Ultimo is a high-end hearing aid conceived with emphasis on flexibility. It comes in three variations, Ultimo, Ultimo Plus and Ultimo Pro. All three are characterized by the ease with which they can address any need, thanks to their leading-edge adaptive algorithms. The Ultimo is based on the Voyageur™ platform and the Ultimo Plus and Ultimo Pro are based on the Voyageur II™. Their unequalled performance offers a highly defined sound quality in addition to the advanced functions that give meaning to the word versatility. Ultimo Plus and Ultimo Pro each stand out with a greater number of channels and frequency bands, thus enabling them to better adapt to more complex hearing losses. They also sport a reduced current consumption, which directly translates in prolonged battery life. As always, the I-Fit, SAM (Situations Automated Manager) and PASS (Patient Assisted Solutions System) automated functions are present, thus making the fitting and troubleshooting steps easier and quicker processes. A product of over 40 years of Canadian creativity and expertise, the Ultimo line of products shall prove its effectiveness and adaptability.

AUDIO CONTROLE

## DESCRIPTION

-Three distinct variations
-Configurable parametric filter
-128 bands Noise Reduction
-12, 14 and 16 bands equalizer
-Occlusion manager
-4, 6 and 8 channels of WDRC
-Low-level expansion
-voice enhancer
-Peak smoother
-Automatic Adaptative Feedback Canceller
-FrontWave™ 2-microphone Directionality system (not available on CIC)
-Adaptive Directionality
-Programmable Telecoil
-On/Off switch if specified
-Choice of styles: ITE, ITC, CIC or Open fit
-Choix of color for faceplate/shell/casing
-External Volume Controle on ITE and ITC if specified

Ultimo ITE	Ultimo ITC	Ultimo CIC	Ultimo Open fit

PERFORMANCE DATA	ANSI S3.22-2003			
Styles	ITE- ITE P	ITC- ITC P	CIC - CIC P	Open fit
Saturation OSPL (dB)				
Peak	116 - 119	108 - 113	103 - 108	119
HFA	110 - 117	104 - 110	102 - 107	105
Gain SPL (dB)				
Peak	44 - 50	40 - 45	34 - 40	35
HFA	38 - 44	33 - 37	29 - 34	24
Reference Gain (dB)				
1 000 - 1 600 - 2 500 Hz	35 - 41	28 - 34	24 - 29	31
Frequency response (Hz)	200-6100	200-7500	200-6400	200-500
Total Harmonic Distortion (%)				
Input 70 dB @ 500 Hz	< 6	< 6	< 6	< 6
Input 70 dB @ 800 Hz	< 6	< 6	< 6	< 6
Input 70 dB @ 1 000 Hz	< 6	< 6	< 6	< 6
Battery life (h)				
13 ZA	256 - 233	-	-	-
312 ZA	149 - 139	155 - 146	-	-
10 ZA	-	91 - 83	108 - 103	92
Battery drain (mA)	1,21 - 1,33	1,16 - 1,26	0,97-1,01	1,15
Equivalen Input Noise (dB)	< 30	< 30	< 30	< 30
Attak time (ms)	Adjustable	Adjustable	Adjustable	Adjustable
Release time (ms)	Adjustable	Adjustable	Adjustable	Adjustable

Fitting Range

dB

CIC
Open fit
Canal
Intra

Frequency (Hz)

125 250 500 750 1k 1.5k 2k 3k 4k 6k 8k
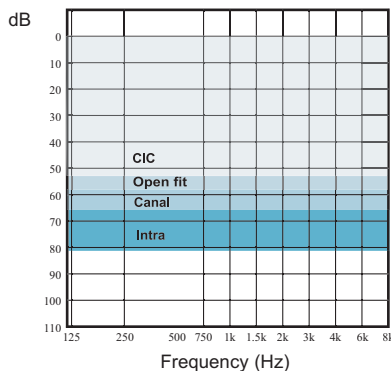
ULTIMO
-4 channels / 12 bands / 4 programs.
-Advanced Adaptative Feedback Canceller
-4-levels Advanced Noise Reduction
-HRX (HeadRoom eXpander)
-Frontwave™ Directionality
-Advanced Adaptive Directionality
-Configurable Parametric Filter

ULTIMO Plus
-6 channels / 14 bands / 4 programs.
-Superior Adaptative Feedback Canceller
-4-levels Superior Noise Reduction.
-HRX (HeadRoom eXpander)
-Frontwave™ Directionality
-Superior Adaptive Directionality
-Configurable Parametric Filter
-15% lower battery drain

ULTIMO Pro
-8 channels / 16 bands / 4 programs.
-Superior Adaptative Feedback Canceller
-4-levels Superior Noise Reduction.
-HRX (HeadRoom eXpander)
–Frontwave™ Directionality
-Superior Adaptive Directionality
-Configurable Parametric Filter
-15% lower battery drain

COMPRESSION FEATURES

-The Glo sets the gain/output level below the Tklo.

-The Gup sets the gain/output level above the Tkup.

-The Tklo moves diagonally along the linear trace, at a gain level set by Glo.

-The Tkup moves diagonally along the linear trace, at a gain level set by Gup.

-The Tklo and Tkup allow for setting the width and ratio of the compression range. The Glo and Gup allow for setting its ratio only.

-If the Glo equals the Gup, the device is in linear mode, which renders variations of Tklo and Tkup without effect since they are now on the same linear trace.

-The Tkexp moves diagonally along the linear trace below Tklo, at a gain level set by Glo.

-The Expansion Ratio diminishes the gain for the softer sounds, below Tkexp level, at a ratio of 1:2.

-The AGCo allows for diminishing the maximum output level from 0dB to 12dB bellow the saturation limit.
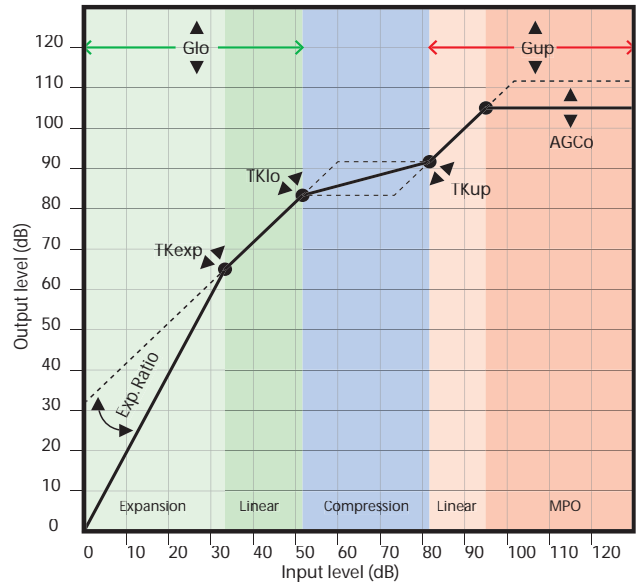
For a greater compression ratio, rise Glo or Tklo.

For a lower compression ratio, rise Gup or Tkup.

AUDIOFIT FITTING TABS
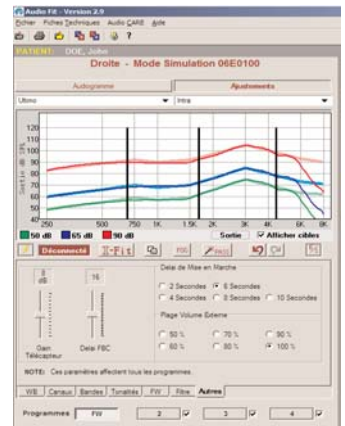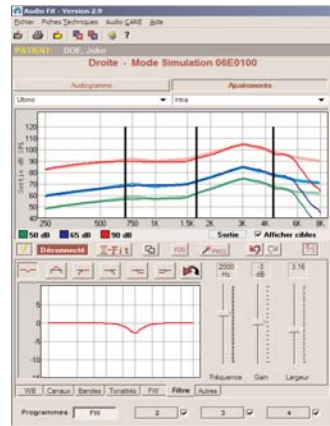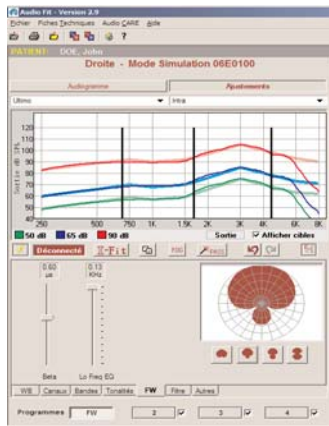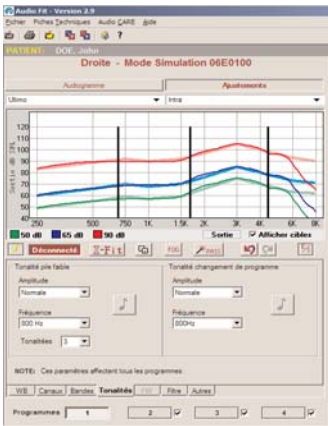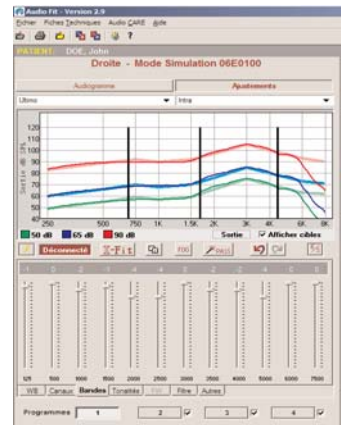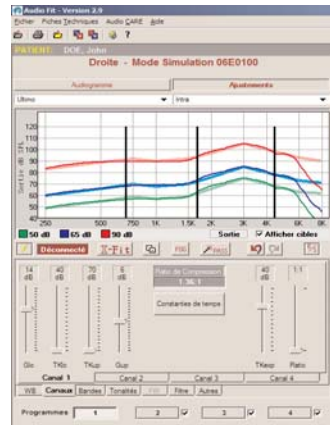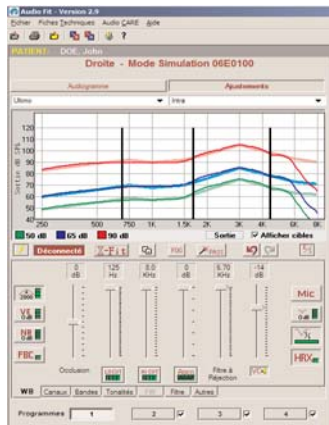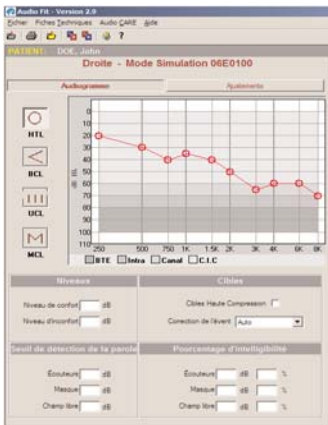
Right - Ultimo Pro 08J0500 Hearing aid model, side and serial number (automatically detected).

"Connected" establishes the link with the hearing aid.

"Disconnected" disables communication and saves the hearing aid settings.

I-Fit Automatically adjusts all parameters according to the targets.

Allows copying adjustments from one program to another or an hearing aid to the other side.

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.

Displays the Input/Output curves and compression ratio.

Glo Adjust soft sounds gain from -14db to 28dB.

Gup Adjust loud sounds gain from -14db to 28dB.

TKlo Adjust compression threshold for soft sounds from 40dB to 70dB.

TKup Adjust compression threshold for loud sounds from 70dB to 104dB.

Time constants Access to time constants adjustments (into each channel tab)

Channels The individual channel tabs gives access to all the compression settings for that channel.

Canal 1 | Canal 2 | Canal 3 | Canal 4 | Canal 5 | Canal 6 | Canal 7 | Canal 8

Select channel into which to make compression adjustments. (4 Ultimo, 6 Ultimo Plus and 8 Ultimo Pro)

FW Access to Frontwave™ directivity

FBC Enable or disable the Adaptive Feedback Canceller

Programmes 1 | 2 ☑ | 3 ☑ | 4 ☑

Allows to choose different programs. Checked programs are accessible by the patient by means of the push button. Unchecked ones are disabled.

Smooth out response peaks according to the hearing aid style.

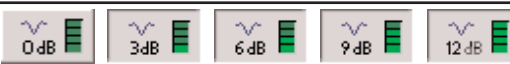**LOCUT 1 2** Low cut filter. Allows to choose first or second order filter for more precise fitting.
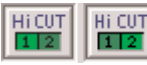
Hi CUT 1 2 High cut filter. Allows to choose first or second order filter for more precise fitting.

AGCO ADAP Output compression limiting circuit.

V 1/1 | V 1/2 | V 1/3 | V 1/4 Adjust Notch Filter width.

0dB | 3dB | 6dB | 9dB | 12dB Adjust Notch Filter depth.

HRX Enable or disable Head Room eXpander to limit distortion for loud sounds.

Mic | TC | AD | M+T | ATC | FW Allows to select the program's sound input device and mode.

Bands Access to the Graphic equalizer.

Tones Allows to choose the amplitude and frequency for low battery warnings and program changes.

VC Hearing aid output activated.

VC Mute: hearing aid output deactivated.

WB Allows to adjust all the parameters that perform changes in the entire frequency response curve.

Others Access and adjust complementary features.

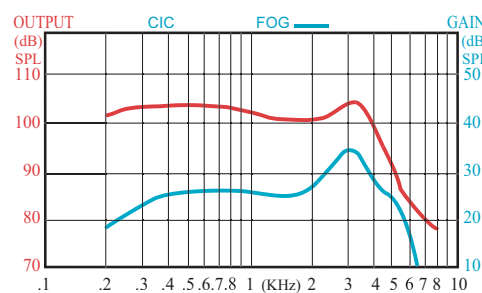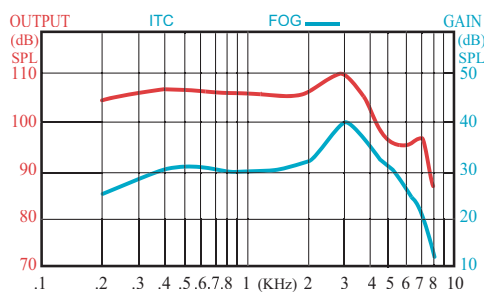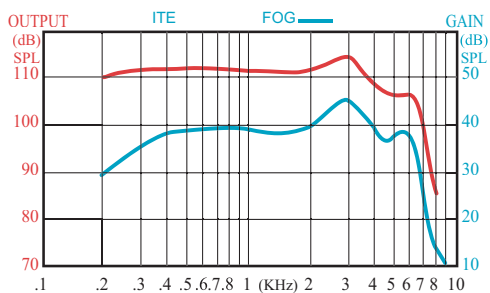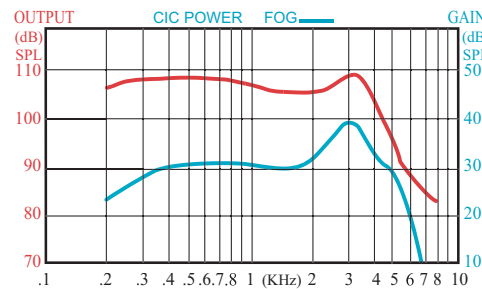**Filter** Allows to build your own parametric filter.

VE 0dB | VE 2dB | VE 4dB | VE 6dB Adjust Voice Enhancer level.

NR 0dB | NR 3dB | NR 6dB | NR 9dB | NR 12dB Adjust Noise Reduction level.

Hear the difference!

ITE POWER FOG / GAIN

ITC POWER FOG / GAIN

CIC POWER FOG / GAIN

ITE FOG / GAIN

ITC FOG / GAIN

CIC FOG / GAIN
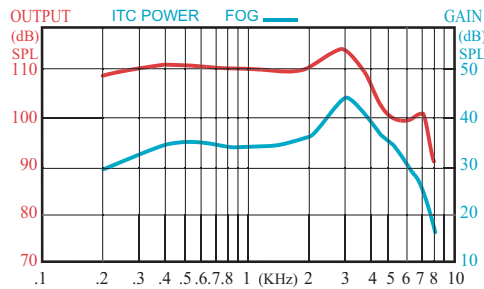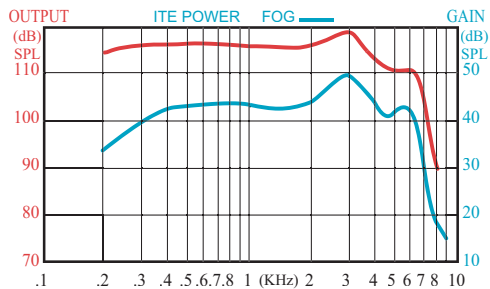
ANSI S3.22 2003 DATA
Open fit

Open fit FOG / GAIN
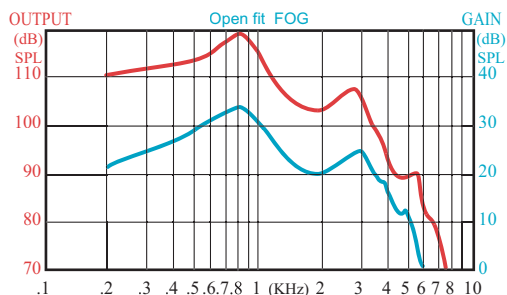
Note: The red traces represent the maximum output levels and the blue traces represent the maximum gain levels. They are respectively analogous to the red and green traces in the Audiofit graphs when the hearing aid is Full-On (FOG).

Note: Each hearing aid is built considering the patient's audiogram. The data found within this document represent the maximum characteristics. These may vary according to order specifications and hearing aid style and shape. They are subject to change without notice.

Hear the difference!