

# Gray Scale Ultrasound Phantom

Model 047



**ZERDINE® Inside**  
A registered trademark of CIRS

## ***EVALUATE RESOLVING POWER AS A FUNCTION OF DEPTH, SIZE, AND CONTRAST***

The CIRS Gray Scale Ultrasound Phantom is a single, simple tool to assess resolution of masses varying in size, depth and contrast. The phantom's unique design allows for rapid visualization of gray scale resolution power at continuous depths from 1 to 12 cm.

Due to the controlled scatter characteristics of the targets, the Model 047 may be used to evaluate gray scale sensitivity on all diagnostic ultrasound machines with a wide range of transducer frequencies. This phantom is an ideal training tool for learning optimum system setup and evaluating system performance.

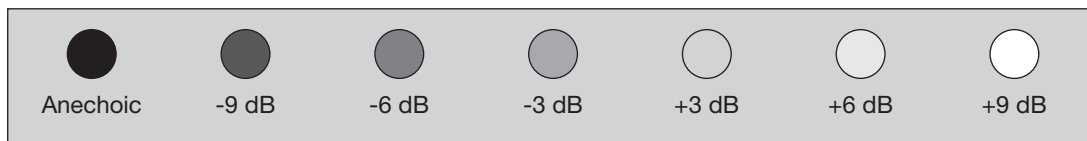
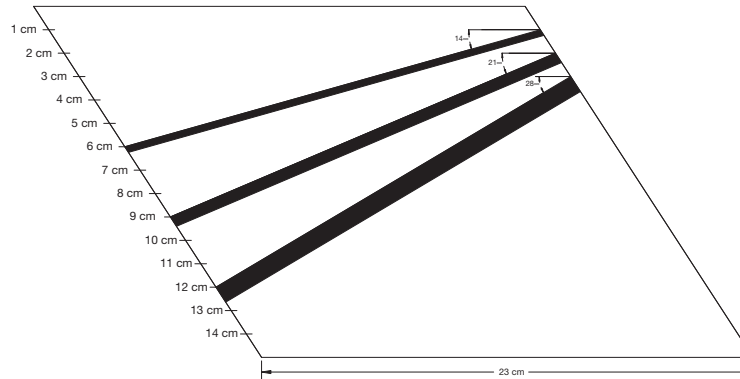
Masses may be viewed with either a circular or elliptical cross-section. The mass diameters were selected so the volume imaged would double as the diameter increased. The gray-scale levels were selected to achieve a doubling in signal intensity as you move from mass to mass. The anechoic masses comply with the ACR accreditation program.

The phantom is constructed of Zerdine<sup>(1)</sup>, a patented, tissue-mimicking material and is housed in a rugged ABS plastic for increased durability. The Gray Scale Ultrasound Phantom includes foam-lined carry case, certificate of compliance, user guide and 48-month warranty.

### ***Features***

- 21 Testing objects of varying diameters and contrast
- Constructed of tissue-mimicking material
- Depth of test object varies continuously as phantom is scanned laterally
- Scatter controlled independently from attenuation
- Carry case, certificate of compliance, user guide and 48-month warranty included

<sup>(1)</sup> US Patent # 5196343



Test objects have same speed and attenuation as background

## SPECIFICATIONS

### CONTAINER

Dimensions: 35 x 13 x 17 cm  
Material: Black ABS  
Weight: 23 lbs.

### BACKGROUND MATERIAL

Zerdine, solid-elastic, water-based polymer  
Freezing Point: 0°C  
Melting Point: Above 100°C  
Speed of Sound: 1540 m/s  
Attenuation: 0.50 dB/cm-MHz

### SCANNING SURFACE

Depth of Scanning well: 1 cm  
Material: Saran Based

### TARGETS

Attenuation Coefficient: 0.50 dB/cm=MHz  
Speed of Sound: 1540 m/s  
Diameters: 2.4, 4, and 6.4 mm  
Contrast: Anechoic, -9, -6, -3, +3, +6 and +9 dB (with respect to background)

### DEPTH RANGE

3 mm: 1-6 cm  
4 mm: 2-9 cm  
6 mm: 3-12 cm

### MODEL 047 INCLUDES

Gray Scale Ultrasound Phantom  
Custom Carry Case  
Certificate of Compliance  
User Guide  
48-Month Warranty

