



# DCN-D Conference Delegate Units

DCN-DS/L, DCN-DCS, DCN-DV, DCN-DVCS



**BOSCH**

en Installation and Operation manual



# Table of Contents

<b>1</b>	<b>Safety</b>	<b>5</b>
<b>2</b>	<b>About this manual</b>	<b>6</b>
2.1	Digital document	6
2.2	Alerts and notice signs	6
<b>3</b>	<b>Introduction and overview</b>	<b>7</b>
<b>4</b>	<b>Planning and design</b>	<b>11</b>
4.1	Limits	11
4.1.1	Power consumption	11
<b>5</b>	<b>Installation</b>	<b>12</b>
5.1	Microphone buttons	12
5.1.1	Remove the microphone button	12
5.1.2	Install the priority and microphone button	13
5.2	Installation to a flat surface	13
<b>6</b>	<b>Connection</b>	<b>14</b>
<b>7</b>	<b>Configuration</b>	<b>15</b>
7.1	Initialization	15
7.2	De-initialization	15
7.3	Internal settings	16
7.3.1	Microphone sensitivity	17
7.3.2	Channel/volume restore function	17
7.3.3	Headphones level reduction	18
7.4	Delegate unit modes	18
7.4.1	Single delegate	19
7.4.2	Chairman	19
7.4.3	Single delegate with auxiliary control	20
<b>8</b>	<b>Operation</b>	<b>21</b>
8.1	Microphone	21
8.2	Attendance LED	21
<b>9</b>	<b>Troubleshooting</b>	<b>22</b>
9.1	Delegate Unit	22
<b>10</b>	<b>Maintenance</b>	<b>23</b>
10.1	Cleaning	23
10.2	Storage	23

---

**11      Technical Data**

**24**

# 1

## Safety

Please read the Important Safety Instructions before you install or operate the delegate units and the DCN System.

The Important Safety Instructions are supplied together with the central control unit.

## 2 About this manual

The Installation and Operation manual gives installers and operators the necessary data to install, configure, operate and maintain the following delegate units:

- DCN-DS-xx (Delegate unit with fixed short stem microphone).
  - DCN-DL-xx (Delegate unit with fixed long stem microphone).
  - DCN-DCS-xx (Delegate unit with channel selector).
  - DCN-DV-xx (Delegate unit with voting).
  - DCN-DCSV-xx (Delegate unit with channel selector and voting).
- xx stands for the region version (e.g. CN is China version).

**NOTICE!**

This manual is an addendum to the DCN system Installation and Operation manual. Where necessary, references will be made to the DCN system Installation and Operation manual.

---

All dimensions, specifications and images are subject to change without prior notice.

### 2.1 Digital document

This installation and operation manual is also available as a digital document in the Adobe Portable Document Format (PDF).

When the PDF refers to a location that contains more data, click the text. The text contains hyperlinks.

Refer to the product related information on [www.boschsecuritysystems.com](http://www.boschsecuritysystems.com).

### 2.2 Alerts and notice signs

Three types of alerts can be used in this manual. The alert type is closely related to the effect that may be caused if it is not observed. These alerts - from least severe effect to most severe effect - are:

**NOTICE!**

Alert containing additional information. Usually, not observing a 'notice' does not result in damage to the equipment or personal injuries.

---

**CAUTION!**

The equipment or the property can be damaged, or persons can be lightly injured if the alert is not observed.

---

**WARNING!**

The equipment or the property can be seriously damaged, or persons can be severely injured if the alert is not observed.

---

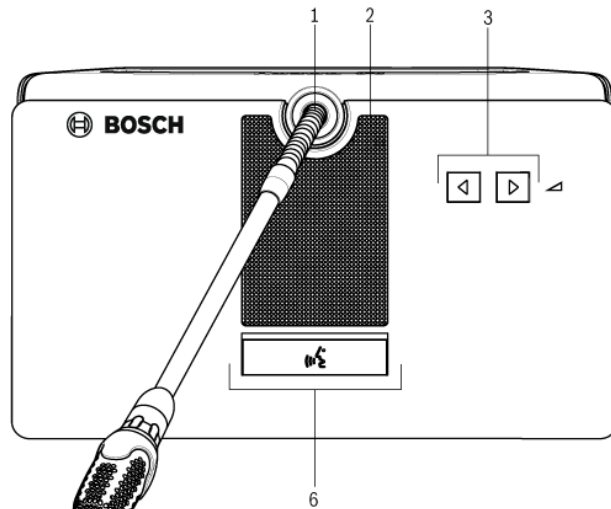
### 3 Introduction and overview

The delegate units are part of the Bosch Digital Congress Network (DCN) system.

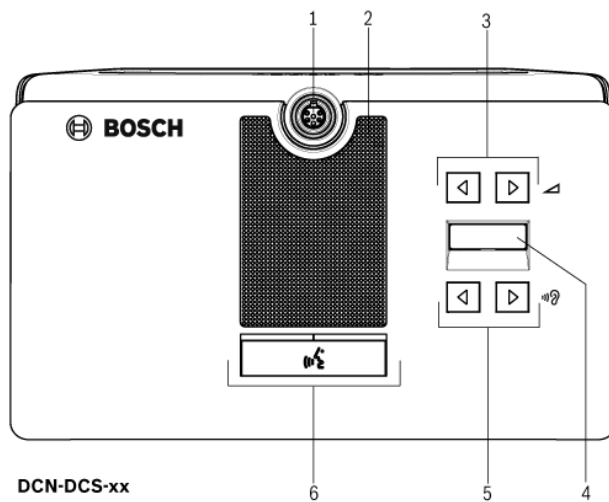
The delegate unit with fixed short or long microphone (DCN-DS/L) enables participants to speak, register a request-to-speak and listen to the speaker. The microphone stem is flexible.

The delegate units accommodate two headphone connections. The built-in loudspeaker is muted when the microphone is on to prevent acoustic feedback.

The delegate unit with channel selector (DCN-DCS) enables participants to speak, register a request-to-speak and listen to the speaker. A socket is provided to connect the pluggable microphones (DCN-MICS and DCN-MICL, to be ordered separately). The unit has a built-in channel selector that makes it suitable for discussions in which more than one language is used and simultaneous interpretations are available. The channel selector includes two up and down channel select keys and a display showing the number and the abbreviation of the languages, enabling rapid selection of the required language channel.



DCN-DS-xx, DCN-DL-xx

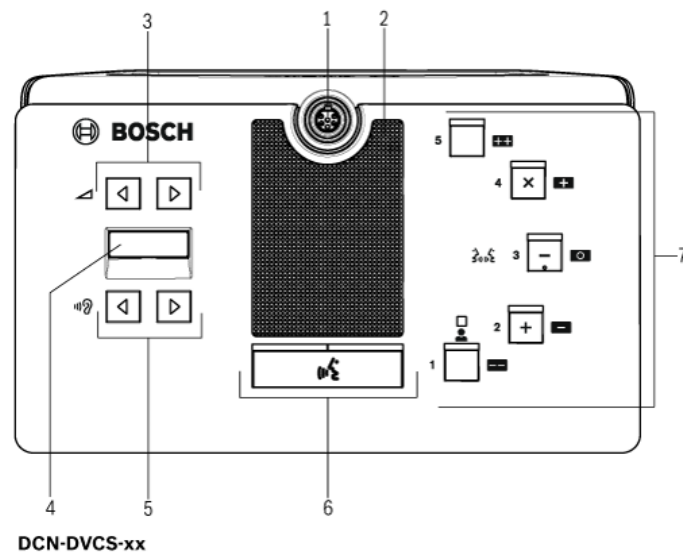
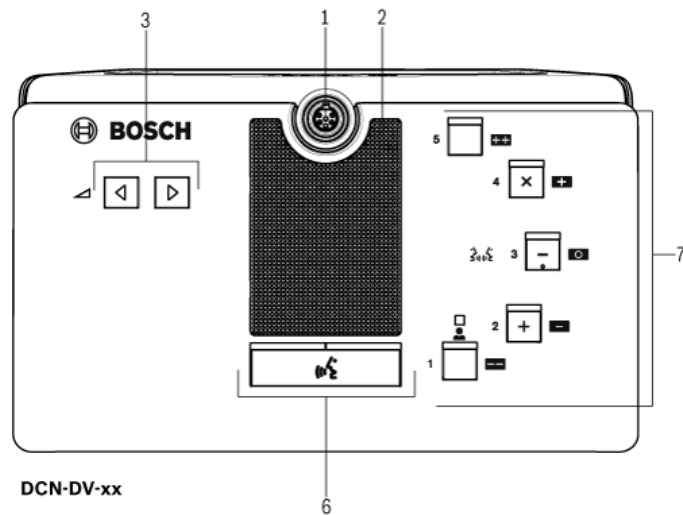


DCN-DCS-xx

**Figure 3.1** Top view of the basic delegate unit (DCN-DS/L) and the delegate unit with channel selector (DCN-DCS)

The delegate unit with voting (DCN-DV) and channel selector (DCN-DVCS) enables participants to speak, register a request-to-speak, listen to the speaker and vote. A socket is provided to connect the pluggable microphones (DCN-MICS and DCN-MICL, to be ordered separately). The unit has five voting buttons for all types of voting. The yellow indicators above the voting buttons are used to prompt users to register their presence, to start voting and to confirm their vote. When the unit's attendance LED is yellow, it indicates the delegate is present.

Besides the voting function, the unit (DCN-DVCS) has a built-in channel selector, which makes it suitable for discussions in which more than one language is used and simultaneous interpretations are available. The channel selector includes up and down channel select keys and a display showing the number and the abbreviation of the languages, enabling rapid selection of the required language channel.



**Figure 3.2** Top view of the delegate unit with voting (DCN-DV) and with channel selector (DCN-DVCS)



**The top side of the delegate unit contains:**

1. **Microphone socket** - Connects a pluggable microphone (DCN-MICL or DCN-MICS) to the delegate unit.

**NOTICE!**

A DCN-MICL or DCN-MICS pluggable microphone cannot be used with the DCN-DS and DCN-DL delegate units. The DCN-DS and DCN-DL delegate units have fixed microphones.

2. **Loudspeaker** - Gives the audio signal from the floor to the delegate or the chairman unit.
  - The loudspeaker signal is muted when the microphone is enabled.
3. **Volume buttons** - Headphone output signal level adjustment.
4. **Channel selector display** - Shows the number of the language channel and abbreviation of the current headphone audio signal.
  - When the display shows FLR, the floor audio signal is on the headphones.

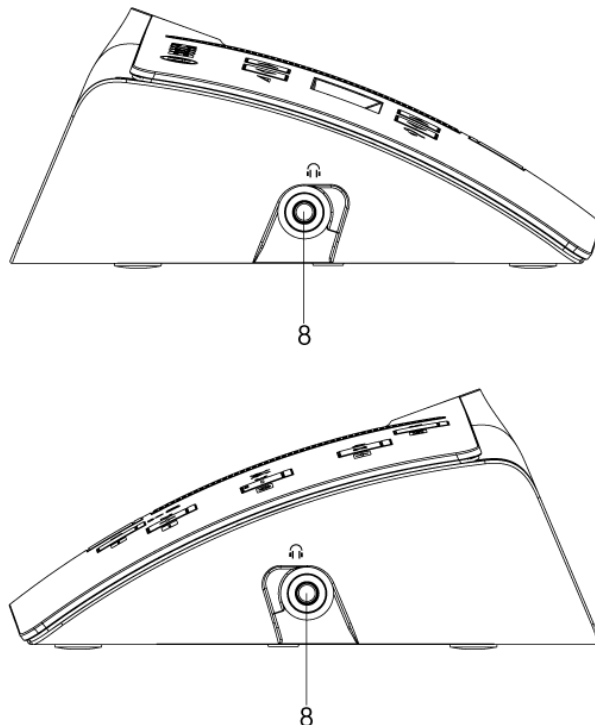
**NOTICE!**

Change the type of language abbreviation with menu e of the installation menu of the interpreter desk.

5. **Channel selector buttons** - Select the channel that is sent to the headphones.
6. **Microphone buttons** - Enable or disable the microphone.
  - Each microphone button has a LED that shows the condition of the microphone.
  - The mode of the delegate unit gives the type and number of microphone buttons which must be installed in the delegate unit.
7. **Voting buttons** - Operate the delegate unit. Each voting button has a yellow LED. The LED adjacent to voting button 1 is the attendance LED.

**The left and right side of the delegate unit contains:**

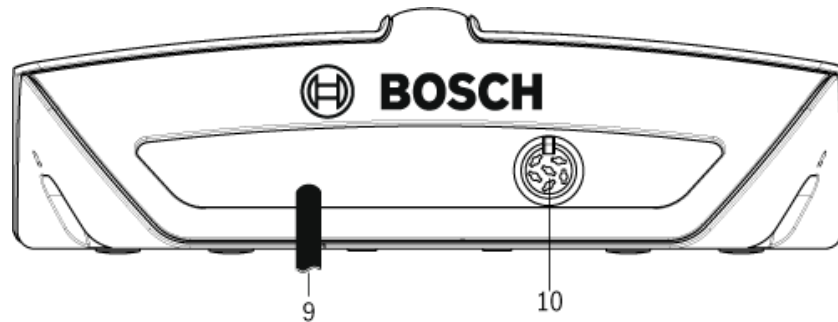
8. **Headphones socket** - Headphone connection.



**Figure 3.3** Delegate unit side views

**The rear side of the delegate unit contains:**

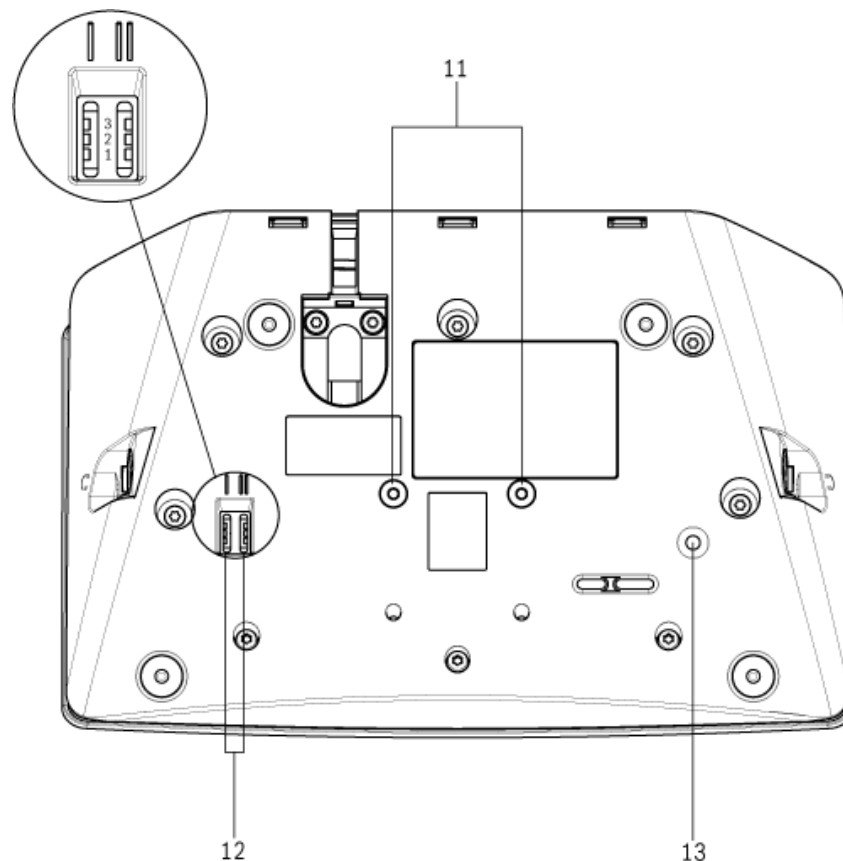
9. **DCN cable** - Connects the delegate unit to the DCN system.
10. **DCN socket** - Makes a loop-through in the DCN system with the delegate unit.



**Figure 3.4** Delegate unit rear view

**The bottom side of the delegate unit contains:**

11. **Screw holes** - Attach the delegate unit to a flat surface.
12. **Configuration switches** - Configuration of the delegate unit and sets the mode of the delegate unit.
13. **De-init switch** - Erases the address of the delegate unit.
  - All LEDs on the delegate unit are on when the delegate unit does not have an address.



**Figure 3.5** Delegate unit bottom view

## 4 Planning and design

The planning and design section tells how to design the delegate units within the DCN system, and gives necessary data to understand the limitations.

### 4.1 Limits

The delegate units make part of the, so-called, active devices in the DCN system. In total, 245 active devices can be used within a DCN system. Make sure the limits are not exceeded when you design the DCN system. In general, refer to the limitations as described within the DCN system Installation and Operation manual.

#### 4.1.1 Power consumption

The following table shows the power consumption of each delegate unit type used in the DCN system.

Delegate unit	Watt
DCN-DS	2.75
DCN-DL	2.75
DCN-CS	2.9
DCN-DV	3.05
DCN-DVCS	3.20

**Table 4.1** Power consumption

## 5 Installation

Default, the delegate unit comes in the single delegate mode and has the microphone button installed. Read the *Section 7 Configuration* first, when you want to change the default delegate settings and the delegate mode.



Figure 5.1 Default microphone button

### 5.1 Microphone buttons

The mode of the delegate unit indicates the type and number of microphone buttons that must be installed. Refer to *Section 7 Configuration*.



#### NOTICE!

Before you install the microphone buttons, make sure that the delegate unit operates correctly. Defective delegate units are always replaced with a delegate unit that contains the default microphone button.

#### 5.1.1 Remove the microphone button

1. To remove the microphone button (1), push the button tool trough the bottom side holes as indicated.
  - The tool comes with the DCN-DBCM button (2) set (to be ordered separately).

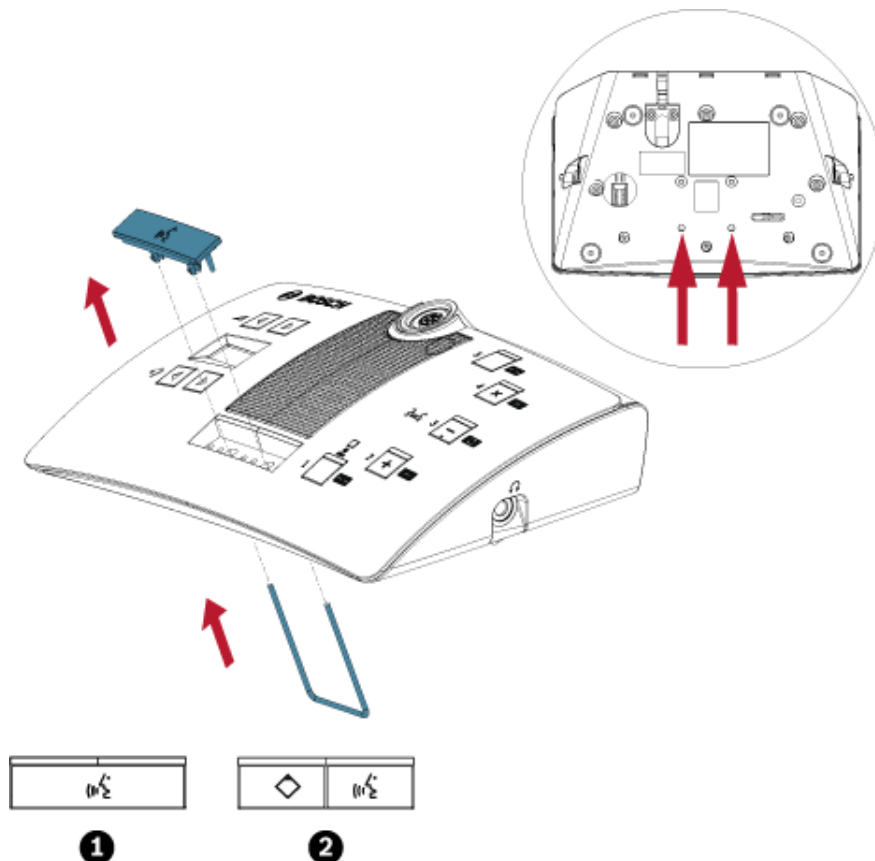


Figure 5.2 Remove the microphone button (1)

### 5.1.2

#### Install the priority and microphone button

1. Push the buttons (2) in the microphone button holes as indicated.
  - The DCN-DBCM button set has to be ordered separately.

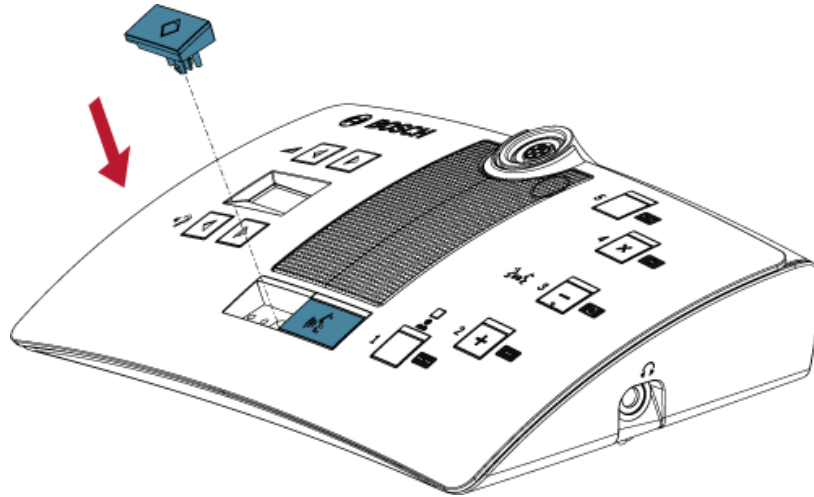


Figure 5.3 Installation of the delegate microphone buttons

## 5.2

### Installation to a flat surface

When you attach the delegate unit to a flat surface, put screws with a maximum length of 8 mm in the screw holes (11). The distance between the centres of the screw holes is 34 mm.

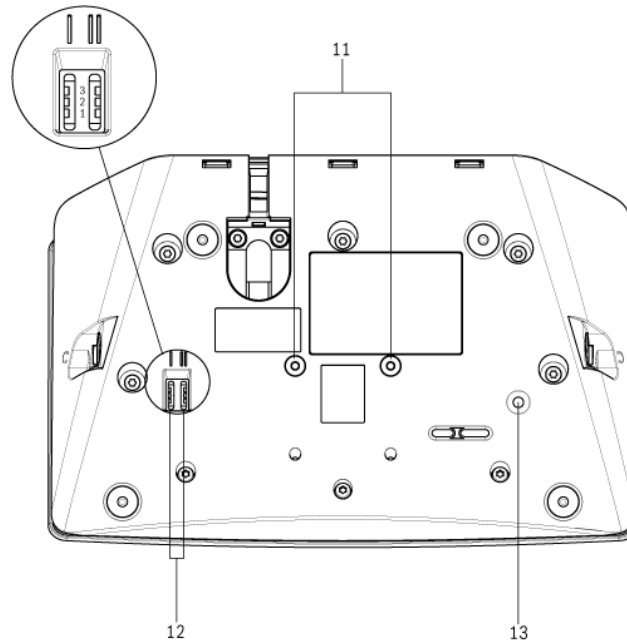
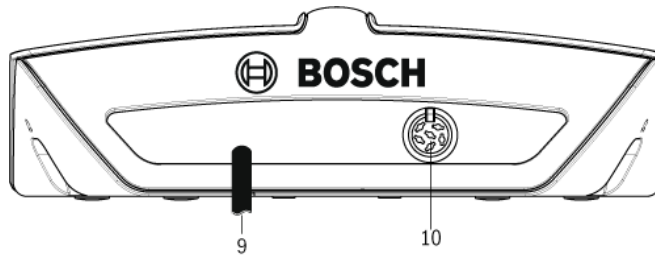


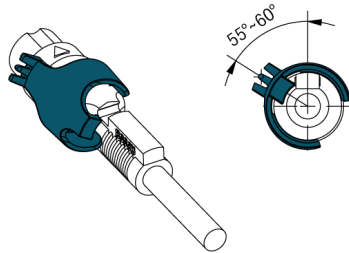
Figure 5.4 Installation to a flat surface

## 6 Connection

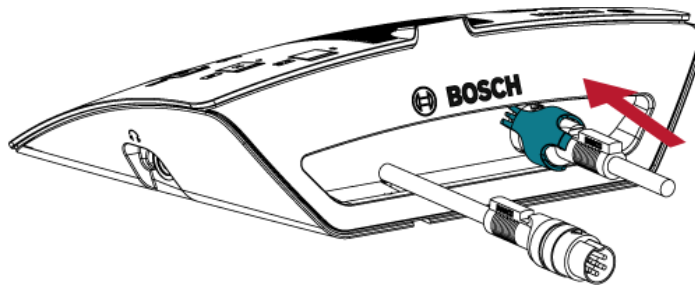
1. Connect the delegate unit to the DCN system with the delegate unit cable (9).
  - Use the DCN socket (10) to make a loop-through with the delegate unit.



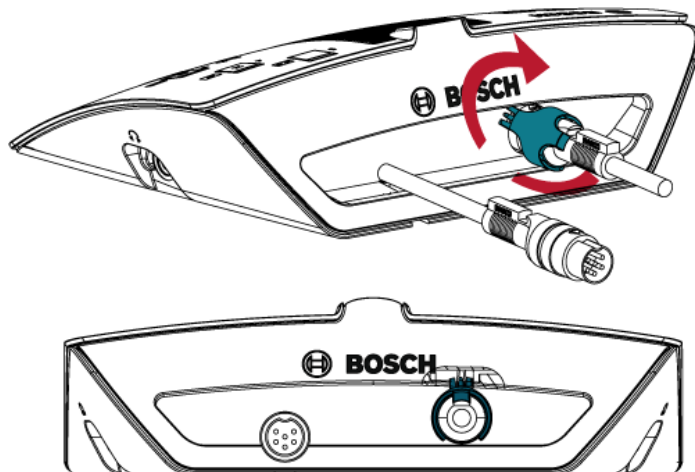
2. Use the cable-to-unit clamp to lock the DCN cable to the delegate unit:
  - Put cable-to-unit clamp on the cable connector (55°~ 60° position).
  - DCN-DISCLM cable-to-unit clamp to be ordered separately.



3. Plug cable and clamp into the unit:



4. Clockwise rotate clamp and make clamp snap into the locking hole of the rear panel:



## 7 Configuration

To function, each delegate unit in the DCN System must have an address. The central control unit cannot send data to a delegate unit that does not have an address. Addressing of delegate units in the DCN system is called, initialization. During the initialization process, the central control unit gives an address to each delegate unit.

### 7.1 Initialization

**NOTICE!**

The central control unit cannot give addresses to more than one delegate unit at the same time. Therefore, do not push more than one microphone button at the same time.

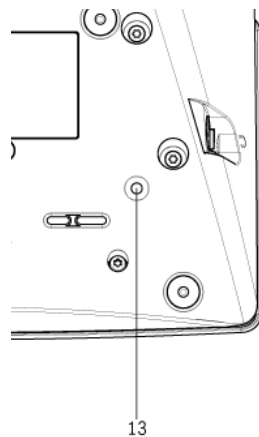
1. All LED's, including the microphone LED, of the delegate unit to be initialized must be ON.
2. Push the microphone button (6):
  - All LED's OFF: delegate unit is addressed.

### 7.2 De-initialization

1. All LED's of the delegate unit to be de-initialized are OFF.
2. Push the de-initialization switch (13) on the bottom side of the delegate unit for less than half a second to erase the address:
  - All LEDs of the delegate unit are ON.
  - The microphone LED (red) is ON.

**CAUTION!**

Do not use a sharp object, otherwise you might damage the de-initialization switch. Use a paperclip or similar device to push the de-initialization switch.



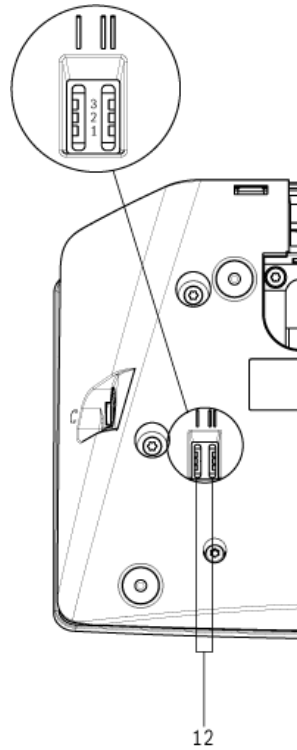
**Figure 7.1** De-initialization switch

## 7.3 Internal settings

The internal settings switches I and II (12) are located at the bottom side of the delegate unit.

Switch: I	Switch: II	Internal settings
2	1	<b>Microphone sensitivity.</b> Default: 0 dB. Refer to <i>Section 7.3.1 Microphone sensitivity.</i>
2	2	<b>Channel/volume restore function.</b> Default: disabled. Refer to <i>Section 7.3.2 Channel/volume restore function.</i>
2	3	<b>Headphones level reduction.</b> Default: disabled. Refer to <i>Section 7.3.3 Headphones level reduction.</i>

**Table 7.1** Internal settings



**Figure 7.2** Internal settings switches



### 7.3.1

#### Microphone sensitivity

1. Put the microphone sensitivity switches I and II (12) in the correct position (refer to *Table 7.1* and *Figure 7.2*):
  - The microphone sensitivity can be adjust between -2 dB and 2 dB.
2. Push the > volume button (3) to increase the microphone sensitivity with 0.5 dB.
3. Push the < volume button (3) to decrease the microphone sensitivity with -0.5 dB.

The color of microphone button LED indicates the microphone sensitivity:

Value in dB	Color of microphone button LED
-2.0	Red
-1.5	Off
-1.0	Orange
-0.5	Off
0.0	Yellow
0.5	Off
1.0	Light Green
1.5	Off
2.0	Green

**Table 7.2** Microphone sensitivity adjustment indication

### 7.3.2

#### Channel/volume restore function

For example, you can enable this function in discussions in which all delegates and chairman have a fixed seat number or delegate unit:

1. Put the channel/volume restore function switches I and II (12) in the correct position (refer to *Table 7.1* and *Figure 7.2*):
  - The function can be enable or disabled.
2. Push the > volume button (3) to enable:
  - The microphone LED above the microphone button come on as green.
  - The last known channel and volume level is automatically set.
3. Push the < volume (3) button to disable:
  - The LED above the microphone button come on as red.
  - The channel 0 (floor) is automatically set.
  - The volume is automatically set to -18 dB.

### 7.3.3

#### Headphones level reduction

For example, you can enable this function to avoid acoustic feedback between the microphone and the headphones of the delegate unit:

1. Put the headphones level reduction switches I and II (12) in the correct position (refer to *Table 7.1* and *Figure 7.2*):
  - The function can be enable or disabled.
2. Push the > volume button (3) to enable:
  - The LED above the microphone button come on as green.
  - When the microphone is enabled, the headphones level reduction is 18 dB.
3. Push the < volume button (3) to disable:
  - The LED above the microphone button come on as red.

## 7.4

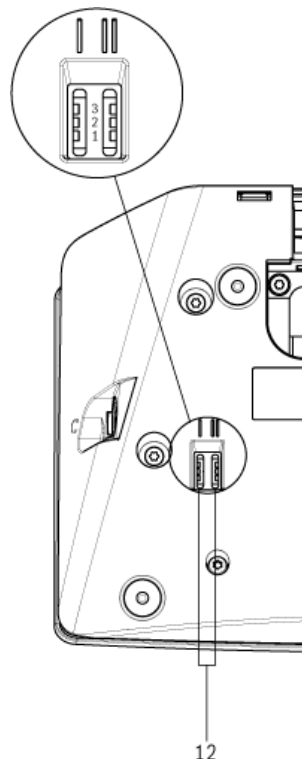
### Delegate unit modes

The delegate unit mode switches I and II (12) are located at the bottom side of the delegate unit.

Each type of delegate unit can operate in a number of modes:

Switch: I	Switch: II	Mode
1	1	<b>Single delegate</b> Refer to <i>Section 7.4.1 Single delegate</i> .
1	3	<b>Chairman</b> Refer to <i>Section 7.4.2 Chairman</i> .
3	3	<b>Single delegate with auxiliary control</b> Refer to <i>Section 7.4.3 Single delegate with auxiliary control</i> .

**Table 7.3** Delegate unit mode overview



**Figure 7.3** Delegate unit mode switches

1. Disconnect the delegate unit from the DCN system.
2. Change the mode of the delegate unit (refer to *Table 7.3*).
3. Change the button, if required refer to *Section 5 Installation*.
4. Re-connect the delegate unit to the DCN system.
5. If required, (de-)initialize the delegate unit (refer to *Section 7.1 Initialization*).

### 7.4.1 Single delegate

Default, the delegate unit comes in the single delegate mode and has the default microphone button installed. Refer to *Table 7.3*.



Figure 7.4 Default microphone button

### 7.4.2 Chairman

When the delegate unit is in the chairman mode, it is a chairman device for 1 chairman (refer to *Table 7.3*). You can put all types of delegate units in the chairman mode. When you put the delegate unit in the chairman mode, you also have to install the DCN-DBCM buttons (to be ordered separately). Refer also to *Section 5 Installation*.

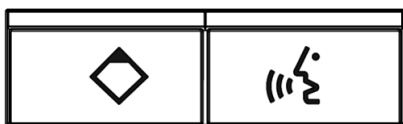


Figure 7.5 DCN-DBCM microphone buttons

The functional difference between a delegate unit and a chairman unit is the priority button on the left hand side of the microphone button. With the priority button, the chairman can disable the microphones of all delegate units used in the DCN system. At the same time, the priority button enables the microphone of the chairman.

The delegate unit in chairman mode has the possibility to:

- Play an attention chime when the chairman pushes the priority button.
- Erase the request-to-speak list and the speakers list when the chairman pushes the priority button.



#### NOTICE!

The DCN-DBCM button set comes with a tool that you can use to remove the buttons from the delegate unit. Refer to *Section 5 Installation*.

### 7.4.3 Single delegate with auxiliary control

When the delegate unit is in the single delegate with auxiliary control mode, it is a delegate device for 1 delegate (refer to *Table 7.3*). The delegate can use the left hand side microphone button as an auxiliary button. For example, to activate an indicator.

**NOTICE!**

When the delegate pushes the auxiliary button, the auxiliary button makes an event. Use the DCN Open Interface to program the actions that must be started by the event. Refer to the applicable DCN software user manual for instructions that tell you how to program the Open Interface.

---

The following types of delegate units can be used in the single delegate with auxiliary control mode:

- DCN-DV
- DCN-DVCS

When you put the delegate unit in the single delegate with auxiliary control mode, you have to install two microphone buttons. For example, you can use the DCN-DBCM buttons (to be ordered separately). Refer also to *Section 5 Installation*.

**CAUTION!**

The DCN-DS/L and DCN-DCS delegate units do not support the single delegate with auxiliary control mode. When this mode is set, the delegate unit will be operate as single user.

---

## 8 Operation

Refer to the Quick Reference Card (QRC) of the used type of delegate unit for instructions that tell you how to operate the delegate unit. See for QRC's the DCN system DVD, which comes with the central control unit.

### 8.1 Microphone

The color of the LED above the microphone button shows the microphone condition.

LED color	Condition
Red (on)	Microphone enabled
Red (flashing)	Last minute of speech time
Green (on)	Request-to-speak
Green (flashing)	First in request-to-speak list
Yellow (on)	VIP mode

**Table 8.1** Microphone condition



#### NOTICE!

You can only put the delegate unit in the VIP mode with the Microphone Management software module. Refer to the applicable DCN system software user manual for instructions that tell you how to enable the VIP mode.



#### CAUTION!

For the microphones it must be avoided to bend the gooseneck more than 90 degrees or to rotate a (bent) gooseneck. This will cause damage to the windings of the gooseneck.

### 8.2 Attendance LED

The LED adjacent to voting button 1 is the attendance LED.

Attendance LED	Condition
Yellow (flashing)	The system requests attendance registration.
Yellow (on)	The attendance registration is confirmed.

**Table 8.2** Attendance LED

## 9 Troubleshooting

### 9.1 Delegate Unit

Problem	Possible cause
<ul style="list-style-type: none"> <li>- Not possible to initialize delegate Units.</li> </ul>	<ul style="list-style-type: none"> <li>- The DCN signal is re-generated too many times.</li> <li>- The trunk is too long.</li> <li>- The DCN signal is not re-generated each 100 m.</li> </ul> <p>Refer to the <i>Section 4 Planning and design</i> and <i>Section 7 Configuration</i>.</p>
<ul style="list-style-type: none"> <li>- Depending on menu setting 8L (CCU), at two or more delegate units the microphone indicator ring is flashing or continues red. The LEDs of the microphone buttons are off.</li> </ul>	<p>Units have the same address. Make sure that each active device in the DCN system has a unique address.</p> <p>Refer to <i>Section 4 Planning and design</i> and <i>Section 7 Configuration</i>.</p>
<ul style="list-style-type: none"> <li>- Delegate unit fully operational but no audio to the loudspeaker or headphones.</li> </ul>	<p>The audio routing mode of the central control unit is Insertion and you did not connect a device between audio input 2 and audio output 2 of the central control unit</p> <p>Refer to the CCU sections of the DCN system installation and operating manual.</p>
<ul style="list-style-type: none"> <li>- Although the system powers the trunks, delegate units are not operational.</li> </ul>	<p>The DCN contains a defective (extension) cable. Find the defective (extension) cable and replace it. The defective (extension) cable can be anywhere in the DCN system.</p>
<ul style="list-style-type: none"> <li>- A delegate unit does not operate as expected.</li> </ul>	<p>The delegate unit is not in the correct mode.</p> <p>Refer to <i>Section 7.4 Delegate unit modes</i>.</p>

## 10 Maintenance

### 10.1 Cleaning

**CAUTION!**

Do not use alcohol, ammonia or petroleum solvents or abrasive cleaners to clean the delegate units.

---

1. Disconnect the delegate unit from the DCN system, if you want to clean it.
2. Use a soft cloth that is not fully moist with a weak soap and water solution.
3. Let the delegate unit fully dry before you install it again.

### 10.2 Storage

1. Keep the delegate units in a clean and dry area with a sufficient airflow.

# 11 Technical Data

<b>Frequency response</b>	30 Hz - 20 kHz
<b>Headphone load impedance</b>	> 32 ohm and < 1k Ohm
<b>Output power</b>	2 x 15 mW/32 Ohm

<b>Headphone plug or socket (2x)</b>	<b>Function</b>	<b>Nominal</b>	<b>Maximum</b>
3.5 mm	Headphones	3 dBV	6 dBV (mute, 0 dB)

<b>Mounting</b>	Tabletop
<b>Dimensions (H x W x D) (without microphone)</b>	60 x 210 x 140 mm (2.36 x 8.27 x 5.51 in)
<b>Weight</b>	
- DCN-DS-xx	1.2 kg (2.65 lb)
- DCN-DL-xx	1.2 kg (2.65 lb)
- DCN-CS-xx	1.15 kg (2.54 lb)
- DCN-DV-xx	1.15 kg (2.54 lb)
- DCN-DVCS-xx	1.15 kg (2.54 lb)
<b>Color top</b>	Black (RAL 9017)
<b>Color rear</b>	Silver (RAL 9006)





**Bosch Security Systems B.V.**

Kapittelweg 10  
4800 RA Breda  
The Netherlands

**[www.boschsecurity.com](http://www.boschsecurity.com)**

© Bosch Security Systems B.V., 2012