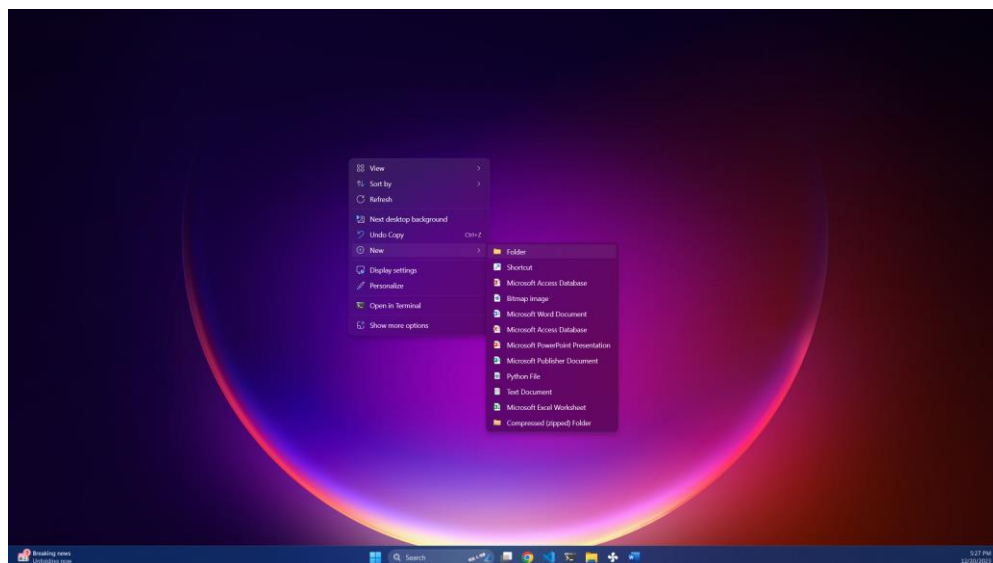
Once the Pico is showing up in File Explorer, we want to drag and drop the UF2 file we downloaded earlier into the Pico. The file should be in your “Download” folder and will be named something similar to “RPI_PICO-20231005-v1.21.0.uf2”.



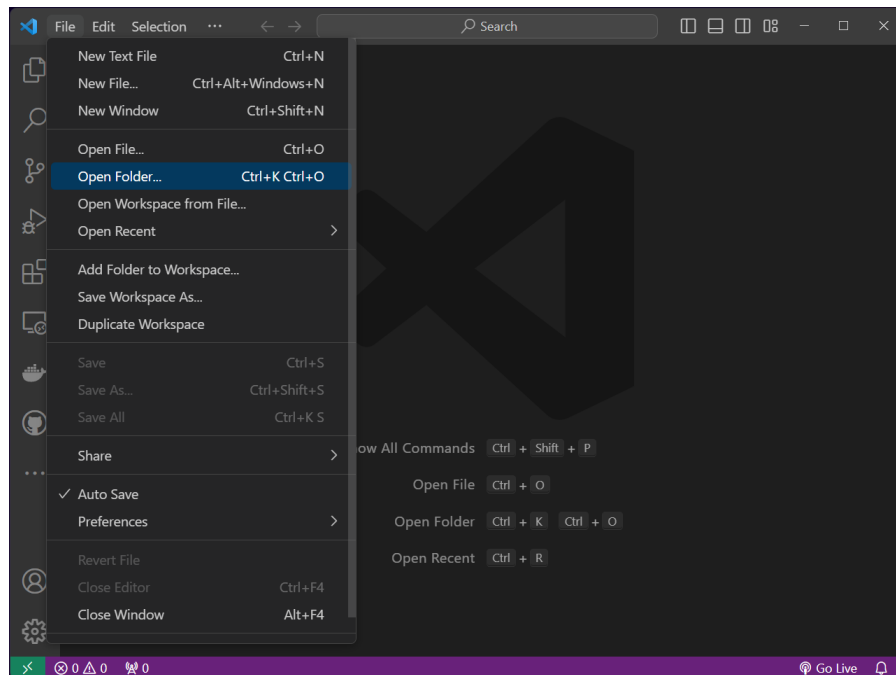
Once the firmware finishes flashing, the Pico will disappear from File Explorer. You are now ready to move to Step 2.

Setting up a Project in Visual Studio Code

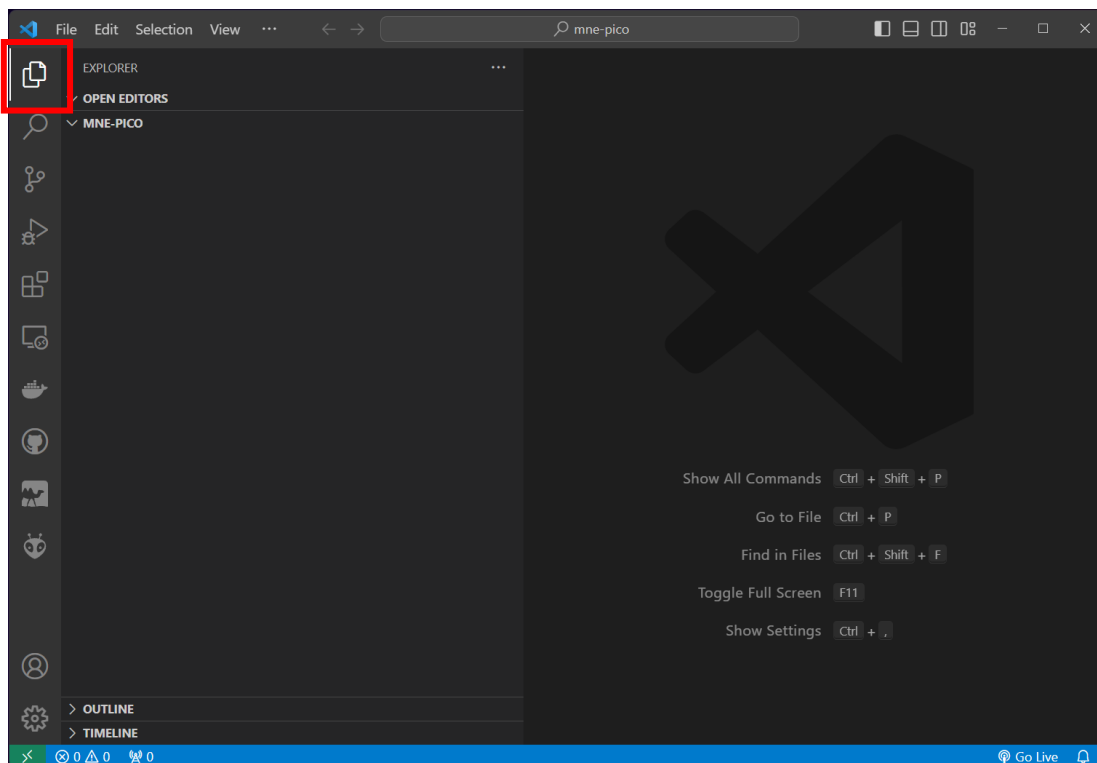
To get started, we want to create a folder in a location that we will not forget. This folder will hold all the code we use for a project using the Pico. For simplicity, create a new folder on your Desktop by right clicking your Desktop and then selecting “New” and then “Folder”.



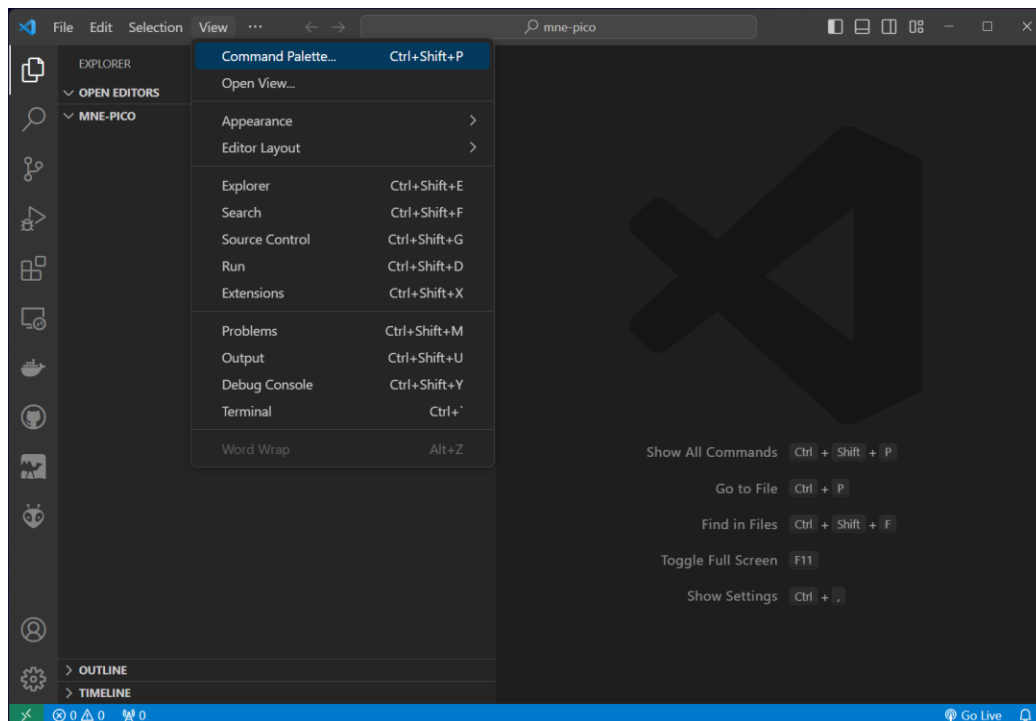
Name the folder after the project or class you will be working on. I will name it mne-pico for this example. Once the file is created, open Visual Studio Code. In the top left, select “File” and then “Open Folder”. Navigate to the file you just created on your Desktop and select it.



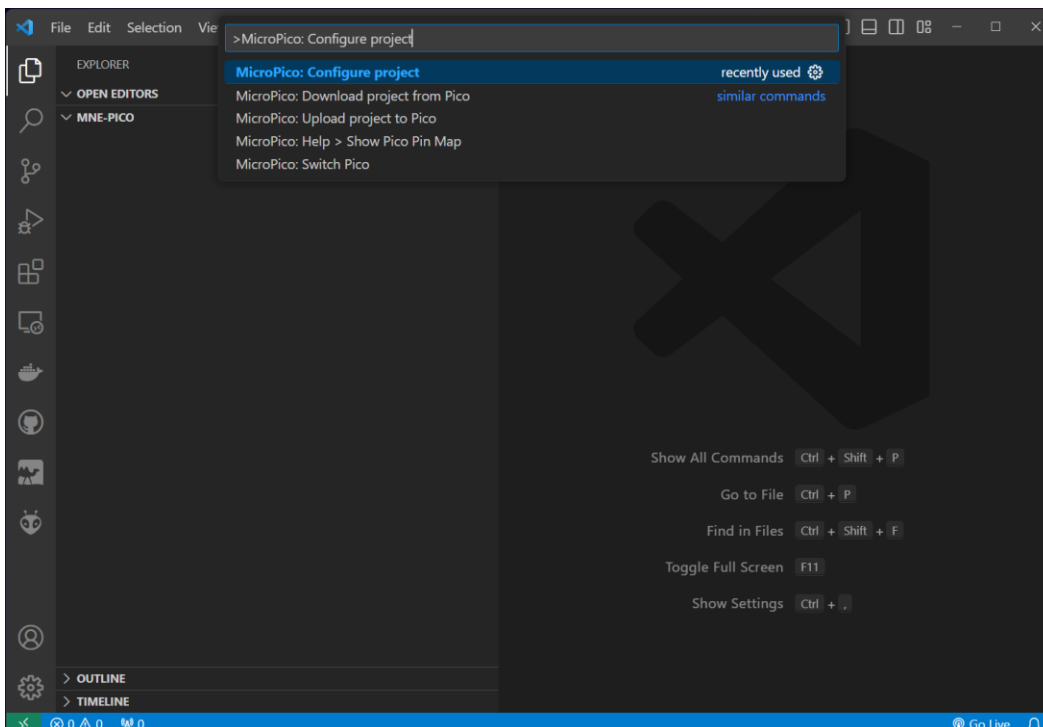
Click on the icon that looks like two stacked pieces of paper in the upper left corner to see the files in the folder. Currently, there should be no files.



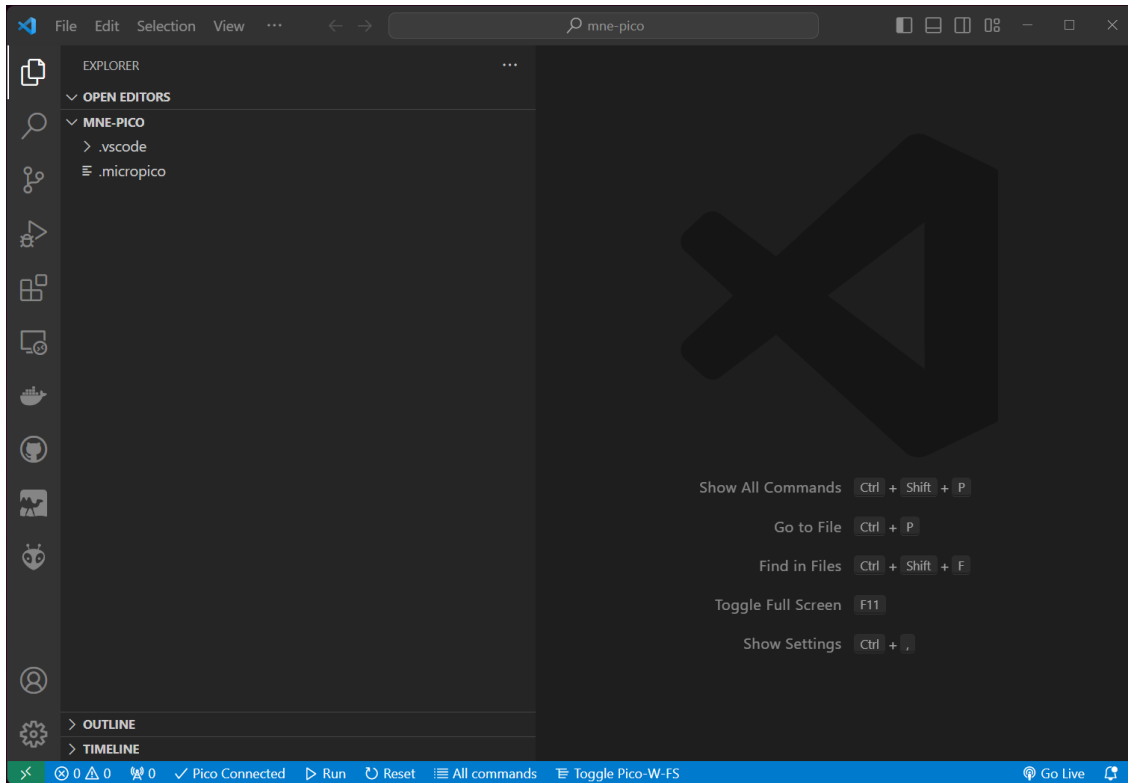
To prepare the workspace for working with the Pico, we now need to configure a project using the MicroPico extension. Begin by hitting “View” and then “Command Palette” in the top left.



This will open a search bar in the upper middle of the screen (note that clicking into the search bar does not do the same thing as opening the command palette). In this search bar, type “MicroPico: Configure project” and select it.



This will create two hidden items: a folder called “.vscode” and a file called “.micropico”. You may also notice that the bottom blue bar now has additional icons for Pico Connected, Run, and Reset.



If the Pico does not automatically show up, try unplugging and re-plugging it. Once there is a check mark by the “Pico Connected/Pico Disconnected” label, code is ready to be run on the Pico. When you want to run a program on the Pico, make sure to use the Run button in the bottom left corner. The Play button in the top right corner of Python files will run locally on your computer, not the Pico.

Should issues arise while using the Pico, the following methods tend to fix most issues:

1. Unplug and re-plug the Pico.
2. Restart Visual Studio Code.
3. Delete the .micropico and .vscode files and run the Project Configuration steps again.
4. Make sure you are inside a folder, not just editing a file from an unknown workspace.
5. Make sure you are using the Run button in the bottom left, not the top right.