

# Harmony<sup>®</sup> HiResolution<sup>®</sup> Bionic Ear System

## Technical Specifications



## HiResolution<sup>®</sup> Sound Processing HiRes<sup>®</sup>-P

Capture	
Microphone Frequency Range	150 Hz–8000 Hz
Effective Audio Sampling Rate	17.4 kHz
Mapping Input Dynamic Range	20 dB–80 dB programmable (60 dB default)
Pre-Emphasis Filtering	<b>Platinum Series™ Processor, HiRes<sup>®</sup> Auria<sup>®</sup> BTE:</b> cascade of highpass Butterworth filters <b>Platinum BTE, CII Bionic Ear BTE, Auria<sup>®</sup> Harmony<sup>®</sup> BTE:</b> second order BiQuad filter
Automatic Gain Control (AGC) (Enabled, default)	Cambridge dual loop AGC (AGC II)
Automatic Gain Control (AGC) (disabled)	Functions as linear peak clipping for signal above the maximum specified system limit
Sensitivity	+/-10 dB (0 dB default)

Compose	
Filter Bands	16 maximum
Spectrum Filtering	Sixth order Butterworth bandpass
Acoustic Equalization (Gain)	+/-10 dB (0 dB default)

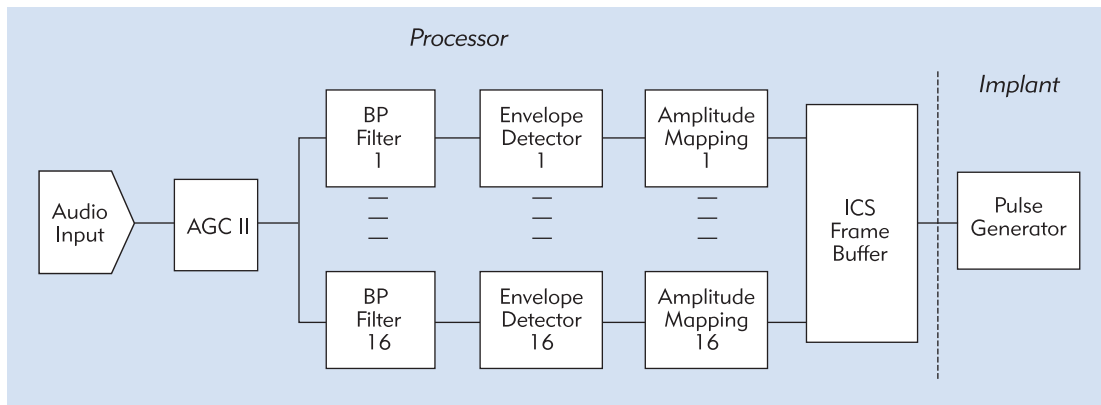
Detail	
Envelope Extraction	Bin averaging
Rectification	Half wave

Deliver	
Telemetry	1.0 Mbps bandwidth Continuous bi-directional
Output Circuits (Channels)	16 independent current sources to 16 channels
Electrodes	16 maximum programmable
Spectral Bands	16 maximum programmable, logarithmically spaced bands
Spectrum Mapping	Full capture range
Output Current	0 $\mu$ A–2040 $\mu$ A (0.25 $\mu$ A resolution), 0-6000 CU scale
Coupling	Monopolar
Pulse Width	10.7 $\mu$ s–229 $\mu$ s, automatically or manually programmable
Firing Order	Apex to base
Simultaneity	Paired simultaneous (1-9, 2-10, etc)
Rate	5156 pps per channel/82,496 pps total maximum—programmable

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### HiResolution® Sound Processing HiRes®-P



HiRes Signal Processing Path



[www.AdvancedBionics.com](http://www.AdvancedBionics.com)

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