

Comfort Digisystem User manual



Comfort Digisystem Microphone DM10



US / English



Comfort Audio
HEAR THE FUTURE

User manual

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1) 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 Microphone DM10 transmitter, the signal is transferred digitally, resulting in an excellent clear sound. The Comfort Digisystem products feature SecureStream Technology – a unique, patented digital technology allowing eavesdrop-secure radio transfer in real time.

2) Regulatory information

Comfort Digisystem products are not to be used as a substitute to the hearing aids and should be used in accordance with the specifications and recommendations provided by your physician.

It is recommended that customers keep the volume control in the lowest position, when turning on the device. If not, the sound could potentially cause harm to the customers' hearing.

Comfort Audio is not liable for damages arising from usage of the equipment not in accordance with the instructions provided by Comfort Audio. Comfort Audio shall not be liable for performance problems and/or damages caused in any way by customer's modification of any part of the equipment.

Federal Communications Commission Statement, This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) this device may not cause harmful interference, and
(2) this device must accept any interference received, including interference that may cause undesired operation.
FCC ID: UOJ-DG02T

Industry Canada, This device complies with Industry Canada licence-exempt RSS standard(s).
Operation is subject to the following two conditions:
(1) this device may not cause interference, and
(2) this device must accept any interference, including interference that may cause undesired operation of the device.
IC ID: 6769A-DG02T

ETL

Conforms to UL Standard for Safety for Audio, Video and Similar electronic apparatus – Safety Requirements UL 60065, Issue:2003/06/30 Ed:7 Rev:2007/12/11
Certified to CSA Standard for Safety for Audio, Video and Similar electronic apparatus – Safety Requirements CAN/CSA-C22.2 No. 60065:03, Issued 2003/04/01 Ed:1 Amendment 1:2006
Intertek ETL Control number: 4002355

WARNING!

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.



DANGER!

DO NOT USE the **COMFORT DIGISYSTEM** products if you have a **PACEMAKER** or other implanted device. The Comfort Digisystem products could cause the pacemaker or other implanted device to malfunction and cause serious injury or death.

3) Functions of the Microphone DM10



4) Included accessories

- Charger A11
- Cable
- Split cable
- Necklace x 2
- Clip on microphone
- Color stickers

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



Display Microphone DM10

5) Getting started

Charging

The Microphone DM10 is chargeable. Charge the DM10 at least 2 hours before using it the first time. An empty battery is fully charged within 2 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 and the functions indicator shows green the unit is fully charged and switches to automatic float charging.



Connecting a charger to the Microphone DM10

Please note:

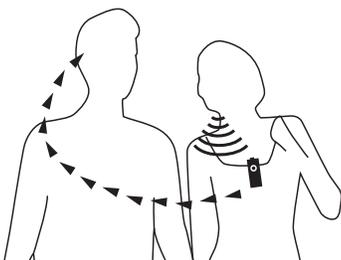
Only use the charger supplied by Comfort Audio. Changing the battery without the assistance of an authorized dealer will void the Limited Warranty.

First time use

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

Connect clip-on-microphone or any other microphone if desired.

DM10 can be attached with its clip to your clothes or carried around the neck with the delivered neck loop (2 lengths available).



The Microphone DM10 is a microphone for closer range. It works best if worn approx. 12 inches (30 cm) from the mouth.

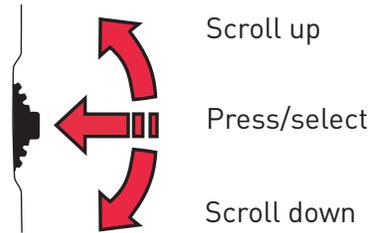
WARNING!

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

6) Menu and settings

Menu control

Three different selections can be made:



To access the menu, press the menu control:

Back

Communication

- ↳ Channel
- ↳ Pair

Function

- ↳ Silence button
- ↳ Mic. On/Off
- ↳ Push to talk
- ↳ Push/Cont
- ↳ FCR
- ↳ FCR indicator

Settings

- ↳ PIN-code
- ↳ Charge
- ↳ Language
- ↳ Name
- ↳ Inputs
- ↳ Func. indicator
- ↳ Factory Reset

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.

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.

Function

Here you can adjust the function button. If no choice has been made, the microphone sends continuously the sound it takes up.

More settings are possible, see below. The chosen setting shows in the display. For more information about the function indicator see *More functions*.

Silence button

In this setting you can shut off the microphone so that no sound is sent when you press the function button.

Mic. On/Off

If set to *Mic. On/Off* the internal microphone and the transmitter can be activated or deactivated by pressing the function button.

Push to talk

DM10 only sends when you press the function button.

Push/Cont

In this setting DM10 works like described above under *Push to talk*, but by pressing the menu control down (scrolling down) the microphone is switched to send continuously the sound it takes up.

This function may be useful when it is impossible to press the function button, e.g. during lectures or presentations etc.

FCR (Free Channel Request)

This function prevents DM10 from sending on frequencies which are already taken by other transmitters, e.g. when several DM10 are set on **Push to talk**.

If transmission is not possible, this is shown in the display together with the function indicator. Is the function button pressed in and transmission is not possible, press the function button again and try to send again (it is not enough to keep the button pressed).

FCR Indicator

Is the FCR indicator activated, the function indicator shows red if the channel is occupied – even if the function button is not pressed.

Settings

PIN code

Here you can turn the PIN code function on and off (selected functions lock).

Under the menu item **Change PIN** you can create your own PIN code.

Under the menu item **Lock Select**, you can select different types of menu locks:

- *Mode: Locks all functions in the "Function button" menu (can be combined with the "Pairing" menu item)*
- *Pair: Locks all pairing functions in the unit, as well as the pairing button*
- *All menus: Locks all menus*
- *Hide PIN entry: When the PIN-code is enabled, it is only possible to unlock the menu within 3 seconds after starting the unit, by pressing the menu control.*

The PIN code is needed to be able to unlock selected functions when PIN code has been activated.

If you forget your PIN code, please contact your point of purchase to unlock the unit.

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 up automatically when the charger is disconnected or loses power.

Language

For selection of menu language.

Name

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

Inputs

Choose which additional input should be used.

- Extern Mic (for external microphones, e.g. clip-on-microphones)
- Line-in (e.g. for TV- or PC-cable)

When Line-in is activated and as soon as a cable is connected to the DM10, it switches automatically to continuous transmission, even if **Push-to-talk** or **Mic. On/Off** was chosen before. Like this it is possible to use a DM10 as a companion unit and as a multimedia connection without having to switch modes.

You can even adjust the level for Extern Mic and Line-in in this menu.

Func. indicator

Here you can enable or disable the function indicator. This function does not affect charging and pairing status.

Factory reset

Resets the unit to the factory settings. Also deletes all pairing information. To prevent eaves-dropping a new code key must be generated.

Key lock

Activates the key lock and thereby locks all buttons. Once the key lock has been activated, **Unlock keys?** appears in the display. Select **Yes** to unlock.

About

Software information.

7) More functions

Function indicator (LED)

The function indicator shows the unit's status, depending on its setting.

On normal operation, the indicator flashes once 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 slowly 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 using the **Push to talk**-function, the indicator shows green when transmission is possible and the microphone has been activated. If transmission is not possible because the channel is occupied (how to use FCR, see section *Function*), the function indicator shows red.

Is **FCR indicator** activated, the function indicator shows red when the channel is occupied.

When using the function **silence button**, the indicator shows red.

Coloured clips

A number of different coloured clips are available to replace the black cover. This might be useful if you use several microphones at the same time.

8) Radio range and channels

The transmitter and receiver have built-in antennas. The radio range between the units is around 100 feet (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.

The channel that you use in your country is perhaps not permitted abroad. Always get in touch with your hearing aid provider in your country in order to find out which channels are permitted in different countries.

Comfort Audio is not liable for unauthorized use of radio waves, such as, but not limited to: interferences with police communication, or strategic communication, military installations etc.

9) 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. Choose **Settings - Charge - Auto power off** in the menu.

10) Battery maintenance

The rechargeable products in the Digisystem series are equipped with Li-Po batteries, ie. the same type of batteries used for most mobile phones and laptop computers on the market today. These types of batteries are able to store large amount of energy in relation to their weight and volume.

The capacity of Li-Pol batteries diminishes during its life cycle. The battery type has no "memory effect", which would mean that you need fully discharge the battery before charging to minimize capacity loss. This means that you can just as well charge the battery often and little, as opposed to seldom and much. Special charging circuits in the Digisystem products protect batteries from overcharging.

The capacity of the Li-Po batteries deteriorates faster when they subjected to deep discharge. Therefore, all products of the Digisystem are fitted with a function that automatically turns off the product well before deep discharge occurs. Deep discharge may still happen as the battery has a certain self-discharge. A product that is fully or partly charged will with enough time reach a state when the battery deep discharges, unless the charger is connected. To avoid this we recommend that the battery is charged at least every 6 months.

11) Service and warranty

Warranty extension

Comfort Audio Inc. warrants this product sold to the first end user (buyer) against defects in materials or workmanship for the time period and as set forth below. Pursuant to this Limited Warranty, Comfort Audio will, at its own option, either (a) repair the product or the parts determined to be defective, using new or refurbished parts, or (b) provide you with a new, or at our option, a refurbished unit. The repaired or exchanged unit is under warranty for the remainder of the original product's warranty period. The warranty does not include any other direct, indirect or consequential damage or loss, or any third party damages or losses.

This Limited Warranty is for a period of two years from the date of purchase as indicated by an original receipt from a Comfort Audio authorized retailer, dispenser or medical facility. Headphones and earphones have a warranty of 30 days from purchase.

How to make a warranty claim

For warranty service, you must contact the Comfort Audio Customer Service listed below to obtain an RMA (Return Merchandise Authorization) number. A description of the defect, your name, address and telephone number is required.

Ship the product freight prepaid via UPS or its equivalent, including a copy of the original purchase receipt, any cables, earphones and base/charger unit, in its original packaging or one that offers equal protection. Insure your shipment for loss or damage. Comfort Audio accepts no liability in case of damage or loss en route to our offices.

This Limited Warranty does not cover

Damage from misuse, neglect or normal wear and tear. Products that have been modified. Products purchased or serviced outside the territory. If you purchased your product outside the territory, see your retailer for warranty information.

12) Technical data

Type of transmitter:	SST – SecureStream Technology
Range:	Approx. 100 feet (30 m)
Dimensions:	3,31 x 1,53 x 0,55 inches (84 x 39 x 14 mm)
Weight:	1.6 oz (45 g)
Frequency range:	904 - 927 MHz
Channels:	38
Antenna:	Built-in
Operating time:	Up to 10 hours
Battery:	Chargeable Li-Polymer
Charging time:	Approx. 2 hours
Microphone:	Built-in
External input:	Mic/Line in



Conforms to ANSI/UL Std.60065

Certified to CAN/CSA Std.C22.2 No.60065:03

The weights, dimensions, capacities, performance ratings and other data in Comfort Audio's brochures, prospectus, circulars, advertisements, price lists and instructions sheets are mentioned only as general information. They are only approximate and shall not bind Comfort Audio.

13) Important safety instructions - Read these before using your product

Not following the Important Safety Instructions, or trying to repair and/or tampering the Equipment without the assistance of an authorized technician will void the Limited Warranty. Comfort Audio is not liable for any damages arising out of such unauthorized uses, repairs, and/or tampering.

Please, heed all warnings. Read, keep and follow all the safety instructions below.

WARNING!

- Too high a volume can seriously damage your hearing.
- The necklace should not be used if there is a risk of getting stuck, e.g. in a machine or other objects.
- Keep small parts out of reach of children and animals. Choking hazard if swallowed.
- There is a danger of explosion if the battery is incorrectly replaced.

Follow these instructions:

- 1) Do not use this product near water or in moist environments of any kind.
- 2) The product shall not be exposed to excessive heat such as sunshine, fire or the like.
- 3) Do not use the product near any heat sources such as radiators, heat registers or other apparatus that produce heat (e.g. amplifiers) and do not leave products, e.g. in a warm car.
- 4) Do not disassemble the product.
- 5) You must not change the battery yourself; please contact your point of purchase.
- 6) Do not defeat the safety features of the polarized or grounded plug. A polarized plug has two blades with different widths and will only fit into the socket one way. A grounded plug has a third grounded prong. The asymmetrical blades and the grounded prong are there for your safety. If the provided plug does not fit into your outlet, please consult a qualified professional/electrician for replacement of your outlet.
- 7) 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.
- 8) The products include radio transmitters. Do not use products where it is not allowed to use electronic equipment, e.g. on airplanes.
- 9) Never charge product in closed, unaired spaces such as handbags, cases or other closed storage bags.
- 10) Ensure that the power cord is not pinched or damaged in any other way.
- 11) Unplug the product during lightning storms or if it is not used for a long period of time.
- 12) Always start listening at a low volume and then adjust it to a comfortable level.
- 13) Clean only with a dry cloth.
- 14) Only use the batteries and power supply or other accessories specified by Comfort Audio.
- 15) The product contains sensitive electronic equipment and must be handled carefully.
- 16) If the product does not operate normally, or if it has been damaged in any way, service is required. E.g. if the power-supply cord or plug is damaged, if the product has been in contact with water or if the product has been exposed to external impact, for instance been dropped. Refer all servicing to authorized service personnel.
- 17) Should the product break open because of damage, service should only be done by qualified service personnel.

Subject to change



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