

*Compact, Advanced, Elegant,
and Affordable...*

The **FONIX® FP35** Hearing Aid Analyzer



All hearing aids—old, new, conventional, and sophisticated—can and should be tested. The FONIX FP35 hearing aid analyzer will tell the hearing health professional just how well the hearing aid is functioning and will provide objective documentation to demonstrate if the aid is in need of repair or replacement. When the Real-ear Option is ordered, the FP35 analyzer can also verify the hearing aid fitting using the NAL-NL1, DSL i/o, NAL-R, or one of the older fitting formulas.

The FP35 analyzer comes standard with multi-curve coupler measurements and one of the following automated test sequences: ANSI 96/03, IEC, and JIS. Choose the second and/or third test sequence for a modest additional charge.

Real-time Composite Option

Most users find the Composite Option is well worth the additional cost. It provides a real-time test consisting of 79 frequencies presented simultaneously. In addition to the speed of the measurement (updating up to 5 times a second), the composite test shows the presence of any intermodulation distortion and provides a true measurement of AGC aids since it avoids the artificial blooming of the lows that occur with the traditional pure-tone tests.

Testing digital aids

When you order the Composite Option, you also get the Digital Speech signal, a randomly interrupted composite signal. The hearing aid responds to this signal as if it were speech so that you can see how the aid works in quiet. You can choose from among several different speech weightings, including ANSI S3.42 and ICRA⁴. This test is extremely fast, convenient, and understandable.

Testing in the real ear (Probe Option)

Because of the great variations in the ear canals of hearing aid users, doing a real ear measurement is an essential part of the fitting of a hearing aid. Yes, it does take a few extra minutes, but not as much time as a dissatisfied client will take. The FONIX FP35 provides an easy, comfortable way to test in the real ear. The tubes are soft and equalized at the end of the tube for accuracy. Real-ear measurements can be made in GAIN or SPL. The popular DSL and NAL-NL1 fitting formulas are incorporated into the instrument. RECD measurements are especially quick because you can save the coupler part of the measurement in permanent memory, so you do not have to repeat it each time you do an RECD measurement. Remember that when you program a hearing aid, the information that

you see on the computer is only an approximation or a prediction. It does not take into account variations in individual ears or problems in a program or a hearing aid.

Testing with live speech

When you order the Composite Option, you also get the ability to test with live speech. This is especially useful in the Real-ear SPL test screen in which you can compare the live-speech measurement directly to the patient's thresholds, uncomfortable levels, and real-ear target. Use the FP35's built-in "noise reduction" feature to speed up the measurement to show the aid's real-time response to speech, or to slow it down to see how the response averages over time. A speech banana and vertical bars, showing the aid's maximum response inside the speech banana, can also be added to the display.

Suggestions for testing directional hearing aids

Directional hearing aids have again become quite popular. One very easy way to test the directional aids is to use the Composite Option in the real ear. If the client is sitting in a chair that revolves, as most office chairs do,

¹ ANSI—American National Standards Institute

² IEC—International Electrotechnical Commission

³ JIS—Japanese Industrial Standard

⁴ ICRA—International Collegium of Rehabilitative Audiology

just turn him or her around and you will be able to see very easily how the directional function is working. Alternatively, you can purchase the optional swing arm and speaker package and move the speaker around the client.

Standard features on the FP35

- **Computer compatibility**

The RS232 computer compatibility feature comes standard with the FP35 analyzer. This means that the FP35 analyzer works with all current FONIX Windows-based software products such as WinCHAP, the FONIX NOAH 3 Module, and FONIX Press & Go. Most upgrades to the FP35 are also done through a computer; we can even email you the upgrade program.

- **NOAH 3 Compatibility**

The FP35 analyzer is fully compatible with the FONIX NOAH 3 Module. This allows you to save all your coupler multi-curve and real-ear measurements to the NOAH 3 database.

- **Easy customization**

Sometimes the need of one user of the FP35 may be different from those of others who use the instrument. For that reason, the instrument provides three different setups, saving MENU selections that have been chosen from the many choices available. If only one

person uses the instrument, that person can have three different setups for different situations that they encounter.

- **External printer capability**

All current FP35s can be connected to an external printer. Any HP or equivalent printer with HPCL version 3 or above (Hewlett-Packard Computer Language) can be used. The cable that is normally provided with the printer is all that is needed.

- **Digital data display**

Sometimes it is useful to look at the actual numbers when you make a measurement. All FP35s provide this choice.

External Monitor Option

The FP35 analyzer can now have the ability to be connected to an external video monitor, giving you a larger display that is more visible to both you and your patient. The external monitor works simultaneously with the built-in LCD display. Most computer monitors (including flat screens!) are compatible.

Why the FP35 is easy to use

Many people have told us that the operation of the FP35 seems very intuitive. That's because it has buttons to push that help you know where to go next. The HELP, MENU, BACK and NEXT buttons simplify the learning

process and speed up the testing. The balloon menus add to the flexibility and ease of use of the instrument.

Sophistication that leads to accuracy of measurement

The FP35 has an Advanced Menu that offers such features as smoothing, custom scaling of graphs, selected measurement delays (related to specific types of hearing aids)—all the things that help keep the FP35 free of common testing artifacts.

In addition to the Advanced Menu, there is one more hidden menu called Custom Menu. When you are ready for it, you can use it to choose different warble signals, look at harmonic distortion even at 90 dB, or see the response of both the coupler and the "probe" microphone simultaneously. We think that many of you will find these features very helpful when you decide to use them.

More options

In addition to the options described above, the FP35 has a CIC (Completely In the Canal) Option and an OES (Occluded Ear Simulator) Option. A unique screening Audiometer Option is also of interest to some of our users. Please see the FP35 Options sheet for more information about all the options available on the FP35.

The development of the FP35 continues. More functions will be added.

FP35 Specifications

Acoustical Drive Signal Frequencies	Pure Tone 200–8000 Hz 1/12 oct, nearest 100 Hz intervals	Composite 200–8000 Hz in 100 Hz intervals	Optional Accessories	Briefcase, softcase, Quest QC-10 sound level calibrator, Eartone 3S insert earphone package, swing arm speaker stand package, floor model speaker stand, 6040 sound chamber, sound chamber cable
Amplitude (RMS) chamber Options	40-110 dBSPL Composite Probe (real-ear) CIC OES Screening Audiometer	40-110 dBSPL	Power supply Line powers Display	CE grade—optional All international Liquid crystal graphical display, 320 pixels W x 240 pixels H, with backlight
Test Sequences (Select one with instrument. Others can be added as options)	ANSI '96 IEC JIS		Environment Operation Storage and shipping	Normal room conditions 15 to 70 degrees C with humidity non condensing Test area 2.65" W x 5.25" L x 1.1" H in acoustical foam testing area
Standard Accessories	Speaker, 18" speaker cable, roll of paper, IEC power cord, HA-1 coupler, HA-2 coupler, ear level to HA-2 adapter, Fun-Tak, RS232 cable, 14 mm to 1" adapter Coupler mic with 1' cable		Sound Chamber Printer	Internal printer type. Thermal, black print on white, 79 mm wide.
Units with sound chamber only Units with Probe Option	Probe & Coupler mic set with 6' Cable, wedge style earhook, probe and ref. mic, mounting sleeves, 2 speaker posts, set of 25 probe tubes, felt pen-dry erase, probe calibration adapter, probe calibration clip		<i>Additional Specifications on Options/Specifications Sheet</i>	



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