C110 pH/ORP SIMULATOR

Parts covered by this product instruction sheet include:
C110

FORM: C110INSTALL [REV:1203]

SECTION 1.0
INTRODUCTION

The C110 calibrator is a MILLIVOLT source that can be used to calibrate or to check calibration of a pH or ORP meter. It also serves as a troubleshooting tool when pH or ORP systems fail. For troubleshooting, the electrode is removed and the simulator used in its place. The signal is sent to the meter to verify performance of the meter. A properly working meter then indicates (by process of elimination) that the electrode may be the cause of the failure.

SECTION 2.0
CALIBRATION PROCEDURE

1. Plug the BNC connector into the top of the Calibrator.(see FIG1)
2. Disconnect the pH or ORP Electrode from the meter.
3. Connect the Calibrator to the meter in the same way the electrode was connected (see FIG 2).
4. Turn ON the calibrator by pressing the desired pH button or mV button (see FIG 3)
5. Press high Ohm button to simulate pH electrode resistance load (C110 has 1000 Megohm load). See FIG 3. Note that ORP does not require high Ohm button to be used since ORP electrodes have low output impedance.
6. At this time it is best to follow the pH or ORP electrode calibration instructions in the manufacturer's instruction manual.

The following Instructions are given as general guidelines for either Microprocessor or Manual Adjust pH Meters.

MICROPROCESSOR TYPE pH METERS

7. Press the Calibrator's "pH 7" button then press the pH Meter's "CALIBRATE" or "STANDARDIZE" button. Some meters have a time delay before accepting a value; usually they flash a "WAIT" message. When the value is accepted go to the next step.
8. Press the Calibrator's "pH 4" button to select "4 pH or "pH 10" button for pH 10. The appropriate calibrator Light should turn on.
9. Press the Meter's "SLOPE" Button and wait until the meter accepts the new value.
10. Place the pH Meter in the "MEASURE" or "READ" mode and press the "pH7", "pH4" and "pH10" buttons to verify that the meter is properly calibrated. Repeat the above procedures if necessary.
11. Turn OFF the calibrator by pressing the "off" button on the calibrator's face.
12. Disconnect the calibrator and re-connect the pH Electrode. Calibrate the pH Meter with pH Electrode as a system following the meter manufacturer's instructions.

FIG. 1

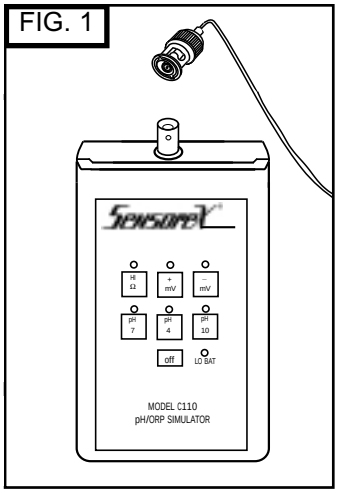


FIG. 3

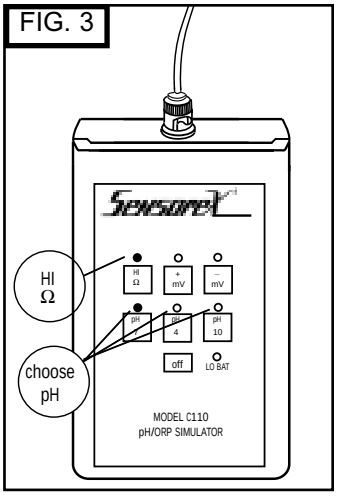
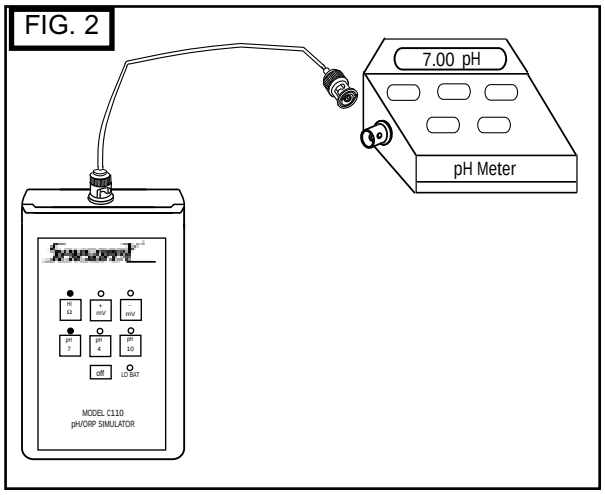


FIG. 2



SPECIFICATIONS

pH Calibration Points:	4.00, 7.00, 10.00
mV range:	-700mV and 700mV
Output voltage:	+ 177.4mV
Calibration Temperature:	25°C
High Ohm Resistor Value :	1000 megohms
Accuracy:	± 0.01 pH ±1mV
Battery:	9V, life:400hours
Dimensions:	100x75x23mm
Weight:	120 grams (4 oz.)

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SECTION 2.0
CALIBRATION PROCEDURE (cont)

MANUAL ADJUST TYPE pH METERS

7. With the “pH 7” light lit, rotate the meter’s “CALIBRATE” or “STANDARDIZE” control until the meter reads ***7.00***
8. Press the Calibrator's "pH 4" button to select "4 pH or "pH 10" button for pH 10. The appropriate calibrator Light should turn on.
9. Rotate the Meter's "SLOPE" Button so that the meter reads the new calibrator value; 4.00 for instance.
10. Scan through 7.00, 10.00 and 4.00 by pressing the appropriate button on the calibrator’s face to verify the meter is properly calibrated. Be sure that the light aboive the button is lit to ensure button is working properly.
11. Turn OFF the calibrator by pressing the "off" button on the calibrator's face.
12. Disconnect the calibrator and re-connect the pH Electrode. Calibrate the pH Meter with pH Electrode as a system following the meter manufacturer's instructions.

NOTE: Not all meters require calibration for ORP. Please consult your meter’s manual for details.

SECTION 3.0
BATTERY REPLACEMENT

The C110 Calibrator is supplied with a 9 volt alkaline battery which comes installed in the unit. When the life of the battery is exhausted the ***LOW BATTERY*** light will be lit and the battery should be replaced before making additional pH Meter calibrations. Any make of 9 volt alkaline battery may be used.

1. Turn over the Calibrator to expose its back side (see FIG 5).
2. At the bottom of the case (opposite side from the connector) is the battery cover. (see FIG 5).
To remove the cover press the indentation inward and pull the cover towards you (see FIG 6).
3. Remove old battery by pulling it out of case and pulling it off of connectors (see FIG 6) .
3. Obtain a new 9V battery and plug the Battery into the exposed connector and place the battery in the Calibrator’s battery compartment.
4. Replace the battery cover by reversing steps from Section 2, step 2 above.

FIG. 4

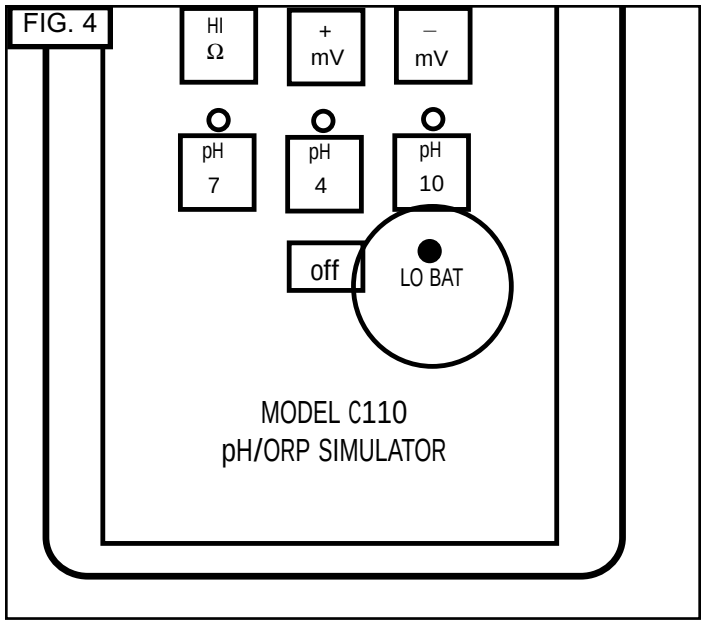


FIG. 5

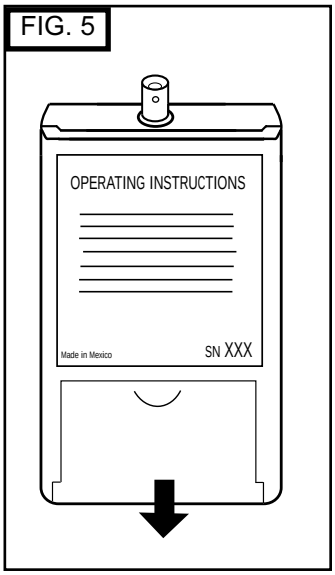
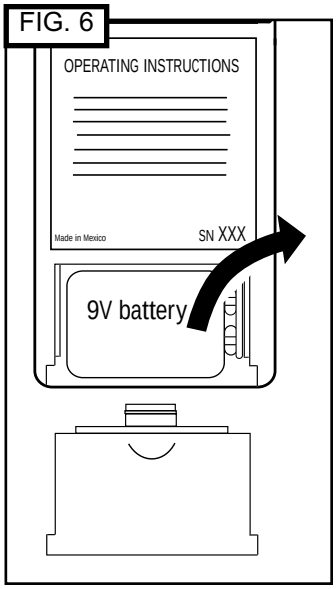


FIG. 6



ORDERING INFORMATION

Model Number	Description
C110	pH/ORP checker/calibrator

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C110