

INFLUENCE OF SIGNAL PROCESSING ON THE QUALITY OF VIDEO PRESENTATION
IN ULTRASOUND DIAGNOSTICS

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The princip to receive information which ultrasonic responses involved is the visualisation of the image. Thereby the magnitude of the echo is equivalent to the brightness of the picture.

Modern conventional systems make it possible to vary the relation between brightness and magnitude of the echo. Other informations, which are involved in the ultrasonic echos, are not used for representation.

One possibility to get additional informations from the echos is the consideration of the spectral distribution. The mean frequency of the echographic response is dependent to the distance of both plane piston and concave spherical transducer. Simple calibration curves are presented for different transducers.

By consideration of the frequency dependent attenuation in relation to the mean frequency of the transducer it is possible to develop a time varying filtering system. The use of this system improves the lateral resolution of the ultrasonic transducers in near field