

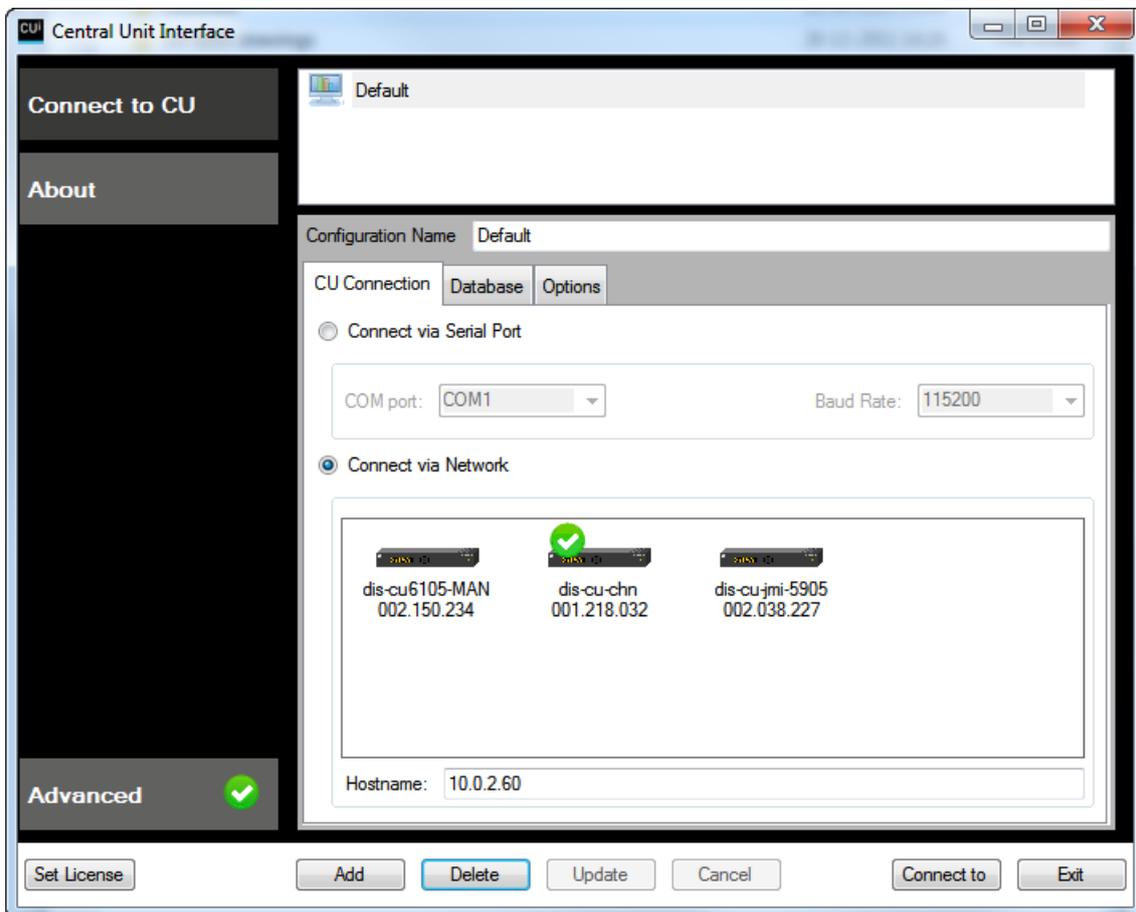


LEGENDARY  
PERFORMANCE™

SW6000 Conference Management Software, Version 6.8

# SW6000

## Installation Manual



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# 1 Introduction

This manual describes how to design a DCS 6000 Conference system using the SW6000 Software Packages, how to install the SW6000 Software Packages and how to setup the system for running the first time.

This document does however not describe the use of the applications like i.e. the CUA and CAA in details. Please consult the relevant manuals.

## 1.1 Minimum Requirements

The minimum requirements for a PC running an application are:

- Min. CPU @ 2GHz
- Min. 2 GB RAM
- Min. 10 GB HD
- USB port if CP 6001 Chip Card Programmer is to be used
- TCP/IP network connection
- VGA screen. Refer to the 'User Manual CUA' and 'User Manual CAA' for information on min. resolution

## 1.2 Compatibility

**Please check the Software-Firmware compatibility chart for compatibility before upgrading.**

If the MXC or DCS 6000 system is an earlier release, an upgrade of the system may be needed. Please consult [www.shure.com](http://www.shure.com) for information about updating your system.

## 1.3 Supported Operating Systems

SW6000 Software v6.8 or later versions support standard installations\* of the following operating systems

- Windows Server 2012 R2
- Windows 7 (32 bit and 64 bit)
- WIN 8.1 x86 Enterprise/Professional/Standard
- WIN 8.1 x64 Enterprise/Professional/Standard
- WIN 10 PRO

### **Important:**

*Windows XP and Vista operating systems are NOT supported*

*Windows Server 2008, 2008 R2 is NOT supported*

### **\*Important:**

*Please notice that cloned operating systems are not considered a standard installation. Clones may cause problems with e.g. duplicate SIDs causing the MSDTC to fail and duplicate QMID's in the registry causing MSMQ communication to fail.*

*Clones should therefore be used with caution and only by experienced IT people.*

## 1.4 Download Web-site

The SW6000 Software Package including Prerequisites and User Manuals is available for download on [dis.cc](http://dis.cc) and [shure.com](http://shure.com).

## 1.5 User Manuals

The use of the applications and modules is found in the following manuals:

- User Manual CAA Conference Admin Application
- User Manual CUA Conference User Application
- User Manual CDA Conference Display Application
- User Manual ECA External Control Application
- User Manual SW6000-ADV Advanced Meeting Management
- User Manual SW6000-ESI External System Interface
- User Manual SW6000 Registration Facility

## 2 Licensing

### 2.1 SW6000 General Description

The use of the SW6000 applications and modules is controlled by a 'SW6000 License' file, which is needed for running SW 6000.

The SW6000 software has the following general features:

- Client/server system for multiple PCs
- Multiple user profiles with different functionality
- Full language support
- Very user friendly graphical design of high quality
- Data stored in SQL database format

### 2.2 SW6000 Conference Management Software (basic)

The basic software is mandatory and includes the following applications:

- CAA Conference Admin Application (one instance)
- CUA Conference User Application (one instance) incl. CUA voting client
- ECA External Control Application

and the following functionality:

- Meeting Creation
- Agenda Control
- Messaging
- Microphone Control
- Mimic/synoptic layout
- Participant Table
- Interpretation Control
- Multiple Languages
- ID Card Registration & Programming
- Multiple Room Control

### 2.3 SW6000 Optional Modules and Applications

The functionality in the SW6000 Conference Management Software (basic) can be expanded with the following optional modules and applications:

#### 2.3.1 SW6000-VOTE

The Parliamentary Voting module enables start/stop of voting from the CUA application and is needed if voting in the system is required.

#### 2.3.2 SW6000-ESI

The External System Interface module includes the following functionality:

- Import/Export of meetings
- Streaming Application Control
- Web Service Interface (Streaming of Dynamic data)

#### 2.3.3 SW6000-ADV

The Advanced Meeting Management module expands the functionality in the basic software with the following advanced controls:

- Advanced Microphone Control
- Advanced Agenda Control
- Advanced Speech Time Control

#### 2.3.4 SW6000-CAA

CAA Conference Admin Application. SW6000 basic includes the use of one CAA instance. Up to 15 additional CAA instances can be used simultaneously in SW6000.

#### 2.3.5 SW6000-CUA

CUA Conference User Application. SW6000 basic includes the use of one CUA instance. Up to 199 additional CUA applications can be used simultaneously in SW6000. This application includes the facility to vote from the CUA application if the system is expanded with the 'SW6000-VOTE' parliamentary voting module.

#### 2.3.6 SW6000-CDA

The CDA Conference Display Applications is used for displaying content for the audience or participants in the meeting.

Up to 16 CDA applications (instances) can be used simultaneously in SW6000.

### 2.3.7 Facilities in the Optional Modules and Applications

The following table shows the optional Applications and Module Licenses available for SW6000:

		Admin Application	User Application	Display Application	Parliamentary Voting	Advanced Microphone Control	Advanced Agenda Control	Advanced Speech Time Control	Streaming Import/Export of meetings	Web Service Application Control	Web Service Interface (Dynamic data)
Facilities not included in SW6000 Basic		SW6000-CAA	SW6000-CUA	SW6000-CDA	SW6000-VOTE	SW6000-ADV	SW6000-ESI				
Admin facility (more than one instance) CAA	Applications	x									
Participant User interface (more than one instance) C			x								
Viewing of information on Large Screens CDA				x							
Voting	Voting				x						
Voting Mimic Diagram					x						
Meeting, Proxy Votes					x						
View Voting Results					x						
Search in Voting Results					x		x				
Voting Configuration				x							
Use Secondary Meeting Role	Microphone					x					
Podium Microphones						x					
Assigning 'Show Name' to Meeting Role						x					
Participant Speech Time	Speech Time										
Group Speech Time							x				
Manual Speech Time								x			
Meeting Role Speech time									x		
Agenda Subject Configuration	Agenda						x				
Speaker Type Configuration							x				
Insert of Speakers in Agenda								x			
Open Mic On							x				
Links in Agenda								x			
Multiple Speeches per Subject								x			
Meeting, Alert on CDA	Message						x				
Messages, Send to Group								x			
Groups Table	Participants							x			
Web Browser	Browser							x			
Meeting, Import/Export	External Connection								x		
Start/Stop of external Streaming Application										x	x
Web Service Configuration											x
Dynamic data output during meeting											

## 3 System design

Prior to installing the software the system has to be designed, as the SW6000 Software Package gives options for all in-between a small installation with one PC and a large installation with more than 1000 PCs.

### 3.1 Applications

The SW6000 Software Packages consists of 4 main applications

- CUA - Conference User Application
- CAA - Conference Administrator Application
- CDA – Conference Display Application
- ECA - External Control Application

and the interface application for establishing the connection to the CU 6105/6110 or DIS-CCU:

- CUI – CU Interface

An application for backing up data and restore data is also part of the package:

- SW6000 Backup Utility

The meeting data (Participant names, Meeting names etc.) is stored in one of the following database installations:

- Microsoft SQL 2012 server, Enterprise Edition or Standard Edition
- Microsoft SQL 2014 server, Enterprise Edition or Standard Edition
- Microsoft SQL 2016 server, Enterprise Edition or Standard Edition
- Microsoft SQL 2017 server, Enterprise Edition or Standard Edition

The Microsoft SQL Express 2014 server is delivered as part of the SW6000 package.

**Important:** *The following SQL servers are not supported:*

Microsoft SQL server 2005 Express

Microsoft SQL server 2000, Enterprise Edition or Standard Edition

Microsoft SQL server 2005, Enterprise Edition or Standard Edition.

\*Microsoft SQL server 2008, Enterprise Edition or Standard Edition

\*Microsoft SQL server 2008 Express

\*Microsoft has announced that **On July 9, 2019, support for SQL Server 2008 will end.** It is therefore strongly recommended, that the SQL server 2008 and SQL Express 2008 is updated.

### 3.2 Installation design

The CUI, CUA, CAA, CDA and ECA applications can all be installed on the same PC or all on separate PCs.

Only one instance of the CUI, CUA and CAA can be started on one PC.

**Important:** *For performance reason the CUI should be installed at the same PC/Server as the database.*

Before installing the applications the design of the system has to be decided.

The following schematics are showing various system designs with SW6000 applications. The abbreviations shown above are used in the schematics:

### 3.2.1 One PC System Design

#### 3.2.1.1 Chairman or Technician control

Design characteristics	This design is used, where control is done by the Chair or a Technician.
------------------------	--

	The PC can be placed in the meeting room or in a technician booth.
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Figure 3.2-A Standard one PC installation

### 3.2.2 Installation with Multiple PC's

#### 3.2.2.1 Chairman & multiple Delegates

<p><b>Design characteristics</b></p> <p>This design is used, where some or all of the Participants have access to a PC. The control of the system can be done from any PC with CUA installed where the Meeting Role gives control privileges' i.e. the 'Technician' or the 'Chairman'.</p> <p>Pre-meeting settings and system administration is done on the 'MS Server' or on the 'Chairman PC'.</p>	<p><b>Reservations</b></p> <p>Running the CUI on a Windows 7 operating system is only suitable for systems with up to 10 users. With more than 10 users, the CUI must run on a Windows Server.</p> <p>For systems with less than 25 users, the SQL Server Express Edition can be used. For systems with more than 25 users, it is recommended to use an SQL Server version for better performance.</p> <p>SQL Servers require Microsoft licenses.</p>
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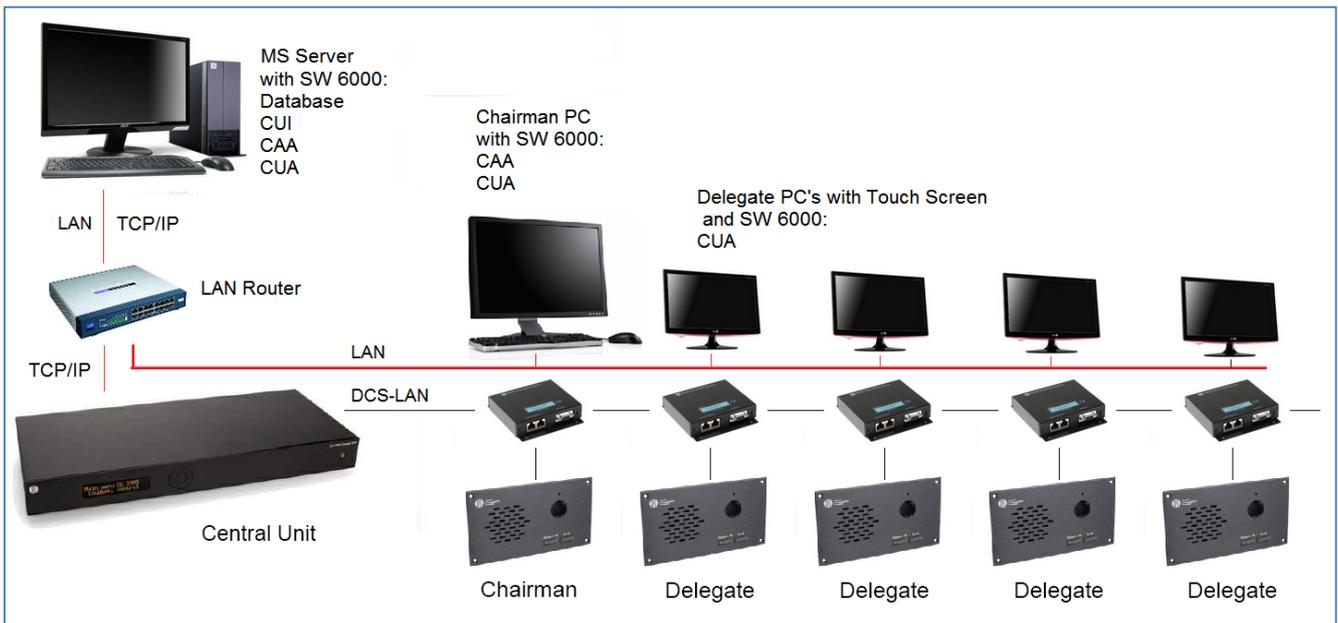


Figure 3.2-B Installation with multiple PC's

### 3.2.2.2 Chairman & Technician control including Display and External control

<p>Design characteristics</p>	<p>This design is used, where a 'Chairman' is controlling or monitoring the system and where a 'Technician' can take over the control of the system if needed. Administration is done on the 'Technician' PC.</p>
-------------------------------	---

<p>Reservations</p>	<p>Running the CUI on a Windows 7 operating system is only suitable for systems with up to 10 users. With more than 10 users, the CUI must run on a Windows Server.</p> <p>For systems with less than 25 users, the SQL Server Express Edition can be used. For systems with more than 25 users, it is recommended to use an SQL Server version for better performance.</p> <p>SQL Servers require Microsoft licenses.</p>
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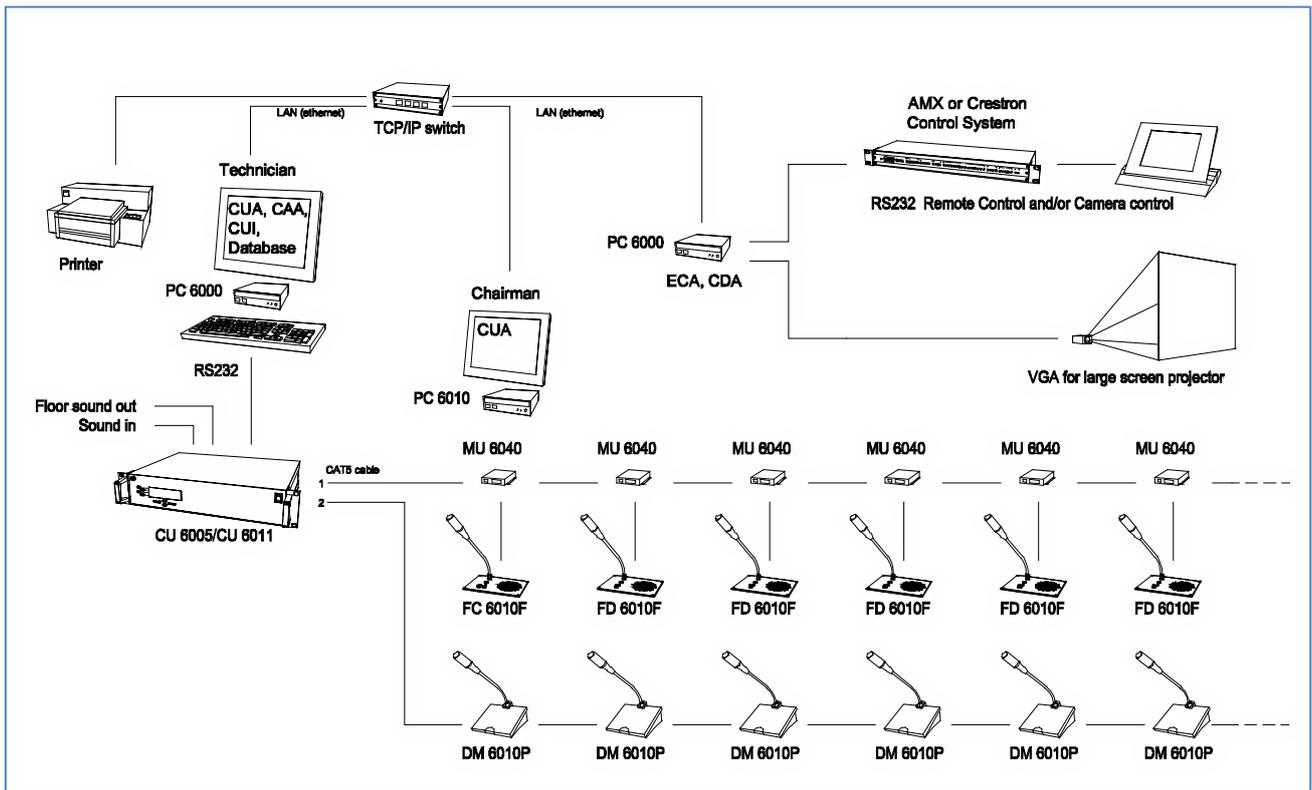


Figure 3.2-C Installation with multiple PC's

### 3.2.2.3 Chairman & Delegates control >10 PCs

<p><b>Design characteristics</b></p>	<p>This design is used, where some or all of the Participants have access to a PC. The control of the system can be done from any PC with CUA installed where the Meeting Role gives control privileges' i.e. the 'Technician' or the 'Chairman'.</p> <p>Administration is done on the 'Technician' PC or on the 'Administration' PC.</p>	<p><b>Reservations</b></p> <p>Running the CUI on a Windows 7 operating system is only suitable for systems with up to 10 users. With more than 10 users, the CUI must run on a Windows Server.</p> <p>For systems with less than 25 users, the SQL Server Express Edition can be used. For systems with more than 25 users, it is recommended to use an SQL Server version for better performance.</p> <p>SQL Servers require Microsoft licenses.</p>	
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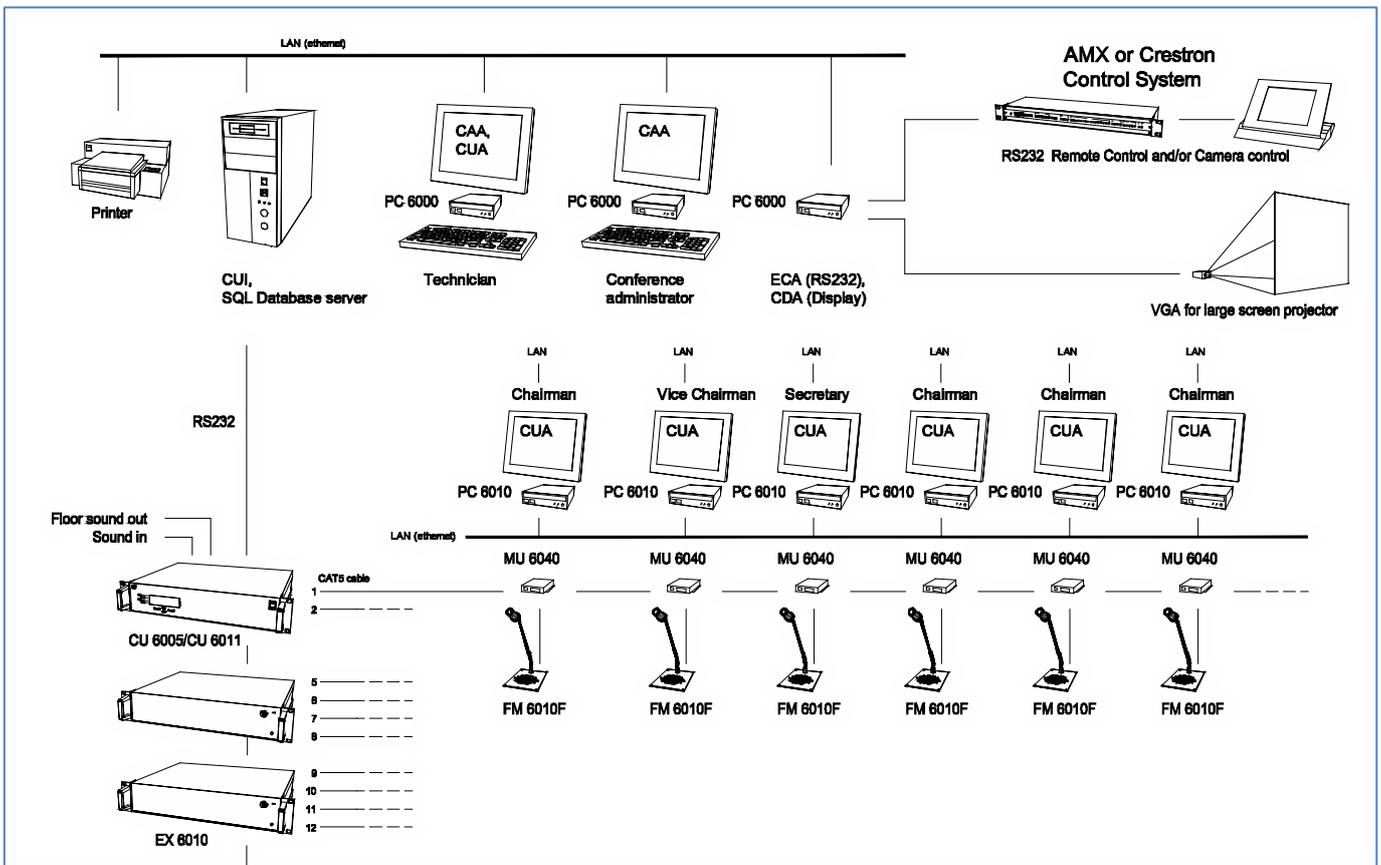


Figure 3.2-D Installation with multiple PC's

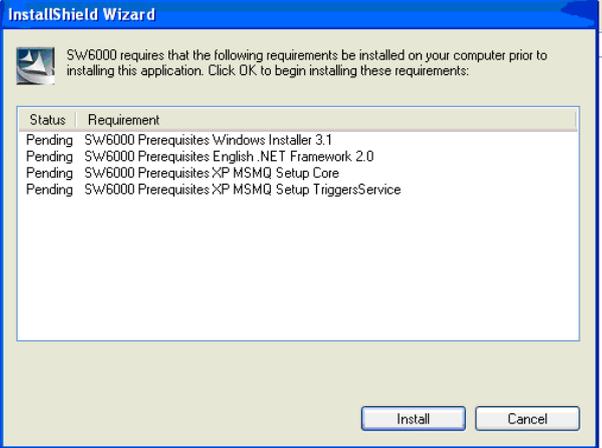
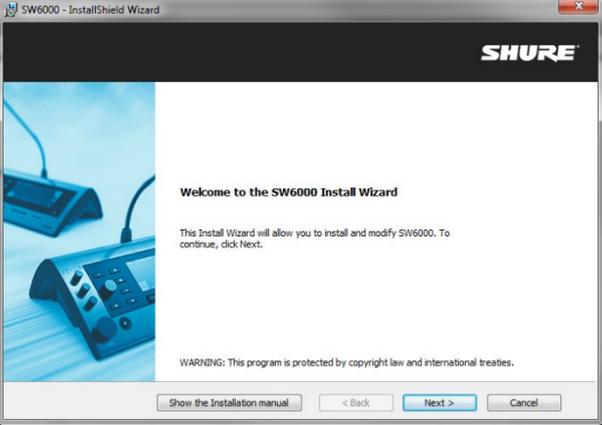
# 4 Software Installation

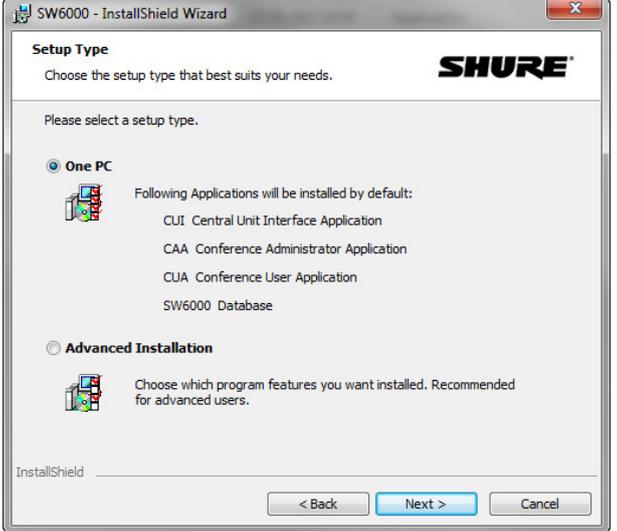
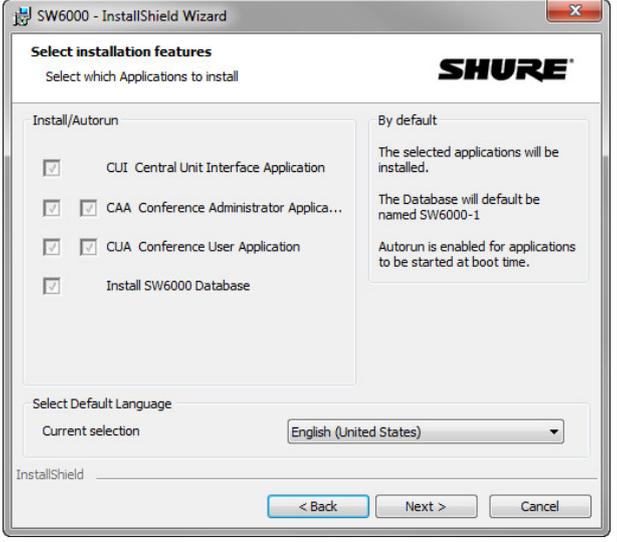
## 4.1 'One PC' Installation or first installation in a multi-PC system

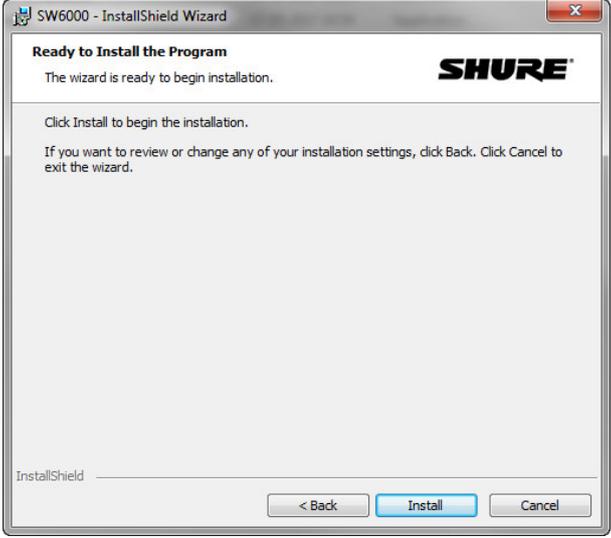
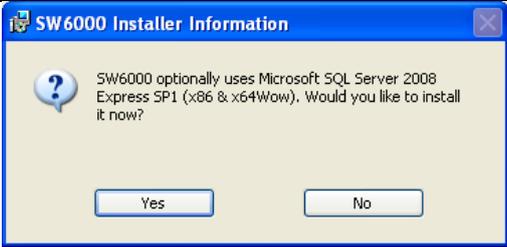
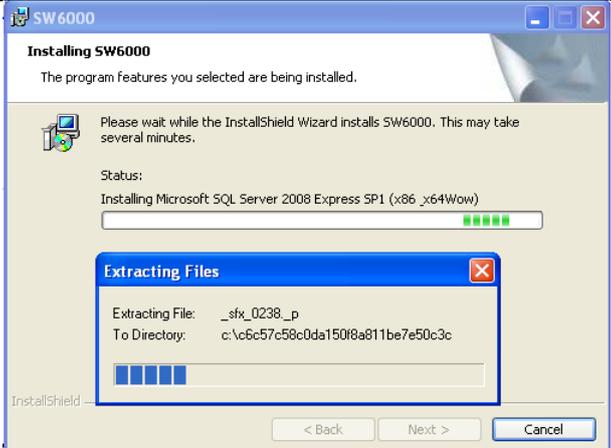
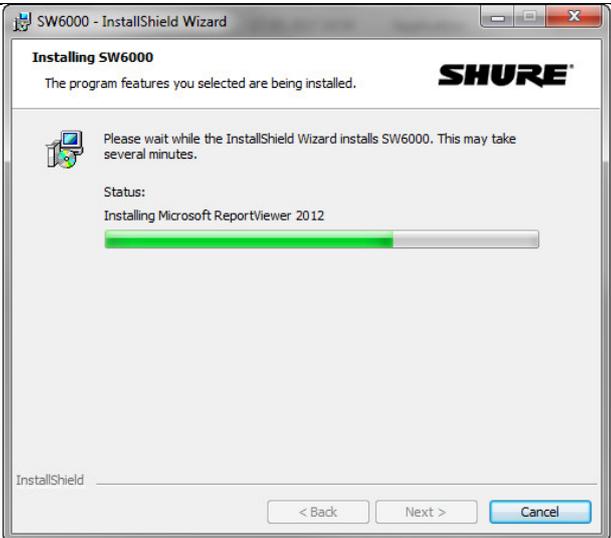
The following installation procedure describes how to install the SW6000 Software on a PC in a design as described in the section '3.2.1 One PC System Design'.

Important: This installation is also recommended to use to install on the Server/PC, where the database is to be placed in a multi-PC system.

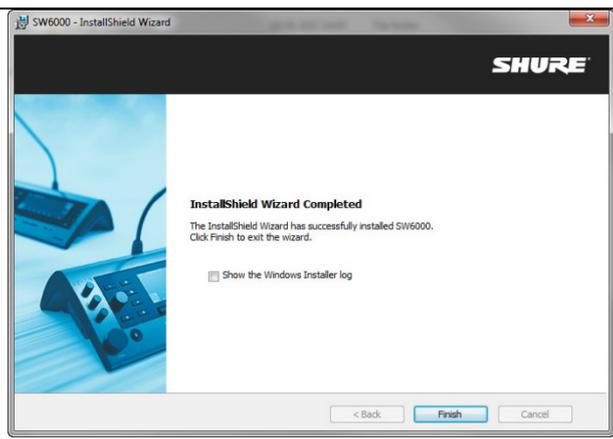
### 4.1.1 Installing SW6000

<p>1. Download the SW6000 software from the Shure download web site.</p> <p>Click on the Setup.exe in the 'SW6000 #Installation' folder in the SW6000 Software package,</p> <p>'The install Shield Wizard' will automatically show a list of 'Prerequisites' required for running SW6000</p> <p>Click 'Install' and continue clicking 'Install' until you are asked if you want to install the SW6000 Applications.</p>	 <p>The screenshot shows the 'InstallShield Wizard' window. At the top, it says 'SW6000 requires that the following requirements be installed on your computer prior to installing this application. Click OK to begin installing these requirements:'. Below this is a table with two columns: 'Status' and 'Requirement'. The table lists four prerequisites, all with a status of 'Pending':</p> <table border="1"> <thead> <tr> <th>Status</th> <th>Requirement</th> </tr> </thead> <tbody> <tr> <td>Pending</td> <td>SW6000 Prerequisites Windows Installer 3.1</td> </tr> <tr> <td>Pending</td> <td>SW6000 Prerequisites English .NET Framework 2.0</td> </tr> <tr> <td>Pending</td> <td>SW6000 Prerequisites XP MSMQ Setup Core</td> </tr> <tr> <td>Pending</td> <td>SW6000 Prerequisites XP MSMQ Setup TriggersService</td> </tr> </tbody> </table> <p>At the bottom of the window are 'Install' and 'Cancel' buttons.</p>	Status	Requirement	Pending	SW6000 Prerequisites Windows Installer 3.1	Pending	SW6000 Prerequisites English .NET Framework 2.0	Pending	SW6000 Prerequisites XP MSMQ Setup Core	Pending	SW6000 Prerequisites XP MSMQ Setup TriggersService
Status	Requirement										
Pending	SW6000 Prerequisites Windows Installer 3.1										
Pending	SW6000 Prerequisites English .NET Framework 2.0										
Pending	SW6000 Prerequisites XP MSMQ Setup Core										
Pending	SW6000 Prerequisites XP MSMQ Setup TriggersService										
<p>2. After installing the 'Prerequisites', the installation wizard continues by installing the SW6000 Applications</p> <p>Click 'Next'</p>	 <p>The screenshot shows the 'SW6000 - InstallShield Wizard' window. It features the Shure logo at the top right. The main text reads: 'Welcome to the SW6000 Install Wizard'. Below this, it says: 'This Install Wizard will allow you to install and modify SW6000. To continue, click Next.' At the bottom, there is a 'WARNING: This program is protected by copyright law and international treaties.' and a set of navigation buttons: 'Show the Installation manual', '&lt; Back', 'Next &gt;', and 'Cancel'.</p>										

<p>3.</p>	<p>Accept the License Conditions and click 'Next'</p>	
<p>4.</p>	<p>The installation gives two choices: 'One PC' installation and 'Advanced Installation'. Select 'One PC' and click 'Next'</p>	
<p>5.</p>	<p>Select default language.</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p><b>Important:</b> The default language can only be selected during installation and cannot be changed after the installation</p> </div> <p>Click 'Next'</p> <p>The 'CAA', 'CUI', 'CUA' and 'SW6000' will then be installed.</p> <p>The applications will start-up automatically.</p>	

<p>6.</p>	<p>Click Install</p>	
<p>7.</p>	<p>If no SQL server is installed previously you will be asked to confirm if you want the SQL server 2008 Express to be installed. Click 'Yes'</p>	
<p>8.</p>	<p>The SQL 2008 Server Express is now being installed.</p>	
<p>9.</p>	<p>The software is installed</p>	

10. Click 'Finish' to complete the installation.
- Shortcuts to the application have been created at the 'Desktop', in the 'Start menu' and in the 'Startup folder' for automatic startup of the applications.



## 4.2 'Advanced' Installation (multiple PC's)

The following installation procedure describes how to install the SW6000 Software on multiple PC's in designs as described in the section '*3.2.2 Installation with Multiple PC's*' Preparations before installation

Before you start the installation of the SW6000 Software Package you must ensure that the following preparations have been done:

- Ensure that you have LAN TCP/IP connection at the PC's. Assign a permanent or automatic IP address
- If you use more than one PC in the system Windows 7/Server 2012 please note that there are some built in Windows errors, which have to be corrected before running SW6000.

Refer to section '*4.2.1 Windows Corrections*'.

- Install touch screen driver if using touch screen for the CUA
- Disable the firewall as default. If it is necessary to enable the firewall please follow the instructions in the sections '*4.2.2 Additional Firewall settings*' and '*4.2.3 Message Queuing settings*'.

### 4.2.1 Windows Corrections

If you use more than one PC in the system and are using Windows 7 or Server 2008/12 please note that there are some built in Windows errors, which have to be corrected before running SW6000. The next sections show the corrections to be made

1. Enable MSDTC to allow the network transaction. To do this, follow these steps:

- a. Click **Start**.
- b. In the **Search programs and files** text box, type **dcomcnfg.exe**, and then click **Enter**.
- c. In the **Component Services** window, expand **Component Services**, expand **Computers**, expand **My Computer**, and then expand

### Distributed Transaction Coordinator.

- d. Right-click **Local DTC** and click **Properties**.
- e. In the **Local DTC Properties** dialog box, click on **Security** tab.
- f. Click to select the **Network DTC Access** check box.
- g. Under the **Transaction Manager Communication** group, click to select the **Allow Inbound** check box. To allow the distributed transaction to run on this computer from a remote computer.
- h. Under the **Transaction Manager Communication** group, click to select the **Allow Outbound** check box. To allow the distributed transaction to run on a remote computer from this computer.
- i. Under the **Transaction Manager Communication** group, click to select the **No Authentication Required** option.
- j. In the **Local DTC Properties** dialog box, click **OK**.

2. Configure Windows Firewall to include the MSDTC program as an exception. To do this, follow these steps:

- a. Click **Start**.
- b. In the **Search programs and files** text box, type **Firewall.cpl**, and then click **Enter**
- c. In **Windows Firewall** dialog box, click **Allow a program or feature through Windows Firewall**.
- d. In the **Allowed Programs** dialog box, click **Allow another Program....** If button is not enabled then click **Change Settings** first
- e. In the **Add a Program** dialog box, click the **Browse** button, and then locate the **Msdtc.exe** file. By default,

the file is stored in the <Installation drive>:\Windows\System32 folder.

f. In the **Add a Program** dialog box, click **Add**.

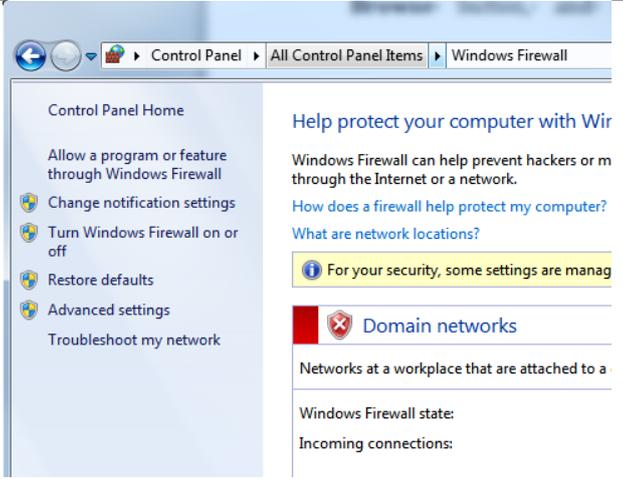
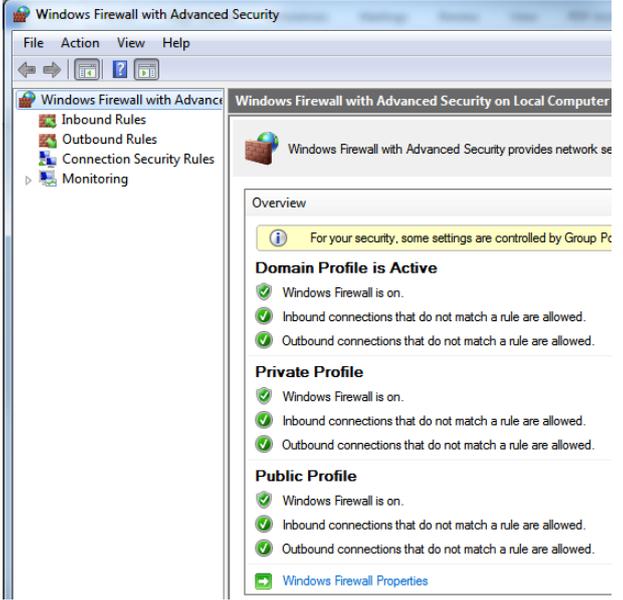
g. In the **Allowed Programs** dialog box, Select **Microsoft Distributed**

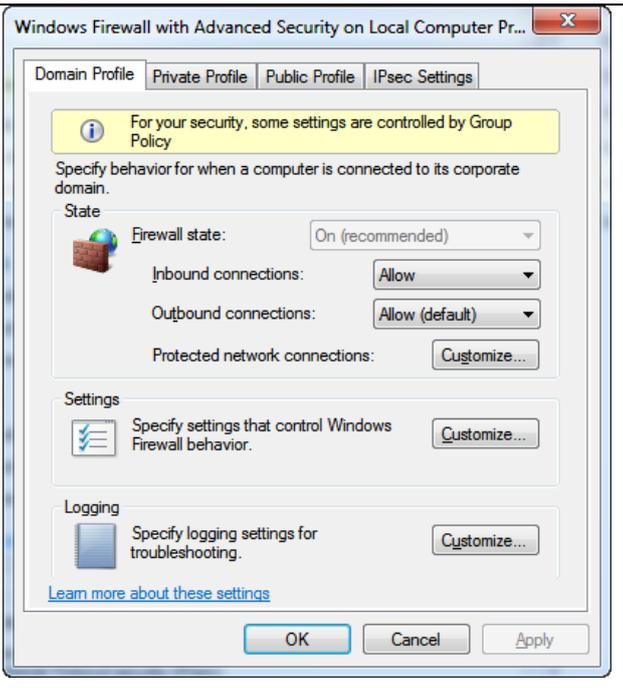
**Transaction Coordinator Service** and check all check box's

h. In the **Allowed Programs** dialog box, click **OK**.

**4.2.2 Additional Firewall settings**

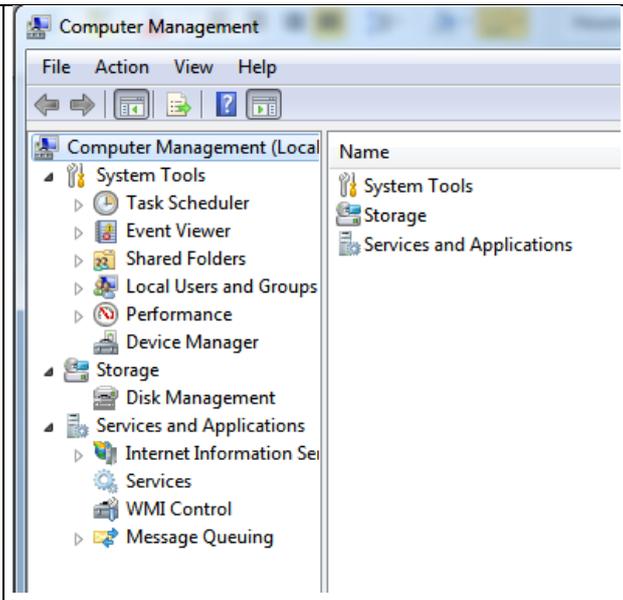
If the system shall run with firewall active the following settings must be done on all PC's in the system.

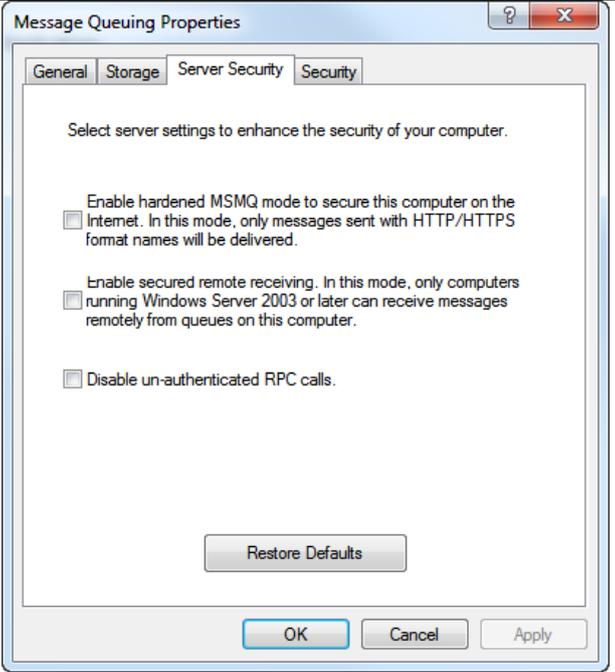
<p>11.</p>	<p>Open 'Control Panel\All Control Panel Items\Windows Firewall'. Select 'Advanced Settings'</p>	
<p>12.</p>	<p>Select 'Windows Firewall Properties'</p>	

<p>13. In 'Domain Profile' and 'Private profile' use the dropdown box to select 'Allow' for Inbound connections'.</p>	
---	--

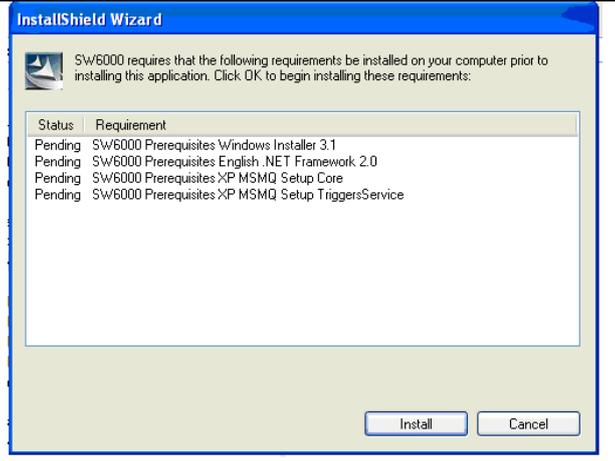
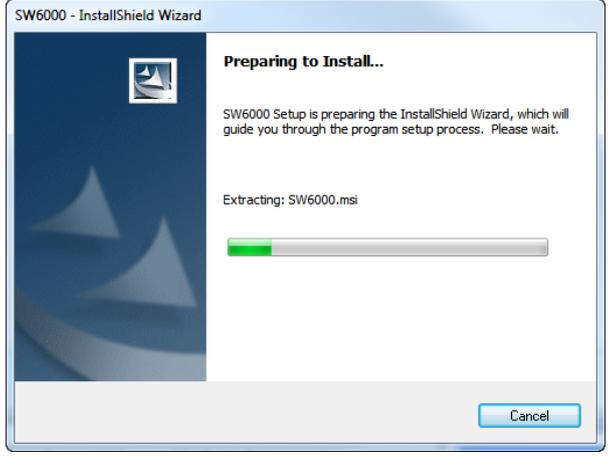
### 4.2.3 Message Queuing settings

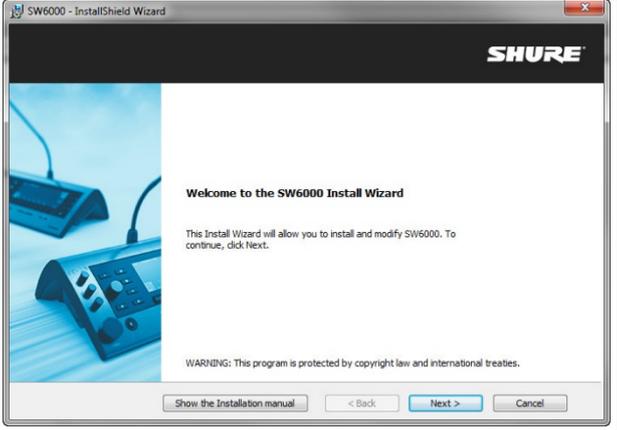
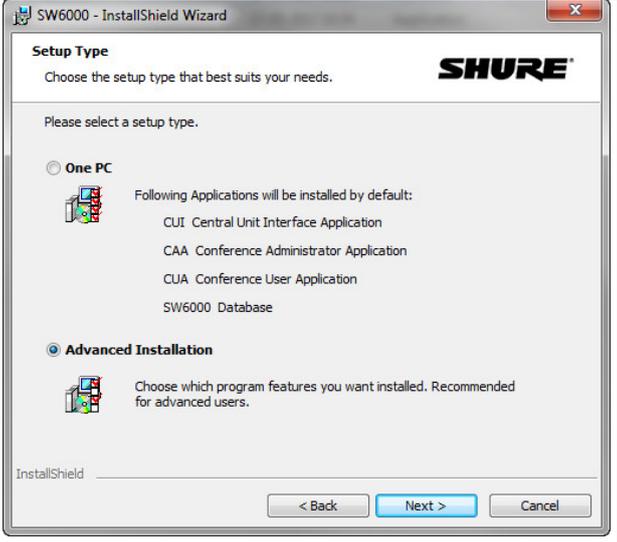
If the system shall run with firewall active the following setting must be done on all PC's in the system.

<p>14. Open 'Control Panel\All Control Panel Items\Administrative Tools\Computer Management'.  Expand 'Services and Application' and right click on 'Message Queuing' and select 'Properties'.</p>	
--	--

<p>15. Select the tab 'Server Security' and un-select 'Disable un-authenticated RPC calls'</p>	 <p>The screenshot shows the 'Message Queuing Properties' dialog box with the 'Server Security' tab selected. It contains three checkboxes: 'Enable hardened MSMQ mode to secure this computer on the Internet...' (checked), 'Enable secured remote receiving...' (checked), and 'Disable un-authenticated RPC calls' (unchecked). There are 'Restore Defaults', 'OK', 'Cancel', and 'Apply' buttons at the bottom.</p>
--	--

#### 4.2.4 Installing SW6000

<p>16. Download the SW6000 software from the Shure download web site.</p> <p>Click on the Setup.exe in the 'SW6000 #Installation' folder in the SW6000 Software package,</p> <p>'The install Shield Wizard' will automatically show a list of 'Prerequisites' required for running SW6000</p> <p>Click 'Install' and continue clicking 'Install' until you are asked if you want to install the SW6000 Applications.</p>	 <p>The screenshot shows the 'InstallShield Wizard' dialog box. It has a title bar 'InstallShield Wizard' and a message: 'SW6000 requires that the following requirements be installed on your computer prior to installing this application. Click OK to begin installing these requirements:'. Below is a table with columns 'Status' and 'Requirement':</p> <table border="1"> <thead> <tr> <th>Status</th> <th>Requirement</th> </tr> </thead> <tbody> <tr> <td>Pending</td> <td>SW6000 Prerequisites Windows Installer 3.1</td> </tr> <tr> <td>Pending</td> <td>SW6000 Prerequisites English .NET Framework 2.0</td> </tr> <tr> <td>Pending</td> <td>SW6000 Prerequisites XP MSMQ Setup Core</td> </tr> <tr> <td>Pending</td> <td>SW6000 Prerequisites XP MSMQ Setup TriggersService</td> </tr> </tbody> </table> <p>At the bottom are 'Install' and 'Cancel' buttons.</p>	Status	Requirement	Pending	SW6000 Prerequisites Windows Installer 3.1	Pending	SW6000 Prerequisites English .NET Framework 2.0	Pending	SW6000 Prerequisites XP MSMQ Setup Core	Pending	SW6000 Prerequisites XP MSMQ Setup TriggersService
Status	Requirement										
Pending	SW6000 Prerequisites Windows Installer 3.1										
Pending	SW6000 Prerequisites English .NET Framework 2.0										
Pending	SW6000 Prerequisites XP MSMQ Setup Core										
Pending	SW6000 Prerequisites XP MSMQ Setup TriggersService										
<p>17. After installing the 'Prerequisites', the setup program is preparing the InstallShield wizard.</p>	 <p>The screenshot shows the 'SW6000 - InstallShield Wizard' dialog box. It has a title bar 'SW6000 - InstallShield Wizard' and a message: 'Preparing to Install...'. Below the message is a progress bar and the text 'Extracting: SW6000.msi'. At the bottom right is a 'Cancel' button.</p>										

<p>18.</p>	<p>After installing the 'Prerequisites', the installation wizard continues by installing the SW6000 Applications</p> <p>Click 'Next'</p>	
<p>19.</p>	<p>Accept the License Conditions and click 'Next'</p> <p><b>INFO:</b> The 'SW6000 Database' option has to be unselected when installing the SW6000 software on all other PC's in the system</p> <p>Select only the 'SW6000 Database' on the PC, where the 'SQL Server 2008' has been installed</p>	
<p>20.</p>	<p>The installation gives two choices 'One PC' installation and 'Advanced Installation'. Select 'Advanced Installation' and click 'Next'</p>	

21. **CUI**

Select the CUI if you are installing on the PC where you previous has made a "One PC" installation or you are making a new installation on a PC, where the SW6000 database shall be installed.

Un-select the CUI if you are installing CUA, CAA, CDA or ECA on another PC in a multi-PC system.

**CAA, CUA and CDA**

Select one or more of the following applications: CAA, CUA, CDA or ECA all depending on your system design.

**ECA**

Select the application ECA depending on your system design. Select the COM port, you want to use with the ECA.

**SW6000 Database**

Select the SW6000 Database if you want to add one or more additional databases to the PC/Server where the SQL Server 2008' has been installed or you are installing a PC/Server with a new database.

Un-Select the 'SW6000 Database' when installing on all other PC's in the system.

**INFO:** The 'SW 6000 Database' option has to be un-selected when installing the SW 6000 software, if a 'SQL Server 2008' has been installed on other PCs in the system

Select only the 'SW 6000 Database' on a PC, where the 'SQL Server 2008' has been installed

**Select Default language**

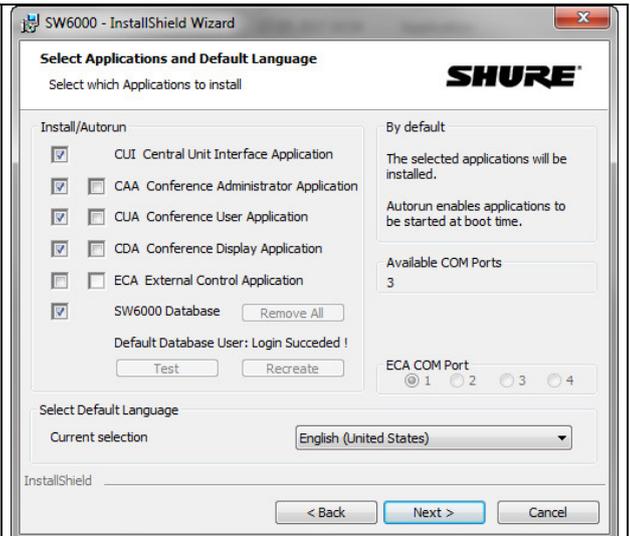
Select the default language only if you are making a new database installation

**IMPORTANT:** The default language can only be selected during installation and cannot be changed after the installation is completed

**Autorun**

Tick the applications, which has to start-up automatically (Autorun) every time the PC is started.

Click 'Next' Click 'Next'



22. If 'SW6000 Database' was selected in previous screen the 'Database Settings' will be shown.

**Database Engine**

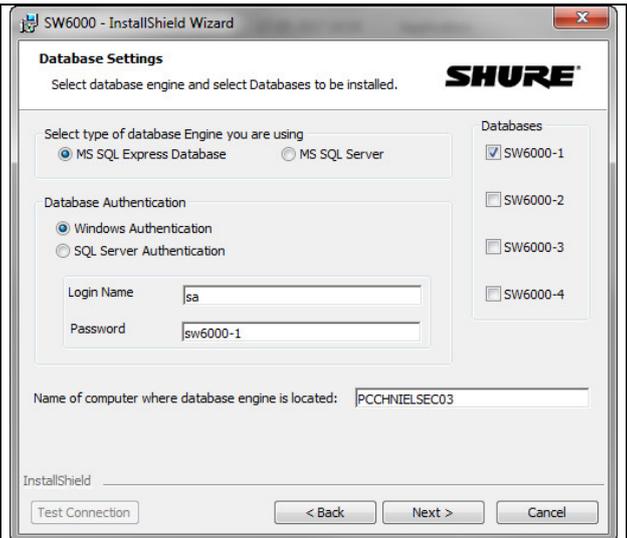
The database server installed together with SW6000 is MS SQL Express. Select 'MS SQL Server' is this type of database server is in use.

**Databases**

Select 'SW6000-1' as the database to be installed.

**INFO:** The SW6000 system can install up to 4 databases in each database engine. The names of the databases are limited to 'SW6000-1', 'SW6000-2', 'SW6000-3', and 'SW6000-4'.  
  
For most installations only the SW6000-1 database is needed.  
  
**IMPORTANT:** Remember the name of the database(s) selected as well as the name of the computer as this information is needed when installing the SW 6000 Software on other PC's

Click 'Next'



23. **Set Database Connection**

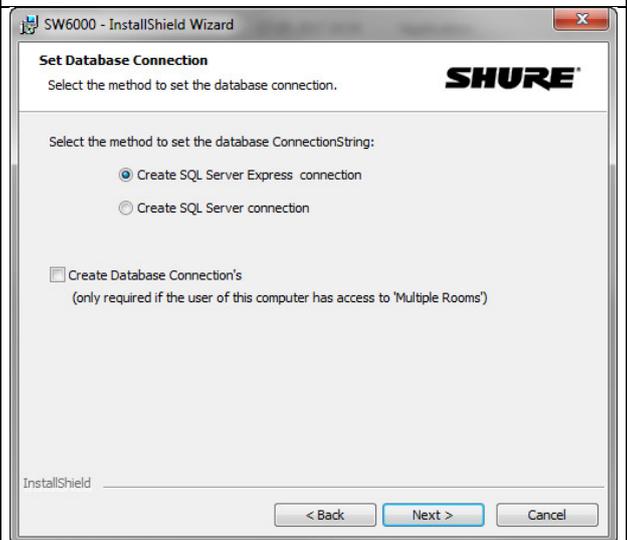
This page sets the type of database connection string to be used.

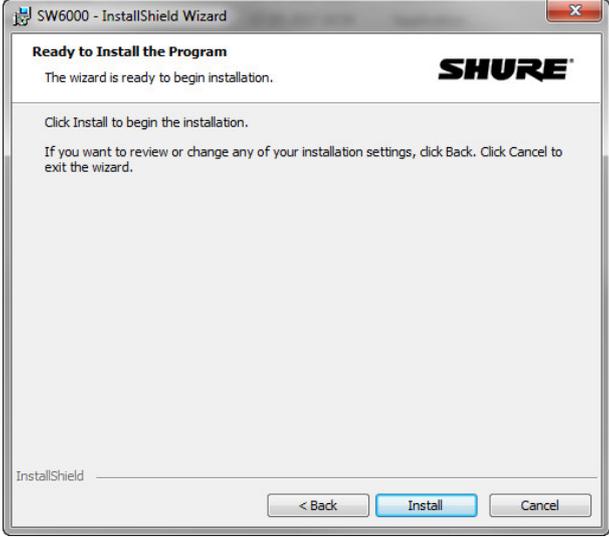
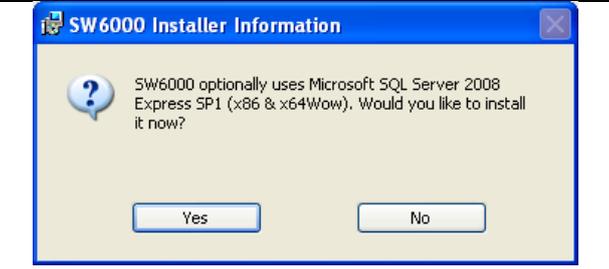
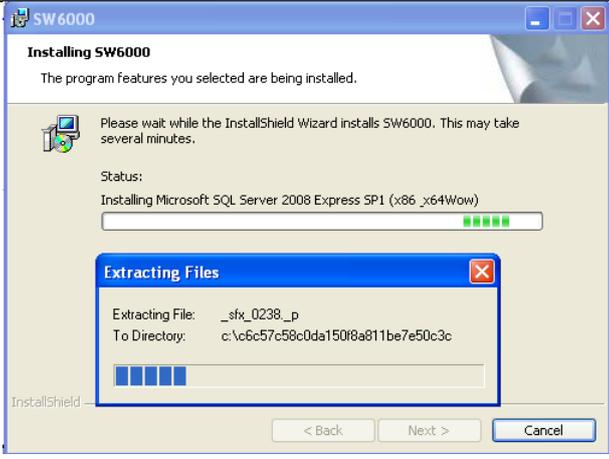
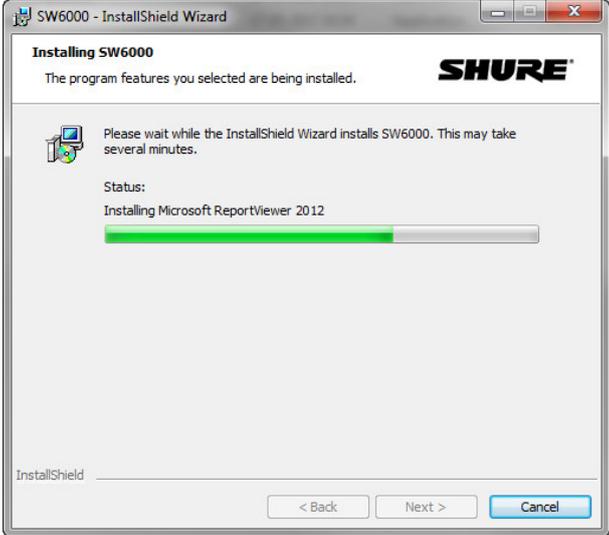
Create SQL Server Express connection is default  
Create SQL Server connection shall be selected if a 'MS SQL Server' is in use.

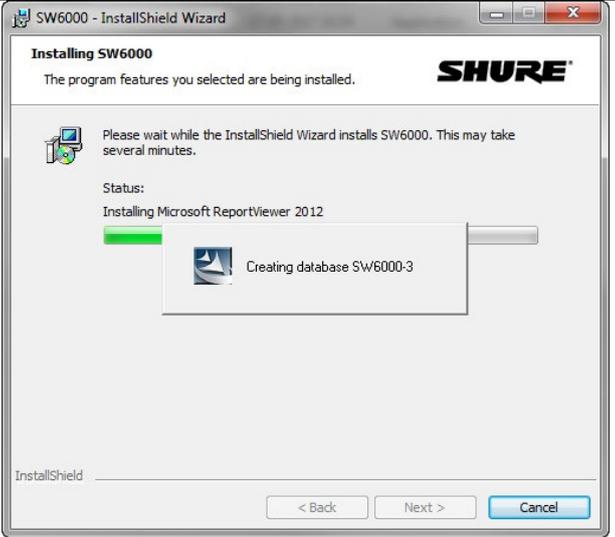
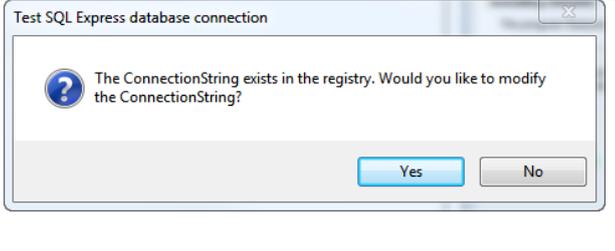
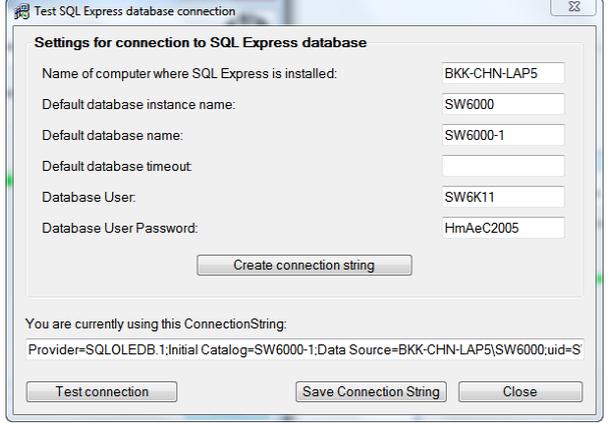
Create Database Connection's might be checked if the option to connect to multiple databases shall be configured. This setting can be done later in the CAA application.

Details on hall definition settings are present in the section '7.6 Creating Database Connections'.

Click 'Next' to continue.



<p>24. Click 'Install' to install the options selected</p>		
<p>25. If you selected 'SW6000 Database' in item 16. If no SQL server is installed previously you will be asked to confirm if you want the SQL server 2008 Express to be installed. Click 'Yes'</p>		
<p>26. The SQL 2008 Server Express is now being installed.</p>		
<p>27. The SW6000 Applications are then being installed</p>		

<p>28. The database(s) are created</p>	
<p>29. If a connection string is present, you will be asked if you want to modify the connection string.  <u>Click No</u> if you do not want to change  <u>Click Yes</u> if you want to modify the connection string or just want to check.</p>	
<p>30. If no 'Connection String' was present or you selected 'Yes' to modify, the 'Test SQL Express database connection' options are shown.</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p><b>Info:</b> The 'connection string' is the 'address' the application uses to connect to the database</p> </div> <p>Use default or change those fields if needed:  <u>'Name of the computer where SQL Express is located'</u> Insert the name of the PC, where the database is installed.</p> <p>In the example the name is 'bkk-lap-chn5'</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p><b>Important:</b> When installing the applications CAA, CUA, ECA or CDA on other PCs than the one where the database is installed the 'Name of the computer...' and 'Default database name' has to be filled in. The name of the computer is the computer, where the SQL database server is installed.</p> </div> <p><u>'Default database name'</u> In the example the name is the default 'SW6000-1'          Other settings are normally not changed.</p>	

31. Create, Test and Save Connection String:  
 Click the 'Create default ConnectionString' button to generate the connection string according to the parameters provided.  
 The resulting 'ConnectionString' will be displayed in the textbox at the bottom of the window  
 Click 'Test connection'.  
 The message 'Connection succeeded' will show.

**Important:** This test must succeed. If the test does not succeed then the name of the computer or the default database name might be wrong.

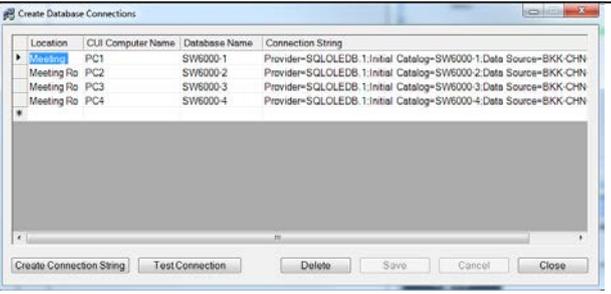
Click 'Save ConnectionString'  
 Click 'Close'



32. Click 'Finish' to complete the installation.  
 Shortcuts to the application have now been created at the 'Desktop', the 'Start menu' and in the 'Startup folder' for automatic startup of the application.

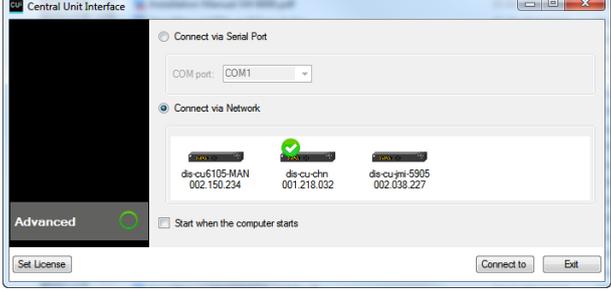
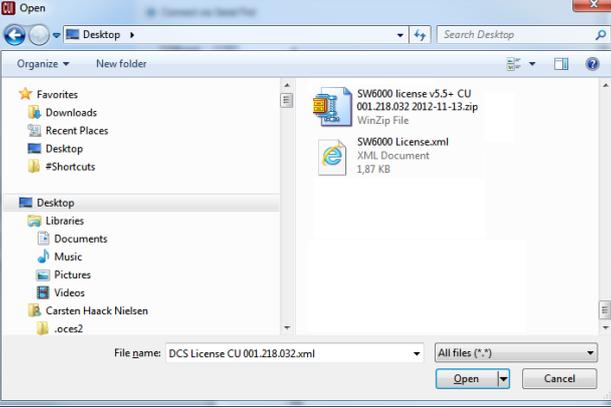
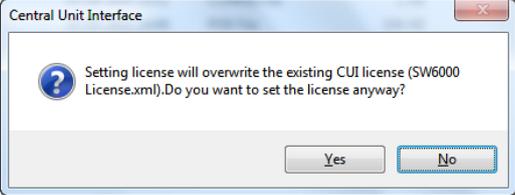


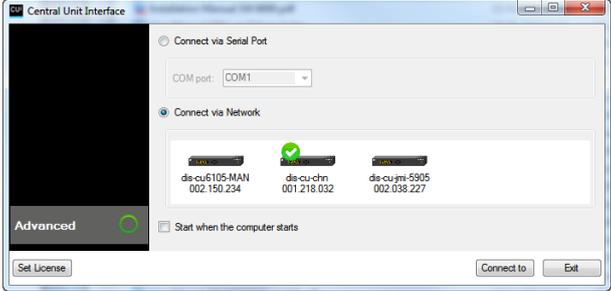
33. If you have selected 'Create Database Connection's' previously, the 'Create Database Connection's' window will appear.  
 For details please refer to the 'User Manual SW6000 CAA'.



# 5 After installation of SW6000 Software

## 5.1 Starting the CUI for the first time

<p>34. After the SW6000 has been installed a shortcut to the CUI application have now been created at the 'Desktop' in the 'Start menu' and in the 'Startup folder' for automatic startup of the application.</p> <p>When starting the CUI for the first time the CUI configuration windows open (<b>Important: Run as Admin</b>).</p> <p>Select..</p> <p><u>Connect via Network</u> by selecting the appropriate CU in the list window.</p> <p><b>Note:</b> 'Connect vis Serial Port' is not supported in this software version.</p>	 <div data-bbox="922 712 1453 958" style="border: 1px solid black; padding: 5px;"> <p><b>Important:</b> The window will only list the CCU's if 'Apple – Bonjour for Windows' is installed. If 'Bonjour is not installed please refer to point 39 in the section '7.1 Advanced setting in the CUI' and use the CCU IP address to identify the CCU.</p> </div>
<p>35. Click 'Set License'</p> <p>A browser window will open. Browse to the 'SW6000 License' file.</p> <div data-bbox="220 1189 751 1317" style="border: 1px solid black; padding: 5px;"> <p><b>Info:</b> For more information about the SW 6000 License file, please refer to the section 'Licensing'</p> </div>	
<p>32 Click 'Yes' to insert the license file</p>	

<p>36. Click 'Connect to'</p> <p>The CUI will now start connecting to the selected CU.</p> <div data-bbox="177 331 831 613" style="border: 1px solid black; padding: 5px;"><p><b>Info:</b> The selections made are used next time the CUI is started, where the 'CUI Configuration window' will not open.</p><p>If a new selection has to be made, the shortcut 'Configure CUI' in the Start menu must be used.</p><p>For 'Advanced' option please refer to section '7.1 Advanced setting in the CUI'.</p></div>	
<p>37. When the CUI is started an Icon is visible in the taskbar.</p> <p>For details please refer to 'Advanced options in later section.</p>	

## 6 Getting started

The system has now been installed successfully.

The following sections describes the necessary steps to get started. However please refer to the SW6000 User Manuals for a throughout description of how to use the SW6000 System.

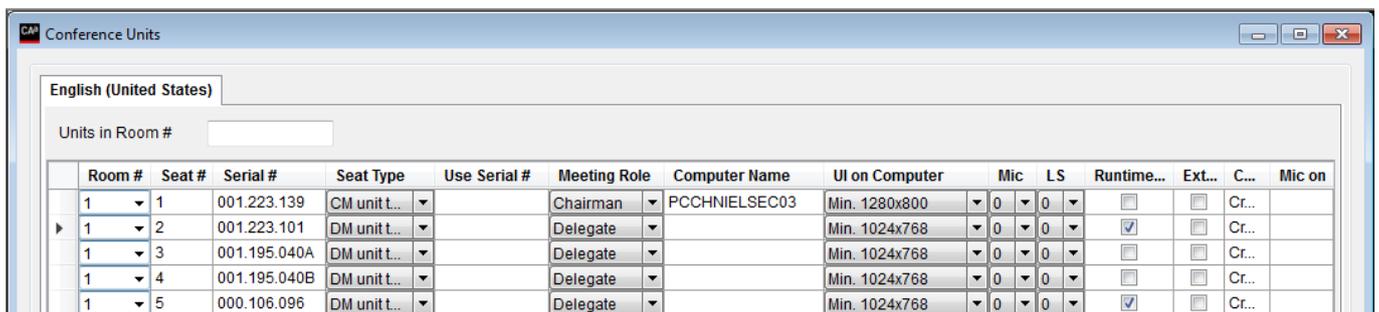
### 6.1 Steps

1. Connect the CU 6105, CU 6110 or DIS-CCU Central Unit to the PC, where the CUI is installed using the TCP/IP ports
2. Turn on the CU/CCU with all units (Delegate Units, Chairman Units, AO units etc.) connected.
3. Start the CU Interface Application (CUI).

If the CUI version is not compatible with the database you will be advised to start the CAA to automatically update the database. You will then have to restart the CUI.

When the CUI Application starts to communicate with the CU/CCU it will receive information for all units connected to the CU/CCU. The CUI Application will then create one seat in the Conference Units table for each Conference Unit and numbering the seats, starting at one and counting upwards.

***Hint:** To make is easier later to assign participants to seats and to make mimic diagrams the seats should be renumbered to give a more logical order.*



The screenshot shows the 'Conference Units' application window. At the top, there is a dropdown menu for 'English (United States)' and a text field for 'Units in Room #'. Below this is a table with the following columns: Room #, Seat #, Serial #, Seat Type, Use Serial #, Meeting Role, Computer Name, UI on Computer, Mic, LS, Runtime..., Ext..., C..., and Mic on. The table contains five rows of data for Room # 1.

Room #	Seat #	Serial #	Seat Type	Use Serial #	Meeting Role	Computer Name	UI on Computer	Mic	LS	Runtime...	Ext...	C...	Mic on
1	1	001.223.139	CM unit t...		Chairman	PCCHNIELSEC03	Min. 1280x800	0	0	<input type="checkbox"/>	<input type="checkbox"/>	Cr...	
1	2	001.223.101	DM unit t...		Delegate		Min. 1024x768	0	0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Cr...	
1	3	001.195.040A	DM unit t...		Delegate		Min. 1024x768	0	0	<input type="checkbox"/>	<input type="checkbox"/>	Cr...	
1	4	001.195.040B	DM unit t...		Delegate		Min. 1024x768	0	0	<input type="checkbox"/>	<input type="checkbox"/>	Cr...	
1	5	000.106.096	DM unit t...		Delegate		Min. 1024x768	0	0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Cr...	

Figure 6.1-A List of units

4. Start the Conference Administration Application (CAA). If needed the Database will be upgraded automatically.

**Important: The first time the CAA is started the application has to be started as 'Run as Admin.'**

5. Select the Meeting Role screen from the "Setup/Meeting Role" and create additional Meeting Roles (e.g. Vice Chairman) to be used when creating list of Participants and to be used as defaults for the seats when no one is logged in.

The Meeting Roles created during installation can either be modified or deleted (the Chairman and Delegate Meeting Role can be modified but not deleted).

The Meeting Role determines the individual conference units settings, screens, buttons and functions that will be available when a participant is logged into the CUA.

A Meeting Role is also associated with each seat to determine the settings that must apply as default when no one is logged in.

6. Select the "Setup/Equipment/Conference Units" and type in the computer names for each of the seats which shall be paired with a PC on the network running the CUA.

Assign a Meeting Role to each of the seats to be used as a default when no one is logged in.

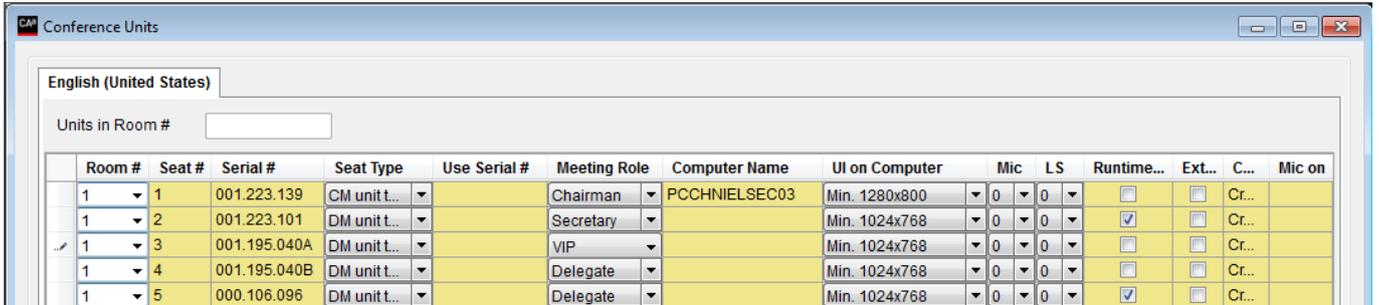


Figure 6.1-B List of units

7. Select the "Participants" screen
  - a. Type in information for all the Participants who shall use the system.
  - b. Select the default Meeting Role for the participant.
  - c. Enter additional information required for participants in up to four customisable fields.
8. Select the "Setup/Configuration/Participant List Configuration" and configure the width and appearance of the various fields on the participant lists.
9. Select the "Setup/Language/Languages" and create additional system languages if needed (in addition to the Default System language created during installation).
10. Select the "Setup/Language/Labels"
  - a. Import labels for the Default System language if different from English if labels for the language exist in the SW6000 Installation package. If not translations for all labels has to be created
  - b. Create translations for the languages which are added. If some or all labels are not translated then the default language translation (English) for a particular label will be used.
  - c. If English is the Default System Language chose the English tab and select label 40 and change "Meeting Room" to a description, which applied to your installation

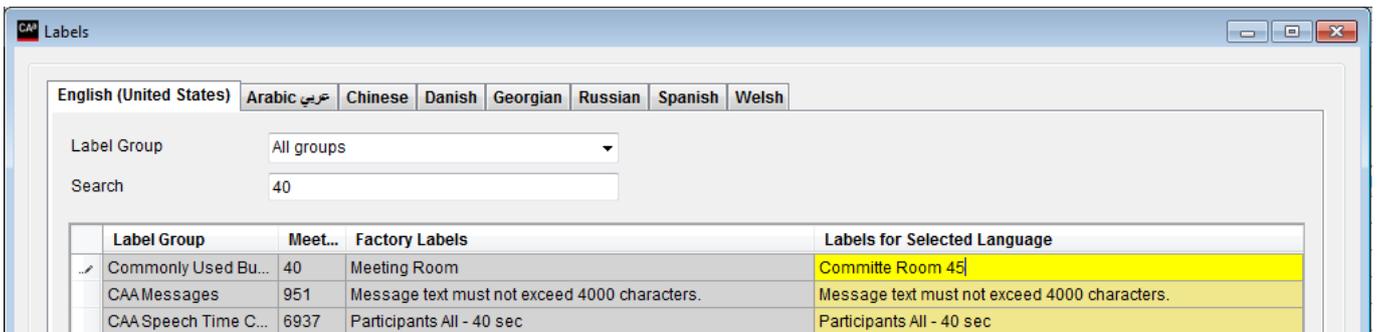


Figure 6.1-C Label for room description

- 11. Select the Mimic screen from the "Setup/Configuration/Mimic Configuration" and create a new Mimic diagram.

Creating a Mimic diagram importing a bitmap showing the meeting room as a background image and then to import all seats onto the Mimic diagram and position the coloured dots representing a microphone or seat.

- 12. Select the "Message" screen and create messages.
- 13. Select "Setup/Configurations/CDA Configuration and change (if needed) Font Size, Colours etc. for the various CDA screens available.

- 14. Select "Meeting"
  - a. Add a meeting

- b. Fill in a proper name for the meeting.
- c. If chip cards or login using code are not in use select "Meeting Mode: Prepared Participant List".
- d. Select the preferable "Speak Mode", "Voting Parameters" (both can be changed at any time during the meeting).
- e. Change Start and Stop date if needed.
- f. Click update

- 15. Select "Participant List"
  - a. Select the Participant who is to be placed in Seat 1 and click >>

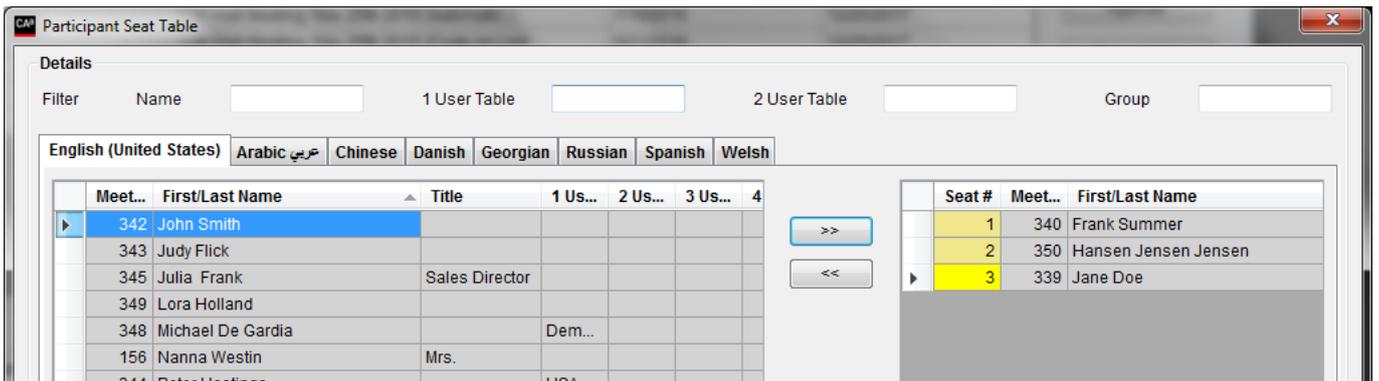


Figure 6.1-D Participant Seat Table

- b. Select the Participant who is to be placed in Seat 2 and click >>. Continue until all participants are placed in the seats
- c. Click "Participants Table -> Hide"

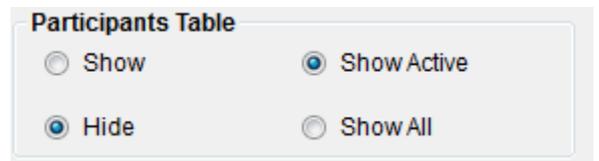


Figure 6.1-E 'Hide' Participant database

- d. Select for each participant the Meeting Role, which shall apply for the participant for this meeting.

Seat #	Meet...	First/Last Name	Title	1 Us...	2 Us...	3 Us...	4 Us...	Meeting Role	Use Second. M...	Secondary Meetin...
1	340	Frank Summer						Delegate	<input type="checkbox"/>	Chairman
2	350	Hansen Jensen Jensen						Delegate	<input type="checkbox"/>	
3	339	Jane Doe						Delegate, ...	<input checked="" type="checkbox"/>	Chairman

Figure 6.1-F Change Meeting Role in Participant Seat Table

- e. Click Update and close the Participant Seat Table
16. Select Agenda and fill in the Agenda details for the Meeting
17. Select Options and select the default options for this meeting
18. Click Update

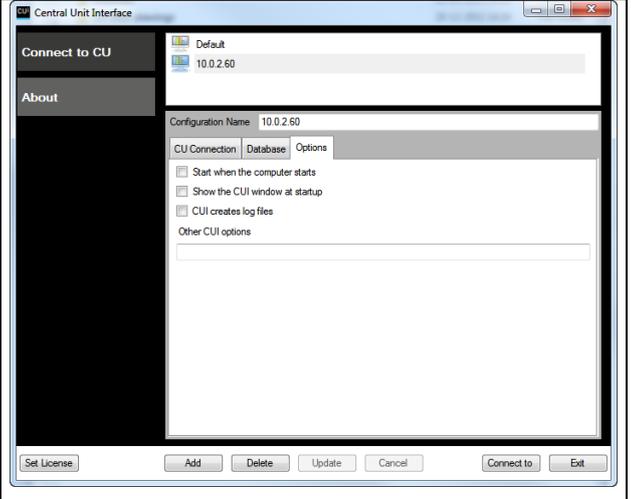
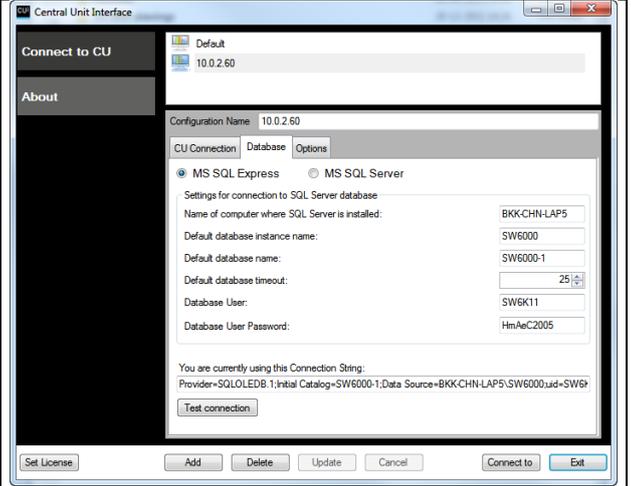
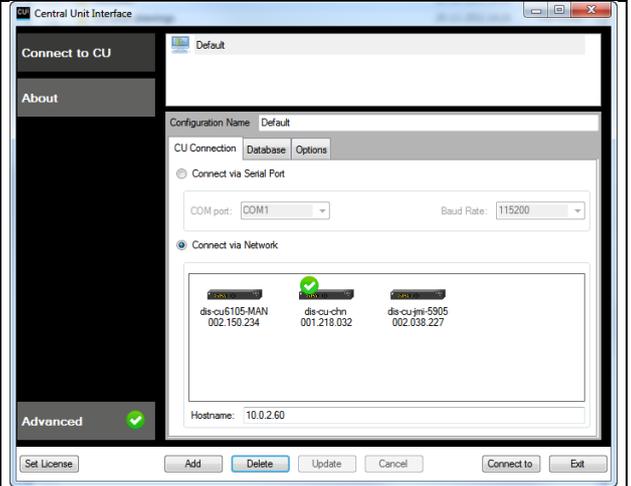
**Hint:** *If the meeting created is supposed to be the default for future meetings then click "Save as Default"*

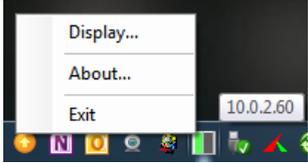
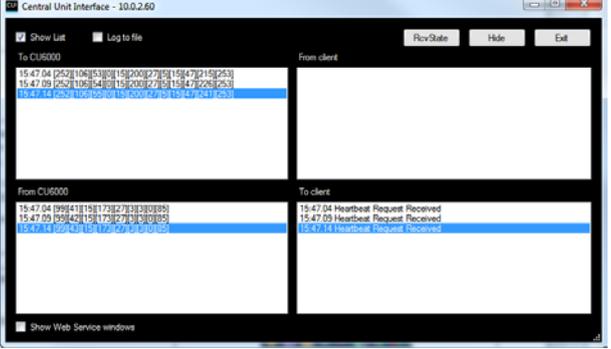
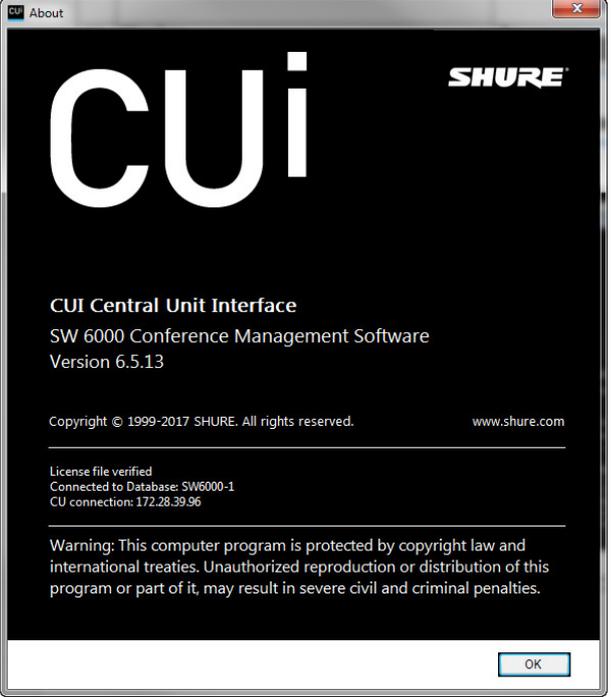
The system is now ready for use, however it is strongly recommended to read the User Manuals for the Applications.

# 7 Advanced Settings

## 7.1 Advanced setting in the CUI

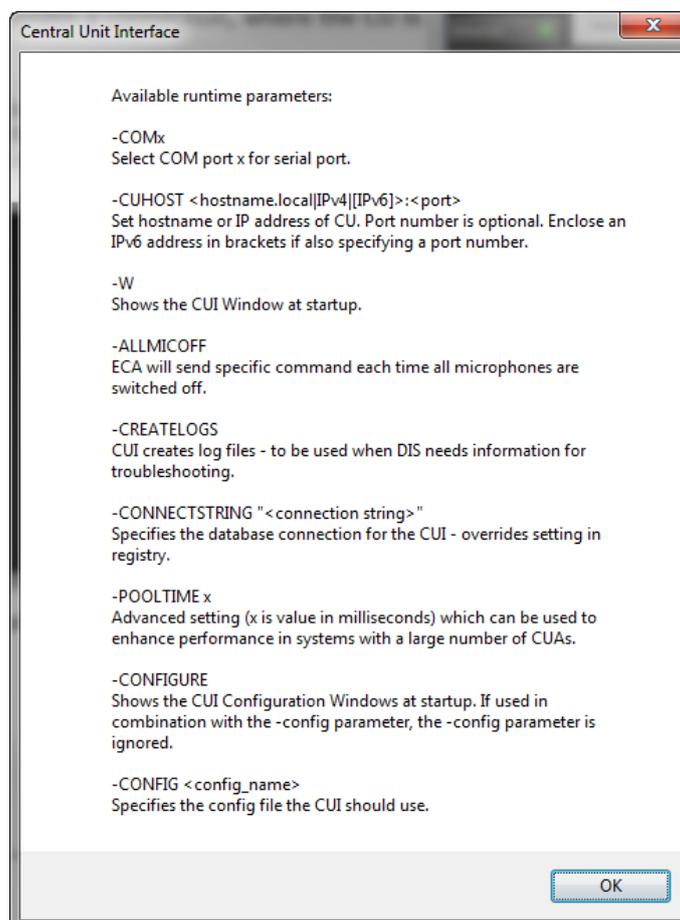
<p>38.</p>	<p>When activating the shortcut 'Configure CUI' in the Start menu the CUI interface opens.</p> <p>When 'Advanced' it ticked more configuration options in three tabs will be available.</p> <p><b>CU Connection</b></p> <p><u>Configuration Name</u> Different CUI configurations can be made. If a configuration is Added, a shortcut is created on the desktop with the name of the configuration.</p> <p><u>Hostname</u> The hostname or IP address can be typed into this field to create a connection, where the CU is not turned on.</p>
<p>39.</p>	<p><b>Database</b></p> <p>CUI connections to different databases can be setup.</p> <p>Click 'Add' and give the new configuration a name and make the settings as needed. Click 'Update' to save the new configuration.</p> <p>Previous configurations can be changed by selecting the configuration in the top window, then making the changes and click 'Update'</p>
<p>40.</p>	<p><b>Options</b></p> <p>The following options are available:</p> <ul style="list-style-type: none"> <li>• Start when the computer starts</li> <li>• Show the CUI window at startup</li> <li>• CUI creates log</li> </ul> <p>A text field is available for additional options</p>



<p>41. <b>When the CUI is started an Icon is visible in the taskbar.</b> Right-clicking the icon brings the option menu.</p>	
<p>42. <b>Display</b> Show messages to/from the central unit</p>	
<p>43. <b>About</b> Shows if the 'License File' is verified and connection details</p>	

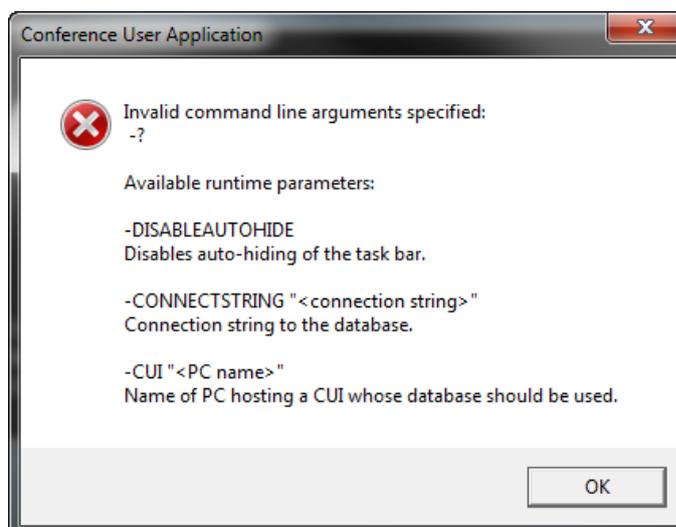
### 7.1.1 Command line parameters for the CUI

Behaviours for the CUI can in addition to the options in the CUI Interface setup also be applied as a command line parameter in the CUI shortcut. The options are:



## 7.2 Advanced settings CUA, CDA and CAA

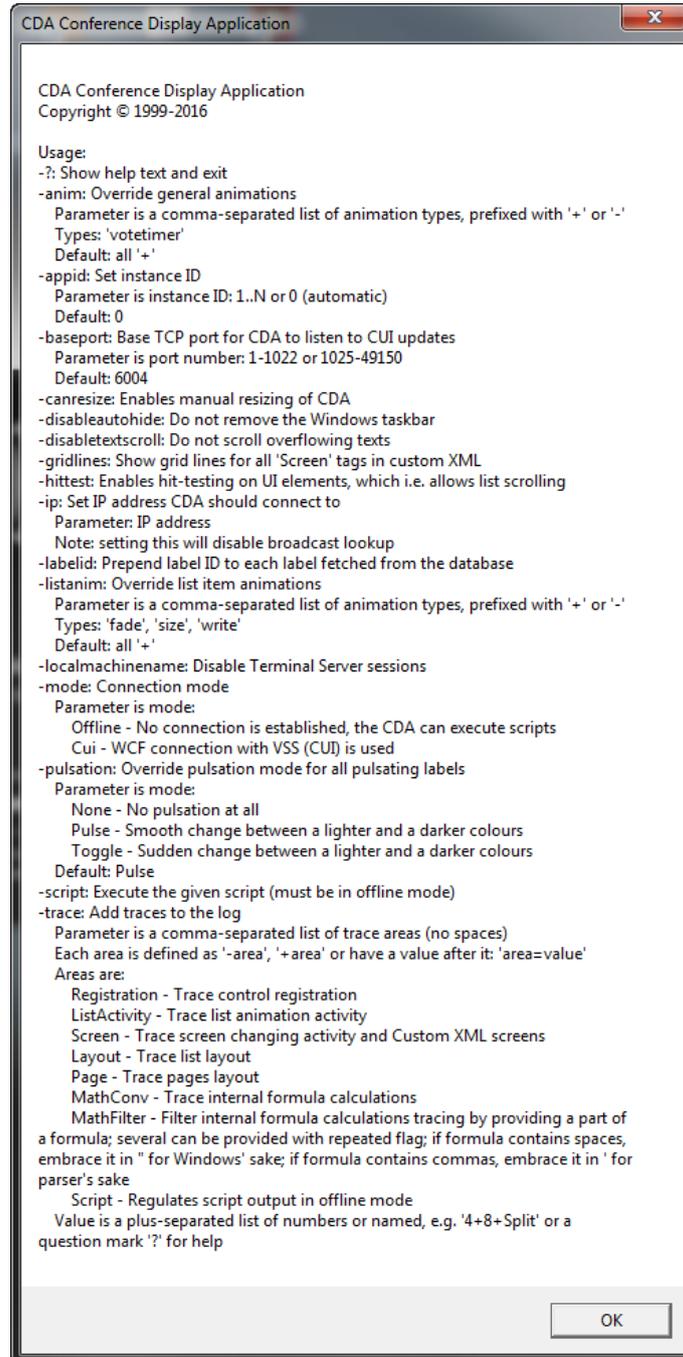
### 7.2.1 Command line parameters for the CUA



- CONNECTSTRING "connectstring"** Use this parameter to specify the database the CUI shall connect to. An example of a valid 'connectstring' entry is  
 Provider=SQLOLEDB.1; Initial Catalog=SW6000-1; Data Source=bkk-chn-lap\SW6000; uid=SW6K11; password=HmAeC2005; Timeout=30;
- DISABLEAUTOHIDE** Will not hide taskbar
- CUI "PC-name"** If this parameter is applied the CUA or CDA will automatic change connection to the database the CUI on the PC specified in the parameter is starting up on.
- USERIDxxx** When RUNTIME login is enabled, the User ID for the user of the PC/Laptop can be specified. The User Id is to be found in 'CAA/Tables/Participants'.
- CONSOLExxx** Used when the CUA is running on a terminal server to specify the client (console) number. In 'CAA/Setup/Equipment/Conference Units' the entry will be in the following format: SERVERNAME~CONSOLExxx like in the following example: FTATS10~186
- LOWRESOLUTION** CUA starts up in Layout 1 with min. resolution of 1024 x 768
- MEDIUMSHORTRESOLUTION** CUA starts up in Layout 2 with min. resolution of 1280 x 768
- MEDIUMRESOLUTION** CUA starts up in Layout 3 with min. resolution of 1280 x 800
- HIGHRESOLUTION** CUA starts up in Layout 4 with min. resolution of 1920 x 1080

## 7.2.2 Command line parameters for the CDA

The CDA has a number of command line parameters.



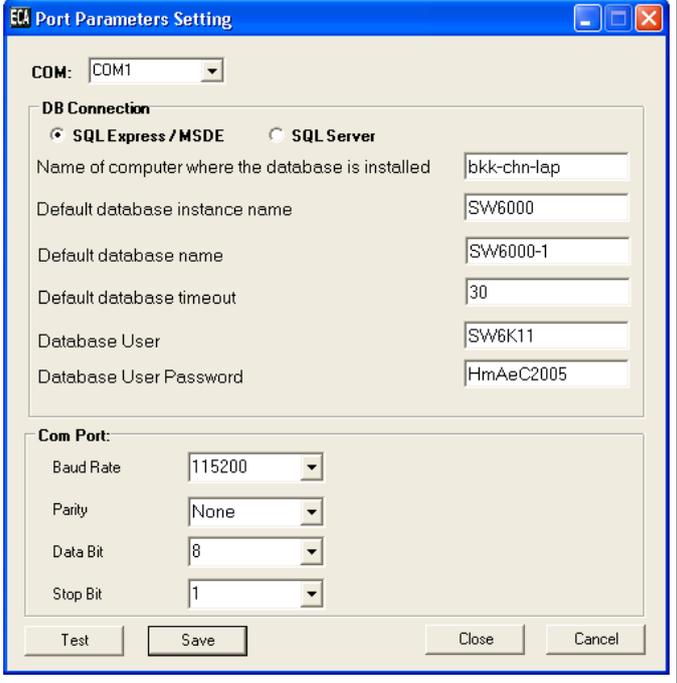
## 7.2.3 Command line parameters for the CAA

**-CONNECTSTRING "connectstring"** Use this parameter to specify the database the CUI shall connect to. An example of a valid 'connectstring' entry is

```
Provider=SQLOLEDB.1; Initial Catalog=SW6000-1; Data Source=bkk-chn-lap\SW6000; uid=SW6K11; password=HmAeC2005; Timeout=30;
```

**-LABELID** Include label numbers in both the CAA and in the reports

### 7.3 Configuring the ECA

44.	After the ECA has been installed, the ECA shortcut is placed on the Desktop and in the start folder.	
45.	Click the 'ECA Interface' shortcut on the desktop	
46.	<p>When starting the 'ECA' the following window appears:</p> <p>The COM ports, which are configured, will be highlighted.</p> <p>Insert the Name of the Computer, where the database is installed</p> <p>Insert the 'Default Database name'</p> <p>Click 'Save'</p>	

#### 7.3.1 Command line parameters for the ECA

- W Show a communication window when the ECA is started. Don't use this parameter in normal use.
- COMx Specifies the COM port to use. COM1 to COM4 are valid entries. When the COM port is specified, the 'Select COM port' popup is disabled.
- STARTUPDELAYx Specifies a delay that the application will wait before initializing completely. The delay x, is given in milliseconds. This is useful if the ECA shortcut is placed in the Startup folder in windows, giving windows time to start services related to SQL, before the ECA starts communicating with the SQL server.
- DELAYxx Please refer to 'User Manual SW 6232 ECA' for details.

### 7.4 Installing the CP 6001 Chip Card Programmer

The CP 6001 Chip Card programmer is used for programming and reading DIS chip

cards. To install the programmer follow the instructions:

<p>47.</p>	<p>Connect the programmer to an available USB port on the PC, where a CAA application is installed.</p> <p>Your windows operating system will automatically detect the CP 6001 by showing the 'Found New Hardware Wizard'.</p> <p>Click 'No, not this time' to continue.</p> <p>Browse to folder "..\SW6000 Accessories\Driver for DCS 600x Chip card programmers" and select the folder with the appropriate driver and install the driver.</p>	
<p>48.</p>	<p>The driver has been installed and the CP 6001 Chip Card Programmer is now ready to use.</p>	

## 7.5 Customer Logo

The Shure logo in the CUA application can be exchanged with a customer logo.

Create a logo in PNG format with an invisible background.

The image size shall be 214x162 pixels

Edit the following entry in the prjCUA.exe.config file located in the CUA executable folder:

```
<setting name="CustomLogoFile"
serializeAs="String" >
```

```
<value>xxxxx.png</value>
```

```
</setting>
```

The value can include drive and folder name.

## 7.6 Creating Database Connections

If your CUA or CAA application on the PC shall have access to more databases you must check the checkbox 'Create Hall Definitions' when prompted during installation of the CUA, CAA.

During the installation of SW6000 software, if the 'Create Hall Definitions' checkbox is selected, it is time to set the hall definitions, the following window will appear.

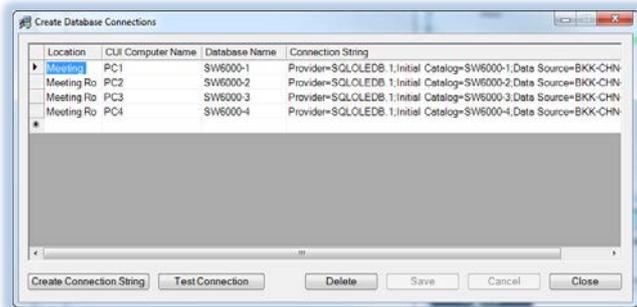


Figure 7.6-A Create Database Connection

Inside the window there is a grid with 4 columns:

- **Location** A description of the location of the computer, where the database is installed.
- **CUI Computer Name** The name of the computer, where the CUI is installed (and database).
- **Database Name** A name identifying the database for the user.
- **ConnectionString** The string, which the CU Interface uses to connect to the specified database. Pressing the 'Create ConnectionString' button at the bottom of the window creates the ConnectionString.

There are 6 buttons at the bottom of the window.

1. 'Delete' button will delete the current row in the grid.
2. 'Save' button will save all row present in the grid to Windows registry.
3. 'Cancel' button will cancel any changes made to the Database Connections.
4. 'Close' button will close the window.
5. 'Create ConnectionString' button is used to create a ConnectionString for the current row on the grid. When this button is pressed, a new window 'Figure 7.6-B Generate Connection String' pops up.

- a. Data Source Type - Select if the database is SQL Express or SQL.
- b. Name of the computer where SQL Server is installed - Insert the name of the Computer running the CUI and database

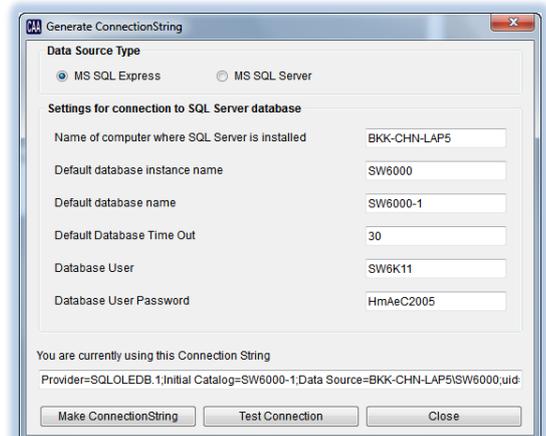


Figure 7.6-B Generate Connection String

- c. **Default database instance name** The default value is SW6000
- d. **Default database name** The Database Name is the name of the database we wish to connect. The names are limited to SW6000-1, SW6000-2, SW6000-3, and SW6000-4.
- e. **Default database time out** The default database timeout is the timeout value for the connection established
- f. **Database user** Default value used during installation of SW6000
- g. **Database user password** Note if the database is MDSE then the password has to be changed to HmAeC2k. For SQL 2008 Server the password is HmAeC2005

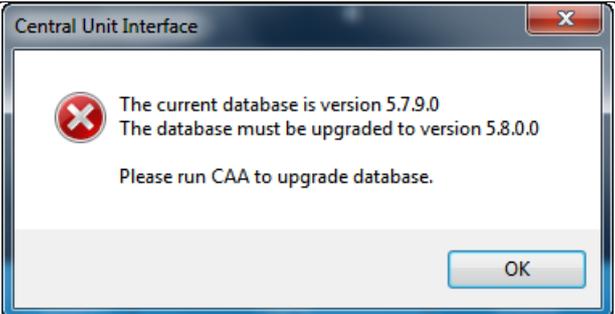
- i. When the selections has been made click 'Make ConnectionString'.to create the connection string. Use the 'Test Connection' button to test the connection string.
- ii. Close the window and proceed filling in information and create connection string for all the connections.

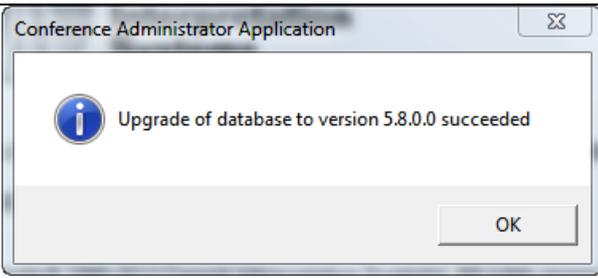
- h. Click 'Make connection string' to generate the connection string.
- i. 'Test Connection' button will validate the Connection String created
- j. Click 'Close' button to close the window.

'Test Connection' button will validate whether the 'Connection String' on the current row in the grid can be used to successfully connect to the database.

## 8 Upgrading from previous versions

### 8.1 Upgrade

49.	Backup the Database(s) using 'SW6000 Backup Utility'.	
50.	On each PC run the SW6000 Installation and select Advanced Installation and select the Applications, which are installed (CUI, CUA, CAA, ECA and/or CDA) and have to be upgraded.  Do not select 'SW6000 Database'.	<div style="border: 1px solid black; padding: 5px; margin: 10px;"> <p><b>Important:</b> An installed database is never 'overwritten' during an upgrade even if it is selected to be installed</p> </div>
51.	If the CUI is started after an upgrade of the Software a message, that the database shall be upgraded might appear.  Click OK to close the message  Close the CUI	

<p>52. Start the CAA</p> <p>Accept to upgrade the database</p> <p>Click OK to close the message and the CAA will start</p> <p>Start the CUI</p>	
---	--

## 8.2 Upgrading from MSDE Database Server

If you have a previous SW6000 version already installed using the MSDE Database Server, you can upgrade as follows.

53.	Backup the Database(s) using 'SW6000 Backup Utility'.
54.	<p>Remove the old installation using "Control Panel - Add or Remove Programs" in the following order:</p> <p>SW6000</p> <p>MSDE Installation</p>
55.	Install the applications as explained in the section "Software Installation".
56.	Restore the Database using 'SW6000 Backup Utility'.
57.	<p>Start the CAA.</p> <p>You will be prompted to upgrade the database when the CAA is started the first time after the installation. Accept this and the database will automatically be upgraded.</p> <p>Click 'Yes'</p>
58.	<p>The upgrade is now completed.</p> <p>Click 'OK'.</p>
59.	Insert a new SW6000 License file as explained in the section "License File"
60.	Update other PCs in the system however do not install the <b>SW6000 database</b>

## 8.3 Upgrading from SQL Express 2005/2008 Express to SQL Express 2014

If you have a previous SW6000 version already installed using the SQL 2005 Server Express and want to use the SQL 2008 Server Express, you can upgrade as follows

61.	Backup the Database(s) using 'SW6000 Backup Utility'.
62.	<p>Double-click the 'setup.exe' in the SW6000 Installation folder and select 'Install'.</p> <p>Select the 'Advanced Installation'.</p> <p>Select 'Remove All' to remove the database</p> <p>Accept to delete all SW6000 databases</p> <p>Enter 'sa' in the Name field and 'sw6000-1' in the password field.</p> <p>Cancel the remaining installation and Finish.</p>

	Optionally, it is possible to remove the database using SQL Server Management Studio Express, however this is not supported by Shure.
63.	Remove the old installation using "Control Panel - Add or Remove Programs" in the following order: <ol style="list-style-type: none"><li>1. SW6000</li><li>2. SQL 2005/2008 Server Express</li></ol>
64.	Install the applications as explained in the section '4.1 'One PC' Installation or first installation in a multi-PC system'.
65.	Restore the Database using 'SW6000 Backup Utility'.
66.	Start the CAA. You will be prompted to upgrade the database when the CAA is started the first time after the installation. Accept this and the database will automatically be upgraded. Click 'Yes'.
67.	The upgrade is now completed. Click 'OK'
68.	Update other PCs in the system however do not install the <b>SQL Server 2008 Express</b> on other PC's.

# 9 Un-installing

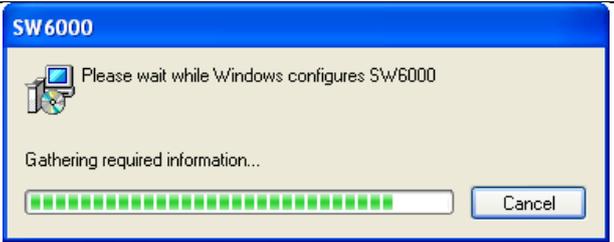
Normally you will not need to un-install the SQL server however if an un-install is

required follow the below instruction carefully:

## 9.1 Un-install SW6000 Applications

The SW6000 Applications can be un-installed using the windows 'Control Panel' and selecting 'Add or Remove programs'.

The name of the installation is 'SW6000'.

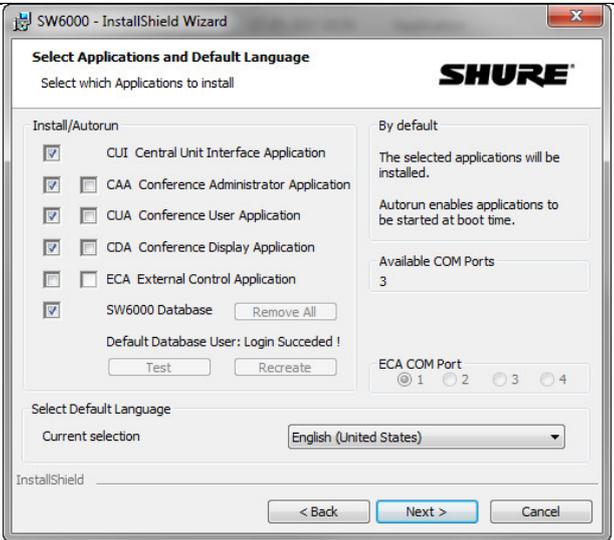
<p>69. To un-install select 'SW6000' in the list of programs and click 'Remove'.</p> <p>All the applications are then removed, except the SW6000 Database and SQL Database Server.</p>	
--	--

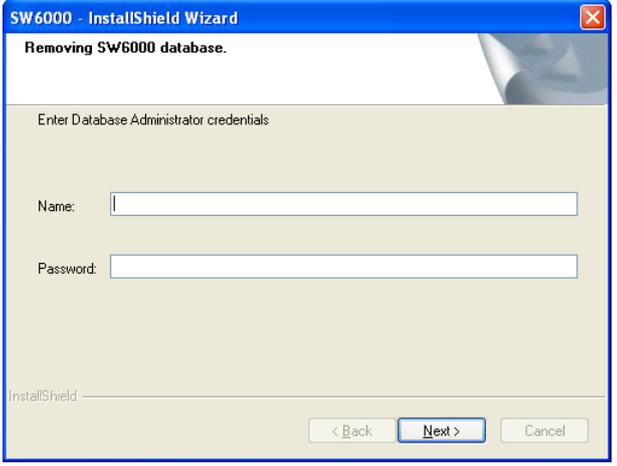
## 9.2 Un-install SW6000 Databases

When the databases (SW6000-1, SW6000-2, SW6000-3 or SW6000-4) has been installed using the SW6000 Setup, the databases will not be removed, when removing the

SW6000 Application using 'Add or Remove programs'.

The Databases are removed in the following way.

<p>70. Run the SW6000 Setup program and select 'Advanced Installation'.</p> <p>Click 'Remove All'</p>	
---	--

<p>71. You will be asked to enter Database Administrator credentials.</p> <p>Enter 'sa' in the Name field and "sw6000-1" in the Password field</p> <p>Click 'Next'</p> <p>The SW6000 Database is now removed.</p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p><b>Important:</b> Remember to make backup of the databases. When the databases are removed all meeting data is lost.</p> </div>	
---	--

### 9.2.1 Problems un-installing the SW6000 Databases

If the SW6000 Applications have been removed before the SW6000 databases are removed or the above procedure for removing the SW6000 Databases fails the databases can be removed in the following way:

**Delete the folder C:\Program Files\DIS\SW6000 Database**

### 9.2.2 Un-install SQL 2008 Express Server

The 'Microsoft SQL Server' can be uninstalled using the 'Add or Remove Programs' function in the Windows 'Control Panel' as well, but unless the 'SW6000 Databases' has already

After deleting the database the SQL 2008 server has to be un-installed and installed again, if SW6000 has to be re-installed.

**Important:** Remember to make backup of the databases before deleting them. When the databases are removed all meeting data is lost.

been uninstalled, do not uninstall the SQL server

The program is displayed on the list as 'Microsoft SQL Server 2008'.

# 10 Descriptions of the more technical parts

## 10.1 Database

To use the SW6000 applications a database is needed. The database contains all data used by the application such as participant names, microphone information etc. etc.

When installing the SW6000 software a database will be created with initial data.

The 'SQL Database Engine' hosts all databases.

These SQL servers can host the database for SW6000:

- \* Microsoft SQL Server 2008 Express
- \* Microsoft SQL Server 2008 SP3 / Microsoft SQL Server 2008 R2 SP2
- Microsoft SQL Server Express 2014
- Microsoft SQL Server 2012 SP3 / Microsoft SQL Server 2012 R2
- Microsoft SQL Server 2012, Enterprise Edition or Standard Edition
- Microsoft SQL Server 2014, Enterprise Edition or Standard Edition
- Microsoft SQL Server 2016, Enterprise Edition or Standard Edition
- Microsoft SQL Server 2017, Enterprise Edition or Standard Edition

\*Microsoft has announced that **On July 9, 2019, support for SQL Server 2008 will end.** It is therefore strongly recommended, that the SQL server 2008 and SQL Express 2008 is updated.

The Microsoft SQL Server Express 2014 is delivered as part of the SW6000 package

If you are planning to use 'Microsoft SQL Server 201x' it must be preinstalled on the computer before you install SW6000. If you are planning to use 'Microsoft SQL Server 2014 Express' you can use the set-up in the SW6000 installation package.

**The 'Microsoft SQL Server 201x' is not part of the SW6000 software package only the Express Server.**

The data in the database is not secured in any way. If you want to secure your data, you must contact your database administrator and change the connect strings used by the applications accordingly. For a description of connects strings see Connect string.

## 10.2 Connect string

When the applications are connecting to the databases to get access to data they use a 'connect string'. This connect string identifies which database should be used by the application and how.

For the SW6000 the connect string is located in registry key:

**HKEY\_LOCAL\_MACHINE\SOFTWARE\DIS\DCS6000\Database\Connect string**

### 10.2.1 Connect string for the SQL Server

For the SQL server the value of the connect string will typically have a value similar to the following: -

**Provider = SQLOLEDB.1;Initial Catalog=SW6000-1;Data Source=SQLSERVERCOMPUTER;uid=sa;**

The 'Provider' determines how the application should access the database. In this case OLEDB is used – which is installed when installing MDAC 2.6.

The 'Initial Catalog' is the name of the database to connect to; this will most likely be SW6000-1.

The 'Data Source' will be the name of the computer on which the SQL server is running.

The 'uid' is the user id to be used by the application when connecting to the database. This will most likely be the default system administrator name 'sa' but it depends on how the SQL Server is installed. If you add security to the SQL Server you might change this to more appropriate value, and for example add a password to the Connect string. If you do please note that this password will be public to anyone with access to the registry on the client-machines.

### 10.3 Workgroup and Domain

Computers that are members of a workgroup don't have common accounts and the trust relationship between computers in a workgroup is inherently lower.

Computers that are members of a domain will have common security permissions as applied to the domain. A higher trust relationship can exist between computers in a domain.

Some of the technologies used in SW6000 – MSMQ and distributed transactions will due to security enforcements work better when applied in a domain. A rule of thumb is that workgroup should only be used for a very limited number of loosely connected computers (10-20 max) and not when advanced mechanisms other than file sharing is used.



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