



Pro1020

Quick Start Guide

This Quick Start Guide is meant to serve as a quick reference in calibrating and operating the Pro1020. It is not intended to replace the information found in the User Manual.

Getting Started

Unpack the instrument and install (2) C size batteries in the back of the instrument. Tighten the four screws of the battery plate on to the back of the instrument.

Installing the DO Sensor

Prior to use, install the sensors into the cable assembly. Remove the temporary plastic plugs from the cable's ports by pulling them straight out of the port. Remove the plastic plug from the sensor's connector by pulling it straight off the sensor. Install the sensor by inserting the sensor into the port and then hand tightening it. Do not use a tool and do not over tighten. Install a pH, pH-amplified or ORP sensor in port 1 and a DO sensor in port 2. Install a port plug into any port that does not have an installed sensor.

Enable the correct ISE (either pH or ORP) and Dissolved Oxygen (either galvanic - gray sensor body or polarographic - black sensor body) sensor in the instrument's System Setup menu. Attach the cable assembly to your instrument.

Installing the DO Membrane

The DO sensor is shipped with a red protective cap to protect the electrode. A new membrane cap must be installed before the first use.

1. Prepare the O₂ probe solution according to the instructions on the bottle. After mixing, allow the solution to sit for 1 hour. This will help prevent air bubbles from later developing under the membrane.
2. Remove, and discard or save the red protective cap.
3. Thoroughly rinse the sensor tip with distilled or deionized water.
4. Fill a new membrane cap with probe solution. Avoid touching the membrane portion of the cap.
5. Thread the membrane cap onto the sensor, moderately tight. A small amount of electrolyte will overflow.

pH Calibration

The Pro1020 pH sensor can be calibrated by performing a 1, 2 or 3-point calibration. At least one of the calibration points must be done with pH buffer 7 or 6.86. For highest accuracy, perform at least a 2-point calibration.

2 or 3-Point Calibration

1. Place the sensor in pH buffer 7 or 6.86 and allow the temperature and pH readings to stabilize.
2. Press and hold **Cal** for three seconds.
3. Highlight **pH** and press **Enter**. If pH is not listed as an option, check the System Setup menu to ensure pH is enabled in the ISE Sensor Type menu.
4. Highlight **2 point** or **3 point** and press enter.
5. If necessary, use the up and down arrow keys to adjust the pH buffer value.
6. Press **Enter** to continue to second point.
7. Rinse the sensor and place it in the second pH buffer (4/4.01 or 10/9.18). If necessary, use the up and down arrow keys to adjust the pH buffer value.
8. Wait approximately 30 to 60 seconds for the pH sensor to stabilize and for the temperature reading to stabilize.
9. Press **Enter** to either complete the 2-point calibration or to continue with the 3rd calibration point. Or, press **Cal** to cancel.
10. If continuing on with a 3rd calibration point, rinse the sensor and place it in the third pH buffer (4/4.01 or 10/9.18). If necessary, use the up and down arrow keys to adjust the pH buffer value.
11. Wait approximately 30 to 60 seconds for the pH sensor to stabilize and for the temperature reading to stabilize.
12. Press **Enter** to complete the 3-point calibration. Or, press **Cal** to cancel.
13. '**Calibration Successful**' will display for a few seconds to indicate a successful calibration and then the instrument will return to the Run screen.
14. If the calibration is unsuccessful, an error message will display on the screen. Press the **Cal** key to exit the calibration error message and return to the Run screen.

ORP Calibration

1. Place the clean sensor in ORP calibration solution. Wait for the ORP and temperature readings to stabilize.
2. Press and hold **Cal** for three seconds.
3. Highlight **ORP** and press **Enter**. If ORP is not listed as an option, check the System Setup menu to ensure ORP is enabled in the ISE Sensor Type menu.
4. Use the up and down arrow keys to adjust the ORP calibration solution value.

5. Wait for the temperature reading to stabilize, then press **Enter** to complete the calibration or press **Cal** to cancel.
6. '**Calibration Successful**' will display for a few seconds to indicate a successful calibration and then the instrument will return to the Run screen.
7. If the calibration is unsuccessful, an error message will display on the screen. Press the **Cal** key to exit the calibration error message and return to the Run screen. Refer to the troubleshooting section of the manual for a possible solution or contact YSI Technical Support.

Barometer Calibration

The barometer reading must be accurate to ensure accurate DO % calibrations and DO readings. If the instrument's barometer requires an adjustment, determine your local barometric pressure (BP) from a barometer, an independent laboratory or from a local weather service. If the BP reading has been corrected to sea level, use the following equation to determine the true BP in mmHg for your altitude:

True BP = (Corrected BP in mmHg) - {2.5 * (Local Altitude in feet/100)}

1. From the Run screen, use the up or down arrow keys to highlight the barometer box then press **Enter**.
2. Use the up or down arrow keys to adjust the barometer reading to the local, true barometric pressure.
3. Press **Enter** to confirm and save the barometer adjustment.

DO Calibration

The Pro1020 can be calibrated in % saturation, mg/L or ppm. Calibration of any option (% saturation, mg/L, or ppm) will automatically calibrate the others. The Pro1020 can be calibrated with the press of a few keys when Quick DO Cal is enabled in the System Setup menu. The following procedure outlines the % saturation calibration option with and without Quick DO Cal enabled.

1. Moisten the sponge in the cal/transport sleeve with a small amount of water and install it on the probe. **Make sure the DO and temperature sensors are not immersed in the water.**
2. Turn the instrument on. If using a polarographic sensor, wait 10 minutes for the DO sensor to stabilize. Galvanic sensors do not require a warm up time.
3. Ensure the barometer reading along the bottom of the display is accurate.
4. Press and hold the **Cal** key for three seconds.
5. If Quick DO Cal is enabled, highlight **Dissolved Oxygen** and press **Enter**. The instrument will then indicate **Calibrating %DO** on the display and automatically calibrate the sensor to the barometer reading.

6. If Quick DO Cal is not enabled, highlight **%** or **%Local** and press **Enter**. The Pro1020 will display the current DO% and temperature readings along with the % calibration value. Wait at least 3 seconds, then, once the DO% and temperature readings are stable, press **Enter** to complete the calibration.
7. **Calibration Successful** will display for a few seconds to indicate a successful calibration and then the instrument will return to the run screen.
8. If the calibration is unsuccessful, an error message will display on the screen. Press the **Cal** key to exit the error message and return to the run screen.

Taking Measurements

1. Before taking measurements, be sure the instrument has been calibrated to ensure the most accurate readings.
2. Turn the instrument on and wait 5-15 minutes if using a polarographic sensor.
3. Install the sensor guard and then insert the probe into the sample.
4. Ensure the conductivity sensor is completely submerged in the sample. The two holes near the cable should be covered by the sample for accurate conductivity readings.
5. Move the probe in the sample at a rate of at least 6 inches (16 cm) per second if using the yellow membrane and 3 inches (7.62 cm) per second if using the blue membrane.
6. While continuing to provide sample movement, wait for the readings to stabilize.
7. Highlight **Save** and press **Enter** to store the reading. The instrument will confirm that the reading was successfully saved.

Contact Information



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Visit [YSI.com/Pro1020](https://www.ysi.com/Pro1020) to find the User Manual, specs, and accessories.

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