

## TECHNICAL DATA

# Alpha XT 7 | 5 miniRITE T R

Bernafon Alpha XT takes Hybrid Technology™ to new levels. The miniRITE T R is an easy-to-use, rechargeable hearing instrument with a Li-ion battery to provide power for a full day of use, including direct audio streaming. It is a receiver-in-the-ear hearing instrument designed for users with slight

to profound hearing losses. It includes 2.4 GHz Bluetooth® Low Energy and NFMI technology, a telecoil, and double push button for volume and program changes. The miniRITE T R is available with the miniFit speaker system, which includes four power levels and a variety of domes and custom molds.



### Technical features

- Direct audio streaming<sup>1</sup>
- Hands-free communication<sup>2</sup>
- 2.4 GHz Bluetooth® Low Energy
- NFMI (near-field magnetic induction)
- Double push-button
- Telecoil
- miniFit speakers
- Hydrophobic coating
- IP68 rated
- LED visual indicator

### Accessories

- Bernafon App
- RC-A (remote control)
- TV-A (TV adapter)
- SoundClip-A
- Noahlink Wireless (wireless programming interface)

For information on compatibility, please visit [www.bernafon.com/compatibility](http://www.bernafon.com/compatibility)

**Operating and charging conditions**  
Temperature: +5°C to +40°C (41°F to 104°F)  
Humidity: 5% to 93% relative humidity, non-condensing  
Atmospheric pressure: 700 hPa to 1060 hPa

**Transportation and storage conditions**  
Temperature and humidity shall not exceed the mentioned limits for extended periods during transportation and storage.

**Transport**  
Temperature: -20°C to +60°C (-4°F to 140°F)  
Humidity: 5% to 93% relative humidity, non-condensing  
Atmospheric pressure: 700 hPa to 1060 hPa

**Storage**  
Temperature: -20°C to +30°C (-4°F to 86°F)  
Humidity: 5% to 93% relative humidity, non-condensing  
Atmospheric pressure: 700 hPa to 1060 hPa

1) From iPhone®, iPad®, iPod touch®, and selected Android™ devices with the Audio Streaming for Hearing Aids (ASHA) protocol

2) Available with select iPhone and iPad models

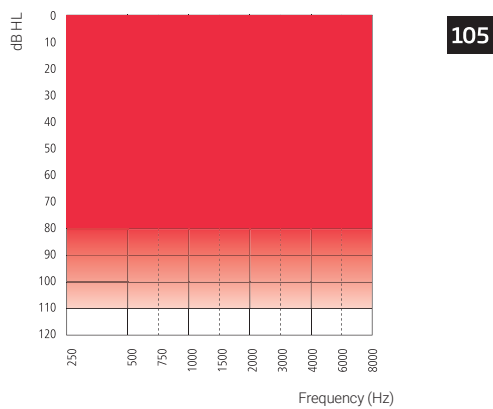
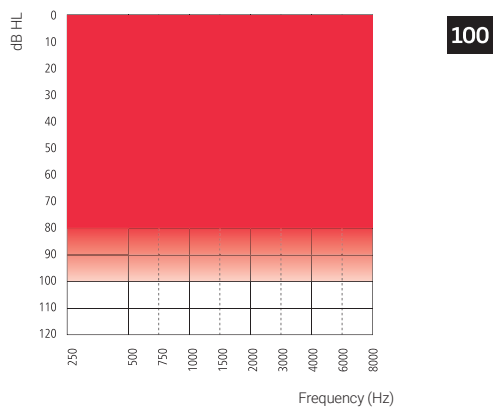
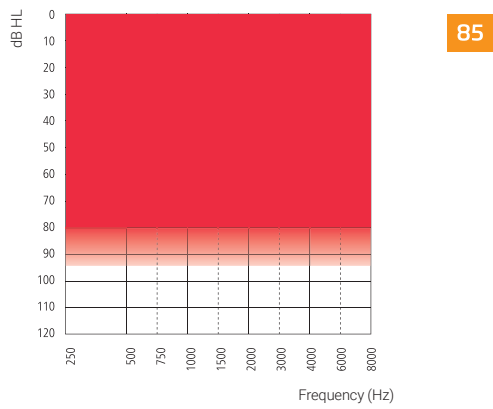
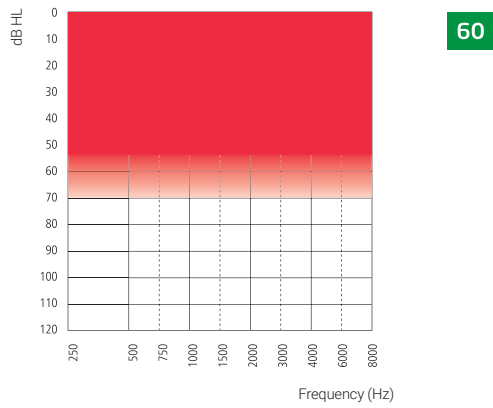
**WARNING:** No modification of this equipment is allowed.

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# Fitting ranges

Bernafon Alpha XT 7 | 5



# Feature overview

	Alpha XT 7	Alpha XT 5
<b>Hybrid Technology™</b>		
<b>Hybrid Sound Processing™</b>	•	•
Frequency bandwidth	8 kHz	8 kHz
<b>Hybrid Balancing™</b>	•	—
Speech Balancer	2 options	•
Noise Balancer	2 options	—
<b>Hybrid Noise Management™</b>	•	•
Smart Noise Reduction	4 options	3 options
Smart Directionality	4 options	4 options
Dynamic States	2 options	—
Omni States	2 options	—
<b>Hybrid Feedback Canceller™</b>	•	•
<b>Hybrid Sound Care™</b>	•	•
Wind   Contact Noise Protector	•	•
<b>Speech</b>		
Low Frequency Enhancer	•	•
Frequency Composition™ <sup>xt</sup>	•	•
<b>Comfort</b>		
Binaural Noise Manager	•	—
Transient Noise Reduction	5 options	4 options
Dynamic Range Extender	•	—
Soft Noise Manager	•	•
<b>Directionality controls</b>		
Dynamic	•	•
Adaptive Full Directionality	•	•
Fixed Directionality	•	•
Fixed Omni	•	•
Omni Directional	•	—
True Directionality Plus	•	—
<b>Individualization</b>		
Personalization	•	•
Fitting bands	20	18
Program options/memories	12/4	12/4
Music Experience	•	•
Binaural coordination: VC, program changes	•	•
Automatic Adaptation Manager	•	•
Transition	3 options	2 options
Data Logging	•	•
Conversation Data	•	•
Spoken indicators	•	•
Tinnitus SoundSupport	•	•
CROS compatibility	•	•

# Alpha XT 7 | 5 miniRITE T R

# Ear Simulator

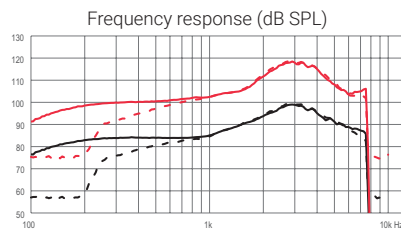
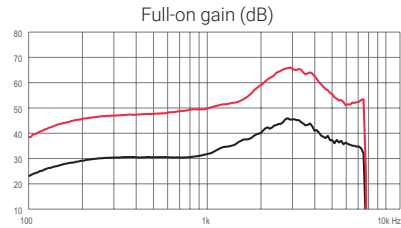
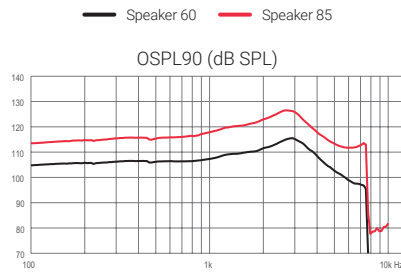
Measured according to IEC 60118-0:1983/AMD1:1994, IEC 60118-0:2015, IEC 60118-1:1995+AMD1:1998 CSV and IEC 60318-4:2010



**Technical information**  
Omnidirectional mode is used unless otherwise stated.

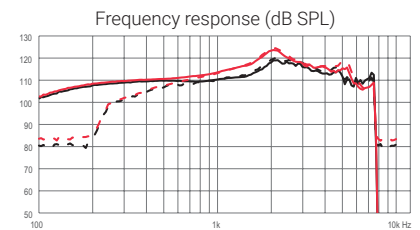
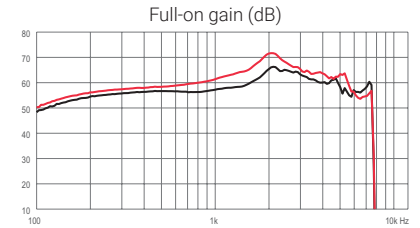
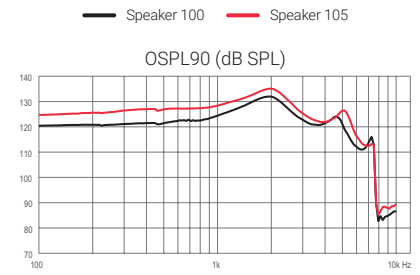
**Speaker 60 / 100**  
— Acoustic input: 60 dB SPL  
- - - Magnetic input: 31.6 mA/m

**Speaker 85 / 105**  
— Acoustic input: 60 dB SPL  
- - - Magnetic input: 31.6 mA/m



Speaker 60

Speaker 85



Speaker 100

Speaker 105

OSPL90, Peak (dB SPL)	116	127	132	135
OSPL90, 1600 Hz (dB SPL)	110	121	130	133
OSPL90, HFA (dB SPL)	110	122	127	131
Full-on gain, Peak (dB)	46	66	66	72
Full-on gain, 1600 Hz (dB) <sup>1</sup>	37	53	60	66
Full-on gain, HFA (dB)	38	56	61	66
Reference test gain (dB)	31	46	54	58
Frequency range (Hz)	100-7500	100-7500	100-7500	100-7500
Telecoil output, 1 mA/m field (1600 Hz) (dB SPL)	68	84	91	96
Telecoil output, 10 mA/m field (1600 Hz) (dB SPL)	88	104	111	116
Total harmonic distortion (Input 70 dB SPL), 500 Hz (%)	<2	<2	<9	<2
Total harmonic distortion (Input 70 dB SPL), 800 Hz (%)	<3	<4	<6	<2
Total harmonic distortion (Input 70 dB SPL), 1600 Hz (%)	<2	<5	<3	<4
Equivalent input noise level, Omni (dB SPL)	19	22	17	16
Equivalent input noise level, Dir (dB SPL)	26	29	26	25
Battery	Lithium-ion	Lithium-ion	Lithium-ion	Lithium-ion
Expected operating time, hours <sup>2</sup>	24	24	24	24

1) Technical data measured with expansion, corresponding to the test box measurement settings. "2cc" refers to a coupler according to IEC 60318-5:2006. "Ear simulator" refers to a coupler according to IEC 60318-4:2010. Applied versions: IEC 60118-0 /A1:1994, IEC 60118-1 /A1:1998, IEC 60118-7: 2005, ANSI S3.22: 2014, IEC 60118-0:2015. Full-on gain is measured with the gain control of the hearing instruments set to its full-on position minus 20 dB and with an input SPL of 70 dB. This is to obtain a gain response equal to the full-on gain response from e.g. IEC 60118-0+A1:1994 but without influence of feedback.

2) Expected operating time for rechargeable battery depends on use pattern, active feature set, hearing loss, sound environment, battery age and use of wireless accessories.

# Alpha XT 7 | 5 miniRITE T R

# 2CC Coupler

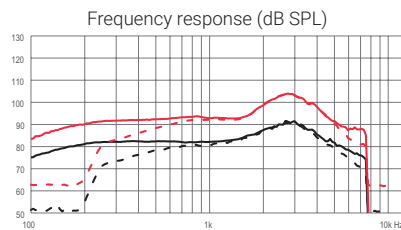
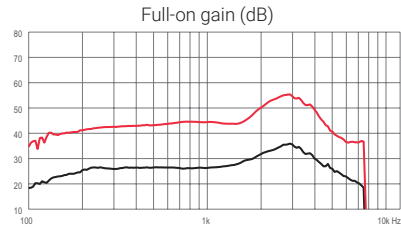
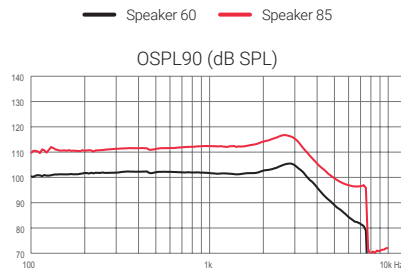
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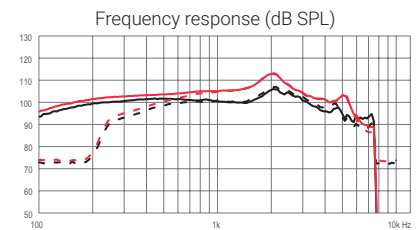
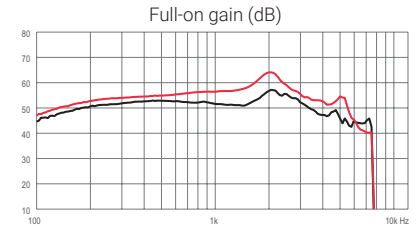
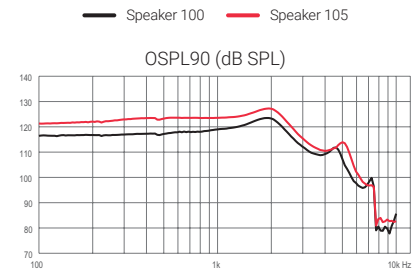
**Technical information**  
Omnidirectional mode is used unless otherwise stated.

**Speaker 60 / 100**  
— Acoustic input: 60 dB SPL  
- - - Magnetic input: 31.6 mA/m

**Speaker 85 / 105**  
— Acoustic input: 60 dB SPL  
- - - Magnetic input: 31.6 mA/m



Speaker 60 Speaker 85



Speaker 100 Speaker 105

OSPL90, Peak (dB SPL)	106	117	124	127
OSPL90, 1600 Hz (dB SPL)	102	113	122	126
OSPL90, HFA (dB SPL)	103	114	120	123
Full-on gain, Peak (dB)	36	55	57	64
Full-on gain, 1600 Hz (dB) <sup>1</sup>	29	45	52	59
Full-on gain, HFA (dB)	30	48	53	58
Reference test gain (dB)	26	37	42	47
Frequency range (Hz)	100-7500	100-7500	100-7500	100-7500
Telecoil output, 1 mA/m field (1000 Hz) (dB SPL)	58	77	86	89
Telecoil output, HFA SPLITS L/R (dB SPL)	83	94	100	104
Total harmonic distortion (Input 70 dB SPL), 500 Hz (%)	<2	<2	<2	<2
Total harmonic distortion (Input 70 dB SPL), 800 Hz (%)	<2	<2	<2	<2
Total harmonic distortion (Input 65 dB SPL), 1600 Hz (%)	<2	<2	<2	<2
Equivalent input noise level, Omni (dB SPL)	17	18	17	16
Equivalent input noise level, Dir (dB SPL)	29	27	29	28
Battery	Lithium-ion	Lithium-ion	Lithium-ion	Lithium-ion
Expected operating time, hours <sup>2</sup>	24	24	24	24

1) Technical data measured with expansion, corresponding to the test box measurement settings. "2cc" refers to a coupler according to IEC 60318-5:2006. "Ear simulator" refers to a coupler according to IEC 60318-4:2010. Applied versions: IEC 60118-0 /A1:1994, IEC 60118-1 /A1:1998, IEC 60118-7: 2005, ANSI S3.22: 2014, IEC 60118-0:2015. Full-on gain is measured with the gain control of the hearing instruments set to its full-on position minus 20 dB and with an input SPL of 70 dB. This is to obtain a gain response equal to the full-on gain response from e.g. IEC 60118-0+A1:1994 but without influence of feedback.

2) Expected operating time for rechargeable battery depends on use pattern, active feature set, hearing loss, sound environment, battery age and use of wireless accessories.

# Charger, miniRITE T R

The charger for Alpha XT miniRITE T R uses inductive technology that allows contactless charging of two hearing instruments via induction coil. Furthermore, the magnetic connection in the charger prevents the hearing instruments

from falling out. When the hearing instruments are inserted into the charger, it automatically starts charging. The hearing instruments turn ON when they are removed from the charger.



## Packaging set

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- Travel pouch
- Instructions for use
- Power supply plug

## Charging time of lithium-ion battery


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- 3 hours = Fully charged
- 1 hour = 50 % charged
- 30 min = 25 % charged

<sup>1</sup> Power plug will vary from country to country

\* USB 2.0 high power (500 mA output) required

Designed for/compatibility	Alpha, Alpha XT, miniRITE T R
Dimensions	Ø95 mm /total height of 39 mm (3.7 in / total height of 1.5 in)
Weight	135 grams (5 oz)
Color	Black
Power supply plug	USB A
Status indications	LED on charger indicates Charger ON/OFF status LED on hearing instrument indicates charging status
Charging time of hearing instruments	Max 3 hours depending on initial state of the battery (Temperature: +10 °C to +35 °C (+50 °F to +95 °F)) Max 4 hours depending on initial state of the battery (Temperature: +5 °C to +10 °C (+41 °F to +50 °F) / +35 °C to +38 °C (+95 °F to +100 °F))
Power source	Supplied power supply unit
Input voltage	5 V DC
Input current	< 0.2 A (charging two hearing instruments) <10 mA stand-by (no hearing instruments inserted)
Cable	Fixed mounted cable / 150 cm (approximately 5 feet)
Connected to external equipment	When connected to external equipment plugged into a wall outlet, this equipment must comply with IEC-62368 (or IEC-60065, IEC-60950 until June 20, 2019) or equivalent safety standards.
<b>Conditions of use</b>	
Operating conditions	Temperature: +5 °C to +38 °C (+41 °F to +100 °F) Relative humidity: 5 % to 93 %, non-condensing
Storage and transportation conditions	Temperature: -25 °C to +70 °C (-13 °F to +158 °F) Relative humidity: 5 % to 93 %, non-condensing
Atmospheric pressure	700 hPa to 1060 hPa
<b>Technical data: Power supply unit</b>	
Power supply unit	AN05x – 050A
Input voltage	100 – 240 V AC
Input current	0.2 A
Input frequency	50 – 60 Hz
Output voltage	5 V DC
Output current	1 A

 SBO Hearing A/S  
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[www.bernafon.com](http://www.bernafon.com)

Bernafon is part of the Demant Group.

