

# C110 pH/mV Checker/Simulator

## Product Instructions

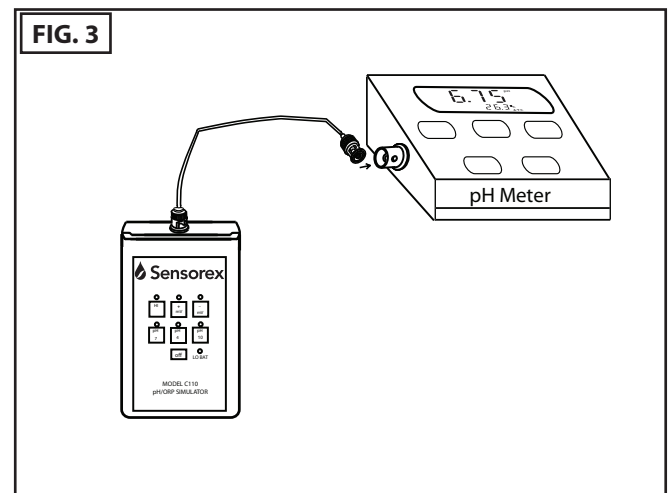
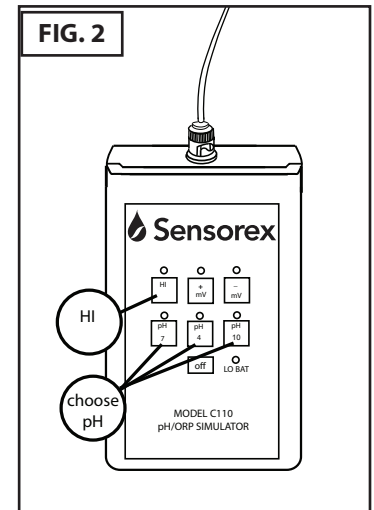
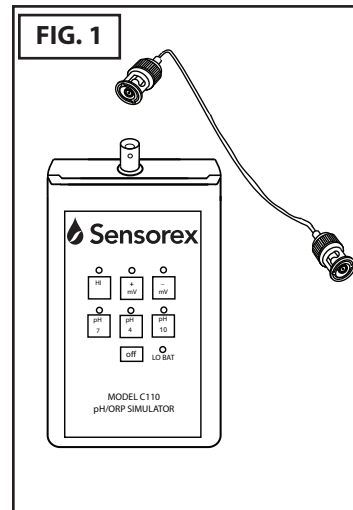
### Introduction

The C110 pH/mV checker simulator is a millivolt source that can be used to calibrate or check the calibration of a pH or ORP (mV) meter. It also serves as a troubleshooting tool when pH or ORP systems fail. For troubleshooting, the electrode is removed and the simulator is connected in its place. The C110 sends a signal to the meter to verify the performance of the meter. Signals of pH4, pH7 and pH10 are available, as well as +/-700mV for ORP. A properly working meter (by process of elimination) indicates that the electrode may be the cause of the failure.

### Calibration Procedure

1. Plug the BNC connector of the black cable or other cable (CX2) into the top of the C110 at the BNR connector. (see FIG 1)
2. Disconnect the pH or ORP electrode from the meter.
3. Connect the C110 to the meter in the same way the electrode was connected. (see FIG 2.)
4. Turn on the C110 by pressing the desired pH or mV button
5. Press the "HIGH  $\Omega$ " button to simulate pH electrode resistance load (the C110 has 1000 M  $\Omega$  load). See FIG 3. Note: ORP does not require "HIGH  $\Omega$ " button to be pressed since ORP electrode have low output impedance.
6. At this time it is best to follow the pH or ORP electrode calibration instructions in the manufacturer's manual.

**The following instructions are given as general guidelines for either microprocessor or manual adjust pH meters.**



### SPECIFICATIONS

pH Calibration Points: pH4.00, 7.00, 10.00

mV Calibration Points: -700mV and +700mV

Accuracy: +/- 0.01pH, +/-1.0mV

Battery: 9V, approximate life = 400hours

Dimensions: 100x75x23mm

Weight: 120 grams (4 oz.)

High Ohm Resistor: 1000 Megohms

## Calibration Procedure (cont.)

7. With the "pH 7" light on, rotate the meter's "CALIBRATE" or "STANDARDIZE" control until the meter's display reads **"7.00"**
8. Press the C110's "pH4" button to select pH4 or "pH10" to select pH 10. The appropriate C110 light should turn on.
9. Rotate the meter's "SLOPE" button so that the meter reads the new value from Step 8.
10. Scan through 7.00, 10.00 and 4.00 by pressing the appropriate button on the face of the C110 to verify that the meter is properly calibrated.
11. Turn off the C110 by pressing the "OFF" button.
12. Disconnect the C110 and reconnect the pH electrode. Calibrate the pH meter with the electrode attached, following the meter manufacturer's instructions.

## Battery Replacement

The C110 pH/ORP simulator is supplied with a 9V battery which comes installed in the unit. When the battery is depleted the **LOW BATTERY** light will be lit (see FIG 4). Replace the battery before using the C110 for any further calibration or troubleshooting. Any type of 9V battery can be used as a replacement.

To replace the battery follow the steps below:

1. Turn over the C110 to expose the backside (see FIG 5).
2. At the bottom of the case (opposite side of the BNR connector) is the battery cover. Remove the cover by pressing the indentation inward and pulling the cover downward (away from the unit). See FIG 5.
3. Remove the old battery by pulling it out of the case then removing the battery from the connectors. See FIG 6.
4. Get a new 9V battery and plug it into the connectors and insert into case as shown in FIG 7.
5. Replace the battery cover as shown in FIG 7.

