

Foucault Pendulum Electronics Kit.

D01_What to do First

www.foucaultpendulum.nl

Document version	2025-11-02
Relates to PCB version	All
Related Documents	All

In brief:

Before there is any chance that the system will work with your pendulum a number of actions must be done.

Read all the documentation until you have a good understanding how the system works, if it is suitable for your pendulum, and which skills are required.

Do that before you decide to buy the kit.

Decide which options you are going to use (Magnetic/Capacitive CenterPass detection, RimCoil, etc..)

Check the properties of your pendulum and calculate which initial parameters should be used. (TStartLookForCenter, Drive Position, etc...)

Install the software development environments on your work-PC (Arduino-IDE, Lazarus / Free Pascal). Make workdirectories for the software, make back-up directories to store intermediate versions and test that the software can be compiled without errors. Test that the Firmware can be uploaded to your Arduino MEGA.

Buy the items which are not in the Kit: (Arduino Mega, Ethernet Shield, Power supply, Cabling, Mounting materials, probably tools)

Note: Buy the Arduino parts from an original source, better not from a cheap clone supplier.

Chose an IP-address for the Arduino from an address pool which is not distributed by DHCP. Even when the hardware is not complete, you can upload the firmware with that IP into the Arduino, mount the Ethernet shield on the Arduino and check that the Arduino responds on a PING <IP> from your work PC, and that there is communication between the PC program and the Arduino.

Provide a dedicated PC or (preferably) a laptop on which the GUI can run 24/7 in the vicinity of the pendulum.

Populate the PCB's with the components (regarding the options chosen) and do the initial tests.

Install the equipment to your pendulum. (Top unit, Coil set, etc...), Make cables to the required length. Provide a place to mount the PCB's, Powersupply, etc...