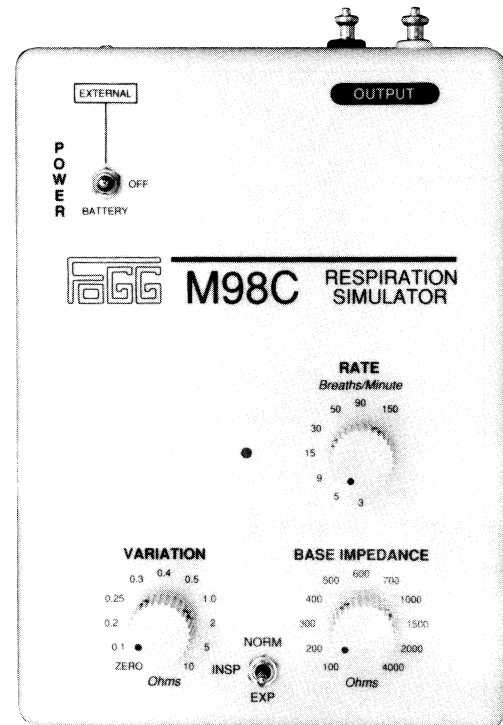


- Calibrated control of 8 respiration rates, 11 impedance variations and 11 basal impedances.
- Impedance variation is almost independent of excitation frequency from dc to 100 kHz.
- Simulate apnea in either inspiration or expiration.
- Manually generate any desired respiration rate.
- Impedance output connects directly to monitor or can be used with an ECG Simulator.
- Battery power or external power source.
- Certificate of Conformance traceable to NIST is available.



Verify Performance & Calibrate Respiration /Apnea Monitors

The M98C Respiration Simulator is used to quantitatively test monitors that detect changes in thoracic impedance. It dynamically simulates 11 impedance variations over a wide range of basal impedances and respiration rates. Apnea can be simulated either in expiration or inspiration independent of the respiratory rate setting.

Since the Respiration Simulator is a floating, purely resistive source, simple dc measurement instruments can be used to verify the accuracy of simulated impedance changes as well as basal impedances.

When testing monitors that detect both ECG and respiration, the M98C can be connected in series with either the Fogg M310 or M311 ECG Simulator. Their low output resistance has a minimal effect on simulated basal impedance and they feature selection of four ECG shapes and a wide range of heart rates and amplitudes.

Technical Information

- Base Impedance:** 11 steps from 100 to 4000 Ω , $\pm 1\%$ of setting at dc.
- Impedance Variation:** 11 steps from 0.1 to 10 Ω including ZERO, $\pm 5\%$ of setting, $\pm 0.02 \Omega$ at dc.
- Respiration Rate:** 8 steps from 3 to 150 BrPM, $\pm 1\%$ of setting, ± 0.5 BrPM.
- NORM / INSP / EXP Switch:** In the NORM position, rate is controlled by the RATE switch. In the INSP or EXP position, the two phases of respiration are controlled manually. Apnea is produced by leaving the switch in either position. Moving the switch between INSP and EXP produces manually controlled rates.
- Output Connectors:** Two banana jacks with snap stud adapters.
- Impedance Waveform:** Square Wave.
- Power:** Internal standard 9V battery or external power source with an output of 6 to 12 V at 50 mA.
- Size:** 5.25"W x 7.25"H x 2.5"D, including knobs.
- Weight:** 1.25 pounds net (0.6 kg); 2.25 pounds shipping (1.0 kg).

ORDERING INFORMATION

A test system consists of the M98C Respiration Simulator and a Cable that connects it to the respiration monitor. The simulator is supplied with snap stud output adapters, a battery and a User's Manual with Schematics and Parts List. A Certificate of Conformance traceable to NIST is available.