Performing Visible Speech measurements on the FONIX FP35



Performing Visible Speech Measurements with the FP35 v5

With software version 5.01, we added new hardware features to make Visible Speech better than ever. (Older FP35s can be upgraded to the new software but will not have the new hardware features without a major upgrade.)

- New, cleaner display that's easier to read
- Improved probe microphone for easier real-ear measurements
- External input for use with pre-recorded signals

Creating a Target



Figure 1: Audiogram Entry screen

This procedure describes how to create a real-ear target on the FP35 analyzer.

- 1. From the Opening Screen, press [F2] to enter the Audiogram Entry screen. You may need to use the [NEXT] key until the Audiogram Entry screen appears. *See Figure 1*.
- 2. Use the arrow keys to input the patient's threshold values. Use up-down arrow keys change the frequency and the leftright arrow keys change the threshold values.
- 3. (optional) Use [F2] to select UCL and input measured UCL values.
- 4. Press [F3] to generate a target.
- 5. Press [MENU] and [BACK] to enter the Target Menu.
- 6. Adjust the AGE, COMPRESSION, CHANNELS, AID LIMIT-ING, FIT TYPE, and REFERENCE settings.
- 7. Press [MENU] to close the local menu.

8. Press [NEXT] to enter the Real-ear SPL test screen. See Figure 2.



Figure 2: Real-ear SPL screen.

Setting up for Visible Speech

This procedure describes how to set up the FP35 hearing aid analyzer and an external CD player for Visible Speech testing. The CD used for the measurement process should have a calibration tone for most accurate results. If the FP35 does not have v5 hardware with the external input, you can perform this exercise using a second speaker connected to your CD player instead of using the FP35 speaker.

- 1. The FP35 v5 hardware features an external input jack on the back of the analyzer for an external CD player. Plug your CD player into the jack labeled "LINE IN" *See Figure 3.*
- 2. In the Real-ear SPL test screen, use [F2] to select AIDED #1.
- 3. Use [F4] to select COMP SRC.



Figure 3: CD player setup with the FP35 v5.

- 4. Use the down-arrow key repeatedly until the SOURCE is OFF as shown in Figure 2.
- 5. Press [START/STOP] to start the spectrum analysis measurement.
- 6. Play the calibration tone on the external CD player. It should play from the FP35's real-ear speaker.
- 7. Hold the reference microphone in front of the speaker approximately where the patient's head would be during the measurement process and look at the "REF" measurement to the side of the graph. Adjust the volume control on the CD player the value reaches the desired level (normally around 60 dB SPL).
- 8. Press [START/STOP] again the stop the measurement.

Performing the Visible Speech measurement

This section describes how to perform a Visible Speech measurement on the FP35 analyzer. The FP35 uses a "peak-pulsed decay" averaging method in which the averaged curve jumps up when exposed to loud signals and then gradually decays over time.

- 1. Position your patient in front of the speaker at the reference position established in the previous section.
- 2. Insert the probe microphone in the patient's ear for the realear measurement.
- 3. Follow steps 2-5 in the previous section to start the spectrum analysis measurement.
- 4. Play the desired track on your external CD player.
- 5. Compare the measurement to the real-ear target and patient's audiometric data shown on the screen. The diamonds indicate the average curve of the test. *See Figure 4*.



Figure 4: Visible Speech measurement.