



## AUDIO CONTROL

### DESCRIPTION

- 16 band noise reduction
- 14 band frequency shaping
- 12 level occlusion manager
- 4 channel linear to WDRC compression
- 4 level noise reduction
- Multi-level voice enhancer
- Multi-pattern microphone directionality
- Multi-level peak smoothing manager
- Adaptive feedback canceller
- Choice of ITE, ITC or CIC style
- Color choice for faceplate and shell
- With or without external Volume control

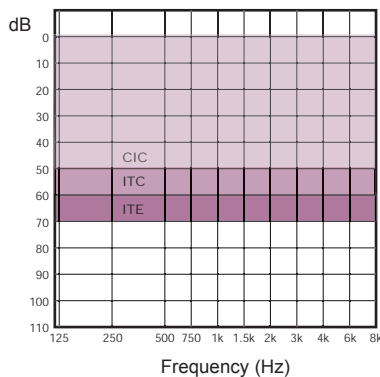
### Additional cost options

- FrontWave™ dual microphone (ITE, ITC)
- Programmable telecoil
- On / Off switch



**MAESTRO**  
DIGITAL

### FITTING RANGE



Maestro, an entirely digital hearing aid, combines Canadian expertise with unequaled virtuosity in technology. Its 16 band noise reduction, 14 band frequency shaping and 4 channels with fully adjustable compression parameters are the keys of our technology. Feedback and occlusion management, peak smoothing and voice enhancer are available in multi level to give you an unequaled precision. All styles ( ITE, ITC and CIC ) includes warning signals for low battery as well as a program change indicator. FrontWave directionality enables you to perfectly set the microphone pattern for specific situations. The fully programmable telecoil ensures clarity for telephone conversations. Our "I-Fit" system adjusts the Maestro according to the audiogram. The "PASS" Wizard (Patient Application Solutions System) assists you in applying solutions to minor programming issues that may occur during the fitting. Finally, our "SAM" (Situations Automated Manager) system will provide environmental adaptability.



Maestro ITE



Maestro ITC



Maestro CIC

PERFORMANCES DATA	ANSI S3.22-1987				IEC 118-7 1994			
	Typical			Limits	Typical			Limits
Styles	ITE	ITC	CIC		ITE	ITC	CIC	
<b>SSPL Saturation (dB)</b>								
Peak	116	114	109	±4	116	114	109	±4
HF-average	114	110	106	±4	-	-	-	-
<b>SPL Gain (dB)</b>								
Peak	45	40	35	±4	45	40	35	±4
HF-average	42	33	31	±4	-	-	-	-
<b>Reference test gain (dB)</b>								
1 000 - 1 600 - 2 500 Hz	37	33	29	±4	-	-	-	-
1 600 Hz	-	-	-	-	40	34	31	±4
<b>Frequency response (Hz)</b>	200-6500				-			
<b>Total harmonic distortion (%)</b>								
Input 70 dB @ 500 Hz	2,1	0,3	1,3	<8	-	-	-	-
Input 70 dB @ 800 Hz	2,5	1,0	1,0	<8	-	-	-	-
Input 70 dB @ 1 000 Hz	-	-	-	-	1,3	0,8	2,7	<8
Input 65 dB @ 1 600 Hz	1,1	0,5	0,8	<8	-	-	-	-
<b>Battery life (hrs)</b>								
13 ZA	138	-	-	-	152	-	-	-
312 ZA	-	94	-	-	-	108	-	-
10 ZA	-	-	58	-	-	-	61	-
<b>Battery life (mA)</b>	1,59	1,16	0,94	-	1,44	1,01	0,90	-
<b>Equivalent input noise (dB)</b>	21	25	27	<32	24	30	28	<35
<b>Attack time (ms)</b>	adjustable				adjustable			
<b>Release time (ms)</b>	adjustable				adjustable			

### Added features

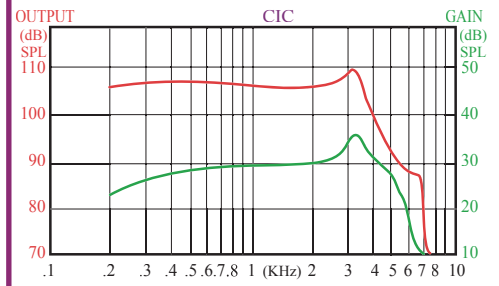
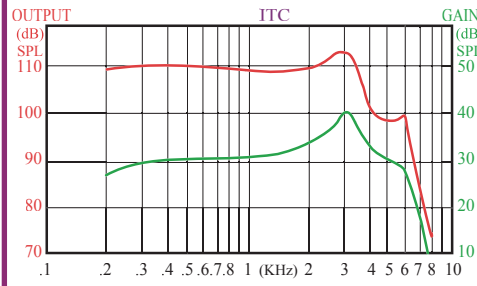
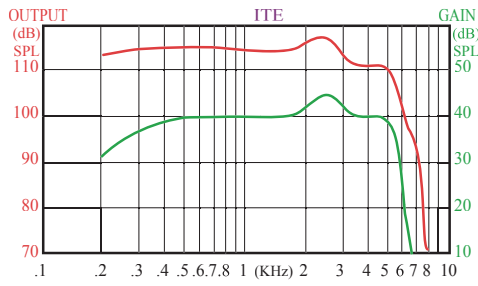
- Low battery indicator.
- Program change indicator.
- Venting correction.
- With / without external volume control.
- Standard and high compression fitting formulas.

### Software features

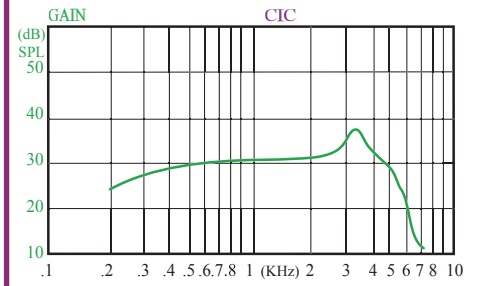
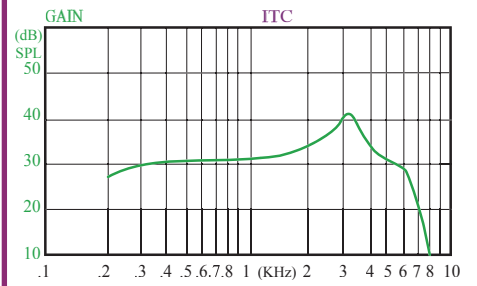
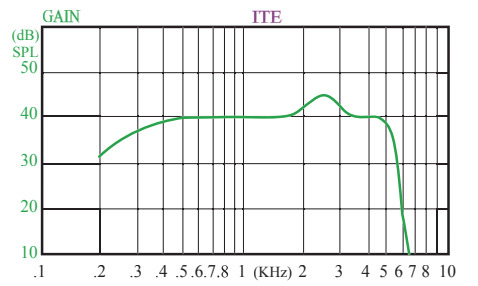
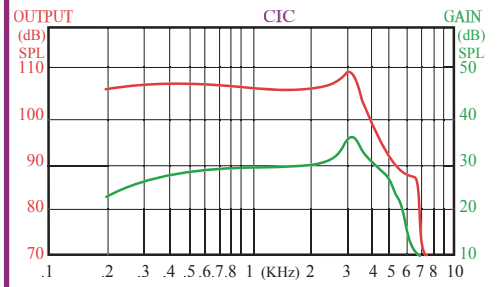
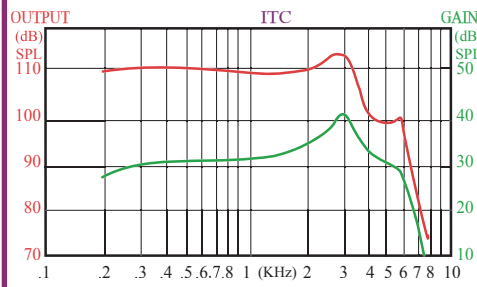
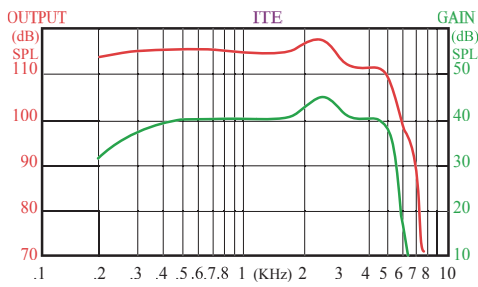
- I-Fit (Automatic adjustment)
- "PASS" Wizard (Patient Application Solutions System)
- FOG (Full On Gain)
- "SAM" System (Situations Automated Manager)

*Hear the difference!*

# ANSI S3.22 1987 DATA



# IEC 118-7 1994 DATA



Note: The given data in this document represent maximal characteristics. They are also subject to changes without notice.



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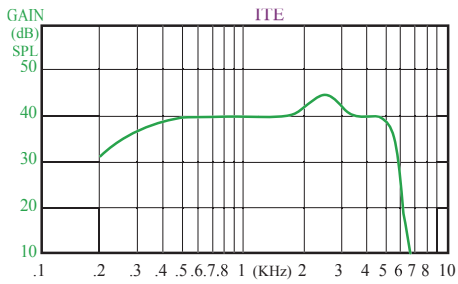
<http://www.audiocontrole.com>



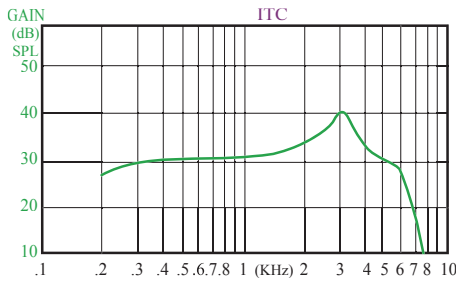
*Hear the difference!*

## 50 dB input curves

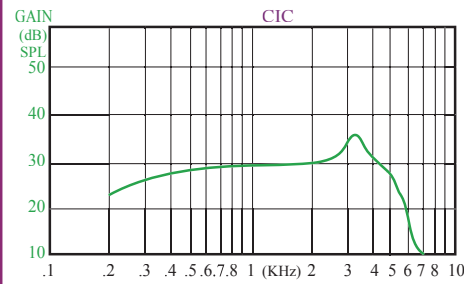
116 dB output



114 dB output

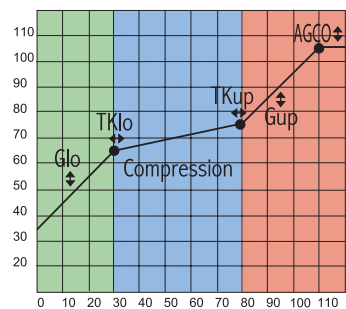


109 dB output

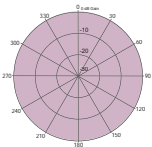


## COMPRESSION FEATURES

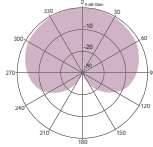
- Glo and Gup gains operate vertically, moving up or down on their own curve.
- TKlo and TKup threshold changes the knee points along Glo and Gup curves.
- Glo varies lower gain sounds (under Tklo level).
- Gup varies upper gain sounds (above TKup level).
- Tklo and TKup adjust the width of compression zone.
- Because the points move along the Glo curve, horizontal movement of Tklo also produces a vertical movement.
- Because the points move along the Gup curve, horizontal movement of TKup also produces a vertical movement.
- When Glo=Gup, the aid is in its linear mode, therefore varying Tklo and TKup will produce no changes, since those points move along the same curve.
- AGCO allows reduction of the output level up to 16dB.



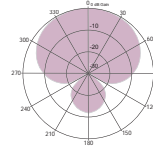
## POLAR PATTERNS



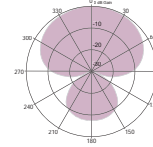
Omnidirectional



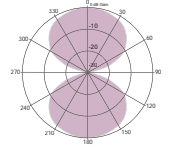
Cardioid



Supercardioid



Hypercardioid



Bidirectional

Maestro has a FrontWave™ directional microphone system. It consists of two separate microphones and an adjustable delayed circuit. This system permits a very wide flexibility when adjusting the directional characteristics. The above diagrams represent certain directional characteristics accessible through the Audio Fit software.

## AUDIOFIT FITTING TABS

*Hear the difference!*

# AVAILABLE ADJUSTMENTS SOFTWARE OVERVIEW

**Maestro (ACI28) Digital 04C0365** Model and serial number of the Hearing Aid (automatically detected).

"Connected", establishes the link with the hearing aid.  
 "Disconnected", disables communication and saves the hearing aid settings.

**I-Fit** Adjusts parameters according to the targets.

Allows copying adjustments from one program to another or one ear to the other.

**FOG** Adjusts parameters to obtain maximum power from the hearing aid.

**PASS** 'PASS' Wizard provides solutions and applies them for frequently encountered problems.

Undo the last adjustment.

Redo the last adjustment.

**I/O** Displays output curves and compression ratio.

**Channel 1** **Channel 2** **Channel 3** **Channel 4**  
 Allows to select and adjust parameters for each channel.

**Glo** Adjusts lower gain level from -18dB to 20dB.

**Gup** Adjusts upper gain level from -18dB to 20dB.

**TKlo** Adjusts lower compression threshold from 40dB to 80dB.

**TKup** Adjusts upper compression threshold from 70dB to 110dB.

**Attack** **Release** Adjusts time constants for each channel (channels tab).

**WB** Gives access to parameters that perform changes on the entire frequency response curve.

**Bands** Adjusts the gain in each band.

**Tones** Allows to choose the signal amplitude and frequency of the low battery and program change indicator.

**FW** Adjusts FrontWave™ parameters (directionality).

**Programs** **1** **2**  **3**  **4**   
 Allows to choose different programs. Checked programs are accessible by the patient. Unchecked ones are disabled.

Softens the first peak according to the hearing aid style.

Softens the second peak according to the hearing aid style.

**VE** **0dB** **3dB** **6dB** Accentuates speech by increasing the gain in frequency area favorable to speech.

**NR** **0dB** **3dB** **6dB** **9dB** **12dB** Deactivates or selects a level of noise reduction.

**FBC** **FBC** Activates the adaptive feedback cancellation system.

**Occlusion** Allows to adjust the low frequencies in order to eliminate the occlusion effect.

**LOCUT** **1 1/2** **1 1/2** Filter that cuts the low frequencies, varying corner frequency from 250Hz to 2000Hz. Allows to choose the filter order for more flexibility.

**HI CUT** **1 1/2** **1 1/2** Filter that cuts the high frequencies, varying corner frequency from 1700Hz to 8000Hz. Allows to choose the filter order for more flexibility.

**Agc0** Output compression circuit that limits the output from 0 to -16dB.

**Notch** Sets the notch frequency, varying from 800Hz to 5000Hz.

Sets the width for the notch filter.

**0dB** The notch produces no effect on the frequency response curve.

**3dB** Introduces a 3dB notch on the frequency response curve.

**6dB** Introduces a 6dB notch on the frequency response curve.

**9dB** Introduces a 9dB notch on the frequency response curve.

**12dB** Introduces a 12dB notch on the frequency response curve.

**Mic** **FW** **TC** Program mode.

**HRX** **HRX** Activates or deactivates the head room expander.

**Vc** Activates volume control in the software.

**Vc** Mutes the hearing aid.

**EXT VC** **EXT VC** Activates or deactivates external volume.

*Hear the difference!*