

Doppler String Phantom

Accurately simulates 16 physiological and test waveforms

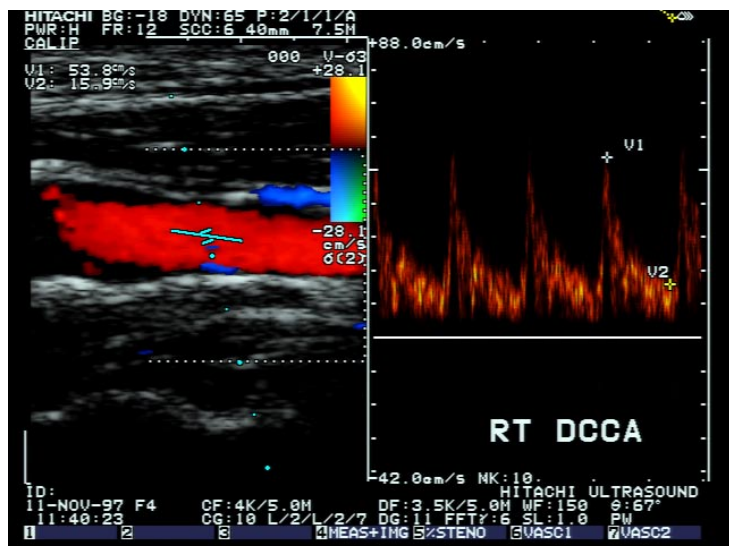
The CIRS Model 043 Doppler String Phantom is an essential tool for people who work with Doppler Ultrasound. The crystal controlled motor accurately generates sixteen pre-programmed waveforms using advanced string target technology. Since the speed is adjusted 1000 times every second, you know it's precise and repeatable.

The Model 043 can be set for use with water or velocity-corrected fluid. If you're using water, it adjusts the string speed accordingly so the different speed of sound in water won't affect your tests. And unlike fluid-flow phantoms, the target never changes; you know what your test results should be every time.

All CIRS Ultrasound phantoms, including the Model 043, are sold with a user's manual, and a rugged carrying case. Additional options include a custom programming of special waveforms.



Model 043



Typical Doppler image of carotid blood flow in human.

*Tissue Simulation &
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Model 043 Specifications

Digital Display:	Waveform readout, string speed, help statements and instructions, and computer host information.
Flow Simulation Speeds:	10 to 200 centimeters per second, bi-directional.
Speed Drift:	Crystal-locked to 20 parts per million (0.002%).
Accuracy:	+/- 1% of stated speed.
Pulsatile Waveforms:	16 pre-programmed and optional customer specified.
Waveforms Included:	Adult common carotid, stenotic carotid, femoral, aortic. Fetal middle cerebral artery, renal artery, umbilical artery. Pediatric descending thoracic artery, patent ductus arteriosus. Test waveforms: Sine waves with peak speeds of 100, 150, and 200 cm/second. Triangle waves with peak speeds of 100, 150, and 200 cm/second. Stepped ramp wave with stops at 0, 20, 40, 60, 80, and 100 cm/sec.
Waveform Resolution:	Each waveform simulation contains 1000 points of resolution, or speed adjustments, enabling extremely complex simulation.
Computer Interface:	Industry standard RS-232 interface built-in for future enhancements and remote control. Very useful for automated quality control in a manufacturing environment.
Fluids Used in Tank:	Plain tap water (velocity 1480 meters per second at 20 degrees C) or velocity corrected water/glycol solution giving 1540 meters per second at 20 degrees C. Phantom adjusts itself for either fluid.
Physical Specifications:	120 Volts AC, 50 Watts. Total weight in travel case: 22 lbs. (10Kg). Travel case dimensions: 17" x 17" x 10" (25 x 19.5 x 14 cm).
Tank dimensions:	10" x 12" x 9" deep (25 cm x 30 cm x 23 cm).