

Calibration

There are few calibration adjustments on the 8000, both external and internal to the instrument. Those available are covered in this section.

C.1 Microphones

A sound level calibrator, such as the Quest QC-10 (with the supplied adapter), is used to generate a signal level at a calibrated intensity.

From the Opening Screen, press [MENU] to enter the setup menu. Then press F6 to enter the microphone calibration screen. Place the M1958E in a sound level calibrator. Position the cursor with the left/right key till the selected level matches the calibrator level. Press the Start key to make the calibration.

There are three possible microphones on the FONIX 8000 analyzer:

- Coupler microphone (M1950E or M1958E)
- Probe microphone
- Reference microphone

All 8000 analyzers include a coupler microphone. The procedure for calibrating this microphone is described in Section C.1.1. 8000 analyzers that do not include the Real-ear Option will only have the coupler microphone.

8000 analyzers with the Real-ear Option have an integrated probe microphone set in addition to the coupler microphone. This consists of a probe microphone integrated into the earhook and a rectangular reference microphone that attaches to the top of the earhook. The procedure for calibrating the integrated probe microphone is described in Section C.1.2. The procedure for calibrating the rectangular reference microphone is described in Section C.1.3.

To perform the microphone calibrations, you will need the following equipment, depending on what type of microphones you are calibrating. The adapters come standard with the analyzer. You can purchase additional adapters and a sound calibrator from the factory. (Sound calibrators are special orders and may not be immediately available for purchase.)

- Sound calibrator such as a QC-10 (all calibrations)
- 14 mm-to-1 inch microphone adapter (coupler and old-style reference microphone calibration)
- Probe microphone adapter (probe microphone calibration)
- Rectangular reference microphone adapter (rectangular reference microphone on integrated probe microphone)



Figure C-1: Calibration equipment

C.1.1 Calibrating the Coupler Microphone

This procedure describes how to calibrate the coupler microphone.

1. From the Opening Screen, press [MENU] to enter the Setup Menu.
2. Press [F6] to enter the Microphone Calibration screen.
3. Put the 14-mm-to-1 inch microphone adapter into the sound level calibrator.
4. Place the coupler microphone in the adapter.
5. Turn on the sound level calibrator.
6. Position the cursor with left/right keys till the selected level matches the calibrator level. Press the [START] key to make the calibration.



Figure C-2: Coupler microphone inserted into sound calibrator.

C.1.2 Calibrating the Probe Microphone

1. From the Opening Screen, press [MENU] to enter the Setup Menu.
2. Press [F6] to enter the Microphone Calibration screen.
3. Use the down arrow key to select "Probe Left or Right", "Probe"
4. Put the 14-mm-to-1 inch microphone adapter into the sound level calibrator.
5. Attach a new probe tube to the probe microphone.

6. Thread the probe microphone through the edged side of the probe microphone adapter so that the probe tube sticks out a coupler of millimeters from the other side of the adapter.
7. Secure the probe tube in place by putting a dab of Fun-Tak (Blue Stik) on the edged end of the adapter.
8. Insert the probe microphone adapter with the attached probe microphone into the calibrator. See Figure C-3.
9. Turn on the calibrator.
10. Position the cursor with left/right keys till the selected level matches the calibrator level. Press the [START] key to make the calibration.



Figure C-3: Integrated probe microphone inserted into sound calibrator.

C.1.3 Calibrating the Rectangular Reference Microphone

This procedure describes how to calibrate the rectangular reference microphone that is part of the integrated probe microphone set.

1. From the Opening Screen, press [MENU] to enter the Setup Menu.
2. Press [F6] to enter the Microphone Calibration screen.
3. Use the down arrow key to select “Probe Left or Right”, “Ref”
4. Insert the rectangular reference microphone adaptor into the sound calibrator.
5. Remove the reference microphone from the integrated ear hook and insert it into the calibration adapter with the opening of the reference microphone pointing into the calibrator. See Figure C-4. You can use a rubber band to hold the microphone onto the calibrator, if necessary.
6. Turn on the sound calibrator.
7. Position the cursor with left/right keys till the selected level matches the calibrator level. Press the [START] key to make the calibration.



Figure C-4: Rectangular reference microphone inserted into sound calibrator.