



Horizontal Measurement Calibration

Description and Reason For Testing

Horizontal distance measurements are obtained perpendicular to the axis of the sound beam. Proper diagnosis depends on the accurate representation of the size and volume of a structure being examined. Most imaging systems use distance markers and/or electronic calipers to obtain these measurements. The phantom is scanned and a distance measurement obtained. The resulting measurement is then compared to the known distance in the phantom. The accuracy of the horizontal distance measurements depends on the integrity of the transducer scanning assembly, the output intensity and the resolution of the imaging system.

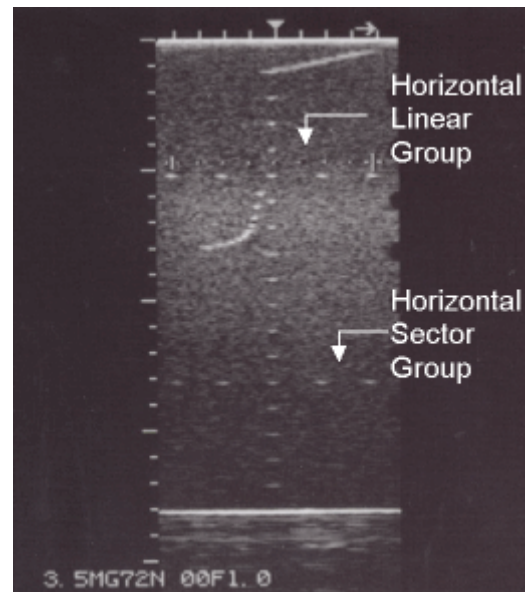
Testing Procedure

Note: The Model 539 Multipurpose phantom provides two scanning surfaces used to evaluate horizontal measurement calibration. Linear array scanning systems should use #1 scanning surfaces. Sector scanning systems should use #3 scanning surfaces.

1. Position the transducer over the horizontal group of line targets until a clear image is obtained. Freeze the image.
2. Using the electronic calipers or the timing markers measure the greatest distance that can be clearly imaged between line targets displayed.
3. Note: Some sector scanners have distance markers on the outside edges of the sector

image with no other indicators available. Hand-held calipers must be used for distance measurements within the image on the monitor.

4. Document all of the measurements on the quality assurance record.



Results

The system's horizontal distance measurements should remain consistent from week to week when using the same instrument settings and Model 539 phantom. Compare the test results obtained from the baseline records. If the current image demonstrates changes in the system's ability to resolve these targets, corrective action should be considered.