

# ProCoDA Software

## What is ProCoDA?

ProCoDA software allows the user to automate data collection and to control many parts of the experimental apparatus.

Process control software allows AguaClara research teams to focus on experimental design and data analysis. Process control software can control the speed of peristaltic pumps, regulate flow through solenoid valves, and measure water quality parameters such as temperature, pressure, and dissolved oxygen.

Automated data acquisition is a powerful tool. The resulting data can be analyzed with Excel, MathCAD, or other data analysis software.

More detailed information can be found in a paper published by Monroe Weber-Shirk "[An Automated Method for Testing Process Parameters.](#)"

## Where to find ProCoDA?

ProCoDA II is available from the program menu under ProCoDA.

## Troubleshooting in ProCoDA

Your goal is to determine which component of a complex system isn't performing properly. The failure could be in the hardware that ProCoDA is interacting with (pumps, sensors, valves), in the ProCoDA hardware, in the user edited software, or in the ProCoDA II software. Here are a list of common failure modes.

## Integrating cameras and ProCoDA

The 2013 release of ProCoDA software includes image processing capabilities as an available external function that can be used by Process Controller and a new Camera Configure program that is used to [set up a camera and the image analysis](#) for use by Process Controller.

This utility is not available in 2015.

## Tutorials

Before you use ProCoDA for your next experiment, learn the program through various tutorials and exercises. Some of these exercises will be utilized in conjunction with a sample system that meters chemical into a tank and drains. The set-up of the sample experimental apparatus is found in the [Tutorial for Basics of Laboratory Research and Experimental Design.](#)

- [Tutorial 1 - Basics of ProCoDA](#)
- [Tutorial 2 - Edit Rules](#)
- [Tutorial 3 - Organizing Rules and States](#)
- [Final Exercise](#)

## Installing ProCoDA

Install [Process Control and Data Acquisition \(ProCoDA II\) software.](#)

## Components for use with ProCoDA

[Relay Pump Cables](#)

[Ethernet Pump Adapters](#)