

6b: Concepts for Diagnosis - Gray Scale / Yale Fisher, MD

Transcript

The second concept I want to address is gray scale. It gets me into more difficult waters because you will see rapidly that gray scale, which is intensity, is very similar to A-scan, which is amplitude discerned by a vertical line from a baseline.

The two relate to each other because, basically, it is similar information but with different displays. One is the brightness of a dot and one is the ability to measure the height of an amplitude. Obviously, A-scan is more simple to see how strong a reflection is but gray scale is extremely useful by turning down the gain and seeing what disappears at lower intensities of power.

All of these machines have a gain button and the gain level is usually kept at ninety decibels for the initial examination and then as abnormalities are found, they can be graded as to their intensity by reducing the gain while still looking at the same material.

So you could also do a simultaneous A-scan and if you are perfectly perpendicular with a vector line, you would then be able to establish what is the A-scan height as well as the gray scan image at the same time.

I use both gray scale and A-scan simultaneously, so that I know where my A-scan is coming from, whether or not I am truly perpendicular.

I said before this is a controversial area and I am not going to try to tell anybody else how to do their A-scans, but I can tell you for me, simultaneous A-scan is the method that I choose to look at both gray scale and simultaneous A for intensity of signal echoes.