

A&E®Coala

auditory speech sounds evaluation

Step by step manual



OTO

CONSULT

EXPERT IN USER-DRIVEN SOFTWARE

Otoconsult™ is committed to developing and supporting audiological application software for the audiologist and the ENT practitioner

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Introduction



A&E (pronounced [eis] like the play card ace) is a set of psycho-acoustical tests to be used by the professional audiologist. It is conceived to test hearing impaired children and adults who are typically aided with a conventional hearing aid, cochlear implant or other device. Most tests are speech and language independent and supraliminal (above-threshold).



The A&E Coala mode is a simplified mode with a limited number of tests to be presented through the calibrated AUX entry of the Cochlear™ Nucleus® speech processor¹.



A&E Coala comprises 2 tests:

- Speech Audiometry with Words in quiet
- Speech Audiometry with Sentences in noise



A&E contains an underlying database keeping track of each patient's test results. This database however has limited functionality. For full data management functionality, it is recommended to use Audiqueen in combination with A&E®. Audiqueen manages all kinds of audiological and other ENT test results that can be connected to electronic medical record (EMR) software. More information can be found on the otoconsult website (<http://www.otoconsult.com>).

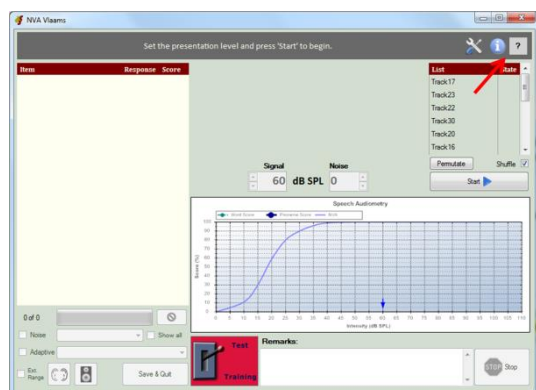


As with all software, it is extremely important to be aware of the vulnerability of digital media. Therefore it is of paramount importance to make **regular backups** of your data (saved test results) and to make sure that the backups are stored in a safe place. It is good practice to have a written back-up procedure that takes care of all your data and to enforce this procedure to be carried out on very regular basis. Otoconsult cannot accept any responsibility for lost data.

¹ Cochlear™ is a trademark and Nucleus® a registered product name, both owned by Cochlear Ltd. Throughout the manual, the terms Cochlear and Nucleus will be used to refer to these terms.

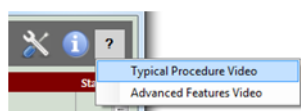
Help

Instructional videos



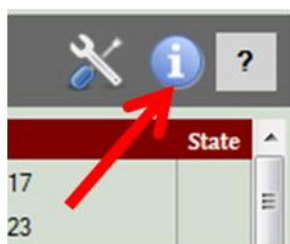
The speech audiometry test comes with instructional videos. They can be found under the help icon ? at the top of each test window. You need to be connected to the internet for this.


These videos cover the features of the full A\$E, a number of which may not be available in A\$E Coala.



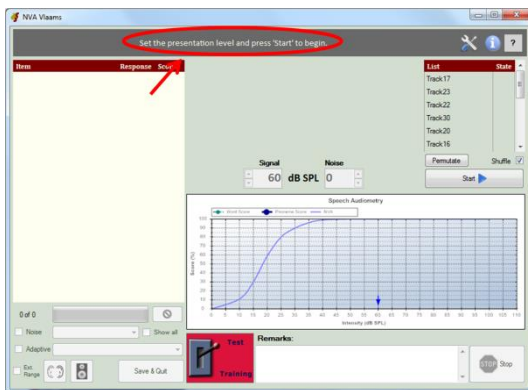
This test-specific help function contains a video explaining the typical test. It is highly recommended to take the time to watch this video before performing the test.

Short Instructions



In addition, short instructions can be found under the  icon. Click on the icon and scroll through the instructions.

Dynamic Instructions



Finally, dynamic instructions appear on the screen during the test execution.

Install A\$E Coala

Pre-requisite

Custom Sound

Make sure you have the latest version of Cochlear's Custom Sound installed (v4.3.00.0450 or later). Connect Cochlear's programming POD (the corresponding FTDI drivers should install automatically).

PC with soundcard

Make sure your PC (see [System Requirements](#)) has an internal or external soundcard.



It is recommended to run A\$E on desktop computers rather than on tablets or mobile devices, because the calibration on the latter devices may be problematic.



If the soundcard comes with a software application to enhance or customize the sound, make sure these features are turned off.



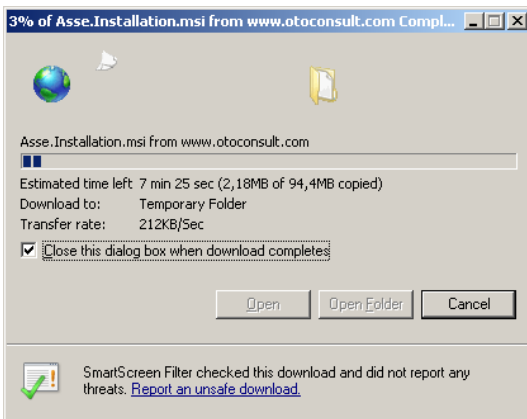
Make sure that while playing A\$E, no other sounds (music, movie, warnings, email messages, etc) are being played by other applications. It is recommended to turn off all other applications while executing A\$E tests.

1. Install A\$E Coala

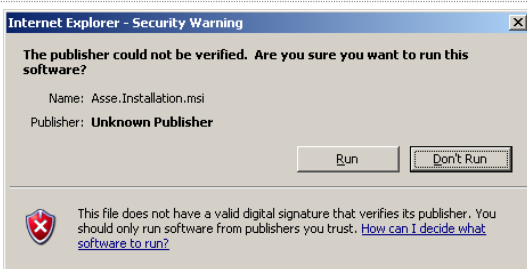


To install A\$E Coala, run the installation file Coala setup.exe from the installation disk or download the installer from the internet-address (URL) that you receive when you purchased the software.

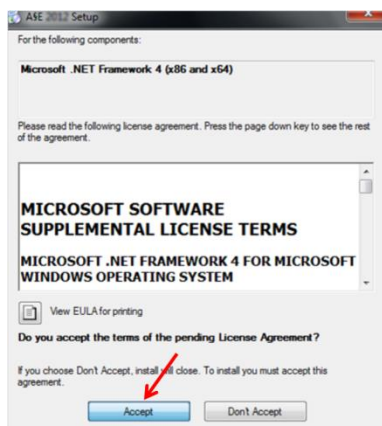
Install ASE Coala



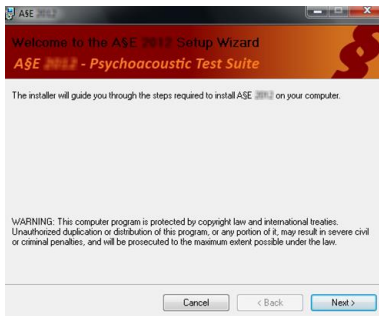
The installation file is being downloaded. Since this is a large file, it may take time.



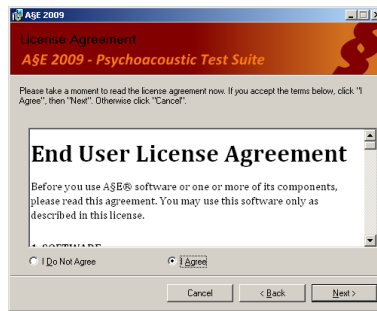
→ Click on **Run**



It may occur that you are asked to install Visual C++ Runtime Libraries or Microsoft .NET Framework first. In this case, accept and be patient... The installation of this application takes a while.

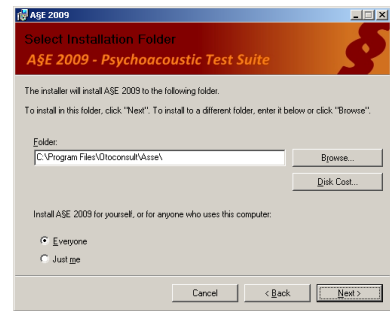


→ Click on **Next**

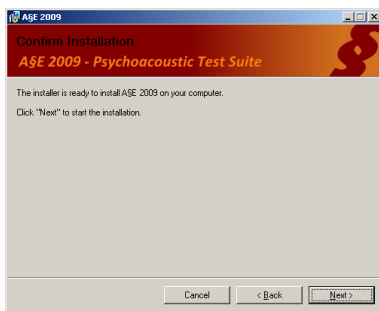


Read the license agreement carefully. If you approve and accept this agreement

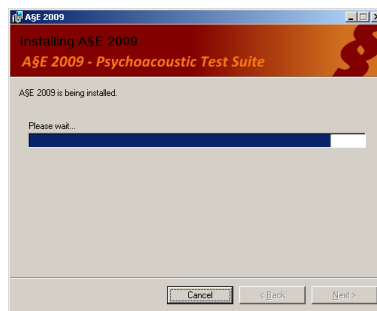
→ Check the "I Agree" button and click on **Next**



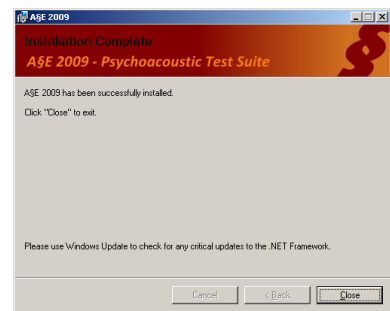
→ Click on **Next**



→ Click on **Next**



Please be patient for a few moments



After successful installation,

→ Click on **Close**

The ASE Coala shortcut appears on your desktop...



Double-click on the icon to open ASE Coala. Since this is the first time, it may take a while before ASE Coala opens. Please be patient ... Should the shortcut not appear on your desktop, you can always retrieve the application in the Otoconsult group of the programs on your PC, through the Windows Start button.

2. Connect a POD

Use a Nucleus Programming Shoe to connect a processor to the Nucleus programming POD (See Cochlear's User Guide for detailed instructions). Use a Nucleus Mains Isolation Cable plus the Personal Audio Cable to connect the processor to your PC Audio output. Make sure that the processor led is orange.



Configuration of the connections. The Nucleus Programming POD is connected with its USB cable to the computer. The programming shoe is clicked on the speech processor. The Nucleus Mains Isolation Cable + Personal Audio Cable connect the processor's AUX entry to the audio OUT of the PC.



Donot unplug or disconnect the POD or the AUX cable or the processor during the execution of a test. Doing so may cause loss of data and it may force A\$E Coala to recalibrate the system.

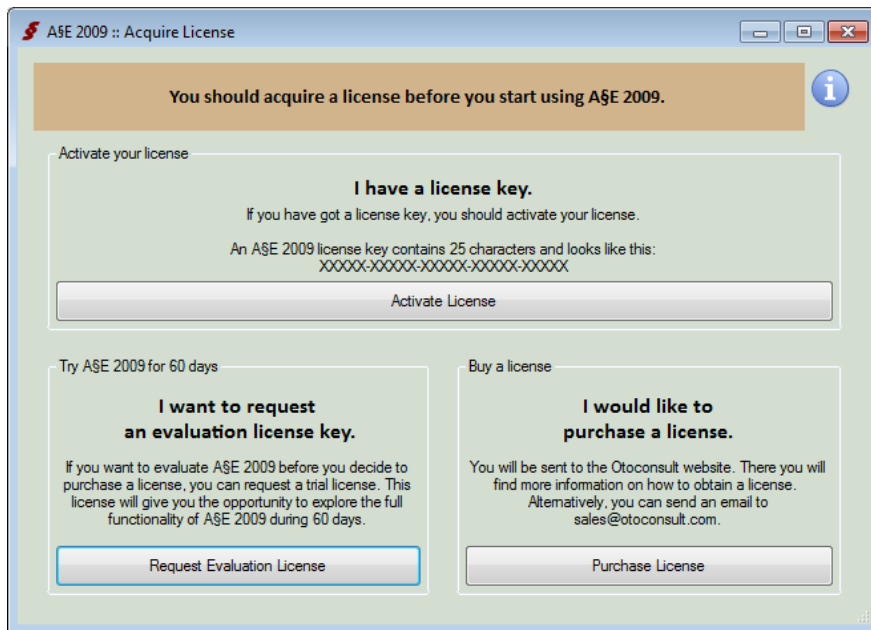
3. Activate the License key

A\$E Coala® needs to be activated by means of a license key. A license key is a series of 5x5 characters and looks like this:

XXXXX-XXXXX-XXXXX-XXXXX-XXXXX

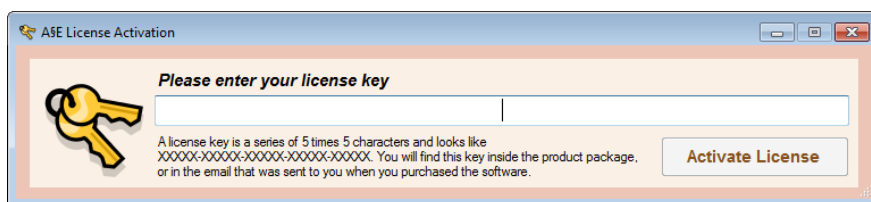
where each x stands for a digit or a character

Contact your Cochlear representative or [Otoconsult](#) to obtain the license key(s).



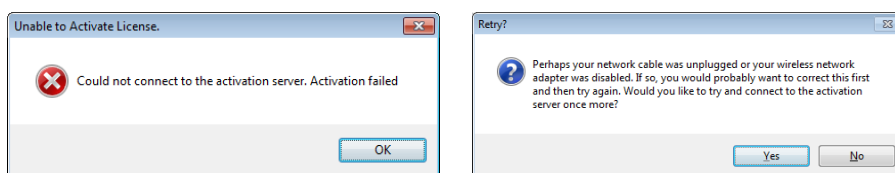
Press Activate License if you have got a license key.

If you have an internet connection, make sure your firewall allows A\$E Coala to connect to the internet!



Enter your license key and Click on Activate License

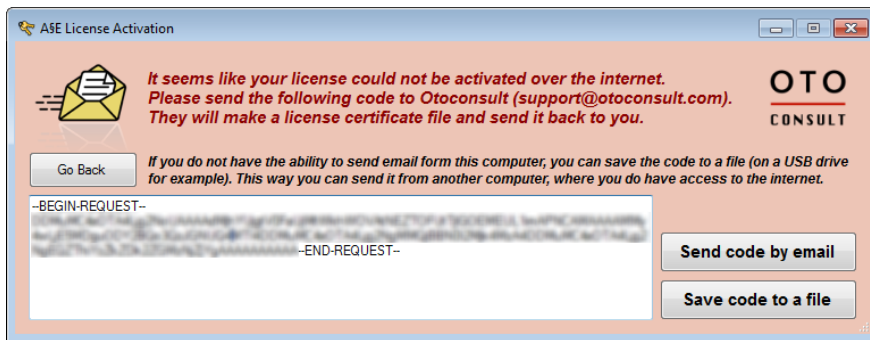
Your license is now activated!



If you received an error message during activation, it is likely that your internet connection is down, or your network administrator has set up a firewall that blocks the Activation wizard from connecting to the internet.

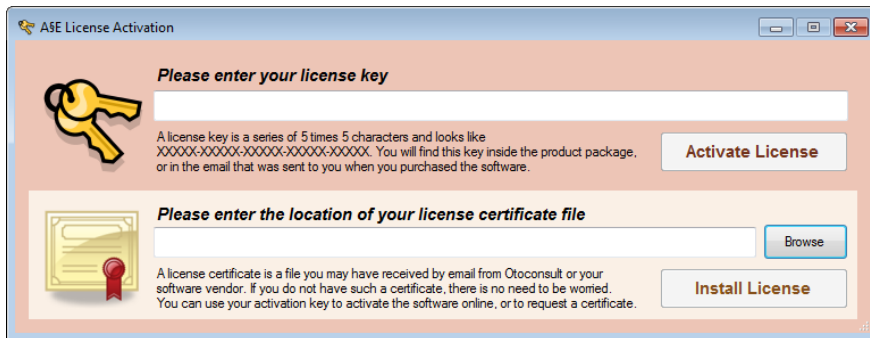
Press Yes to retry or No to proceed to the offline activation procedure.

Install A\$E Coala



A\$E Coala now displays a code that you should send to Otoconsult (preferably by email: support@otoconsult.com). If you are unable to send mail from the computer you are installing A\$E Coala on, you can save the code to a file on a USB drive so you can send it from another computer. Otoconsult will use this string to create a license certificate file which will be returned to you.

Once you have received the license file from Otoconsult, you can proceed. Launch A\$E Coala and return to the license installation. An additional option will now allow you to install your license certificate file.



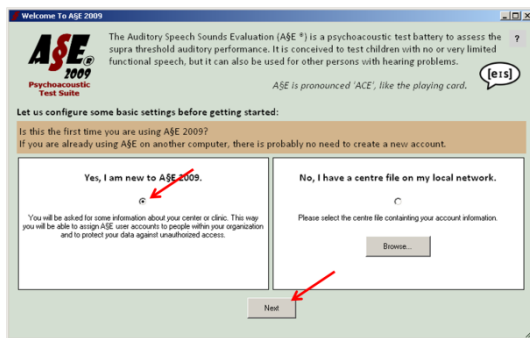
Click Browse to select the location of the license certificate file you received. Then click on Install License

Your license is now activated!

4. Create a Centre and at least one administrator.

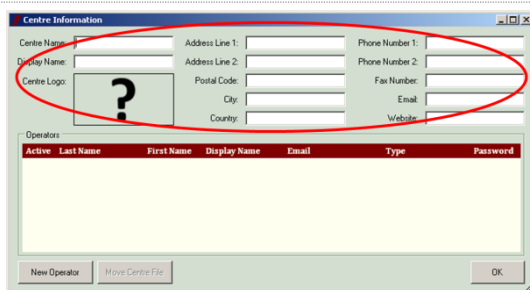
The use of A\$E is organized per clinical centre. In the typical situation a centre has multiple audiologists who have access to the same patientbase. The details of the centre and its audiologists are kept in the centre file.

If this is the first AŞE Coala that you install in your centre:



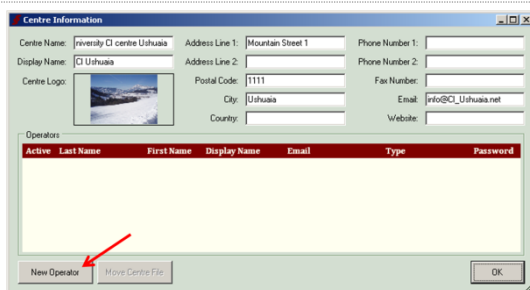
→ Click on **Next**

If you already have AŞE Coala running on another computer in your centre and if you want to have all data available on both computers, you should proceed with the network installation. See [ICT](#) for instructions.



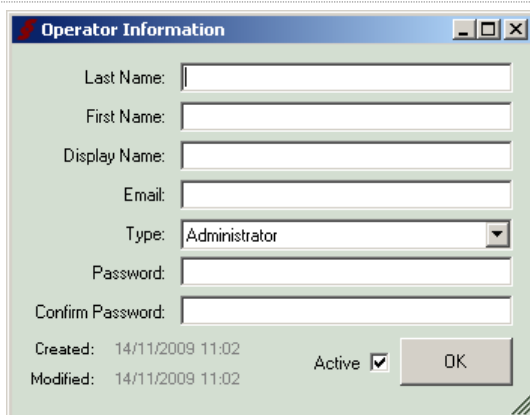
Enter the administrative details of your centre. These are important for the unique identification of your centre.

The data will be transmitted to the AŞE Coala internet webserver. This webserver is managed by Otoconsult with respect of the Belgian Laws on the Protection of Privacy (see <http://www.privacycommission.be/en/>).



Now it is time to create the first operator. This is the audiologist, engineer, speech therapist or other professional who will be granted “administrator rights” within the AŞE Coala software.

→ Click on **New Operator**



Enter the details of this operator. Since this is the first operator, AŞE Coala attributes Administrator rights by default.

Install ASE Coala



Operator Information

Last Name:

First Name:

Display Name:

Email:

Type:

Password:

Confirm Password:

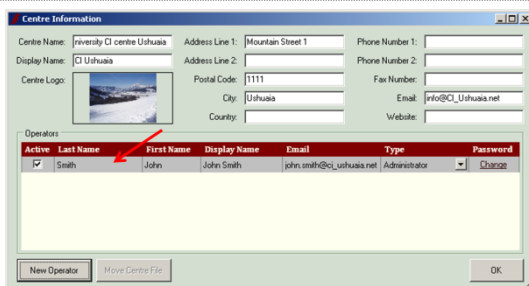
Created: 14/11/2009 11:02

Modified: 14/11/2009 11:02

Active ☒

OK


→ Click on **OK**



Centre Information

Centre Name:

Display Name:

Centre Logo: 

Address Line 1:

Address Line 2:

Postal Code:

City:

Country:

Phone Number 1:

Phone Number 2:

Fax Number:

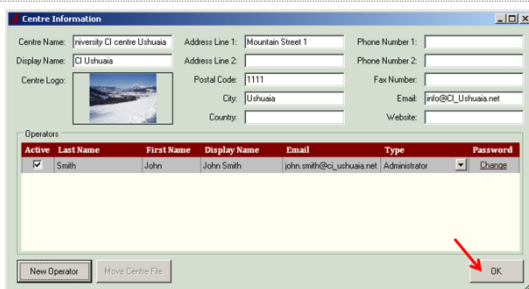
Email:

Website:

Operators

Active	Last Name	First Name	Display Name	Email	Type	Password
<input checked="" type="checkbox"/>	Smith	John	John Smith	john.smith@ci_ushuaia.net	Administrator	<input type="button" value="Change"/>


The new operator appears in the list.



Centre Information

Centre Name:

Display Name:

Centre Logo: 

Address Line 1:

Address Line 2:

Postal Code:

City:

Country:

Phone Number 1:

Phone Number 2:

Fax Number:

Email:

Website:

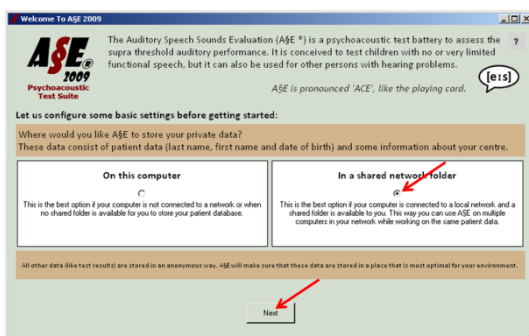
Operators

Active	Last Name	First Name	Display Name	Email	Type	Password
<input checked="" type="checkbox"/>	Smith	John	John Smith	john.smith@ci_ushuaia.net	Administrator	<input type="button" value="Change"/>

You may add other operators now or later (see [Environment-Operator](#))

→ Click on **OK**

ASE Coala keeps patient data in a file, called the Centre File.



Welcome To ASE 2009

ASE 2009
Psychoacoustic Test Suite


The Auditory Speech Sounds Evaluation (ASE ®) is a psychoacoustic test battery to assess the supra threshold auditory performance. It is conceived to test children with no or very limited functional speech, but it can also be used for other persons with hearing problems.

ASE is pronounced 'ACE', like the playing card.

Let us configure some basic settings before getting started:


Where would you like ASE to store your private data?
These data consist of patient data (last name, first name and date of birth) and some information about your centre.

On this computer




This is the best option if your computer is not connected to a network or when no shared folder is available for you to store your patient database.

In a shared network folder



This is the best option if your computer is connected to a local network and a shared folder is available to you. This way you can use ASE on multiple computers in your network while working on the same patient data.

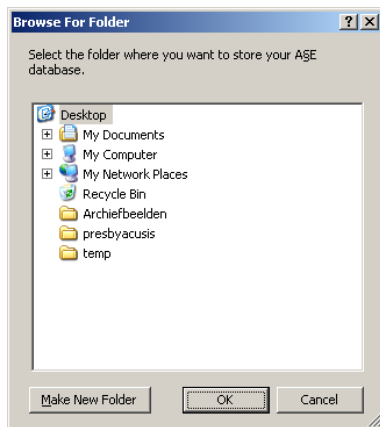
All other data (like test results) are stored in an anonymous way. ASE will make sure that these data are stored in a place that is most optimal for your environment.

 This file is very important. It contains sensitive data which are required to link test results to patient names. You should make backups of this file on a regular basis!!! (See [ICT-backup](#) for instructions)

You can choose where to store this file. It is recommended to do this in a shared folder on your network. The folder should be part of your regular backup procedure and it should be available to other computers where you plan to install additional ASE Coalas.

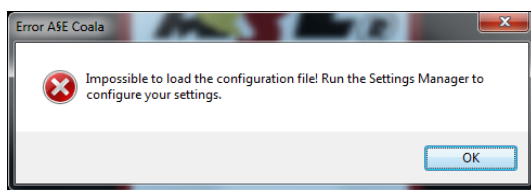
→ Check the appropriate radio-button and Click on **Next**

You can modify the location of this file at any moment in future. See [Environment-Centre](#) for instructions.



Browse for the network directory where you want to store the Centre File.

→ Click on **OK**



Well done ! A\$E Coala has been installed and the license key activated.

Now close this window and proceed with step [Configure A\\$E Coala](#).

Run A\$E Coala



Make sure to reboot (switch off and on again) the Sound Processor before starting A\$E Coala. You should do this every time you modify the MAPs in the Sound Processor.



Connect a processor to the programming POD and take an AUX cable with a Mains isolation cable to connect the processor to your PC Audio output. (See [Connect a POD](#) for the full configuration)



Make sure that the processor led is orange.



Do not unplug or disconnect the POD, the AUX cable or the processor during the execution of a test. Doing so may cause loss of data and it may force A\$E Coala to recalibrate the system.



Make sure that while playing A\$E, no other sounds (music, movie, warnings, email messages, etc) are being played by other applications. It is recommended to turn off all other applications while executing A\$E tests.

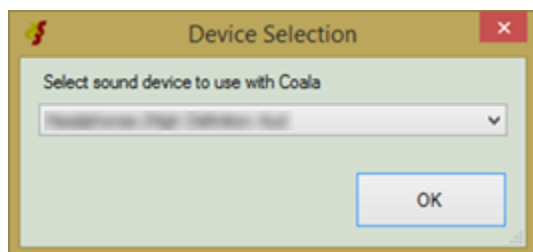
Click on the icon on your desktop to open A\$E Coala.



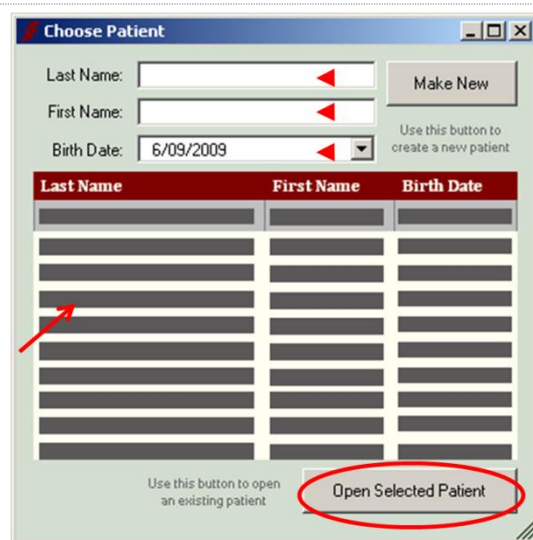
A\$E Coala opens with the log-on screen

→ Enter your username and password and click on OK .

Run A\$E Coala



If this is your first time, and if your computer has more than one soundcard, A\$E invites you to pick the soundcard that is going to deliver the sound to the speech processor.



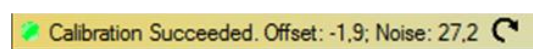
A\$E Coala should retrieve the patient's name from the processor. If not, you can enter the patient's data manually and click on Make New.

➔ Click on Open Selected Patient.



The A\$E Coala window displays:

1. The processor and recipient ID
2. The 4 programs in the processor
3. Test options
4. Test Select buttons
5. Test names
6. A link to open the full A\$E application (this will only work if you have a license for this)
7. Calibration line



The calibration line shows a successful calibration (green light) confirming that A\$E Coala was well calibrated with this particular processor.

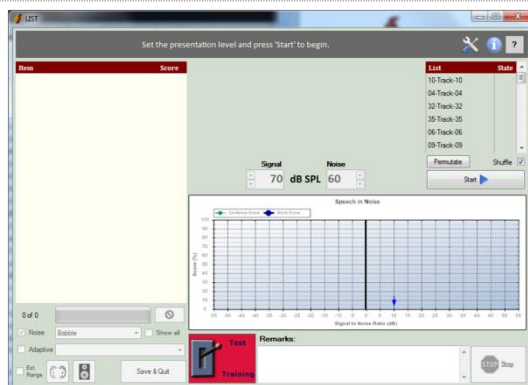
If not, make sure that the correct soundcard has been selected in the configuration tool, disconnect and recon-

nect the processor and the POD and click on the recycle icon to run the calibration once again.



Select the program you want to use, the test option and click on the execute test button of your choice. These are the test options currently available:

- Words in quiet at 50 or 65 dB SPL presentation level.
- Speech test in noise at 5 or 10 dB SNR (Speech level fixed at 70 dB SPL) or with an adaptive scoring algorithm seeking the SRT.



ASE Coala now opens the ASE speech audiometry test.

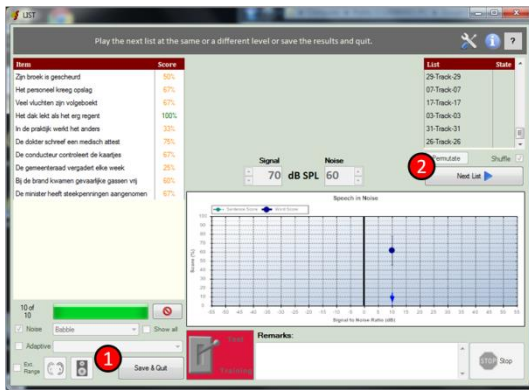
Click Start to begin playing the first signal (word or sentence).



The signal is displayed (1) and you are invited to enter the score (2).

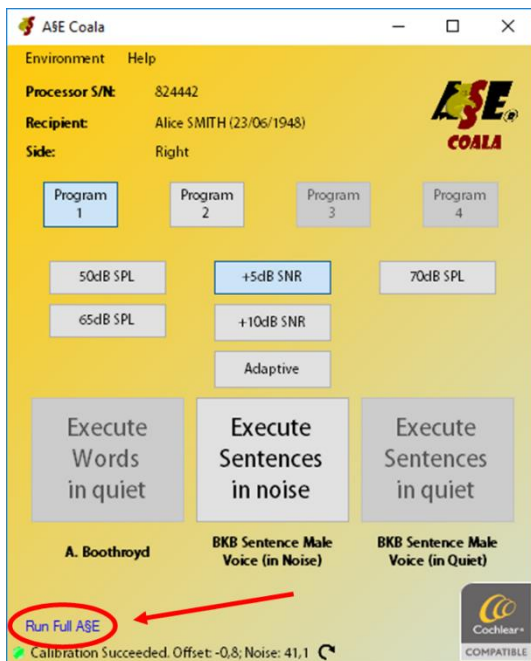
ASE Coala will then play the next signal.

Run ASE Coala



At the end of the list, you can choose to either (1) save the result and quit or to (2) play another list. If saved, the result is saved in the Custom Sound database. If you have a full ASE license, the results are also save to the ASE tables. ASE allows you to view, edit, export, and print results.

Run full ASE

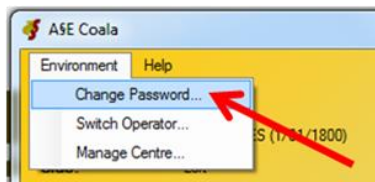


Should you have a licence for the full ASE version with all ASE tests, then you can jump to this version by clicking here...

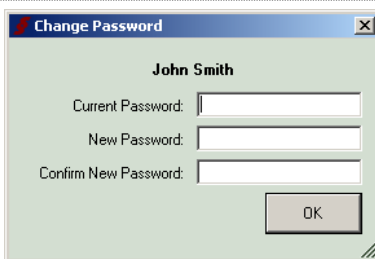
Now all AE tests can be performed with the Coala Link.

Environment

Change Password

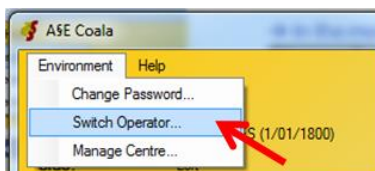


→ In the menu, click on **Environment** and then on **Change Password**.



Enter your current password and the new one and repeat the new one. Then click on **OK** to save.

Switch Operator



→ In the Menu, click on **Environment** and then on **Switch Operator**

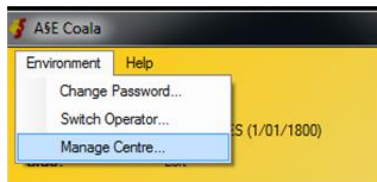


Select another operator from the drop down list, enter the password and click on **OK** to proceed.

Environment

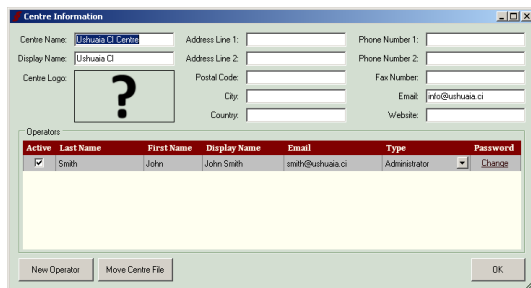
Manage centre

You need administrator rights to access this feature!



→ In the Menu, click on **Environment** and then on **Manage Centre**

Centre

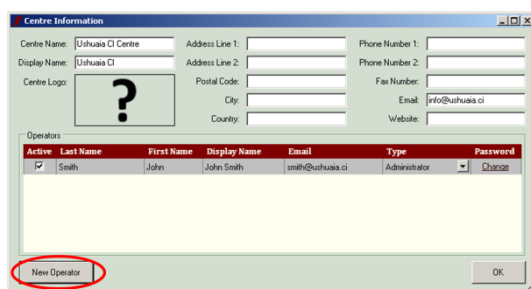


Active	Last Name	First Name	Display Name	Email	Type	Password
<input checked="" type="checkbox"/>	Smith	John	John Smith	smith@ushuaia.ci	Administrator	Change

Enter your centre's full name and other centre details.

The Centre data are very important for good and unique identification of your centre. They are stored in a file called the Centre File. This file contains some properties of your centre, user accounts and privileges. By default these data are stored locally on your PC. To work with multiple PC's in a local network, you need to move this file to a directory somewhere on your network that is accessible to all participating PC's. See the ICT section for more details.

Operator



→ Click on **New Operator** to create a new operator.

Operator Information

Last Name:

First Name:

Display Name:

Email:

Type:

Password:

Confirm Password:

Created: 6/09/2009 16:37

Modified: 6/09/2009 16:37

Active ☒

OK

Enter the operator's details and [click on OK](#) to save.

Centre Information

Centre Name:

Display Name:

Centre Logo:

Address Line 1:

Address Line 2:

Phone Number 1:

Phone Number 2:

Fax Number:

Email:

Website:

City:

Country:

Operators

Active	Last Name	First Name	Display Name	Email	Type	Password
<input checked="" type="checkbox"/>	Smith	John	John Smith	smith@ushuaia.ci	Administrator	Change

New Operator

OK

→ Double-click on an existing operator to modify his/her details.

Operator Information

Last Name:

First Name:

Display Name:

Email:

Type:

Password:

Confirm Password:

Created: 18/08/2009 16:07

Modified: 18/08/2009 16:07

Active ☒

OK

Modify the details and [click on OK](#) to save.

You can uncheck the Active checkbox if an operator is no longer active in your service.

Operator Information

Last Name:

First Name:

Display Name:

Email:

Type:

Password:

Confirm Password:

Created: 18/08/2009 16:07

Modified: 18/08/2009 16:07

Active ☒

OK

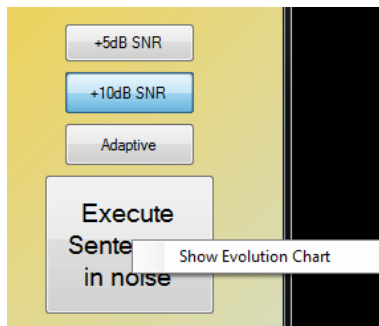
You can change the operator's type by selecting it from the drop-down list. The type defines the authorization level. The administrator can modify the centre details and the type of the other operators. He/She can also design new tests. The Test Designer can design new tests. A regular Operator is not allowed to do so.

View Results

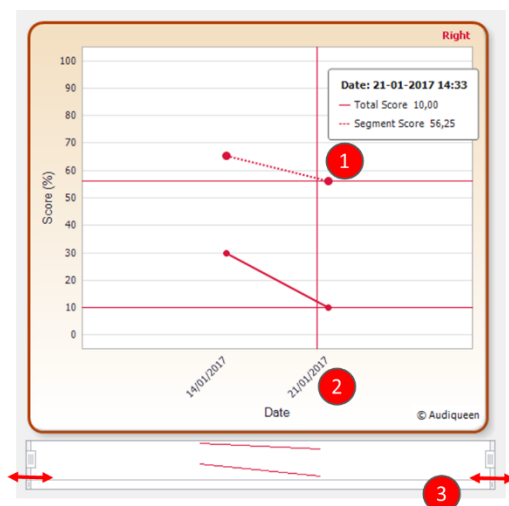
AŞE is conceived to perform psychoacoustic tests. The Coala Link has been developed to present the sounds directly to Cochlear's CP910 speech processor.

For full data management functionality, it is recommended to use Audiqueen in combination with AŞE. Audiqueen manages all kinds of audiological and other ENT test results that can be connected to electronic medical record (EMR) software. More information can be found on the otoconsult website (<http://www.otoconsult.com>).

AŞE Coala comprises a limited result viewer showing the results of a certain test condition on a time axis.



Select the test option and right-click on the Execute test button to open the result viewer.



The evolution graph shows the results (vertical axis) as a function of time (horizontal axis).

- (1) Hover over a point to see more details of the scores.
- (2) Click on the horizontal axis to toggle between calendar date and age

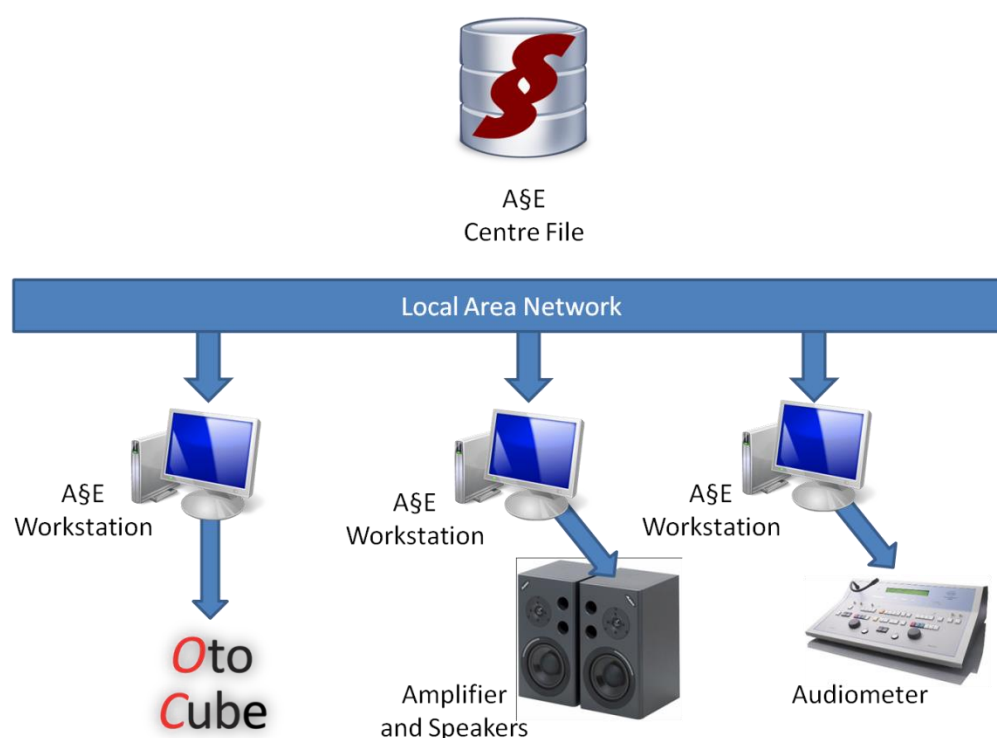


- (3) Use the sliders to zoom in into a specific time period



Introduction

The Auditory Speech Sound Evaluation (AŞE and AŞE Coala®) contain psycho-acoustic tests with supra-liminal auditory tests. They are conceived to test children and adults with hearing problems and aided with a conventional hearing aid or cochlear implant. Most tests are speech- and language independent allowing analytical assessment of the supraliminal auditory capacity. The software runs on a single PC ("stand alone") or in a local network ("LAN") with a shared centre file and several workstations.



System Requirements

AŞE Coala workstations need to have read and write access to the entire folder where the centre file is stored.

System Requirements

Operating Systems: Windows 7 or higher.

Processor: 1 GHz Pentium processor or equivalent (Minimum); 2 GHz Pentium processor or equivalent (Recommended)

RAM: 512 MB (Minimum); 2 GB (Recommended)
Hard Disk: Up to 1 GB of available space may be required
Display: 1024 x 768 (Minimum)
Soundcard: internal or external minimum 16 bit soundcard

Software Prerequisites

.NET Framework 4.0 (included in the installation bootstrapper)
Windows Installer 3.1 (included in the installation bootstrapper)

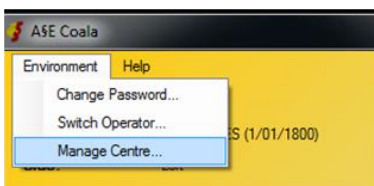
How to work in a local area network (LAN) ?

If you have more than one computer in your centre running AŞE (Coala), you probably want to have all data available at all computers. The file that identifies your centre takes care of this. It is called the centre file and it should be placed in a shared directory somewhere on your network. This directory should be accessible from all computers running AŞE (Coala). The file is created during the installation of AŞE (Coala) on the first computer in your network.

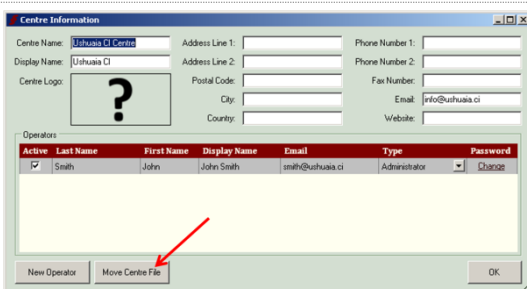
Move the centre file to a shared directory on your LAN

An AŞE user with administrator rights has the option to move the centre file. After doing so, every single computer in your centre where AŞE is used, must be reconfigured to point to the new location.

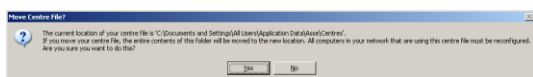
In case you have been working with AŞE Coala on a single computer, it may be that your centre file is located locally on that particular computer. Once you would like to use AŞE Coala on multiple computers and still work on a single database, you will need to move the centre file to a shared location. To do this, open AŞE Coala on the computer where you installed it for the first time. Retrieve and move the centre file to a shared location on your LAN.



→ In the AŞE Coala® menu, click on **Environment** and then on **Manage Centre**

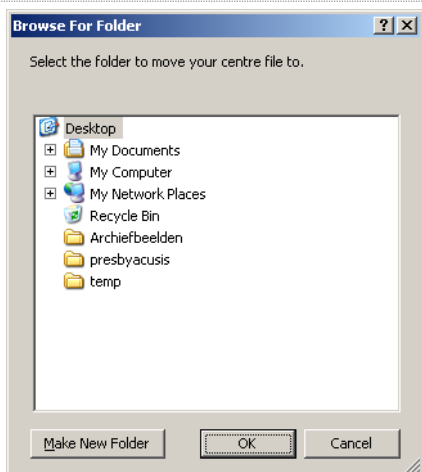


→ To move the centre file, click on **Move Centre File**



For your information, the current location is displayed.

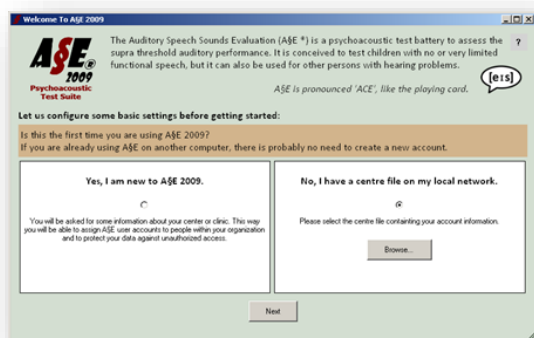
→ Click on **Yes**



→ Browse for the new location.

Connect each next AŞE Coala instance to the shared centre file

When installing the second or further AŞE Coala instance, make sure to link it to the shared centre file on your LAN.



During the installation or the first use of the new AŞE Coala, this window will be displayed.

→ Click the second radio button and browse for the correct centre file

How to make a backup of the data



Remember that AŞE Coala® is not a data management system. Therefore **all test results must be saved**

manually (see [how to save test results](#)) on your own computer or network!!! We recommend these test result files to be included in your daily backup routines.

The A&E Coala web server may keep your latest test results available, but this is a free service for your convenience without any guarantee or commitment.

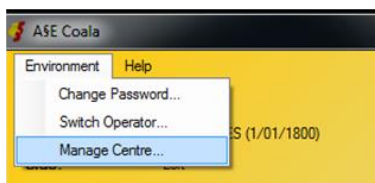


If you are looking for a software package for the management of your audio-logical data, take a look at [Audiqueen®](#).

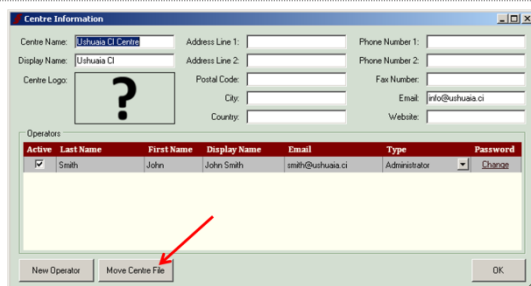
Audiqueen manages all data relevant to the audiologist and ENT-specialist, including audiological data, rhino(mano)metry, images, videos etc. It can be easily linked to your electronical medical file.

Centre file and configuration data

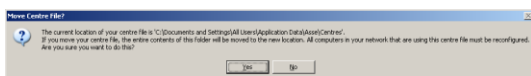
Retrieve the centre file location and make a daily backup.



→ In the A&E Coala® menu, click on **Environment** and then on **Manage Centre**



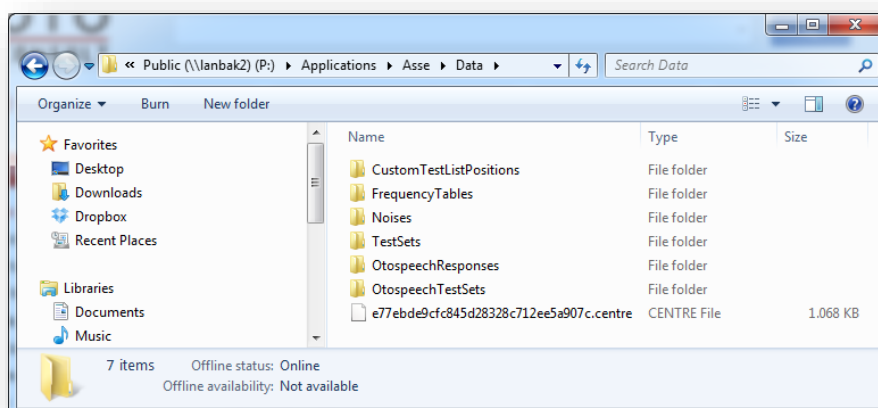
→ To retrieve the centre file location, click on **Move Centre File**



For your information, the current location is displayed.

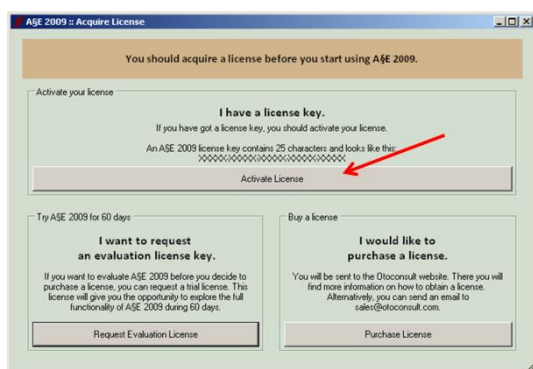
→ Click on **No** and leave this module.

Once you know where the centre file is stored, make sure this file is backed-up regularly, and be sure to include all subfolders that exist in the folder where the centre file resides in your backup too.



How to activate A\$E Coala® license keys?

In the typical scenario, you will have activated this key during the configuration process ([see How to install A\\$E Coala® ? → License activation](#)). In case you installed A\$E Coala® without license activation or if a license has expired, you may get an end of license message when opening A\$E Coala®.



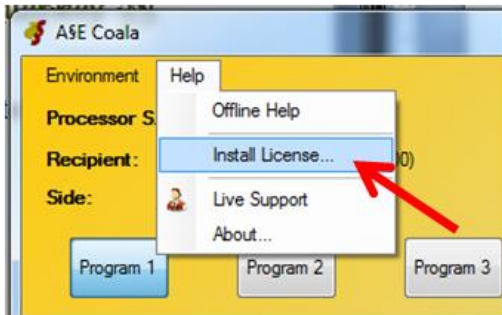
In case you have a valid license key → Click on **Activate License**

Otherwise, click on one of the other keys to obtain a license key.

How to upgrade license keys?

In case of product upgrades, you may receive new license keys that need to be activated. On each A\$E Coala® instance that needs to be upgraded, execute the following procedure.

→ Open the [Install License menu item](#) in the A\$E Coala® Help menu. Follow the instructions under [“How to install A\\$E Coala” > “License key activation”](#).



After having upgraded an A\$E Coala® license, you need to restart A\$E Coala®

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