



Y S I Environmental

Model 556

Quick-Start Guide

This Quick-Start Guide is meant to serve as a quick reference in operating the YSI Model 556. It is not intended to replace the information found in the Operations Manual. For your convenience, included in parenthesis for each section, are the section numbers from the full-length manual where additional information may be found.

INSTALLING THE DO MEMBRANE (3.4)

Note: The DO sensor is shipped with a dry shipping membrane 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. Unscrew and remove the probe sensor guard.
3. Unscrew, remove, and discard the old membrane cap.
4. Thoroughly rinse the sensor tip with distilled or deionized water.
5. Fill a new membrane cap with O₂ probe solution. Be very careful not to touch the membrane surface.
6. Thread the membrane cap onto the sensor, moderately tight. A small amount of electrolyte should overflow.
7. Screw the probe sensor guard on moderately tight.

MENU FUNCTIONS (2.9 – 2.11)

The Model 556 is set up with a menu-based interface. To navigate through the menus, use the up and down arrow keys to highlight a desired menu option, then press the **Enter** key to open the menu feature. Press the **Esc** key to return to a previous screen. The 556 will automatically power on to the Run screen. Press the **Esc** key to display the main menu screen.

SETTING THE DATE AND TIME (10.2)

1. Select **System Setup** from the main menu and then select **Date & Time**.
2. Highlight **Date** and press **Enter**.
3. Use the keypad to enter the correct date and press **Enter**.
4. Highlight **Time** and press **Enter**.
5. Use the keypad to enter the correct military time and press **Enter**.
6. Press **Esc** several times to return to the main menu.

SETTING UP SENSORS & REPORTING PARAMETERS (4 - 5)

Although a sensor may be installed on the probe of the 556, it must be enabled in the Sensor menu for it to operate. Once a sensor is enabled, the parameters and units to display for that sensor must then be selected in the Report menu.

1. From the main menu, select **Sensor**.
2. Sensors which are enabled will appear with a black dot. If a sensor is disabled, it will appear with an empty circle. Use the arrow keys to highlight the sensor you want to change. Press the **Enter** key to enable or disable it.
3. When Dissolved Oxygen is selected, a submenu will appear with a selection of membranes. Each membrane type is also identified by the color of the membrane cap. Highlight the desired membrane choice and press **Enter** to activate the selection. Press **Esc** to return to the Sensor menu.
4. Once changes to the Sensor menu have been completed, press **Esc** to return to the main menu.
5. Select the **Report** menu option.
6. Parameters which are enabled will appear with a black dot. If a parameter is disabled, it will appear with an empty circle. Use the arrow keys to highlight the parameter you want to change. Press the **Enter** key to enable or disable it.
7. For some parameters, a new submenu will appear to allow a selection of units for the parameter. Make a selection from the submenu and then press **Esc** to return to the Report menu.
8. Once all changes are complete, press **Esc** to return to the main menu.

BAROMETER CALIBRATION (10.9 – 10.10)

Note: The following information is only for 556 Instruments equipped with the optional internal barometer.

1. Determine your local barometric pressure (BP) in mmHg from a mercury 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:

$$\text{True BP} = (\text{Corrected BP}) - \{2.5 * (\text{Local Altitude}/100)\}$$

2. Select **System Setup** from the main menu and then select **Calibrate Barometer**.
3. Use the keypad to input the known barometric pressure as determined in steps 1 and 2. Press **Enter** to confirm the value.
4. Press **Esc** to return to the main menu.

CONDUCTIVITY, pH, ORP CALIBRATION (6)

1. From the main menu, select **Calibrate**.
2. Place the correct amount of calibration standard into a clean, dry or pre-rinsed calibration cup.
3. Immerse the probe into the solution, making sure the sensor to be calibrated is adequately covered.
4. Allow at least one minute for temperature to stabilize.
5. Select the sensor to be calibrated. For conductivity, a second menu will offer the option of calibrating in **specific conductance**, **conductivity**, or **salinity**. Calibration of any one option automatically calibrates the other two. For pH, a second menu will appear offering the choice of a 1-, 2-, or 3-point calibration.
6. Enter the value of the standard being used. (For pH, always calibrate in the 7 buffer first.) Be certain that the units are correct and press **Enter**. The current values of all enabled sensors will appear.
7. Observe the readings and when they show no significant change for approximately 30 seconds, press **Enter**. The screen will indicate if the calibration has been accepted.
8. Press **Enter** again to return to the Calibrate screen, or, for pH, to continue with the second point of the calibration.

DO CALIBRATION (6)


The Model 556 offers two options for calibration of dissolved oxygen. The first is an air calibration method in % saturation. The second is calibrating in mg/L to a solution with a known DO concentration (usually determined by a Winkler Titration). Calibration of either option (% or mg/L) will automatically calibrate the other. The procedure outlined here is the % saturation calibration, the easier of the two methods to perform.

1. Place approximately 3 mm (1/8 inch) of water in the bottom of the transport/calibration cup. Screw the transport/calibration cup onto the probe, engaging only 1 or 2 threads to ensure venting to the atmosphere.
Note: Make sure the DO and temperature sensors are not immersed in the water.
2. Turn the instrument on to the Run mode and wait 10 minutes for the DO sensor to stabilize.
3. From the main menu, select **Calibrate**, then **Dissolved Oxygen**, then **DO %**.
4. Use the keypad to enter the current local barometric pressure and press **Enter**. The current values of all enabled sensors will appear.
5. Observe the readings and when they show no significant change for approximately 30 seconds, press **Enter**. The screen will indicate if the calibration has been accepted.
6. Press **Enter** again to return to the DO Calibration screen.

TAKING MEASUREMENTS AND STORING DATA (7 - 9)

1. Power the instrument on, or select **Run** from the Main Menu.
2. Insert the probe into the sample to be measured. Continuously stir, or move the probe, through the sample until the readings on the screen stabilize.
3. Use the arrow keys to highlight **Log one sample**, or select **Start logging** to record a series of data. Press **Enter**. The Enter Information screen should appear.
4. Use the keypad to enter a filename for the measurement. If no file name is entered, the instrument will assign a default of NONAME. Press **Enter**.
5. If you would like to enter an optional site description, highlight that field and use the keypad to enter the information. Press **Enter**.
6. Highlight **OK** and press **Enter**. If logging one sample, the instrument will confirm the data point was successfully logged.
7. If a series of points is being logged, the Start logging entry in the run screen will change to Stop logging. At the end of the logging interval, press **Enter** to stop logging.

UPLOADING DATA TO A PC (8.4)

1. Make sure EcoWatch for Windows is installed on the PC.
2. Disconnect the probe assembly from the 556 instrument and use the 655173 PC interface cable to connect the meter to the serial port of the PC.
3. Open EcoWatch for Windows on the PC.
4. Click on the sonde/probe icon in the upper toolbar. 
5. Set the com port number to match the serial port the 556 is connected to and choose OK. A terminal window should appear with a flashing cursor.
6. Power on the 556. From the Main menu select **File**, then **Upload to PC**.
7. From the File List, highlight the file you wish to transfer and press **Enter**. The file transfer should begin with a progress shown on both the 556 and PC.
Note: The file will automatically upload to C:\ECOWIN\DATA.
8. After the file transfer is complete, close the terminal window in EcoWatch.
9. Press **Esc** on the 556 until you have returned to the main menu.

CONTACT INFORMATION

Contact YSI Environmental if you need assistance or have questions regarding any YSI Environmental Product. Business hours are Monday through Friday, 8AM to 5PM ET.

YSI Environmental
1725 Brannum Lane
Yellow Springs, OH 45387
Toll Free: 800-897-4151
Phone: 937-767-7241
Fax: 937-767-1058
E-Mail: environmental@ysi.com
www.ysi.com/environmental

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