

# 405GSX Phantom

## Troubleshooting Phantom

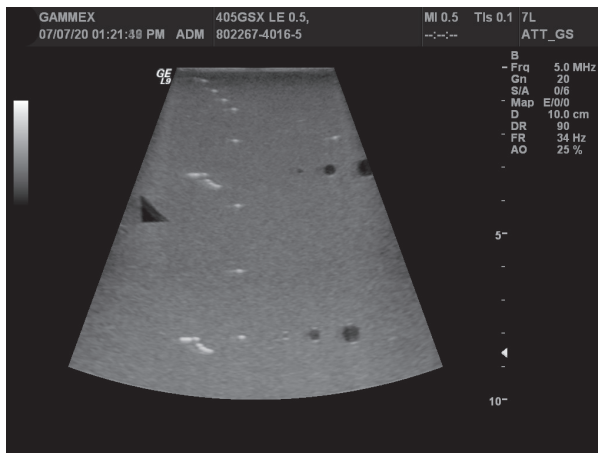
- Supports Biomedics who need to troubleshoot ultrasound systems
- Triangular grey scale targets in the phantom can be used to test resolution of high performance ultrasound scanners
- Two horizontal cross fibers in the middle of the phantom can be used for aligning the transducer and as reference markers to ensure consistent setup over time



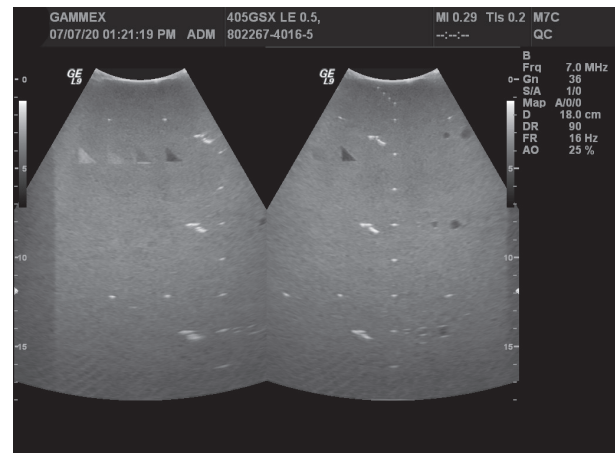
The 405 GSX Phantom features tissue mimicking gel that is ultrasonically similar to human tissue, allowing the use of normal scanner control settings and ensuring that the performance measured closely approximates scanner performance in a clinical examination. An advanced composite film scanning surface improves transmission properties, allowing more of the ultrasound beam to be received and transmitted.

Performance measures include:

- Axial Resolution
- Lateral Resolution
- Dead zone target imaging
- Vertical and horizontal distance accuracy
- Image uniformity



Resolution target groups at 3, 8, and 14 cm deep to test axial resolution



Triangular targets to test resolution

## 405GSX Precision Resolution Phantom

- Intended for routine and periodic verification of high resolution ultrasound patient diagnostic imaging performance
- HE Gel is very uniform and has a nonlinearity parameter (B/A) that is equivalent to human liver.
- HE Gel can be rejuvenated and your phantom re-validated any time to strengthen your investment.

## Specifications

Attenuation Coefficient <sup>1</sup>	0.5 or 0.7 dB/cm/MHz
Variation of Attenuation with Frequency <sup>2,3</sup>	f <sup>1.08</sup> at 0.5 dB/cm/MHz f <sup>1.1</sup> at 0.7 dB/cm/MHz
HE Gel Freezing Point	< 0°C
HE Gel Melting Point	>100°C
Frequency Range	2 - 18 MHz
Speed of Sound	1540 m/s
Scanning Surface	Composite Film
Pin Target Material	Nylon monofilament
Case Material	Extruded ABS Plastic
Weight	2.8 kg (6 lbs. 5 oz)
Dimensions	23.2 x 8.25 x 18.5 cm (9.25 x 3.25 x 7.25 in)

## Target Specifications

### Cystic Targets

Diameters	2, 4, and 6 mm
Placement	3, 8, and 14 cm deep

### Grey Scale Targets

Dimensions	9.5 x 9.5 x 13.4 mm
Placement	4 cm deep
SOS	1540 ±10 m/s
SOS <sup>TD</sup>	1.5 m/s/°C
Contrast	-6dB, +6dB, high scatter relative to background

### Pin Targets

Diameter	0.1 mm
Vertical Spacing	2 cm at 2 to 16 cm deep
Horizontal Spacing	3 cm at 2 and 12 cm deep

### Resolution Target Groups

Depth	3, 8, and 14 cm deep
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## Accessories

- Precision Transducer Holder
  - Securely holds a transducer in a precise location for reproducible tests over time.
  - Fits most Sun Nuclear B-Mode & Doppler Flow phantoms
- Padded travel case with shoulder strap



## Target Schematic

