

## **HDA 300 High-Frequency Audiometric Headphones**

### User Guide

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**Technical support**  
Please contact your supplier.

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# 1 Device Description and Intended Use

HDA 300 headphones are closed circumaural dynamic headphones designed for use with audiometers. HDA 300 headphones are suitable for high-frequency audiometry.

The intended users are audiologists, ENTs, hearing instrument dispensers and other health care professionals.

For information regarding use of the HDA 300 headphones together with an audiometer, see the user guide for the relevant audiometer.

# 2 Typographical conventions

## The use of Warning, Caution and Note

To draw your attention to information regarding safe and appropriate use of the device or software, the manual uses precautionary statements as follows:

**Warning** • Indicates that there is a risk of death or serious injury to the user or patient.

**Caution** • Indicates that there is a risk of injury to the user or patient or risk of damage to data or the device.

**Note** • Indicates that you should take special notice.

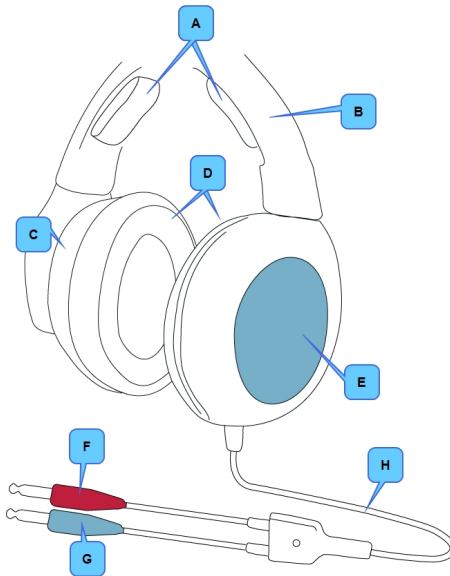
# 3 Unpacking

1. Unpack the device carefully.

When you unpack the device and accessories, it is a good idea to keep the packing material in which they were delivered. If you need to send the device in for service, the original packing material will protect against damage during transport, etc.

2. Visually inspect the equipment for possible damage.  
If damage has occurred, do not put the device into operation. Contact your local distributor for assistance.
3. Check with the packing list to make sure that you have received all necessary parts and accessories. If your package is incomplete, contact your local distributor.

## 4 Product overview



- |                         |                         |
|-------------------------|-------------------------|
| A. Headband padding     | E. Ear cup, left (blue) |
| B. Headband             | F. Plug, right (red)    |
| C. Ear cup, right (red) | G. Plug, left (blue)    |
| D. Ear pads             | H. Connection cable     |

## 5 Connecting the HDA 300

To connect the headphones to the audiometer, do the following:

- Insert the red headphone plug into the red headphone socket in the audiometer connection panel.
- Insert the blue headphone plug into the blue headphone socket in the audiometer connection panel.

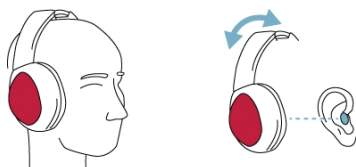
**Note** • Blue corresponds to Left and Red corresponds to Right.

For more information, see the Reference Manual for the audiometer.

## 6 Using HDA 300

1. Ask the test person to remove glasses, earrings or any other items that might keep the headphones from fitting properly.
2. Place the headphones on the test person with the red ear cup on the right ear.
3. Adjust the headphones so that the ears are completely inside the ear pads.

The test person should feel even, gentle pressure around their ears and the headband should fit closely to the head.



The headphones are in constant contact with the patient, and should therefore be kept clean. See the cleaning instructions in [Cleaning](#) ► 7.

## 7 Storage and handling

- Do not store the headphones in a position that straightens the headband. If the headband is straightened, it can lose elasticity, and the pressure of the headphones against the ears can be reduced.
- Do not position the headphones so that someone is likely to trip over the cable.

- Do not twist, bend, or damage the cable. Accidental damage and incorrect handling can have a negative effect on the functionality of the device. Contact your supplier for advice.

## 8 Service, cleaning and maintenance

### Service

For the sake of safety and in order not to void the warranty, service and repair of electro-medical equipment should be carried out only by the equipment manufacturer or by service personnel at authorized workshops. In case of any defects, make a detailed description of the defect(s) and contact your supplier. Do not use a defective device.

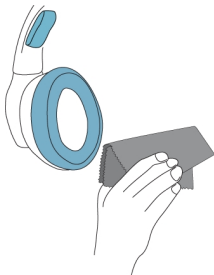
### 8.1 Cleaning

Always follow any established infection control procedures for the setting in which you are working.

**Caution** • *Keep the unit away from liquids. Do not allow moisture inside the unit. Moisture inside the unit can damage the instrument and it may result in a risk of electrical shock to the user or patient.*

Clean the headband padding and the ear pads only with the cleansing agents recommended below. Follow the instructions from the manufacturer of the cleansing agent.

**Caution** • *Do not spray liquids directly on the product. Use a soft cloth dampened with the cleansing agent or disinfectant.*



## Products recommended for cleaning and disinfecting ear pads and headband padding:

Manufacturer	Suitable product
Bode	Bacillol AF; Bacillol Tissues
Dreve	OtoVita Cleaning Spray; OtoVita Cleaning Wipes
Egger	Cedis; Cedis med WB; Cedis N-Pro Cleansing Spray/Wipes
Reckitt Benckiser	Sagrotan hygiene spray; Sagrotan hygiene cleaner

After cleaning HDA 300, let the headphones dry before using them.

## 8.2 Maintenance

HDA 300 requires no preventive maintenance.

### Calibration

When you receive the headphones with your audiometer, they have been calibrated at the factory.

### Annual calibration

The audiometer, headphones, bone oscillators, and sound field speakers must be calibrated once a year by your authorized service department.

**Caution** • Calibration is also necessary if you acquire new headphones or if the climatic conditions change.

## 9 Technical specifications

Type	1098
Transducer type	Dynamic
Ear coupling	Circumaural



Contact pressure	8.8 N ( $\pm$ 0.5 N)
Weight with cable	approx. 490 g
Cable length	approx. 2.2 m
Standards	IEC 60645-1, IEC 60645-2 ANSI S3.6-2010

System-related technical specifications can be found in the user guide for your audiometer.

## 10 Manufacturer

Natus Medical Denmark ApS  
Hoerskaetten 9, 2630 Taastrup  
Denmark  
☎ +45 45 75 55 55  
[www.natus.com](http://www.natus.com)

### 10.1 Responsibility of the manufacturer

The manufacturer is to be considered responsible for effects on safety, reliability, and performance of the equipment only if:

- All assembly operations, extensions, re-adjustments, modifications or repairs are carried out by the equipment manufacturer or personnel authorized by the manufacturer.
- The electrical installation to which the equipment is connected complies with EN/IEC requirements.
- The equipment is used in accordance with the instructions for use.

The manufacturer reserves the right to disclaim all responsibility for the operating safety, reliability and performance of equipment serviced or repaired by other parties.

# 11





## Warning notes

This manual contains information and warnings, which must be followed to ensure the safe performance of the devices and software covered by this manual. Local government rules and regulations, if applicable, should also be followed at all times.

- For the sake of safety and in order not to void the warranty, service and repair of electro-medical equipment should be carried out only by the equipment manufacturer or by service personnel at authorized workshops. In case of any defects, make a detailed description of the defect(s) and contact your supplier. Do not use a defective device.
- Never use the headphones on broken skin.
- The product generates magnetic fields - also when not in use. Always maintain a distance of at least 10 cm (3.94 inches) between the ear cups and a cardiac pacemaker or implanted defibrillator.
- Keep the unit away from liquids. Do not allow moisture inside the unit. Moisture inside the unit can damage the instrument and it may result in a risk of electrical shock to the user or patient.
- Do not expose the device to extreme temperatures (close proximity to a heater, extended exposure to sunlight, etc.). Noncompliance can have negative effects on performance or cause degradation of device components.

## 12

## Definition of symbols

	<p>Electronic equipment covered by the Directive 2002/96/EC on waste electrical and electronic equipment (WEEE).</p> <p>All electrical and electronic products, batteries, and accumulators must be taken to separate collection at the end of their working life. This requirement applies in the European Union. Do not dispose of these products as unsorted municipal waste.</p> <p>You can return your device and accessories to Natus Medical Denmark ApS, or to any Natus Medical Denmark ApS supplier. You can also contact your local authorities for advice on disposal.</p>
	<p>Manufacturer and date of manufacture.</p>
	<p>Complies with Medical Devices Directive 93/42/EEC and RoHS Directive (2011/65/EC).</p>
	<p>Consult instructions for use.</p>

