

*simultaneous Rx and Tx noise cancellation,  
acoustic coupling canceller, speech enhancement,  
voice equalization, noise dose measure, alert and control.  
All available on a tiny PCB module incorporating low power DSP.*

### Noise & Echo Reduction:

Single & dual-mic transmit noise reduction  
Receive channel noise reduction  
Acoustic coupling canceller

### Speech & Voice Solutions:

Receive & transmit speech enhancement  
Noise-dependent volume control  
Voice activity detector  
Side tone generator

### Voice Tags:

Confirmation voice tags  
Notification voice tags

### Noise Dose Measurement:

Exposure monitoring & alert  
Exposure monitoring & control  
Exposure monitoring & logging

### Acoustic Shock Attenuator:

Acoustic shock compressor  
High-pitch shock detector / attenuator  
Impulsive shock detector / attenuator  
Multi-tone detector / attenuator

### Spectrum Enhancements:

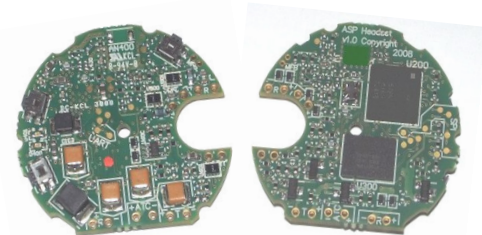
Receive voice equalization profiles  
Transmit voice profile enhancement

## Features:

- ❖ Best-in-class **adaptive technologies** for voice enhancement in Rx & Tx comms channels
- ❖ Exceptional **speech clarity** in the presence of noise
- ❖ Upto **25dB** noise attenuation with dual-mic (upto **17dB** with single mic)
- ❖ Real-time **noise dose** meter for hearing exposure measurement through the headset
- ❖ **Hearing protection** against different types of loud acoustic incidents
- ❖ Technology meets international **standards**, regulations & recommendations
- ❖ Comprehensive suite of technologies aimed at **high quality** products
- ❖ Available on low-power DSP with integrated **high quality** audio codecs
- ❖ Solution tailored for **military & aviation** applications
- ❖ Provision for independent **left & right** comms channels
- ❖ Feature-rich solution running on **ultra-low power** DSP
- ❖ Solution available for integration in **small form-factors**, including headset ear-cup
- ❖ DSP software **upgradeable** with **code security**

## Benefits:

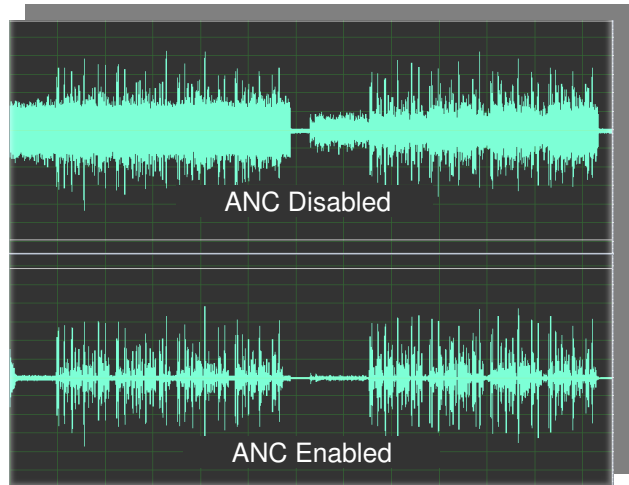
- ❖ Increased **intelligibility**
- ❖ Reduced listening **fatigue**
- ❖ Enhanced voice quality
- ❖ Improved confidence in critical communication
- ❖ Hearing protection against high **noise dose & acoustic incidents**



## Examples of technology:

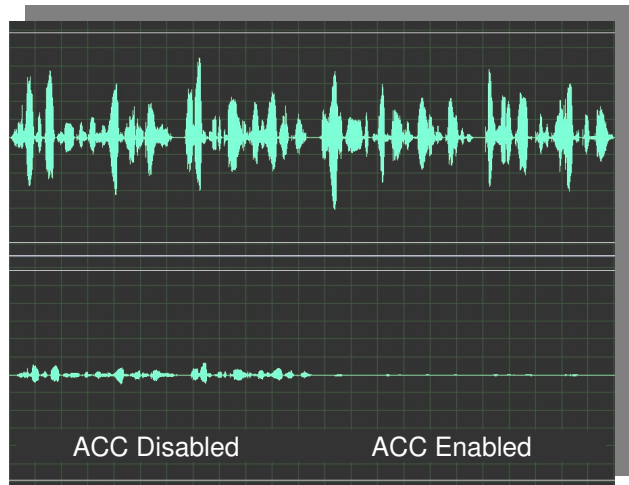
### Adaptive Noise Canceller:

- ❖ Upto 25dB noise attenuation with 2-mics
- ❖ Robust noise estimator & noise tracker
- ❖ Fast convergence to all noise types
- ❖ Minimum adverse affect on voice quality, even with negative SNRs
- ❖ No robotic or musical speech effects
- ❖ Consistent performance regardless of the position or direction of noise source



### Acoustic Coupling Canceller:

- ❖ Cancels acoustic coupling (echo) from speaker to microphone
- ❖ ERLE of ~25 dB with re-convergence time of <1 sec with changes in echo path
- ❖ Robust stability and performance with no divergence during double talk
- ❖ Handles multiple echos within the processing frame
- ❖ No choppiness in transmitted speech



### Noise-Dependent Volume Control:

- ❖ Adjusts the received signal volume based on the severity of ambient noise
- ❖ Accurate ambient noise estimation
- ❖ No false triggering on near-end speech
- ❖ Smooth convergence to different levels
- ❖ Intelligent & consistent tracking
- ❖ Optimum voice quality
- ❖ Avoids startle effects – no sudden changes

