



Swift 70+
Swift 90+
Swift 100+

General information

Swift is a range of 3 high quality, programmable, cosmetically attractive BTE instruments. With a low noise, Class D amplifier and a range of options and accessories, they offer a comprehensive solution for most mild, moderate, severe and profound hearing losses.

Swift BTEs are easily programmed via the PC-based Noah/OtiSet fitting software or the stand alone EasyFit hand-held programmer.

An initial fitting based on threshold data is appropriate in most cases. Air-bone gap information can be used to refine the prescribed settings.

An integrated user diary and fine tuning guide assists in efficiently obtaining high user satisfaction levels.

Model overview

Available with or without Telecoil

- Swift 70+ mild to moderate HL
- Swift 90+ moderate to severe HL
- Swift 100+ severe to profound HL

User groups

- Most sensorineural and conductive hearing losses from mild to profound
- People with high demands on ergonomics

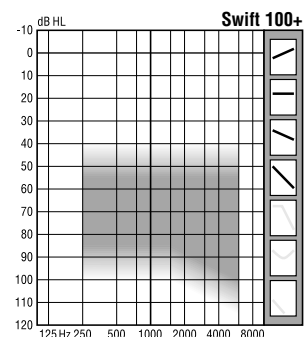
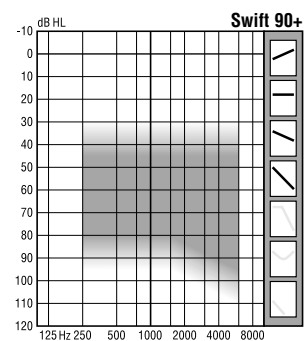
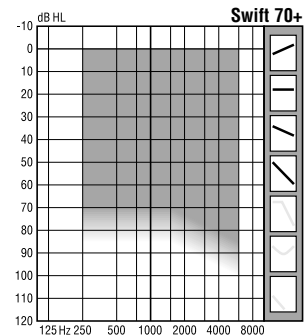
User benefits

- Small size and attractive form
- Low distortion, clear sound quality
- Excellent mobile phone immunity
- Comfortable anatomical shape
- Easy to use controls

Dispensing features

- Straightforward fitting procedure
- Wide fitting range
- Supported by Noah/OtiSet and EasyFit
- Standard Oticon 4 pin programming cable (# 3)

Fitting Ranges



Standard Features

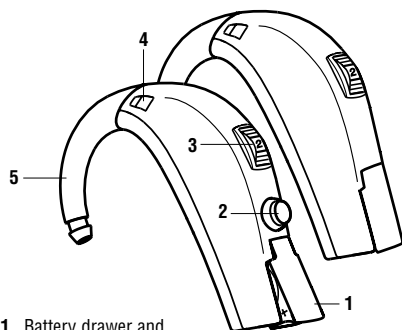
- Digitally programmable
- Class D amplifier
- A-Gram slope control (4th order LF or HF cut)
- Hearing Level control (simultaneous adjustment of Gain and MPO)
- AGCo
- Swing hook (9 dB damped)
- DAI (Direct Audio Input)
- Beige color

Options and Accessories

- Telecoil
- Hooks:
 - Non damped
 - 5 dB damped
 - Small size for children
- Audio shoes for DAI and MLx/TMX
- Tamper resistant battery drawer
- Tamper resistant volume control
- Hair tone color top shell

Audiological Information

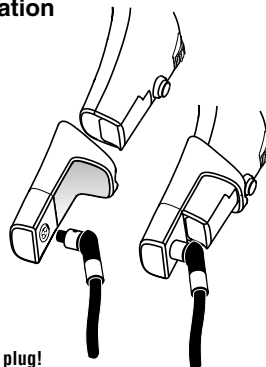
User operation



- 1 Battery drawer and on-off switch
- 2 Telecoil push-button
- 3 Volume control
- 4 Microphone opening/sound inlet
- 5 Swing hook

Swift 70+
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Fitter operation



Do not twist the plug!

HI-PRO cable # 3 Right (Red) no. 384-20-014-00
HI-PRO cable # 3 Left (Blue) no. 384-20-015-01
Swift BTE programming adaptor no. 390-01-151-00

Battery

Battery size 13 (IEC R48 - ANSI M6, S6)

Estimated life in hours	Max	Typ	Min
1.4 V Zinc air, Swift 70+	280	280	255
1.4 V Zinc air, Swift 90+	280	280	135
1.4 V Zinc air, Swift 100+	280	280	110

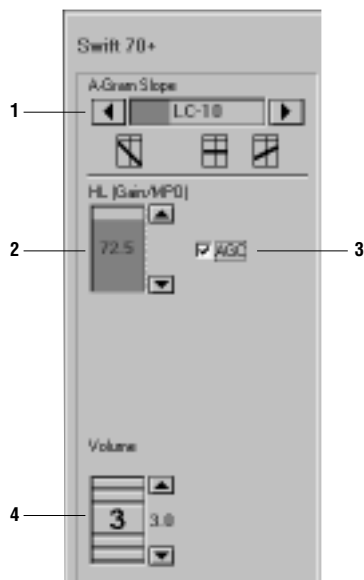
Telecoil sensitivity

Telecoil sensitivity at reference test gain, 1600 Hz:
31.6 mA/m equals 62 dB SPL.

Swift fitting controls in OtiSet and EasyFit

The calculated prescribed settings in OtiSet and EasyFit are based on standard rationales for linear instruments. The default rationale is NAL-RP, but a variety of alternative rationales are available. Further adjustments and fine tuning are straightforward.

OtiSet



1 A-gram Slope Cuts low (LC) or high (HC) frequencies according to the overall slope of the audiogram. In 'N' position, there is no attenuation of either low or high frequencies.

2 HL The Hearing Level trimmer simultaneously adjusts both Gain and MPO. Ideally this should be set to a comfortable level with the Volume control around 3. This will leave the user with approximately 10 dB reserve gain. The figure displayed in the trimmer window (in this case 72.5) is an indication of the level of the hearing loss and will vary widely depending on the type and shape of the hearing loss and upon the fitting rationale chosen.

3 AGC Activates the AGC. The AGC works in combination with the PC to enable comfortable low distortion output limiting. Often preferred by first time users.

4 Volume control Allows on-screen adjustment of the instrument's Volume control during the fitting. Manual operation of the VC on the instrument itself overrides the on-screen setting and should be avoided during the fitting process.

EasyFit



Fitting of children (0-60 months)

OtiSet and EasyFit displays gain and output from the instrument in a graphical format. The Insertion Gain and Simulated In-Situ Output curves shown are based on average adult Real Ear to 2cc Coupler Difference (RECD). The prescribed setting uses these adult values and should be modified when fitting children below the age of 60 months, either by using standard compensation or by measuring RECD.

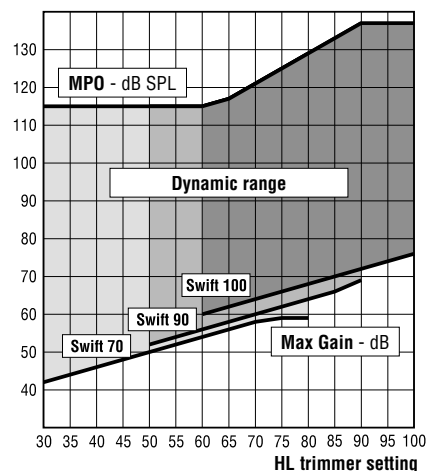
Standard compensation

To compensate for the age appropriate RECD values, reduce the HL (Gain/MPO) control as recommended in the table below - if possible.

Age in months	HL (Gain/MPO) reduction
0-12	6 steps (-15.0)
13-24	5 steps (-12.5)
25-28	4 steps (-10.0)
29-60	3 steps (-7.5)

Warning to hearing instrument dispensers

The maximum output capability of this hearing instrument may exceed 132 dB SPL. Special care should be exercised in selecting and fitting the instrument as there may be risk of impairing the remaining hearing of the hearing instrument user.



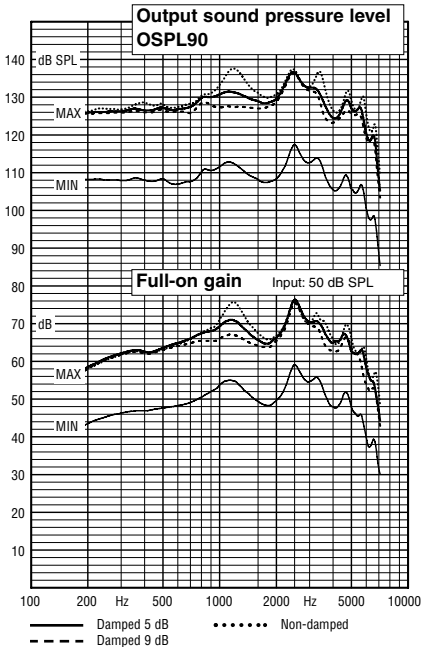
HL (Gain/MPO) trimmer function

The HL trimmer simultaneously adjusts Gain and MPO. The graph above shows the relationship which exists between the Peak Gain (ear simulator) and the Peak MPO for each setting of the HL trimmer.

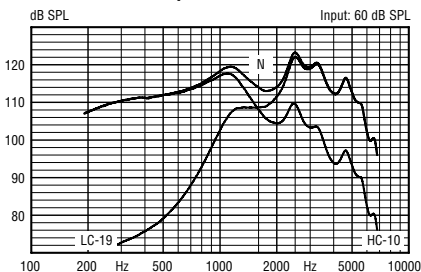
Note: When maximum Gain and MPO are required, use a non damped hook.

Ear simulator

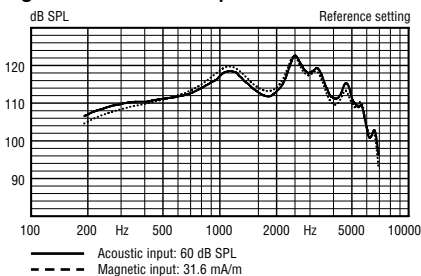
Measured according to IEC publications 118-0, -1, -2, -6 (incl. amendments) and 711



Basic frequency response and effect of A-Gram Slope control

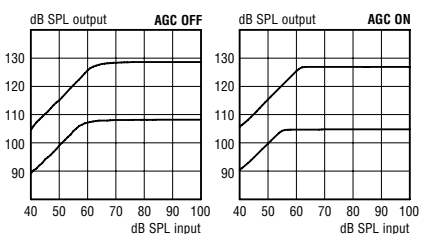


Frequency response with magnetic and acoustic input



Input/output variation

Frequency: 1600 Hz, Gain setting: Full-on



Data at a glance

General measuring conditions

Sound hooks:
 Non damped, Oticon No. 571-01-740-07
 Damped 5 dB, Oticon No. 571-05-210-05
 Damped 9 dB, Oticon No. 571-05-220-07
 Tubing: 25 mm length, 2 mm inside diameter
 Supply voltage: 1.3 Volt
 () values = 9 dB damped hook, standard

Ear simulator

OSPL90	Output, dB SPL	SSPL90
138 (137)	Peak	134 (129)
133 (128)	1000 Hz	130 (122)
131 (127)	1600 Hz	122 (119)
131 (128)	Average (DIN)	125 (121)
	HF Average (ANSI)	127 (123)

Full-on gain, dB		
Input: 50 dB SPL		
76 (76)	Peak	72 (70)
71 (66)	1000 Hz	66 (62)
67 (64)	1600 Hz	62 (58)
67 (65)	Average (DIN)	62 (60)
	HF Average (ANSI)	66 (63)

Frequency range, Hz		
100-6900	DIN	100-6150
	ANSI	100-6200

Telecoil output, dB SPL		
96	1 mA/m field, 1600 Hz	90
	10 mA/m field, 1000 Hz (ANSI)	116

Reference test gain, dB		
56 (52)	IEC	50 (46)
	HF Average (ANSI)	50 (47)

Equivalent input noise level, dB SPL		
27	IEC 118-0	27
	ANSI, typical/maximum	22/25

Total harmonic distortion, %		
Input: 70 dB SPL		
IEC	500 Hz, typical	ANSI 2.0
5.0	800 Hz, typical	2.0
2.5	1600 Hz, typical	1.0
1.0	2000 Hz, typical	0.5

Battery consumption, mA		
0.8	Quiescent	0.8
1.5	IEC	1.5
	ANSI, typical/maximum	1.5/2.0

Dynamic characteristics of AGC, ms		
Input: 55-80-55 dB SPL (IEC 118-2)		
5/70	AGC, 1600 Hz, attack/release time	

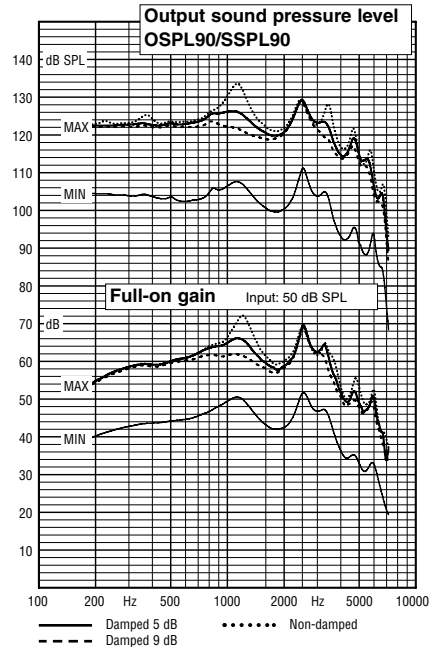
EMC immunity, IRIL dB SPL		
(IEC 60118-13)		
2/20	GSM/DECT-range, maximum	

Further technical information is available in Oticon Swift BTE - TECHNICAL REPORT

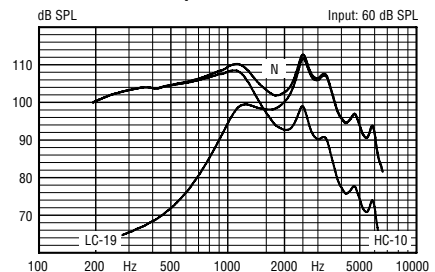


2cc coupler

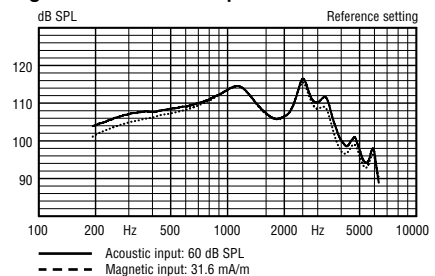
Measured according to IEC publications 118-7 (incl. amendments) and 126 and to ANSI S3.22 (1993) and S3.7 (1973)



ANSI frequency response and effect of A-Gram Slope control



Frequency response with magnetic and acoustic input



Input/output variation

Frequency: 2000 Hz, Gain setting: Full-on

