FAQ

# If the MHC instruments work at 100 kHz and reject low frequencies how can they produce an audible output?

This is because its audible output is produced by a process of amplitude demodulation in a similar way to how an AM radio works (it detects at radio frequencies, strips out the radio frequency carrier and outputs the envelope of the signal which is at audio frequency).

With AE signals from machinery it's an interesting fact that the clicks, crunches and rubs associated with damage produce bursts of detectable AE activity which, when it's demodulated in this way, sounds just like clicks, crunches and rubs as if you were listening to it directly at audio frequencies.

The difference is that the high frequency detection of the AE method is insensitive to everyday low frequency sounds. Maintenance personnel tell us that this results in a much clearer signal from the AE headphones than listening with a screwdriver or stethoscope.