



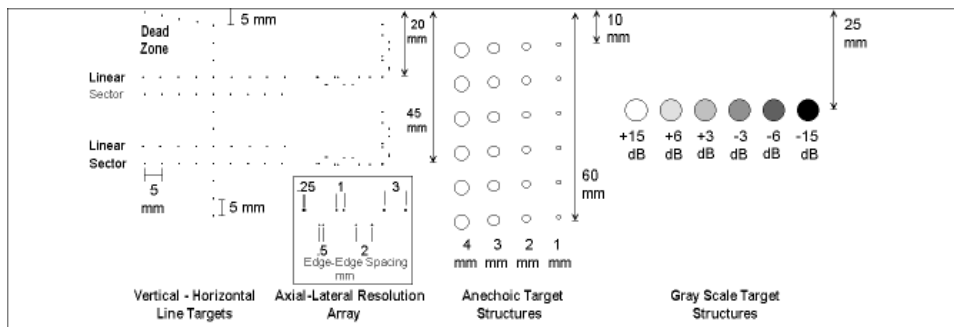
Model 551 Small Parts Phantom

- Vertical Measurement Calibration
- Horizontal Measurement Calibration
- Axial Resolution
- Lateral Resolution
- Sensitivity
- Focal Zone
- Functional Resolution
- Image Uniformity
- Gray Scale
- Dead Zone



Product Description

Model 551 provides a comprehensive means of evaluating the performance of a diagnostic ultrasound system at frequencies ranging from 7.5 to 15 MHz. It is designed with a combination of monofilament line targets and tissue mimicking cylindrical targets of varying sizes and contrasts. The monofilament line targets have a diameter of 0.05 mm, to optimize the displayed image at frequencies of 7.5 MHz or greater. Four groups of line targets are provided to evaluate the vertical and horizontal calibration measurements, dead zone and axial-lateral resolution. The Model 551 is constructed of our rubber-base tissue mimicking material to provide a phantom which is accurate, durable and maintenance free. **Lifetime warranty.**



Specifications

General

Overall Dimensions	28.0 x 11 x 11cm *
Weight	3.1 Kg*
Housing Material	Acrylic
Wall Thickness	1.0 cm*
Scan Surfaces	1
Scan Surface Dimensions	25 x 8 cm

Tissue Mimicking Material

Type	Urethane rubber
Freezing Point	< -40°C
Melting Point	> 100°C
Attenuation Coefficient	0.5 dB/cm/MHz ± 5.0%**
Speed of Sound	1450 m/s ±1.0% at 23°

Line Targets

Material	Monofilament Nylon
Diameter	0.05mm ± 5%
Position Tolerance	± 0.1 mm
Vertical	
Number of Targets	10
Interval Spacing	.5 cm
Depth	.5 to 5.0 cm
Horizontal	
Number of Targets	9
Number of Groups	2
Interval Spacing	.5 cm
Depths	
Linear Array	2.0 & 4.0 cm
Sector Array	2.5 & 4.5 cm

Dead Zone	
Lateral Displacement	5.0 mm
Interval Spacing	1.0 mm
Depth	1.0 - 4.0 mm
Axial-Lateral Resolution	
Number of Groups	2
Targets sets per depth	10
Depths	3.0 & 5.5 cm
Spacing (edge to edge)	0.25, 0.5, 1, 2, 3 mm

Anechoic Target Structures

Type	Non-echogenic, cylindrical
Positional Tolerance	± 0.1 mm
Diameter Tolerance	± 5%
Number of Groups	4
Targets in each group	6
Diameters	1.0, 2.0, 3.0, 4.0 mm
Interval Spacing (center to center)	1.0 cm
Depth	1.0 – 6.0 cm

Gray Scale Target Structures

Type	Echogenic, Cylindrical
Number of Targets	6
Diameters	6.0 mm
Interval Spacing (center to center)	1.0 cm
Depth	2.5 cm
Contrast relative to background material (dB)	+15,+6, +3,-3,-6, -15

*Nominal dimensions

**Other attenuations are available upon request

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