

Foucault Pendulum Electronics Kit.

D13-Errors

www.foucaultpendulum.nl

Document version	2026-05_25
Relates to PCB version	all
Relates to Software version	all
Related Documents	all

In brief:

This document treats the way errors are detected and reported.
And gives some hints to find the root cause.

Introduction.

In nearly every part of the system errors can occur. To mention a few: When the amplitude of the pendulum becomes far to low or to high numeric errors can occur by overflow or divisions by zero. With bad cable connections data may fail in many ways, Network transmission errors may corrupt the messages, and (random) noise is everywhere.

On many places we have captured possible errors to prevent the program to crash, and logged them to help tracing the rootcause.

Errors are reported in the Memo field on the GUI, and in Data- and Event logfiles.

The firmware on the Arduino Mega reports several errors on the USB-Serial port. They can be inspected by connecting a suitable terminal program e.g. the monitor of the Arduino IDE.

Not all thinkable errors are detected and / or handled in a neat way.

The software is not fullproof and certainly not foolproof.

To catch errors during normal operation I advise to run the GUI from within the IDE.

If something goes wrong there will be better error messages and diagnostic tools.