

# Doppler String Phantom

Accurately Simulate  
Physiological and Test  
Waveforms

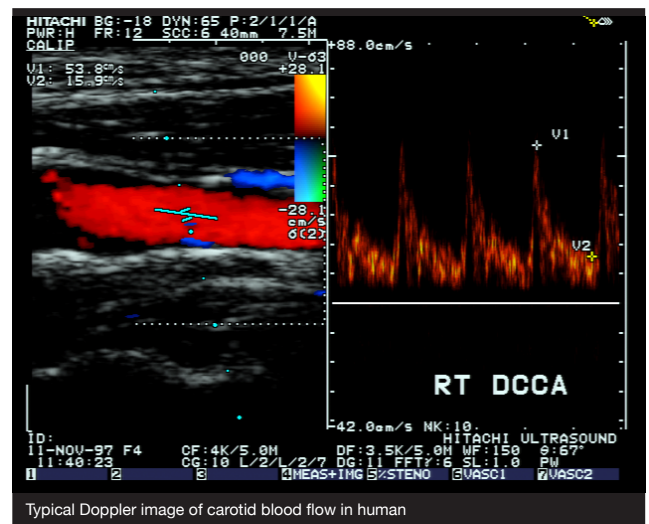


## Precise and Repeatable

The CIRS Model 043A Doppler String Phantom is an essential tool for Doppler Ultrasound. Its crystal controlled motor accurately generates 16 pre-programmed waveforms using advanced string target technology. Since speed is adjusted 1,000 times per second, you can be confident in its precision and repeatability.

Our Model 043A can be set for use with water or velocity-corrected fluid. When using water, it adjusts the string speed accordingly so varying speeds of sound in water won't affect your tests. Unlike fluid-flow phantoms, the target never changes; you know what your test results should be every time.

The Model 043A includes a user's manual and a rugged carrying case. Additional options include custom programming of special waveforms.



## Specifications

<b>Dimensions</b>	Tank - 35.6 x 25.4 x 22.9 cm (14" x 10" x 9") Box - 22.9 cm x 20.3 cm x 10.2 cm (9" x 8" x 4")
<b>Weight</b>	17 lbs (7.7 kg)
<b>Digital Display</b>	Waveform readout, string speed, help statements and instructions, and computer host information.
<b>Flow Simulation Speeds</b>	10 to 400 centimeters per second, bidirectional.
<b>Speed Drift</b>	Crystal-locked to 20 parts per million (0.002%).
<b>Accuracy</b>	± 1% of stated speed.
<b>Pulsatile Waveforms</b>	16 pre-programmed and optional customer specified.
<b>Included Waveforms</b>	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.
<b>Waveform Resolution</b>	Each waveform simulation contains 1000 points of resolution, or speed adjustments, enabling extremely complex simulation.
<b>Computer Interface</b>	Industry standard USB interface built-in for future enhancements and remote control. Very useful for automated quality control in a manufacturing environment.
<b>Fluids Used in Tank</b>	Plain tap water (velocity 1480 m/second at 20° C) or velocity corrected water/ glycol solution giving 1540 m/second at 20° C. Phantom adjusts itself for either fluid.
<b>Physical Specifications</b>	95-260 V AC, 50/60 Hz Total weight in travel case: 10 kg (22 lb) Travel case dimensions: 25 cm x 19.5 cm x 14 cm (17" x 17" 10")

## Items Included with CIRS Model 043A

Quantity	Description
1	Doppler String Phantom
1	Carry case
1	User guide

## Optional Accessories

Part No.	Description
043-C	Step Down Transformer (220V)
043SL	Replacement performed string loop (pack of 20)