

Description

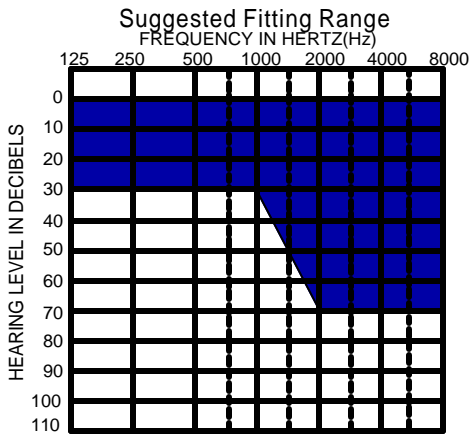
STANDARD FEATURES

- Program thru faceplate
- Push button
- Helix mic
- 1 year loss or damage
- 2 year warranty

OPTIONS

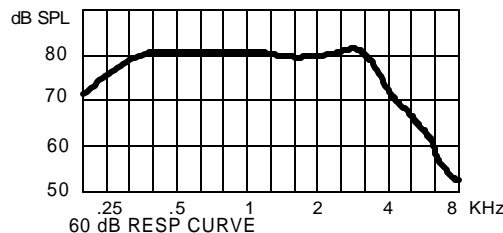
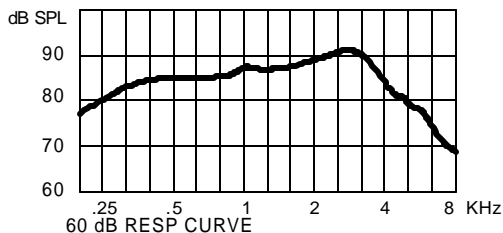
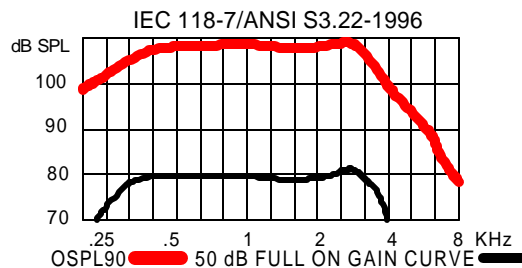
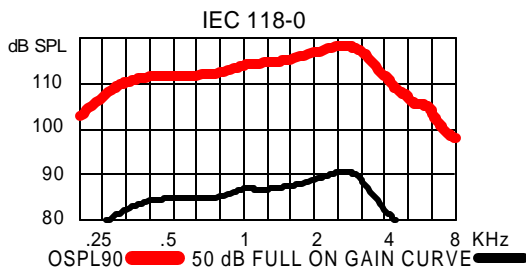
- Clear, Tan or Brown shell
- Foto coat

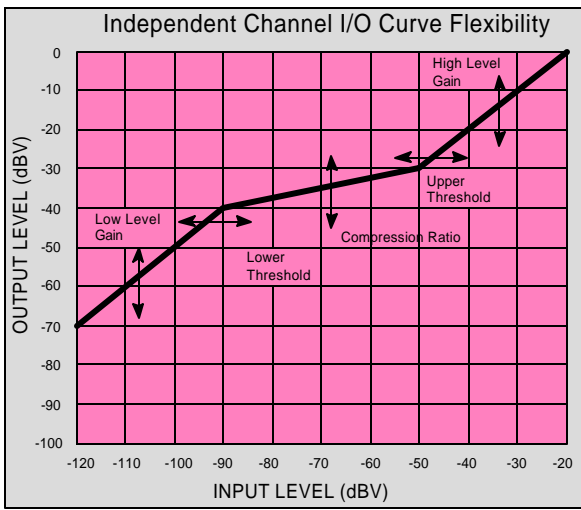
- The ONLY Custom approach to open fittings.
- Takes advantage of the concha for a more natural listening experience.
- Improved secure fit.
- Receiver is mounted in the canal.
- The unique shell design helps in reducing the occluded sensation.
- Reduced wind noise with the helix microphone.
- The ARC is a high fidelity digital hearing instrument. This product uses the latest advancements in phase cancellation feedback technology, which monitors for feedback over 4000 times per second, eliminates forward gain reduction, and allows for an extra 14dB of insertion gain. This allows the ARC with its unique shell design to be fit on patients with precipitous high frequency hearing losses.
- Eight(8) bands of gain adjustment for precise target matching.
- Four(4) selectable noise reduction algorithms.
- Three(3) adjustable crossover frequencies.
- Adjustable expansion (threshold and ratio) in each channel for quieter performance.
- Highly configurable digital signal processor provides excellent versatility, with independent channel compression characteristics including four(4) parameter I/O adjustment.
- Full dynamic range, low noise and 16kHz bandwidth offers true, high fidelity audio processing without compromise. **8KHz bandwidth through programming gives improved battery life.(see back of sheet for comparison)**
- Multi Memory Tone Indicator with acoustic fade between memories for improved comfort.
- Programmable with HiPro or the Microconnect card and the Audina ezFit software(NOAH or stand alone).



Performance Data:

| | | | Coupler 2cc IEC 118-7/94 | Coupler MZ(711) IEC 118-0/94 | Coupler 2cc ANSI S3.22-1996 | Limits |
|-----------------------------------|-------------------------|--------|-----------------------------|---------------------------------|--------------------------------|--------|
| SATURATION (OSPL 90) | Peak | dB SPL | 108 | 118 | 108 | +/- 3 |
| | F Reference | dB SPL | 108 | 116 | 107 | +/- 3 |
| | HF Average | dB SPL | | | 107 | +/- 3 |
| Full-on Gain (Input: 50dB SPL) | Peak | dB | 32 | 42 | 32 | +/- 4 |
| | F Reference | dB | 28 | 37 | 28 | +/- 4 |
| | HF Average | dB | | | 28 | +/- 4 |
| Nominal Reference Test Gain (RTG) | | dB | 18 | 27 | 30 | |
| Frequency Range | | Hz | 200-6300 | | | |
| Volume Control Range | | dB | Programmable | | | |
| Total Harmonic Distortion at RTG: | | | | | | |
| 70 dB SPL in | 500 Hz | % | 1 | 1 | 1 | <4 |
| | 800 Hz | % | | | | <4 |
| 65 dB SPL in | 1600 Hz | % | | | | <4 |
| Equivalent Input Noise Level | | dB | 28 | 28 | 28 | <31 |
| | | dB | | | | <31 |
| Supply Current | input dB SPL | | 60 | | 65 | |
| at RTG | mA | | 1.05 | 1.05 | 1.05 | <1.25 |
| Battery Life | Type 10 Zinc-Air(60mAh) | hrs | 55 | 55 | 55 | |
| | Type 5A Zinc-Air(30mAh) | hrs | 25 | 25 | 25 | |
| AGC @ 2KHz | Attack | mS | 10 | 10 | 10 | +/-50% |
| | Release | mS | 700 | 700 | 700 | +/-50% |
| Reference Test Frequency(RTF) | | Hz | 1600 | 1600 | 1000 | |





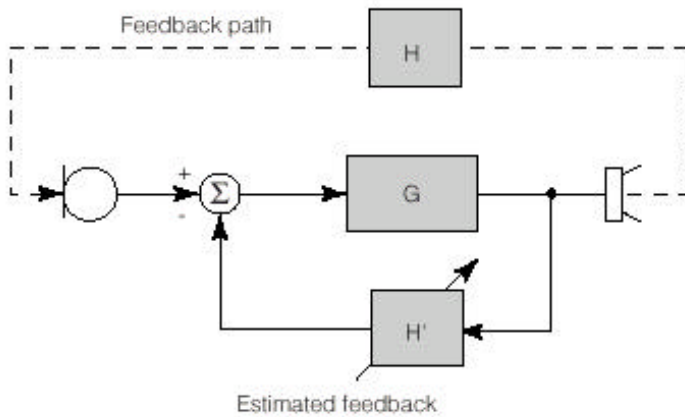
CHANNEL PROCESSING

This figure represents the I/O characteristics of independent AGC channel processing. The I/O curve can be divided into three(3) main regions:

- *Low input level linear region
- *Compression region
- *High input level linear region (return to linear)

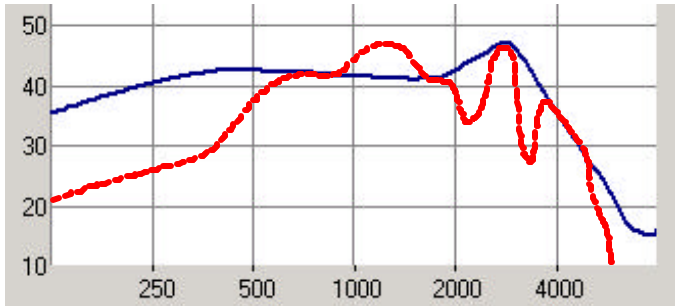
The I/O characteristics can be adjusted in three(3) ways:

- *Low level gain
- *Lower threshold
- *Compression Ratio



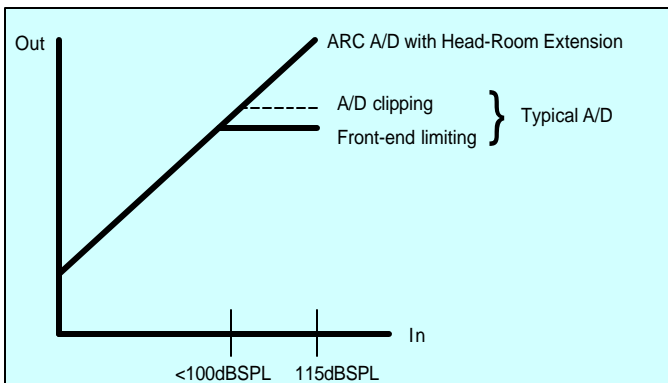
Intuitive Feedback Reduction

The intuitive feedback reduction(IFB) reduces the acoustic feedback by forming an estimate from the feedback signal and then subtracting this estimate from the hearing aid input. Therefore the forward path of the hearing is not affected. Unlike adaptive notch filter approaches, ARC's IFB does not reduce the hearing aid's gain. The IFB is based on a time-domain model of the feedback path.



Eight-Band Gain Adjustment

- For precise target matching
- Low Frequency Shaping
- High Frequency Shaping
- Resonance Smoothing
- Feedback Notches
- Peak Shifting



HIGH FIDELITY DIGITAL SYSTEM

Dual A/D converters are combined with the Head-Room Extension Algorithm to yield a 16kHz bandwidth and a 95dB of full dynamic range hearing instrument.



16KHz and 8KHz Bandwidth Battery Life Comparison

| Bandwidth | 16KHz | 8KHz |
|---------------------|----------|----------|
| Battery Current | 1.05mA | 0.85mA |
| Battery Life 10A/5A | 55/25 | 70/35 |
| Wear 15Hrs a day | 3.5/1.25 | 4.5/2.25 |
| Wear 12Hrs a day | 4.5/2.5 | 6.0/3.0 |