

Comfort Digisystem User Manual



Conference Microphone DC10



English



User Manual

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Introduction to the Comfort Digisystem

Thank you for choosing Comfort Digisystem.

The products are easy to use, whether you use a hearing aid or not.

Before using the product, please read this User Manual carefully.

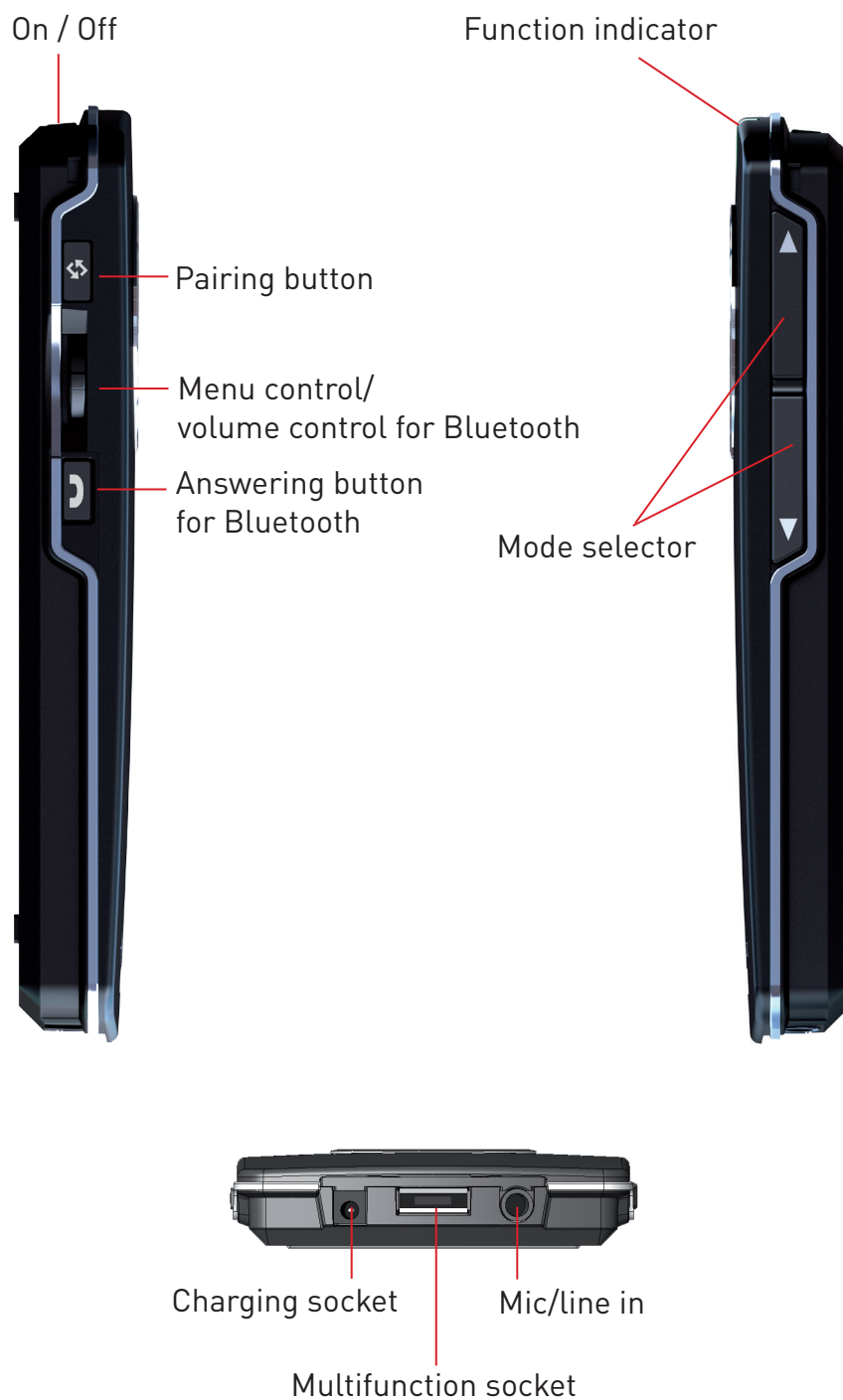
Using the Conference Microphone DC10 transmitter, the signal is transferred digitally, resulting in an excellent clear sound.

Comfort Digisystem is fitted with SST SecureStream Technology – a type of digital technology allowing eavesdrop-secure radio transfer in real time.

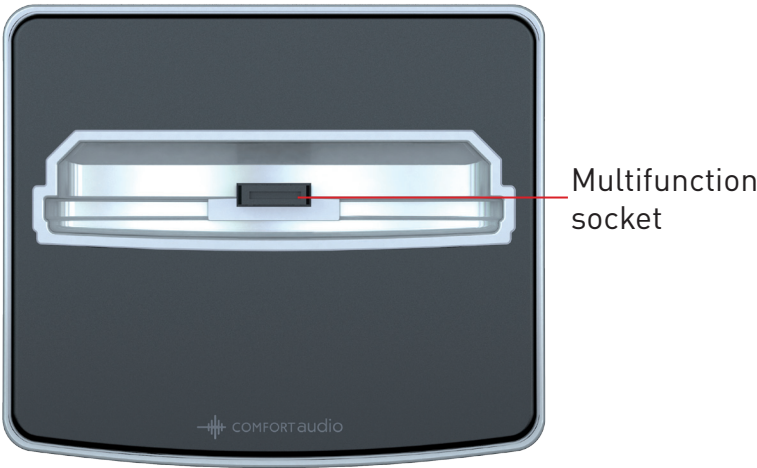
PSE (Perceptual Speech Enhancement)

The Conference Microphone DC10 is equipped with high-power sound processing that is used in the two omni modes (omnidirectional). The method is based on emphasising meaningful parts of speech. Please visit our website for more information on how this technology works.

Functions of the Conference Microphone DC10



Functions - Charger unit



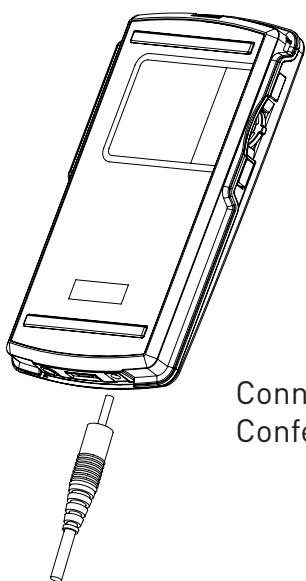
Getting Started

Charging

The Conference Microphone DC10 is chargeable. Charge the DC10 at least five hours before you use it for the first time. An empty battery is fully charged within five hours.

During charging, the function indicator shows red and a lightning bolt appears through the battery symbol in the display. Once the battery symbol is filled with green columns, the unit is fully charged and switches to automatic float charging.

You must not change the battery yourself; please contact your point of purchase.



Connecting a charger to the
Conference Microphone DC10

Please note:
**Only use the charger
supplied by Comfort Audio AB.**

First Time Use

Switch on the transmitter by pressing the On/Off button for around two seconds.

The Conference Microphone DC10 always starts in Omni Mode Wide as default. The position is easily changed using the mode selector on the long side of the unit.

The various microphone positions are located in the following order:

- *Zoom*



- *Omni – Narrow*



- *Omni – Wide*
(default position)



- *Music*



Other functions are explained later in this manual.

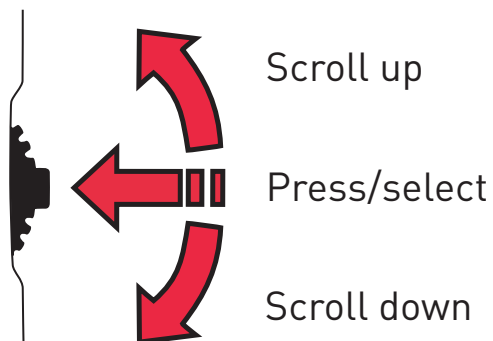
WARNING!

The necklace should not be used if there is a risk of getting stuck, e.g. in a machine or other objects.

Menu

Menu control

Three different selections can be made:



To access the menu, press the menu control:

Back

Communication

- ↳ *Channel*
- ↳ *Pair*
- ↳ *Bluetooth*

Sound

- ↳ *Treble and Bass*
- ↳ *Equalizer*
- ↳ *Advanced settings*

Inputs

- ↳ *Mic/Line in*
- ↳ *Charger unit*

Settings

- ↳ *Charge*
- ↳ *Language*
- ↳ *Key lock*
- ↳ *Name*
- ↳ *Factory reset*

Activate key lock

About

Back (relates to both the main menu and submenus)

Here you can choose to return to the menu and to the main display.

Communication

Channel

To use the receiver and the transmitter together, they must be set to the same channel. The transmitter and receiver are set to the default channel by the manufacturer.

This does not apply to units with both sender and receiver. In this case the transmitter/receiver are adjusted as described in chapter *Radio range and Channels*.

Change channel:

1. Choose **Channel** in the menu.
2. Choose transmitter or receiver (this applies only to units with both transmitter and receiver).
3. Select a new channel using the menu control.

Channel information is also given when the units are paired.

Channels 1, 2 and 3 are free channels in most European countries that do not require a licence. Under **Extended** more channels can be selected, but these usually require a licence – see the section *Radio Range and Channels*.

FFC (Free Frequency Check) indicates in green the suitable frequencies for the specific environment. **Please note!** Switch off your other Digisystem transmitters for correct result.

FFC dB indicates the noise level in dB for each channel. The higher the (-) value, the lower the risk of interference.

Pair

To use a receiver and transmitter together, they must be paired. All transmitters and receivers are default paired at the factory and will work together.

NB! To prevent eavesdropping, a new code key must be generated and transmitted between the units by pairing.

Transmitting/receiving of pairing information along with a new code can be performed from any Comfort Digisystem unit with a display.

To pair units without a display, see section *Pairing (via pairing button)* for more information. Pairing information or a new code key can be received by several activated units.

Pairing (via menu)

1. Choose **Communication - Pair**
2. Select **Receive info** on one unit. **Ready to receive pairing info** is shown in the display.
3. Select **New code** on the other unit; select **Yes**.
4. **Generate new code and send info?** is shown in the display. Select **Yes** (Now both the channel and the coding information have been sent, and sound transfer is eavesdrop-secure).
5. To pair another unit into your coded system, select **Send info** instead on one of your paired units.

Pairing (via pairing button)

(The only way of pairing units without a display, with the pairing button)

You can activate the Pairing function via the pairing button.

1. One brief press of the button opens the *Pairing* menu.
2. Two brief presses activate the **Send info** function.
3. One long press activates the **Receive info** function.

Units with both transmitters and receivers built in

Comfort Digisystem units with both transmitters and receivers built-in can be paired separately.

When opening the pairing menu, choose the concerning unit (transmitter/receiver). In units with both transmitters and receivers, the pairing button controls the transmitter.

The transmitter and receiver are paired separately in these units. The code key is always the same for the transmitter and the receiver when these are built-in in the same unit.

The easiest way to get the same code key in the whole Digisystem is to generate a new code key from the combined unit; in that way the built-in receiver gets the same code as the rest of the system.

Bluetooth™

Here you can activate Bluetooth to be able to pair the Conference Microphone DC10 with a telephone or mobile. For detailed user information, see chapter *More Functions - Bluetooth*.

Sound

Treble and Bass

Treble and Bass control that allows simple adjustment of the unit's equalizer. Press the answering button to return to the menu.

Equalizer

You can obtain fine tuning of the sound characteristics by changing the level at various frequencies, from low to high frequencies. The level can be increased or reduced at the mid-range frequencies 63 Hz, 125 Hz, 250 Hz, 500 Hz, 1 kHz, 2 kHz, 4 kHz and 8 kHz. Press the answering button to return to the menu.

Advanced settings

Here you can adjust PSE compensation in the modes Omni – Wide and Omni – Narrow. Settings are saved separately for each mode.

The effect of increasing this value is that the volume will increase when the overall sound level in the environment raises. If the surrounding sound is too high, you can increase PSE compensation and the overall sound level is raised.

For someone who feels that the volume gets too loud in noisy environments, PSE compensation can be reduced.

On delivery, Omni – Wide is set to +2 and Omni – Narrow to +6.

Inputs

Mic/Line in

This is where the function for the mic/line in socket is selected:

- Line in (for TV or computer etc.)
- Microphone in (for an external microphone, e.g. a clip-on microphone)
- Headphones out (for testing the unit with headphones)

Here you can also adjust the level for Line in, Microphone in and headphones:

- Line gain
- Mic gain
- Headphones

When connecting a signal source to Line in (e.g. a TV), Line in mix is selected to also receive surrounding sound through the Conference Microphone DC10.

Charger unit

Here you can adjust the level for Line in and Microphone in. Line in mix can also be selected for use with charger unit.

It is not possible to use both sockets at the same time. In this case an error-message is shown: **Disconnect from Mic/Line**.

Settings

Charge

Here you can activate the **Auto Power Off** function to shut down the unit automatically during charging. If **Auto restart** is activated, the unit will start automatically when the charger is disconnected or loses power.

Language

Here you can select the menu language.

Key lock

When this function is activated, all buttons are locked automatically as soon as the display fades out. It can be quickly activated; see the section *Activate key lock*.

Name

Here the text to be displayed is selected. Choose symbols with the menu control. Select ✓ to save and ✗ to close without saving. To move the cursor during editing, use the symbols > and <.

Factory reset

Resets the unit to the factory settings. Also deletes all pairing information (SST and Bluetooth). To prevent eavesdropping a new code key must be generated.

Activate key lock

Here you can activate the key lock directly when the menu control has been pressed. Or you can press the menu control, followed by arrow up (mode selector) on the long side of the unit.

About

Here you find software information.

More Functions

Function indicator (LED)

The function indicator shows the unit's mode settings.

Music position = Flashes green once every three seconds

Omni position – Wide = Flashes green twice every three seconds

Omni position – Narrow = Flashes green three times every three seconds

Zoom position = Flashes green four times every three seconds

During charging the indicator shows red. When the charging is completed, the indicator shows green. The indicator stays red even when the battery is fully charged, if the unit is On during charge.

When the battery level gets low, the indicator flashes red. (Check the battery status on the display)

Once the unit has been set to receive pairing information, the indicator flashes green quickly.

When receiving pairing information, the indicator shows green for three seconds.

When sending pairing information, the indicator flashes red five times.

When the pairing mode for Bluetooth has been activated, the indicator shows blue.


When a Bluetooth telephone has been successfully connected, the indicator flashes blue five times.

During an ongoing telephone call, the indicator flashes blue every second second.

When **Clear settings** is selected, the indicator flashes blue ten times.

Bluetooth™

The Conference Microphone DC10 can be connected to two Bluetooth telephones at the same time. The person you are talking to can hear you through the microphones on DC10. His/Her voice is sent to a paired Digisystem receiver.

When Bluetooth is activated in the menu, the Bluetooth symbol is shown in the display . If only one telephone has been paired (and connected) with the unit, the figure 1 appears at the Bluetooth symbol in the display. If two telephones have been paired (and connected) the figure 2 appears instead.

Some DECT telephones are only connected during incoming or outgoing calls. In such cases, the unit can also display a 1, even if a mobile and a DECT telephone have been paired with the unit.

The DC10 supports both headset and handsfree profiles for Bluetooth. The profile is chosen automatically during pairing.

Application

Pairing with telephones:

To pair the unit with telephones, see the section *Communication*.

Activate Bluetooth:

Enter the menu **Communication - Bluetooth - Enable**

Bluetooth menu:

When **BT only** is selected, the transmitter is active only when the telephone call is connected via Bluetooth or a headset cable is connected and activated.

Pair Mobile (**Communication - Bluetooth - Pair BT- Pair Mobile**) (code 1234) is used to pair a mobile with the DC10.

Pair Phone (**Communication - Bluetooth - Pair BT- Pair Phone**) (code 0000) is used to pair a landline-based, wireless (DECT) or mobile phone with the DC10.

Select **Clear settings** (**Communication - Bluetooth - Pair BT- Clear settings**) to clear all information about paired units.

Please note: After this the Bluetooth units have to be paired again (so that Bluetooth can work).

You can use **Mix level** to select how loud your own voice is during a phone call.

Answer an incoming call:

Press the answering button briefly (around 1/2 second), or answer with the telephone.

End a call:

Press the answering button briefly (around 1/2 second), or end the call with the telephone.

Make a call:

When you make a call, the sound is automatically transferred via the relevant Bluetooth connection (depending on the telephone's settings) to the DC10.

One of the Bluetooth connections (telephone, code 0000) has priority. This means that the voice dialling and re-dialling functions only work in this telephone if two telephones are connected.

- Voice dialling is activated by briefly pressing (approx. 1/2 second) the answering button.
- Re-dialling is activated by pressing the answering button approx. two seconds.

Microphone position:

During a telephone call, it is possible to select between the modes Omni – Wide, Omni – Narrow and Zoom, using the mode selectors on the long side of the unit.

Volume control:

During a telephone call, the volume can be adjusted by using the menu control on the long side of the unit (this adjusts the telephone's volume control). The display shows the current volume.

When using land line/cordless and mobile phones at the same time On some land line/cordless telephones the Bluetooth connection is not active if no call is being made. This can cause a time delay before Bluetooth is connected for an incoming call. In certain cases the time delay can be avoided by pairing a cordless telephone in the "Pair Mobile" profile, but this can cause problems with initiating outgoing calls from the land line/cordless telephone. For more information, see "More Functions".

Some mobiles require further adjustments to obtain sufficiently loud sound. For example increase the level manually in the media player's equalizer (SonyEricsson).

Charger unit

The Conference Microphone DC10 is delivered with a charger unit. Apart from charging the microphone, the unit can be connected to external sound sources. There are 2 sockets at the right hand short side of the charger unit, marked 1 and 2 (look underneath).

At socket 1, an external microphone can be connected. At socket 2, a stronger signal source, such as TV, MP3, radio etc. can be connected. It is not possible to use both sockets at the same time. In that case, an error-message is shown: **Disconnect from Mic/Line**. The level of these signal sources can then be adjusted under **Inputs – Charger unit**.

Radio Range and Channels

The transmitter and receiver have built-in antennas. The radio range between the units is around 30 metres. This may however vary depending on the particular environment you are in. Like all radio systems, Comfort Digisystem communicates on specific channels. If you use two transmitters on the same channel or a neighbouring one, there may be interference. Other electronic equipment can also interfere with radio transmissions.

In most European countries, channels 1-3 (863.250 – 864.750 MHz) may be used for hearing products. However, you should always check with the frequency assignment authority in your own country which channels are free and which require a licence.

In addition to channels 1-3, under **Extended** there are several channels in bands A-F, which require a licence in most European countries:

- A 768 - 790 MHz
- B 854 - 863 MHz
- C 790 - 800 MHz
- D 800 - 820 MHz
- E 820 - 854 MHz
- F 865 - 872 MHz

Attached Accessories

Necklace

Two different lengths.

Clip-on microphone

Charger

Charger unit

Split cable for charging

Audio cables

Other original Accessories

Car charger

The car charger is designed for cars with a 12 volt (-) earthed electrical system. The charger has short-circuit and automatic overload protection. Disconnect the charger from the socket after use.

Boom microphone

Headset microphone.

Earworn microphone

A microphone that is attached around the ear.

For other accessories, please visit our website,
www.comfortaudio.com

Trouble Shooting

The transmitter and receiver do not start

Charge the transmitter and receiver. Remember to press the On/Off button down for 2 seconds to switch the unit on. Check that the charger is connected to the plug socket.

Poor speech intelligibility

The distance between the transmitter and the receiver may be too long. The range is around 30 metres. The distance between the microphone and the person who is talking may also be too long; move the microphone nearer to the person talking. Try to change channel/environment.

Poor range and interference

In some environments involving, e.g., concrete, iron or sheet metal structures, the range may be reduced. There may also be equipment nearby causing interference. Change channel.

No sound

Check that the transmitter and receiver are set to the same channel.

Loud hissing noise (no sound transfer)

Check that the units are paired.

The unit will not start during charging

Disconnect the charger. Check the selection **Auto power off** under **Settings** in the menu.

Service and Warranty

Comfort Audio AB accords a limited warranty for two years as of the date of delivery. This covers all defects of manufacture and materials.

For accessories the warranty period is 90 days as of the date of delivery. Local agreements or regulations may exist. Defects caused by careless handling or intervention inside the product or its accessories are not covered by the warranty.

It is recommended that the batteries included with Comfort Digisystem are charged little and often. They are designed to reach 90 % capacity mid-way through charging. To maintain optimum battery performance, batteries should not be fully discharged during storage. It is perfectly normal that the battery's capacity decreases gradually. Battery lifetime depends on how the product is used.

Contact your point of purchase when it is time to change the battery. You are always welcome to contact Comfort Audio if you have any questions.

Technical Data

Type of transmitter:	SST – SecureStream Technology
Range:	Approx. 30 m
Dimensions:	115 x 62 x 14 mm
Weight:	90 g
Frequency range:	768 - 872 MHz
Antenna:	Built-in
Operating time:	Operating times vary depending on which features are enabled and used. One such feature is phone calls via Bluetooth. In such cases, it is recommended that the unit is charged during a lunch break or similar. Is Bluetooth deactivated, operating time is up to 10 hours. The operating time is measured using factory settings.
Battery:	Chargeable Li-Polymer
Charging time:	Approx. five hours
Microphones:	Combination of four built-in microphones, directional and omnidirectional
Connections:	Mic/Line in, socket for testing with headphones



Important Safety Instructions - Read these before using your product

- 1) Read these instructions.
- 2) Keep these instructions.
- 3) Heed all warnings.
- 4) Follow all instructions.
- 5) Do not use this apparatus near water.
- 6) Clean only with dry cloth.
- 7) Do not use near any heat sources such as radiators heat registers stoves, or other apparatus (including amplifiers) that produce heat.
- 8) Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet consult an electrician for replacement of the obsolete outlet. (Only when using polarized plug)
- 9) Protect the power cord from being walked on or pinched particularly at plugs convenience receptacles. and the point where they exit from the apparatus.
- 10) Only use attachments/accessories specified by Comfort Audio AB.
- 11) Unplug this apparatus during lightning storms or when unused for long periods of time.
- 12) Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way such as power-supply cord or plug is damaged liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture does not operate normally or has been dropped.
- 13) Start listening at a low volume.

- 14) Too high a volume can seriously damage your hearing.
- 15) Don't disassemble the product.
- 16) Should the product break open because of damage, service should only be done by qualified service personnel.
- 17) Never use a transmitter or receiver set to a non-permitted frequency. Check with the frequency authority in the country where the equipment is to be used.
- 18) The product contains sensitive electronic equipment and must be handled carefully.
- 19) Never charge product in closed, unaired spaces such as handbags, cases or other closed storage bags.
- 20) Only use batteries and power supply specified by Comfort Audio AB.
- 21) You must not change the battery yourself; please contact your point of purchase.
- 22) **CAUTION!** Danger of explosion if battery is incorrectly replaced.
- 23) The product shall not be exposed to excessive heat such as sunshine, fire or the like.
- 24) Products include radio transmitters. Do not use products where it is not allowed to use electronic equipment, e.g. on airplanes.
- 25) Do not leave the product unloaded for too long, the battery could get damaged.
- 26) Do not keep the product connected to the charger if it is not used for a longer period.

Subject to change



Manufactured by:

Comfort Audio AB

Box154, SE-301 05 Halmstad, Sweden
Tel. +46 35 260 16 00 Fax +46 35 260 16 50
info@comfortaudio.com www.comfortaudio.com