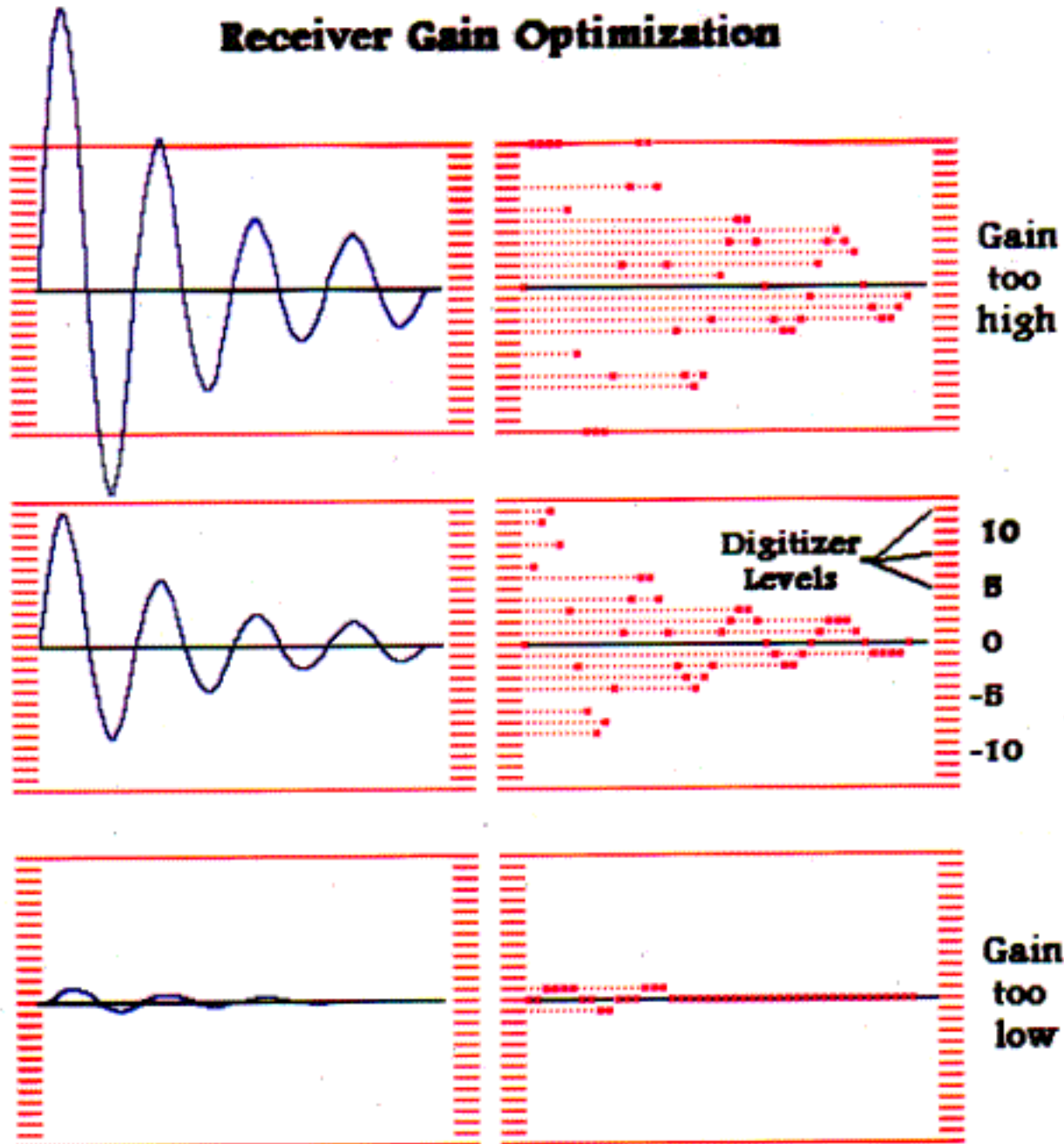


# Receiver Gain Optimization



**Analog**

**Digital**

The Analog-to Digital Converter (ADC or "digitizer") can be viewed as a ladder of possible integer values. If the gain is set too high, the first portion of the FID is "clipped" at the maximum integer value, leading to large baseline rolls in the spectrum. If the gain is set too low, the shape of the signal is lost and a "blocky" representation results, reducing signal-to-noise ratio and dynamic range.