

# FSS

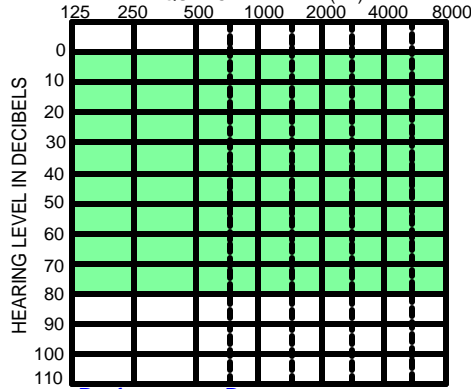
# ACCURIO

# Audina

HEARING INSTRUMENTS, INC.

Suggested Fitting Range

FREQUENCY IN HERTZ(Hz)



## STANDARD FEATURES

- On/off volume control
- Four(4) pin socket
- Windscreen
- Variable vent system

- Windscreen
- 1 year loss or damage
- 2 year warranty

## OPTIONS

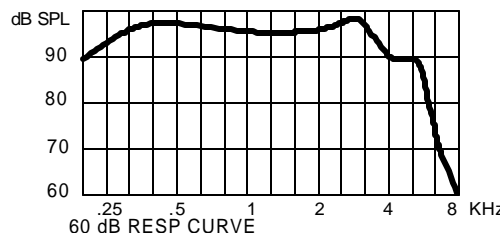
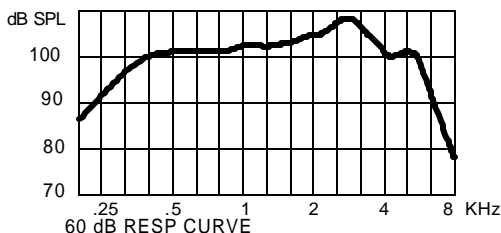
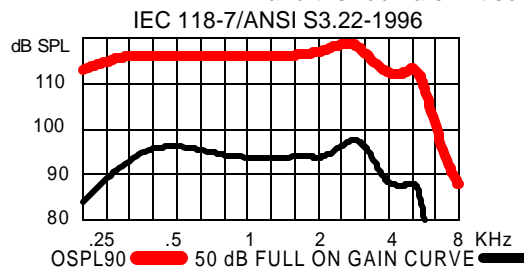
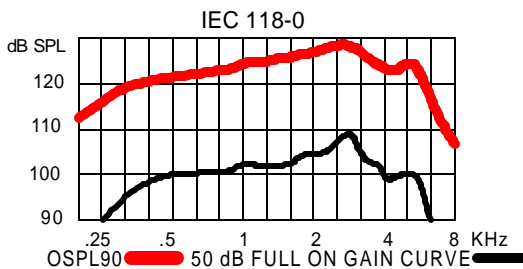
- Programmable volume control
- Multi-memory(2-4)
- Programmable telephone coil
- Program thru faceplate
- **FRONTWAVE**  
2 microphone directional system
- Trimmer volume control
- On/off switch
- Foto-coat
- Flip Top wax trap
- Windscoop/windhood

## Description

- The FSS ACCURIO is cutting-edge technology featuring the latest in 20 bit digital audio processing. Intuitive Feedback Cancellation and 128 band Adaptive Noise Reduction algorithms.
- Intuitive Feedback Reduction monitors for feedback 4000 times per second automatically reducing feedback without reducing gain. This allows for an extra 14dB of insertion gain. Spectral Information is maintained.
- Eight(8) bands of gain adjustment for precise target matching.
- Three(3) selectable speech enhancement filters.
- Four(4) selectable noise reduction algorithms.
- Three(3) adjustable crossover frequencies.
- Adjustable expansion (threshold and compression) in each channel for quieter performance.
- Three(3) selectable time constants for each channel.
- 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 thru programming gives improved battery life.(see back of sheet for comparison)**
- AGC-o compression limiting.
- Effective dynamic range of 95dB.
- Low Battery Indicator.
- 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).

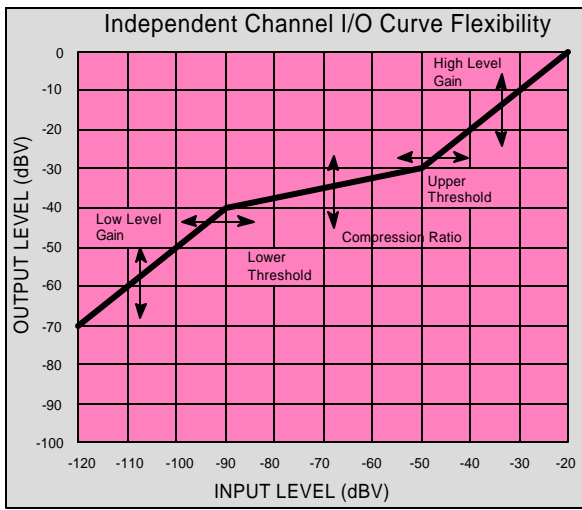
## Performance Data:

			Coupler 2cc IEC 118-7/94	Coupler MZ(7/11) IEC 118-0/94	Coupler 2cc ANSI S3.22-1996	Limits
SATURATION (OSPL 90)	Peak	dB SPL	118	128	118	+/- 3
	F Reference	dB SPL	116	126	116	+/- 3
	HF Average	dB SPL			116	+/- 3
Full-on Gain (Input: 50dB SPL)	Peak	dB	48	58	48	+/- 4
	F Reference	dB	44	53	44	+/- 4
	HF Average	dB			45	+/- 4
Nominal Reference Test Gain (RTG)		dB	33	43	39	
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	%				
65 dB SPL in	1600 Hz	%				
Equivalent Input Noise Level		dB	28	28	28	<31
		dB				<31
Maximum Telecoil Sensitivity						
FOG; Input 10mA/m @ RTF		dB	101	105	104	
RTG; Input 31.6mA/m @ RTF		dB				
FOG; Input 31.6mA/m @ RTF		dB				
SPLITS @ RTF						
		dB			96	
HF Average		dB			98	
STS		dB			1.0	
Supply Current						
		input dB SPL	60		65	
at RTG		mA	1.20	1.20		<1.45
Battery Life						
	Type 13 Zinc-Air(220mAh)	hrs	180	180	180	
	Type 312 Zinc-Air(110mAh)	hrs	90	90	90	
AGC @ 2KHz						
	Attack	mS	10	10	10	+/-50%
	Release	mS	700	700	700	+/-50%
Reference Test Frequency(RTF)						
		Hz	1600	1600	1000	



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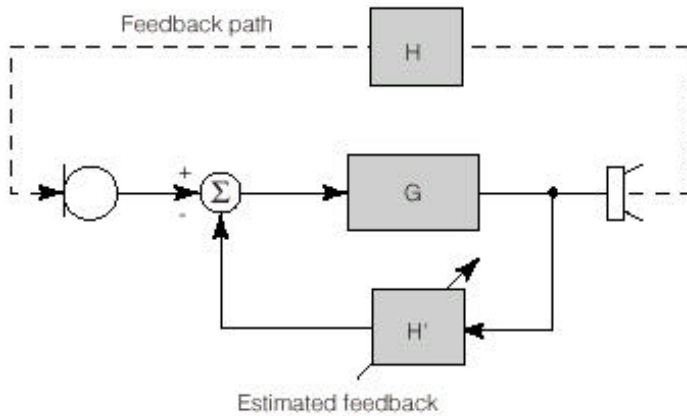
DWG# SPIEFSSACCURIO  
Rev. 3 04/11/06



**CHANNEL PROCESSING**

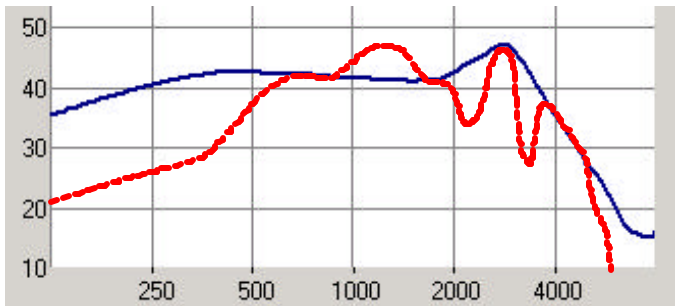
This figure represents the I/O characteristics of independent AGC channel processing. The I/O curve can be divided into three(3) main regions:  
 \*Low input level linear region  
 \*Compression region  
 \*High input level linear region (return to linear)

The I/O characteristics can be adjusted in three(3) ways:  
 \*Low level gain  
 \*Lower threshold  
 \*Compression Ratio

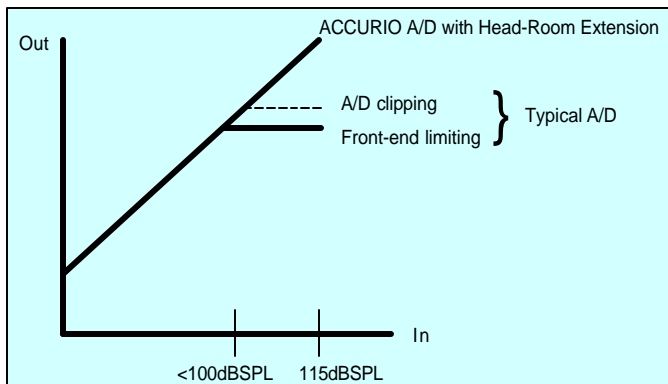


**Intuitive Feedback Reduction**

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, Accurio'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	1.20mA	1.00mA
Battery Life 13/312A	180/90 Hrs	220/110 Hrs
Wear 15Hrs a day	12/6	14.5/7.25
Wear 12Hrs a day	15/7.5	18/9