FONIX FP35

Portable Hearing Aid Analyzer

The FONIX FP35 is a beautifully designed portable hearing aid analyzer capable of performing both coupler and optional real-ear measurements.

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.

The FONIX FP35 is simple and easy to use, making it great for busy clinicians who need to be able to quickly check that the hearing aid is working properly. When the Real-ear Option is included, you can also make sure the hearing aid is adjusted appropriately for the patient's hearing loss. The FONIX FP35 also has a great deal of testing capability and flexibility, ensuring that the clinician can configure the analyzer to fit into the needs of the clinic instead of the other way around. You can save most test settings to user default settings. Three such user defaults are available, making it possible to customize the FP35 defaults for different clinicians or different types of hearing aids.

Users who prefer a computer-based interface will love the optional FONIX NOAH Module, WinCHAP, and FONIX Press & Go computer programs. Each of these programs gives the clinician the ability to control the functions of the analyzer from the computer and store test results into a database. See the FONIX Computer Programs brochure for more details.

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Test Digital Hearing Aids with the Composite/Digital Speech Option

The Composite/Digital Speech Option adds the ability to perform real-time measurements using a broadband speech-weighted signal. Both the modulated Digital Speech and steady-state Composite test signals are included, making it possible to accurately test the frequency response of digital hearing aids with noise suppression capabilities.
These measurements update up to five times a second, making the test very quick and easy. You only need to present the test signal for a couple of seconds to get an accurate measurement.

Compare the frequency response of a high end digital aid with the Digital Speech signal to its response with the Composite signal. If the noise suppression technology is working properly, the Digital Speech signal will be amplified more than the Composite noise. This comparison will clearly demonstrate to your client the noise suppression ability provided by the hearing aid.

The Real-ear Option

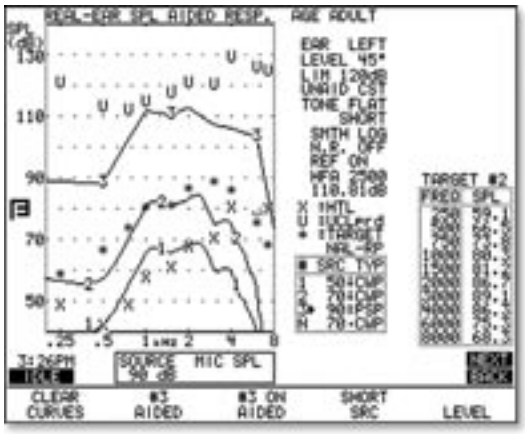
Because of the great variations in the ear canals of hearing aid users, real-ear measurements are the only way to determine the actual frequency response of the hearing aid inside the patient's ear. This makes real ear measurements an invaluable tool for any hearing health care professional.

When the Real-ear Option is included, the FONIX FP35 hearing aid analyzer includes both the traditional Insertion Gain method of performing real-ear measurements, and the newer SPL method.

In the Insertion Gain method, the insertion gain is determined by subtracting the patient's unaided response from the aided response. The average unaided response can be substituted for the measured unaided response,

if desired. The resulting insertion gain is compared to a target. The non-linear NAL-NL1 and DSL i/o targets are available as well as the linear fitting rules: NAL-RP, 1/3 Gain, 1/2 Gain, 2/3 Gain, POGO, and Berger.

In the Real-ear SPL screen, the patient's threshold values, measured or predicted uncomfortable values, real-ear target, and real-ear measurements are displayed together on one graph. This allows the clinician to directly compare the patient's audiometric data to the real-ear measurements and targets and ensure that soft sounds are audible, the hearing aid fitting is appropriate for the loss, and loud sounds are below uncomfortable levels. This is a different perspective than the traditional insertion gain method, and can give the clinician valuable information. All real-ear measurements are automatically converted when switching between insertion gain and SPL screens, allowing the clinician to view test data from different perspectives without requiring duplicate measurements.



Coupler Measurements with a Target

In some cases, it may not be practical or possible to perform normal real-ear measurements on a patient. This is particularly the case when fitting hearing aids on infants or small children. With the FONIX FP35 analyzer, you can perform a simple RECD measurement that will be used to convert real-ear targets into coupler targets. This allows you to fit the hearing aid using sound chamber measurements, a process sometimes known as "simulated real-ear." If it is not possible to measure the RECD, an age-corrected average RECD is automatically substituted.

Testing with Visible Speech

When you order the Composite/Digital Speech 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 "noise reduction" feature to control whether the aid's real-time immediate response to speech is displayed, or to show the average response over time. A speech banana and vertical bars, showing the aid's maximum and minimum response inside the speech banana, can also be displayed.

External Monitor Option

The FP35 analyzer has the ability to connect to an external video monitor 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.

FP35 Specifications

Acoustical Drive Signal	**Pure Tone**	**Composite**
Frequencies	200–8000 Hz	200–8000 Hz
	1/12 oct, nearest 100 Hz intervals	in 100 Hz intervals
Amplitude (RMS)		
Chamber	40-100 dB SPL	
Real-ear	40-90 dB SPL	
Measurement Accuracy	± 2.5 dB, 500-3500 Hz, ±3.5 dB all other freq	
Equivalent Input Noise	Less than 45 dB SPL RMS	
Options	Composite/Digital Speech, Real-ear, CIC, OES. Screening Audiometer, External Monitor	
Test Sequences	(Select one with instrument. Others can be added as options) ANSI 96/03, IEC, JIS, ISI	
Language Options	English, Spanish	
Standard Accessories	HA-1 coupler, HA-2 coupler with adapter, Fun-Tak, RS232 cable, 14 mm to 1" adapter	
Units with sound chamber only	Coupler mic with 1' cable	
Units with Real-ear Option	Probe & coupler mic set with 6' Cable, earhook, extension post, probe tubes, felt pen, probe adapter, calibration clip	

Optional Accessories	Soft carrying case, RECD package, external speaker on swing arm or stand, external sound chamber, Telewand, Telecoil board
Line powers	100-240 VAC, 50/60 Hz
Display	LCD with backlight, VGA (optional)
Physical Description	
Dimensions	40.64 x 28 x 12.5 cm (16 x 11 x 4.9 in)
Weight	5.45 kg (12 lbs) with soft carrying case and accessories
Printer	Internal printer: Thermal, black print on white, 79 mm wide. External printer: Parallel port, HPCL v3 and above
Safety/Quality Standards	IEC 60601-1, ISO 13485: 2003, 93/42/EEC

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