

Calibration

Your new instrument has been calibrated at the factory. However, from time to time, you will wish to check it with an external source, a sound level calibrator. Frye Electronics offers the QUEST QC-10 calibrator, especially adapted to our equipment, but other models can also be used.

While in the SETUP menu, push F4, CAL MIC(s).

Calibrating the Coupler /Reference Microphone

1. Place the 1" to 14 mm adapter in the QC-10 calibrator.
2. Place the coupler/reference (larger) microphone in the adapter. See Figure B-1
3. Turn on the calibrator, noticing the stated output (114 dB).
4. The measured output can be seen on the display. If it is higher or lower than the desired output, you may adjust the calibration by using a small screwdriver at the REF GAIN control inside the sound chamber (Fig. B-2). You must first remove the sound box on FP40 units with serial no. 941655 and higher, and FP40-Ds with serial no. 944402 and higher.



Figure B-1



Figure B-2

Calibrating the Probe Microphone

1. Place the probe calibration adapter in the 1" to 14 mm adapter as show in Figure B-3
2. Put the probe tube in the adapter, pushing it completely through, as shown in Figure B-4

Proceed as in Fig. B-1, except observe the measured output for the probe microphone and adjust the calibration at the control marked PROBE GAIN.

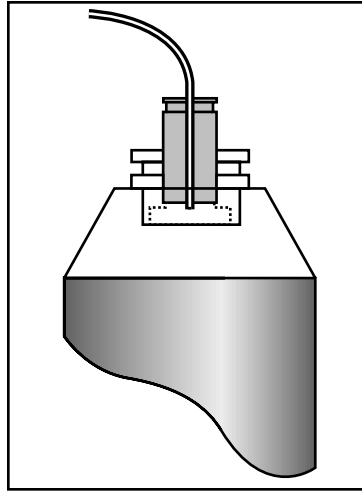


Figure B-3 Figure B-4

Compensating Probe Microphone to Reference Microphone.

Since it is not necessary to compensate the probe microphone often, and an unintentional use of this function could cause measurement problems, the compensation function is hidden under CAL MIC(S). To further insure that it is not enabled accidentally, you must go to SETUP from the coupler measurement mode, not the probe mode.

1. Make sure that REFERENCE MIC is ON under PROBE SETTINGS.
2. Exit PROBE by pushing F5.
3. Place Reference Microphone and Probe Microphone together in the sound chamber at the reference point. For best results, use a calibration clip to hold the probe tube and Reference Microphone together, as shown in Figure B-5.
4. Close the sound chamber lid.
5. Push F1 SETUP MENU.
6. Push F4 CAL MIC(S).

-
7. PUSH F6 COMPEN (compensate) Probe. When the signal stops, the probe has been compensated and the compensation has been saved.
 8. To view the effects of compensation, EXIT MENU, adjust AMPLITUDE to 70 dB and push START.

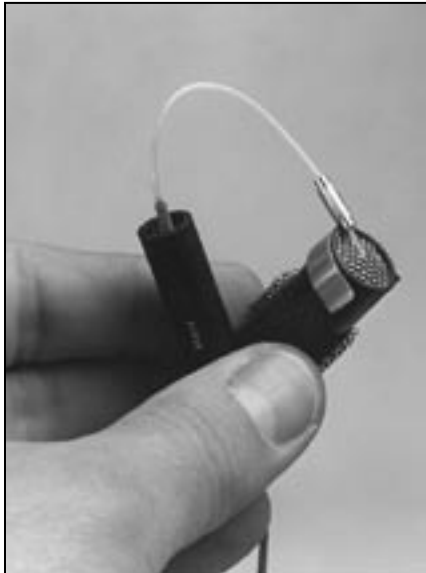


Figure B-5

Note:

You may want to view the uncompensated differences between the two microphones. Follow instructions 1-7 above. Interrupt the compensation process by pushing RESET shortly after you hear the tones. Then follow instruction 8 above to view uncompensated differences.

Note:

If after Step 8 the differences between mics are unacceptable, try the process again, but level the instrument between steps 7 and 8.

The compensation process can adjust for differences of up to 3.5 dB. If the difference between the two microphones is more than 5 dB after calibration, consult factory.

IF YOU PUSH RESET DURING THE COMPENSATION PROCESS TO SEE THE UNCOMPENSATED DIFFERENCES, YOU HAVE REMOVED THE COMPENSATION. IF YOU NOW WANT TO HAVE COMPENSATED MICROPHONES, YOU MUST REDO THE COMPENSATION.