

FP35 Specifications

ACOUSTICAL DRIVE SIGNAL	SINE	COMPOSITE
Frequencies	200 to 8000 Hz 1/12 oct, nearest 100 Hz intervals	200 to 8000 Hz in 100 Hz intervals
Frequency accuracy	1 percent	1 percent
Frequency control	Left-right buttons	not applicable
Amplitude(RMS) Chamber	40 – 110 dB SPL	40 – 110 dB SPL
Amplitude(RMS) Sound Field (5 dB steps)	40 – 90 dB SPL	40 – 90 dB SPL
Amplitude accuracy (at reference point, right after leveling, same source as used for leveling)	2.5 dB: 500 Hz – 3.5 kHz, otherwise 3.5 dB	
Attenuator accuracy (chamber mode, relative to other source settings)	± 1.0 dB: @1.0 KHz, 40 – 100 dB source	
Amplitude control	Up-Down buttons	Up-Down buttons
Amplitude distortion (at 70 dBSPL)	< 0.5 percent, 400 – 2500 Hz	not applicable
Crest factor	not applicable	less than 9 dB
DIGITAL READOUT OF SPL		
Amplitude readout range at most:	-30.0 to 145.0 dB SPL coupler, -30.0 to 140.0 dB SPL probe	
Resolution	0.1 dB SPL	
Type of readout		
Composite, Coupler Mode:	Estimated RMS*	
Composite, Real Ear Mode:	Estimated RMS*	
Pure tone, Coupler Mode		
if src >= 90 dB:	Estimated RMS*	
if source < 90 dB:	Filtered to fundamental frequency	
if source off:	Graph filtered, current status estimated RMS	
if source warbled:	Always filtered to fundamental frequency	

Pure tone, Real-Ear Mode

if source \geq 85dB:	Estimated RMS*
if source $<$ 85dB:	Filtered to fundamental frequency
if source off:	Graph filtered, current status estimated RMS
if source warbled:	Always filtered to fundamental frequency

***Notes:** Estimated RMS combines the energy at all frequencies from 200 – 8000Hz. It can be lower than true RMS if a noisy signal is being measured.

Accuracy, Coupler (specific freq) \pm 2 dB, from 200 to 8000 Hz.

(true RMS) \pm 3 dB, from 200 to 6000 Hz.
 \pm 4 dB, from 6000 to 8000 Hz.

Accuracy, Probe (specific freq) \pm 2 dB, from 200 to 8000 Hz.
 (true RMS not used with probe)

Equivalent Input Noise Less than 50 dB RMS.

Crosstalk (probe to ref mic) 200 – 8000Hz
 At least 80 dB below probe mic signal

Crosstalk (ref mic to probe) 200 – 8000Hz
 At least 80 dB below reference mic signal

Noise reduction:
 Source On

Averages the measured signal in synchronism with the signal generator by the factor chosen. Averaging factors from 2 to 16 available in powers of 2. Random noise will be reduced by an amount equal to the inverse square root of the factor chosen.

Source Off (Spectrum mode) Averages the SPLs at each frequency. This makes the frequency response more accurately reflect the long term average response of a random noise signal.

HARMONIC DISTORTION ANALYSIS

Type 2nd, 3rd, and 2nd + 3rd= total.

Resolution 0.1 percent

Reading Percent with respect to fundamental. Readings made at frequencies from 400 through 2500 Hz.

INPUT POWER

Voltage	90 – 250 VAC
Frequency	47 – 63 Hz
Power dissipation	27 watts typical with full operation. 23 watts when unit is in standby.
Safety earth leakage current	
Standard Unit 110VAC	less than 200uA
Standard Unit 220VAC	less than 400uA
Medical Grade option	less than 100uA

DATA DISPLAY

Types available:	LCD (Always included)
Liquid crystal display	graphical, 320 wide x 240 high pixels
Standard LCD	Blue background, white foreground, or converse
Display	fluorescent edge lighted
Data display module	Fixed at 10 degrees with respect to horizontal

SOUND CHAMBER

Test area	2.65" W x 5.25" L x 1.1" H inches in acoustical foam treated area.
Speaker	2.5" cone, mounted in case. Case can be removed and mounted on a post for real-ear operation.

PRINTERS

Internal printer type	Thermal
Print speed	Screen copy in 52 seconds.
Paper used	Black print on white background. 79 mm wide.
Access	Through top mounted door

EXTERNAL CONTROLS, INDICATORS AND CONNECTORS**Front Panel Mounted**

Function keys	5 function keys on front panel directly below LCD display. Function of individual button is described on LCD screen.
Basic push button controls	Print/Feed, Reset, Operate, Exit, Next, Back, Menu, Help,

Start/Stop,
 ^(ampl), v(ampl), < (freq), > (freq),

LEDs

Steady green indicates unit is operating; flashing green indicates it is in standby or screen-saver mode; red indicates a fault condition; alternating red and green occurs during software upload.

Rear Panel Mounted

Rotary control

LCD contrast

Jacks

RS232 (9 pin "D"), Parallel (25 pin "D"),
 External Keyboard (6 pin mini DIN),
 External speaker (4 pin Modular),
 Earphone (3.5mm stereo phone),
 Power (5 pin DIN),
 optional 15 pin "D" VGA CRT connector.

Mounted in Chamber area

Jacks

Internal Speaker (4 pin Modular),
 Microphone (8 pin DIN)

External Power Supply

Line Power Connector

IEC320 (computer type)

ENVIRONMENT

Altitude:

Operating: 0 to 7500 feet (0 to 2286 meters)
 Shipping & storage: 0 to 50000 feet (0 to 15240 meters)

Humidity:

Operating: 5 to 90 percent relative humidity (non-condensing)
 Shipping & storage: 5 to 90 percent relative humidity (non-condensing)

Temperature:

Operating: 15 to 35 degrees Celsius (59 to 95 degrees Fahrenheit)
 Shipping & storage: 0 to 70 degrees Celsius (32 to 158 degrees Fahrenheit)

PHYSICAL DESCRIPTION

Dimensions

16" x 11" x 4.9" (40.6 x 27.9 x 12.4 cm)

Color

Blue box, white overlay with black and blue buttons and black lettering

Weight

15 pounds (6.8 kg) with hard briefcase and all accessories except manual.