Otosuite®

Otosuite

Installation Guide

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natus®

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Technical support
Please contact your supplier.

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This section describes how you perform a standard installation of Otosuite and Otosuite® Reports, and describes how you configure Otosuite before use.

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This section describes how you customize the installation of Otosuite.

You can add a number of special features such as speech material, special tests and other related applications to the installation.

See Customized installation ► 10

2 Standard installation

Standard installation

This section describes how you perform a standard installation of Otosuite and Otosuite® Reports, and describes how you configure Otosuite before use.

To configure Otosuite, see Configuring Otosuite ► 9.

After installing Otosuite, install your test device. See your device manual for detailed instructions.

Customized installation and installation of special features

If you wish to customize the installation, or install specific applications separately, see Customized installation ► 10.

2.1 System requirements

- 1.5 GHz processor or higher (2 GHz recommended)
- 2 GB RAM (4 GB recommended)
- 8 GB free disk space for installation of the Otosuite software.
- Microsoft® Windows® 7 SP1 (32 or 64 bit) or Microsoft Windows 8.1 (64 bit) or Microsoft Windows 10 (32 or 64 bit)
- All Microsoft Windows updates from Microsoft Update (or .NET 4.6 installed)
- USB port for connecting accessories, v. 2.0 or higher
- DVD drive (only for a minority of features)
- 32 bit color display, 1024x768 screen resolution
- For Noah mode operation: NOAH 3/NOAH 3 for ENTs (version 3.7 or higher), or Noah 4 (version 4.1 or higher), or Otobase®.

> *Note • If you wish to use speech material supplied by Otometrics, check the Speech Material installation medium to make sure that your PC has the additional disk space required.*

2.2 Standard installation sequence

> *Caution • Do not connect the test device and accessories before you have fully installed the software.*

1. Noah/Otobase

Standard installation

• If you are performing a standard installation of Otosuite, and if you plan to use Otosuite with Noah or Otobase, first install the Noah or Otobase software. Doing so will enable you to store measurements with client information in Noah/Otobase.

If you install Noah/Otobase after Otosuite has been installed, you can register Otosuite as a module under Noah/Otobase by running **PostNOAHInstall**. See Installing Noah or Otobase after the Otosuite installation ► 14.

2. Integrated Otometrics speech material

To install the Integrated Otometrics speech material from the supplied speech material medium, see Installing speech material ► 13.

3. Otosuite

If Noah/Otobase is installed on the computer, Otosuite will automatically be installed under Noah/Otobase.

2.3 Launching the installation application

> *Note • Otosuite cannot be installed on a shared network drive.*

Starting the installation from a zip file

1. Right click on the zip file and select **Extract All...**
2. Make sure that the check box **Show extracted files when complete** is selected.
3. Click the **Extract** button.

    The installation files are extracted and listed in Windows Explorer.

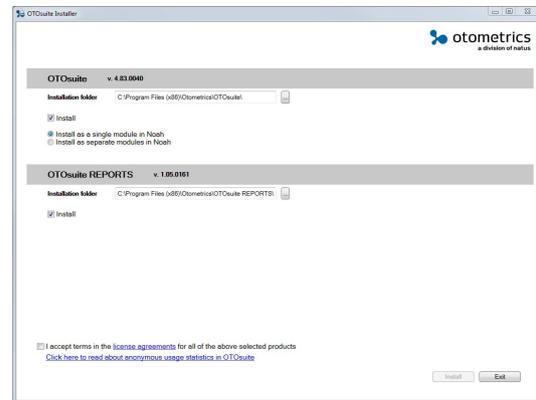**Starting the installation from a DVD or a memory stick**

1. Insert the installation DVD or memory stick into the PC.
2. If the content does not display automatically, navigate to the relevant drive in Windows explorer.

Launching the installation

1. Close all Windows programs to avoid conflict with the installer software.

2. Do not connect any accessories before the installation is completed.

3. Double-click the file **OTOsuiteInstaller** to launch the installation.

    Windows 10 users: right-click the file and select **Run as administrator**.

4. To perform a standard installation, see The installation process ▶ 6

5. To customize the installation, see Customized installation ▶ 10.

2.4 The installation process

1. Launch the installation application. See Launching the installation application ▶ 5

2. The installation application screen is shown.

3. Click to select whether you wish to install Otosuite.

4. Click to select whether you wish to install Otosuite as one module in Noah/Otobase, or as separate modules:

    –   **Install as a single module in Noah**:

        The Otosuite modules will be installed under a single Otosuite icon in Noah/Otobase.

    –   **Install as separate modules in Noah**:

        The Otosuite modules will be installed as separate icons in Noah/Otobase.

        If you wish to install Noah/Otobase after installing Otosuite, see Installing Noah or Otobase after the Otosuite installation ▶ 14.

5. Click to select whether you wish to install Otosuite® Reports as part of the Otosuite installation.

    If needed, you can run the installation application at a later date to install Otosuite® Reports.

6. Click to accept the license agreements.

7. If needed, click to view information about the usage statistics tool. For a description of the tool and how to disable the tool see Configuring Otosuite ▶ 9.

8. Click **Install** to start the installation.

9. When the installation is completed, click **Finish**.

2.5 Launching Otosuite

How you launch Otosuite depends on how you want to run Otosuite.

•   with Noah/Otobase

•   in stand-alone mode

Connected to the Noah/Otobase database

How you launch Otosuite with Noah or Otobase depends on how Otosuite is configured.

Launching Otosuite directly
1. Click the Otosuite icon on the PC desktop or in the Windows **Start** menu (**All Programs** > **Otometrics** > **Otosuite**). The Noah or Otobase patient browser appears. 2. Select a patient. Otosuite is launched and is connected to the Noah or Otobase database.

Launching from the Noah or Otobase Module Selection
1. Launch Noah or Otobase. 2. In the Module Selection in Noah or Otobase, click to select the Otosuite module that you wish to open.

Launching from a Noah or Otobase measurement
1. Launch Noah or Otobase and select a measurement. Otosuite opens in the module that is best suited to display the measurement.

Stand-alone

You can run Otosuite in stand-alone mode in the following situations:

- Neither Noah or Otobase is installed on the PC.

- Otosuite is installed on a PC with Noah/Otobase, but is not connected to the Noah/Otobase database. See the Otosuite Installation Guide for how to connect to the Noah/Otobase database.

Launching Otosuite in stand-alone mode	
1. Launch Otosuite by clicking the Otosuite icon on the PC desktop (you may need to create the shortcut first).	
or	
2. Launch Otosuite by clicking the Otosuite icon in the Windows **Start** menu (**All Programs** > **Otometrics** > **Otosuite**).	

Configuring the Otosuite setup

- The first time you launch Otosuite, the Configuration Wizard is shown automatically.

- If you have updated Otosuite, select **Tools** > **Configuration Wizard**.

- See Configuring Otosuite ► 9.

2.5.1 Otosuite icons in Noah/Otobase

Depending on how Otosuite was installed, the Noah/Otobase **Module Selection** displays either one Otosuite icon, or an icon for each module in Otosuite. If there is only one icon, it launches Otosuite according to your start-up settings,

otherwise, the icon you select will open the corresponding module in Otosuite.

To change how many Otosuite icons are displayed in Noah/Otobase, see The installation process ► 6.

Otosuite module	Noah/Otobase icon
Launch Otosuite according to your start-up settings	
The Video Otoscopy module	
The Otoacoustic Emissions module	
The Immittance module	
The Audiometry module	
The Counseling & Simulations module	
The PMM module	
The HIT module	

2.6   Otosuite manuals

After you install Otosuite, you can find Otosuite manuals and related documentation on your PC. In the **Start** menu, open **Otosuite Manuals**, which contains an overview with links to all manuals.

See also the manuals and online Help relating to test devices and specific test modules in Otosuite.

> *Note • Make yourself familiar with the test device, Otosuite, and their functions and settings, before you start testing.*

2.7   Installation of test devices

See the "Installation" section in the manual for your device.

If you connected a test device before installing Otosuite

> *Caution • Do not connect the test device and accessories before you have fully installed the software.*

If you connected a test device before installing Otosuite, you may experience problems, either because Windows has installed an incorrect driver for the device, or no driver has been installed.

To solve the problem:

1. Locate the device in the Windows Device Manager.

2. Right-click on the name of the device and then click to update driver software. Allow Windows to search automatically for the correct device driver.

> **Important •** *A device may appear in the Device Manager more than once if it has more than one driver. Repeat the above procedure for each instance (for example, "SoundHub 100 Headphones + Mic." and "SoundHub 100 Speakers").*

2.8 Configuring Otosuite

This section describes how you configure Otosuite before use.

The Configuration Wizard guides you through the process of customizing the various features and functions that apply to Otosuite.

1. In Otosuite, select **Tools** > **Configuration Wizard**.

2. To configure general Otosuite functionality, click **Next**.

3. To connect your test device to the specific module and set up module-specific functionality, click on **Configure...** next to the module you wish to configure.

General configuration is described in the Otosuite manuals.

> **Note •** *The sound card setup set by the Otosuite installation may change the default Windows sound card setup. Use the Windows functionality to change the default setup.*

2.8.1 Entering license keys

Your license keys are included in the Otosuite installation package. To enter your license keys in Otosuite, do the following:

1. In Otosuite, select **Tools** > **Configuration Wizard**.

2. Click on **Configure...** next to the module you wish to enter your license keys for.

3. Click **Next** until the **License Keys** dialog is shown. Enter your license keys and click **Finish**.

2.8.2 Usage Statistics

During the installation of Otosuite, a tool is installed that enables you to share anonymous usage statistics with Otometrics to help us better understand the needs of our customers, and to improve our products and services.

The tool sends anonymous usage statistics to Otometrics when the PC is connected to the internet.

You can disable/enable the usage statistics tool at any time in the Otosuite Configuration Wizard:

1. In Otosuite, select **Tools** > **Configuration Wizard**.

2. Click **Next**.

3. In the **Preferences** screen, click to disable/enable the check box **Allow anonymous usage statistics**.

Usage statistics include the following

Only anonymous statistics related to the usage of the Otosuite software is included, for instance how often different features are used, and how often buttons and menu items are clicked. This means that the tool does not send any personal or patient data, nor will any information identifying the PC or any other type of usage related to the PC be included.

2.8.3 Connecting Otosuite to Noah or Otobase

> *Note • The following applies only if Noah or Otobase is installed on the PC.*

Connect Otosuite to a database at start-up

You can configure Otosuite to connect automatically to the Noah or Otobase database, regardless of whether you launch Otosuite directly or from Noah or from Otobase.

1. In Otosuite, select **Tools** > **Configuration Wizard**.

2. Click **Next** until the Noah/Otobase screen is shown.

3. Enable the option **Connect Otosuite to a database at start-up**.

   The available databases will be shown below.

4. Select the database that you wish to connect to.

5. Restart Otosuite to enable the selection.

Launching a non-Otosuite module from Noah or Otobase

If you launch a non-Otosuite measurement module from Noah/Otobase, this will force Otosuite to close. You can set up Otosuite to close without prompting.

If you have unsaved data in Otosuite, you will always be prompted to save data before Otosuite closes.

1. In Otosuite, select **Tools** > **Configuration Wizard**.

2. Click **Next** until the Noah/Otobase screen is shown.

3. Enable the option **Close Otosuite automatically** if you launch a non-Otosuite measurement module. (You will be prompted to save any unsaved data.)

Enable FastView (If supported by Noah/Otobase)

FastView data can be saved in Noah or in Otobase. The option gives access to browse or view summaries of data quickly without launching the individual modules from where the data was saved.

1. In Otosuite, select **Tools** > **Configuration Wizard**.

2. Click **Next** until the Noah/Otobase screen is shown.

3. Select the option **Enable FastView**.

3   Customized installation

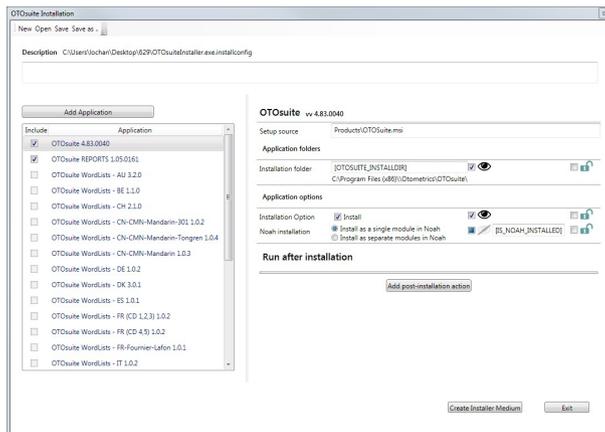**Customized installation and installation of special features**

This section describes how you customize the installation of Otosuite.

You can add a number of special features such as speech material, special tests and other related applications to the installation.

Launching the OTOsuiteInstaller executable file in configuration mode

1. To launch the **OTOsuiteInstaller** executable file in configuration mode, navigate to the folder containing the executable file in a DOS command prompt window: type **OTOsuiteInstaller.exe /configure**.

Customizing the installation

- The **Description** field

    This field contains a description of the configuration file that is currently being edited, if such a description exists.

    If needed, enter a text of your choice to supplement the installation or the customer. This may help maintenance staff identify the file.

- The **Add Application** button

    Click the **Add Application** button to add extra **.msi** modules or applications to the installation bundle.

Note • *If you reference to applications that are placed in user-dependent folders such as User > Desktop, User > Downloads, or User > My Documents, and you run the installation without having created the installer medium, the installer will fail to reference to these applications during installation on another PC.*

1. Check the desired check boxes to select the features you wish to include in the installation. This dialog verifies that all the referenced **.msi** files exist.

    For each application you can select/deselect a range of preferences in the right side of the screen.

    – A checkbox for selecting/deselecting the application or feature in the installation setup.
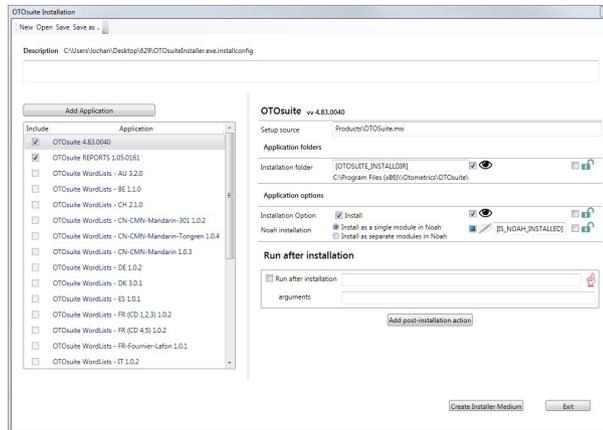
    – Hide/Show:
      This option hides the feature or shows the feature in the list in the **OTOsuiteInstaller** application.

    – Lock/Unlock:
      This option locks or unlocks the feature in the list in the **OTOsuiteInstaller** application, making it non-selectable or selectable for the person performing the installation.

2. In the **Run after installation** panel you can click **Add post-installation action** to add applications or extra files such as batch files to be run after the installation.

3. **Create Installer Medium**

   When you have added applications or extra files to be run after the installation, click the button **Create Installer Medium** to open a dialog where you can create a folder of your choice, and save the files and file structure to be shipped to the person performing the installation.

4. When you have set up the applications and modules you wish to include in the installation, save the customized file in the folder where the file **OTOsuiteInstaller** is located.

   The default name of the customized file is **OTOsuiteInstaller.exe.installconfig**. If you save the file under another name in the installer folder, the installer will not use the configuration file.

Note • You can edit and save the file OTOSuiteInstaller.installconfig in a pre-defined structure, saving you from repeating the layout process when no additional dependencies have been added.

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5. Click **Exit**.

6. To install the customizations, run the file **OTOsuiteInstaller** as described in The installation process ▶ 6.

3.1 Customized installation sequence

Caution • Do not connect the test device and accessories before you have fully installed the software.

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1. Noah
• If you plan to use Otosuite with Noah, first install the Noah software. Doing so will enable you to store measurements with client information in Noah.
If you install Noah after Otosuite has been installed, you can register Otosuite as a module under Noah by running **PostNOAHInstall**. See Installing Noah or Otobase after the Otosuite installation ▶ 14.

2. Integrated Otometrics speech material
To install the Integrated Otometrics speech material from the supplied speech material medium, see Installing speech material ► 13.

3. Otosuite
If Noah/Otobase is installed on the computer, Otosuite will automatically be installed under Noah/Otobase.

3.2   Installing speech material

Installing speech material using the Otosuite Installer

> **Note •** *If you wish to use speech material supplied by Otometrics, check the Speech Material installation medium to make sure that your PC has the additional disk space required.*

1. Follow the instructions for installing extra features: see Customized installation ► 10.

Installing speech material separately

1. Insert the Otosuite Speech Material Installation disk in your disk drive.

    The Installation Wizard will start up automatically. If it does not, activate the Windows **Run** command and type **d:\setup.exe**, where **d:** denotes your disk drive.

2. The Installation Wizard will guide you through the installation.

After installing the speech material

When you have installed the speech material, you can select the speech lists in the relevant Otosuite test modules.

See the specific test device manuals for instructions on how to use the speech material.

3.3   Installing Otosuite® Reports separately

If you have not installed Otosuite® Reports in the general Otosuite installation, you can do so separately.

You can install Otosuite® Reports either on a PC with or on a PC without Otosuite or Otobase installed.

If you have created report templates on a separate PC, you must copy the templates to the PC where Otosuite or Otobase is installed. See the Otosuite® ReportsUser Guide.

System requirements

On a PC without Otosuite or Otobase installed
• 1.5 GHz processor or higher (2 GHz recommended) • 1 GB RAM (2 GB recommended) • 1 GB free disk space for installation of the software. Additional disk space is needed for installation of prerequisites. • Microsoft® Windows 7 (32 or 64 bit), or higher • 32 bit color display, 1024x768 screen resolution

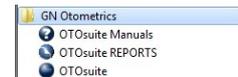| On a PC with Otosuite or Otobase installed |
| --- |
| If you install Otosuite® Reports on a PC where Otosuite or Otobase is already installed, see the Otosuite or Otobase system requirements for detailed information. |

Installation procedure

• Follow the instructions for installing extra features: see Customized installation ► 10.

Launching Otosuite® Reports

• Otosuite® Reports is listed in the Otometrics program folder in the Windows "All Programs" list.

3.4   Installing Noah or Otobase after the Otosuite installation

If you wish to install Noah or Otobase after Otosuite, then Otosuite will not be registered in Noah/Otobase and it will not be possible to launch Otosuite from Noah/Otobase.

1. To install Noah or Otobase follow the instructions for installing extra features: see Customized installation ► 10.

Adding Otosuite to Noah/Otobase after installation

You can use the **PostNOAHInstall** tool to add Otosuite to Noah/Otobase or to change the way Otosuite is shown in Noah/Otobase.

Running the PostNOAHInstall tool

1. Navigate to the folder where Otosuite is installed (the default folder is c:\Program Files\Otometrics\Otosuite).

2. Double-click on **PostNOAHInstall**.

3. Select how you wish Otosuite to be shown in Noah/Otobase, and then click **OK**.

4   Uninstalling Otosuite

To uninstall Otosuite

1. If Otosuite is active, exit Otosuite.

2. Use the Windows functionality for uninstalling programs.

5 Cybersecurity

Cybersecurity is the protection of computer systems from theft or damage to their hardware, software or electronic data, as well as from disruption or misdirection of the services they provide.

This section describes how Otosuite implements protection against cybersecurity threats and recommendations for customer site implementations.

A Manufacturer Disclosure Statement for Medical Device Security (MDS2 Form) is available on request.

The cybersecurity at the customer site may be improved by combining Otosuite security implementations with local system setup.

The customer has the full responsibility for the chosen cybersecurity implementation.

5.1 Otosuite - Cybersecurity Implementations

- Otosuite supports the use of Windows security. The program requires standard Microsoft Windows user security priv-ileges for daily use
- Otosuite supports the use of Microsoft Windows screen savers to prevent showing confidential information on unat-tended systems
- For data stored in the NOAH database, access will require verification of user credentials
- The application DLLs are signed and cannot be replaced by malicious code.

5.2 Customer - Recommended Implementations

The final security setup at the customer site may be improved by following best security practices and policies. This includes, but is not limited to, the recommendations provided in the following sections.

5.2.1 Establish a secure environment

- Prevent physical access to the system from unauthorized persons.
- Connect the system on secured networks only. Don't use the system on a wide-open network, including Wi-Fi, Bluetooth, etc. based networks. This also applies to stand-alone systems.
- Keep the network software updated with the latest patches.
- Use encrypted data communication over "less safe" network segments (IPsec, VPN...).
- Make frequent backups of the system. Store the backup on a safely stored device.
- Enforce that all resources within the network (shares, printers, other equipment) can be accessed by authenticated users only.
- Protect the system with updated antivirus.
- Use the Windows firewall at all times.

5.2.2 Secure access to Windows systems

- Use domain-controlled network and domain-based authentication methods

- Enable auditing of system use, including Windows logins to the operating system
- Consider using two-factor authentication for user logins.

5.2.3   Data confidentiality

- The Windows system should be locked automatically in case of user inactivity
- Users should lock the system manually if they leave it unattended.

5.2.4   Minimize potential data leaks

- Do not install any 3rd party software which is not intended for use with the application. Unknown software can possess a potential security risk.
- Encrypt drives that contain archived information. Make a backup of the archived data stored on another safely stored device.
- Avoid using acquisition systems that are in contact with patient data as network servers for other functionalities.
- Disable unnecessary Windows services designed for non-work related features. Examples: Messenger, CD burning services (if not used), Netmeeting, Remote Sharing, Remote Desktop Help Session Manager, Dropbox, Skype, email, etc.

5.2.5   Control user access

- Use password policies to ensure passwords are complex, non-repeated and regularly changed
- Consider assigning lowest possible user rights for the users, as no special elevated rights are required to use the application.

5.2.6   Establish secure organizational policies/framework

Many cyberattack threats originate from email and access to malicious websites.

- Avoid using dedicated acquisition systems connected to a patient for another purpose. Examples are: using it as an office workstation for reading/processing emails, browsing on the web, etc.
- Use personal user accounts only to ensure that the system can identify the user
- Do not use known shared accounts in the organization for access to systems that contain confidential data
- Make sure only trained users have access to the application.

5.2.7   Implement legal security regulations

- The medical software is subject to local regulations. Use the software according to the regulations.

5.2.8   Working with Windows updates and ensuring system availability

The Microsoft Windows operating system is regularly patched for security vulnerabilities. The following workflow is recommended when updating the system, to ensure high availability of the system:

- Install the updates outside of normal daily working hours to prevent affecting the daily work
- Check the system after an update to ensure that all parts of the system are working as intended.

6 Manufacturer

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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 man-ufacturer 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.