





M O D E L **9350C**

MICROPHONE CALIBRATION WORKSTATION

- Complies with IEC 61094-6 and IEC 60942
- Streamlined, easy and intuitive operation throughout
- Comma Separated Variable (CSV) export of calibration data for integration into an existing database
- Easy and fast retrieval of calibration certificates from a model/ serial or asset number filtered list
- Automatic free-field and random incidence correction curves applied for those types of microphones
- Built-in system verification procedures
- Pass/fail classification of the Microphone Under Test is available by use of frequency dependent limit lines
- Automatic test parameter setup for PCB Piezotronics, Larson Davis, G.R.A.S., Brüel & Kjær, and other microphone manufacturers
- Prints customizable ISO 17025 compliant calibration certificates

PRECISION LABORATORY ACCURACY

The Microphone Calibration Workstation Model 9350C is an automated, accurate, turnkey, PC-based system offering costeffective calibration of ¼ in, ½ in, and 1 in condenser microphone cartridges (open-circuit sensitivity), condenser microphone cartridges with preamplifiers (closed-circuit sensitivity), as well as microphone Frequency Response Function. In addition, the system provides for conformance testing of microphone preamplifiers and acoustic calibrators: this includes pistonphones as well as speakerphone-based calibrators.

Under complete software control, the 9350C operates in these four modes:

- Condenser Microphone Calibration
- Condenser Microphone & Preamplifier Calibration
- Preamplifier Conformance Test
- Sound Source Calibration (pistonphone, speakerphone, etc.)

The Model 9350C provides consistent and reliable calibrations and conformance tests with the highest possible accuracy. System verification procedures assure a stable, consistent operating environment and reduce systematic and random errors to a minimum. With easy, user-friendly operation and proven stepped sine excitation method, the 9350C provides fast, consistent, reliable performance and excels in efficient, highvolume transducer calibrations. The system also allows for easy integration of customized calibration certificates.

SPECIFICATIONS			
Performance			
Microphone Types Calibrated	1/4 in, 1/2 in, and 1 in externally polarized (120 V and 200 V) and pre-polarized condenser microphones		
Microphone Calibration	Open-circuit sensitivity, pressure response, free-field response, and random incidence response		
Microphone Calibration with Preamplifier	Closed-circuit sensitivity, pressure response, free-field response, and random incidence response		
Pistonphone Calibration	Output sound pressure level, frequency and distortion		
Preamplifier Types Calibrated	$\frac{1}{4}$ in and $\frac{1}{2}$ in traditional (28 V and 120 V) and ICP		
Preamplifier Conformance Check	Frequency response and gain		
Calibration Method	Single level/single frequency insert voltage technique (Per IEC 61094-5) and Electrostatic Actuator Response (Freq. Response) (Per IEC 61094-6)		
Frequency Range	20 Hz to 95 kHz [1]		
Measurement Uncertainty (at Microphone Reference Frequency)	± 0.3 dB		
Correction Curves - Supplied	PCB Piezotronics, Larson Davis, G.R.A.S. and Brüel & Kjær microphones Manual data entry capable into text file		
Correction Curves - Other	Yes		
Calibration Data Management	Yes		
Automatic Pass/Fail Classification	Yes		
Accuracy Verification Test	Yes		
Reference Microphone			
Туре	1/2 in Precision Condenser		
Sensitivity	12.5 mV/Pa		
Frequency Range	3.15 - 20,000 Hz		
Dynamic Range	19 - 162 dB (re. 2 x 10-5 Pa)		
Polarization Voltage	200 Volts		
Transfer Sound Source			
Sound Pressure Level	114 dB (re. 2 x 10-5 Pa)		
Frequency	251.2 Hz ± 2 Hz		
Distortion	< 2 %		

THE MODAL SHOP

AN AMPHENOL COMPANY

SPECIFICATIONS (continued) **Physical** System Warm-Up Time 30 minutes Main Voltage Supply 115 V - optional 220 V **Electronic Controller Chassis** Туре 4U 19" Rack Mount Case 48.3 x 17.8 x 10 v 7 v 17 1 :-Dimensions (H X W X D)

Dimensions (H X W X D)	19 X / X 1/.1 III	43.4 cm
Sound Isolation Chamber		
Dimensions (H X W X D)	21 x 17 x 20 in	53.3 x 43.2 x 50.8 cm
Weight	28 lb	12.8 kg

[1] Highest test frequency determined by frequency bounds of Microphone Under Test, with a maximum of 95 kHz



Calibration Certificate

A calibration certificate may be generated and results saved in the software database.

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