

MODEL 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 cost-effective 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:

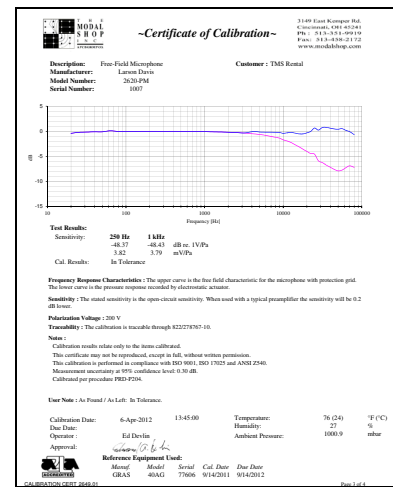
- Condenser Microphone Calibration
- Condenser Microphone & Preamplifier Calibration
- Preamplifier Conformance Test
- Sound Source Calibration (pistonphone, speakerphone, etc.)

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, high-volume transducer calibrations. The system also allows for easy integration of customized calibration certificates.

SPECIFICATIONS	
Performance	
Microphone Types Calibrated	¼ in, ½ 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	¼ in and ½ 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	
Type	½ 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 %

SPECIFICATIONS (continued)		
Physical		
System Warm-Up Time	30 minutes	
Main Voltage Supply	115 V - optional 220 V	
Electronic Controller Chassis		
Type	4U 19" Rack Mount Case	
Dimensions (H X W X D)	19 x 7 x 17.1 in	48.3 x 17.8 x 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.