# brähler

## DIGIMIC® P1029

## DCen mini – Central Unit

## Special Features:

## - Microphone mode AUT-U

## - Automatic Power-UP

**Operating Instructions**

Rev 2.03 P1029

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Printed in Germany

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www.braehler.com

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Manual BGE-DCen-mini_2.03_P1029.docx

Our equipment and installations have been built and tested according to the latest state of the art.
Under normal conditions, they do not require any special maintenance.

However, please be aware of the following:

- ➢ safe stand of the system
- ➢ never operate equipment near heat sources such as heating radiators etc.
- ➢ connecting cables - avoid trip-traps
- ➢ liquids - avoid penetration of liquids into the housing

| |
|---|
| ***Warning: Never expose equipment to rain or humidity.*** |

Please also be aware of the fact that rough handling of the equipment, such as strong bumps or vibrations, may result in damages. Inappropriate handling and storage, i.e. handling and storage not in conformity with the operating instructions, may as well lead to equipment damages.

# Content

## Disclaimer

All information, designs and specifications in this manual were correct at the time of publication. The product will be continually improved and updated, so the product can differ in appearance and in functions.

Both the compliance of these instructions and the conditions and methods of installation, operation, use and maintenance of the system cannot be monitored by the manufacturer. Improper installation can result in property damage and endanger people.

Therefore, we assume no responsibility or liability for any loss, damage or expense resulting from improper installation, improper operation, maintenance and use or associated with this. Also, we assume no responsibility for patent infringements or violations of other rights of third parties arising from the use of this system. The manufacturer reserves the right to make changes of the product, technical data or instructions without a notice.

**Warning: opening the device, manipulation and attempts to repair as well as improper operation lead to lost of warranty.**

## About this manual

The meanings of the symbols and fonts used in this manual are as follows:

Indicates an important note, if not minded, the functionality of the unit, the security of your data, or your health are put at risk.

Supplementary information, remarks, and tips follow this symbol.

Text, which follows this symbol, describes activities that must be performed in the order shown.

Texts in **bolded letters** require your special attention.

# Important remarks

**Safety**

Should any liquid or solid object fall into the housing, unplug the unit and have it checked by qualified personnel before further operation.

**Installation**

Do not install the unit in a location near heat sources such as radiators or air ducts, or in a place exposed to direct sunlight, excessive dust or humidity, mechanical vibration or shock.

To avoid moisture condensations do not install the unit where the temperature may rise rapidly.

**Cleaning**

To keep the housing in its original condition, periodically clean it with a soft cloth. Stubborn stains may be removed with a cloth lightly dampened with a mild detergent solution. Never use organic solvents such as thinners or abrasive cleaners since these will damage the housing.

**Repacking**

Save the original shipping carton and packing material; they will become handy if you ever have to ship the unit.

For maximum protection, re-pack the unit as originally packed from the factory.

If not supplied with the equipment, a complete transportation and storage box system is available from BRÄHLERICS. We recommend you to use this system for long-term protection and care.

**General**

Please keep this manual together with the equipment. If you pass on the unit to other parties, please include this manual.

Please read the manual carefully, taking special care when you see this symbol as indicates important information!

This product conforms to the rules of the following European regulations:

2004/108/EG

Council directive to the alignment of the rules, of rights of all member states about the electromagnetic compatibility, adapted through RL 91/263/EWG, 92/31/EWG and 93/68/EWG of the council. Further information is available on request.

# Introduction

Thank you for your confidence in the conference technology of Brähler!.

The Central Control Unit DCen mini controls all connected delegate units (CMic/CChair as well as DMic/DChair) of the DIGIMIC discussion system, configures them automatically and routes the digital audio signals. As a stand-alone unit the DCen mini includes 3 microphone modes:

- AUT-U (push to talk up to all microphone units) ONLY available in project-version P1029

- VOX (VAL limited: voice activation up to 3 simultaneous activated microphone units)

- FLOAT (AUTF3, the first of three speakers will be replaced by the last speaker.)

The DCen mini has one CMic outlet to connect up to 25 delegate units.

Once a unit is connected to the central control unit it is ready to use immediately without any further adjustment. For additional functionalities the DCen mini is equipped with a network interface to ensure remote control from various applications via PC, e.g. DMicControl software for microphone control on a geographical virtual microphone mimic and name handling.

Voting functionality with up to 5 voting buttons can be achieved with CMic CSV delegate units and DIGIVOTE basic interactive PowerPoint voting software.

The audio streaming function of the DCen mini is controlled via the REC button at the front of the device. Rec&Go is a mobile application to make recordings for DIGIMIC conference systems. The program, written for iPhone[1] and iPad[1], not only allows recordings of sessions and conferences, but also their organization and archiving.

Please read this manual carefully, to get access to all features of the DCen mini central unit.





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[1] ® Apple, iPhone, iPod, iPad, iTunes are trademarks of Apple Inc

**Items delivered**

- DCen mini (*DIGIMIC®* central unit)
- PSU DCen power supply (input range 90 – 250 V)
- Mains cable 2.0 m

**System components**

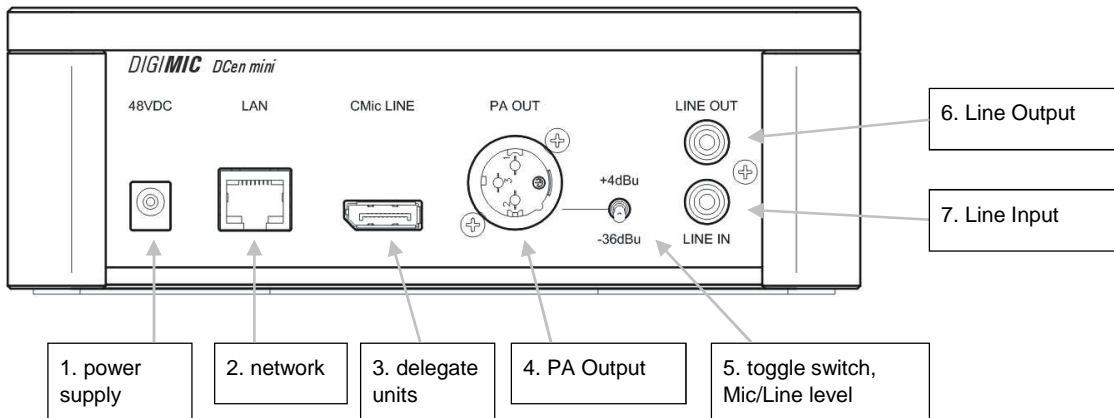| | |
|---|---|
| **CChair** | *DIGIMIC®* Classic Chairman Unit |
| **CChair CSV** | *DIGIMIC®* Classic Chairman Unit with channel selector and voting |
| **CMic** | *DIGIMIC®* Classic Delegate Unit |
| **CMic CSV** | *DIGIMIC®* Classic Delegate Unit with channel selector and voting |
| **DChair** | *DIGIMIC®* Chairman Unit pro (adapter cable 08.3502 necessary) |
| **DMic** | *DIGIMIC®* Delegate Unit pro (adapter cable 08.3502 necessary) |
| **DExt** | *DIGIMIC®* Extension power supply unit to expand the number of units in line (adapter cable 08.3502 and/or 08.3500 necessary) |
| **DMicControl** | PC Software for microphone management |
| **DV basic interactive** | PC Software to conduct voting, opinion polls, and others |
| **Rec&Go** | APP for iPhone / iPad[1] to handle records |

**Accessories**

**TMD/01** Conference microphone, electret (01.0701)

**TMD/01-S2** Conference microphone, electret, 2 goosenecks (01.0701.S2)

**TM58/6** Conference microphone, electret, with illuminant ring indicator, rigid tube with gooseneck (01.0560)

**K45/16** Dynamic conference headphone, 1,5m cable (03.0290)

**PMX60-2** Dynamic conference headphone, with neckband, 3.5 mm jack (03.5501)

**CM9 Connection cable** DIGIMIC „classic", different length available

**D9 Connection cable** DIGIMIC „pro", different length available

**Adapter cable D9** DisplayPort CM9 "Classic" unit <--> S8G cable plug "Pro" Series (08.3500)

**Adapter cable D9** DisplayPort plug "Classic" unit <--> S8G socket "Pro" Series (08.3502)

# Connections (rear side)

The digital central unit DCen mini is designed for easy handling without complex settings.

The connections are shown below:



## 1. 48VDC (Power Supply)

Connection for the AC adapter included. Please use this certified power supply only.

## 2. LAN (RJ45)

LAN connection for integration into your network to operate by remote control via software (DHCP client)

## 3. CMic LINE (Displayport®)

Connection for up to 25 units of the type  CMic, CChair, CMic CSV, CChair CSV or DMic, DChair via adapter cable

## 4. PA OUT (XLR)

Controlled, balanced Output for an external PA system

## 5. Toggle switch

Switch for different level at PA OUT:
microphone level (-36 dBu)
line level (+4 dBu)
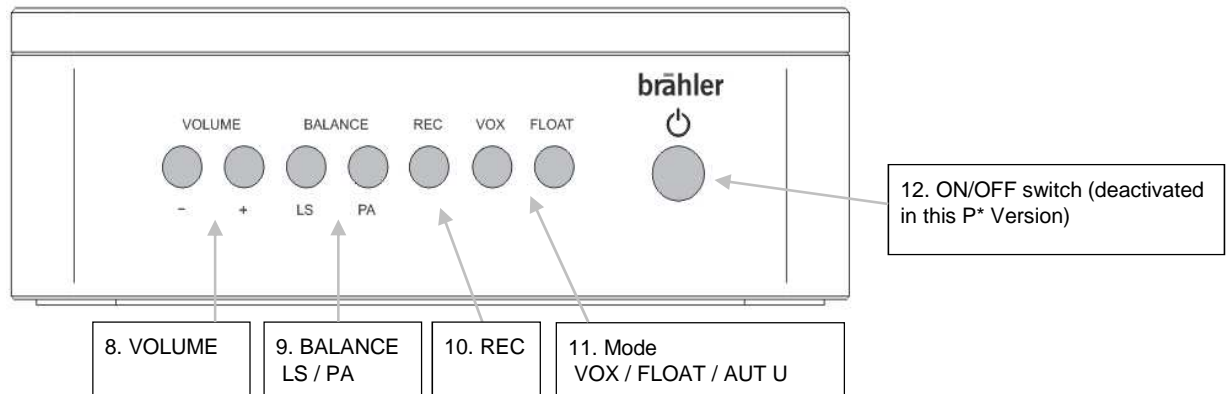
## 6. LINE OUT (Cinch)

Line Out asymmetric unregulated: Cinch connector for signal transfer to external devices such as mixers.

## 7. LINE IN (Cinch)

 Line Input (-12 to +14 dBu): Cinch connector for input of signals from external devices

# Controls (front side)

The panel has eight backlit buttons, which are explained below.



## 8. VOLUME

With the buttons Volume – (down) und Volume + (up) the volume is adjusted or changed. This relates to the LS of the units and the PA-OUT. To set the key equivalent to, if necessary pressed several times.
Button "-" decreases the volume level
Button "+" increases the volume level

While pressing the button the brightness changes corresponding to the selected volume.

## 9. BALANCE

With the two buttons LS and PA the ratio of the volume between the internal speakers of the units (LS) and the externally supplied source (PA) is set.

The illumination of the buttons changes according to the duration of pressing.

## 10. REC

Pressing the REC button enables the audio streaming function.

## 11. Operating modes VOX and FLOAT

Select the conference mode with these two buttons. The corresponding button is lit for the selected mode.

If no button is pressed the automatic-unlimited mode is set. Automatic-unlimited mode is also set by pressing both buttons simultaneously.

**AUT-U** push to talk up to all delegates. Participants can switch off or on their microphones at all times.

**VOX** limited: voice activation for up to 3 activated microphone units.

**AUTF**loat AUTF3, the first of three speakers will be replaced by the last speaker (FIFO = **F**irst **I**n **F**irst **O**ut).

> Several participants can be active simultaneously up to a set limit. If another microphone is switched on, the microphone was turned on first, is switched off.

## 12. ON / OFF Switch

When power-supply is connected, the button is illuminated. In this Project-Version of DcenMini the ON/OFF - Switch is without function.

## Setup

The build-up is done according to the block diagrams in the next section.

Place the central unit to the designated location and distribute the microphone consoles in an appropriate manner in the room. Observe the safety instructions.

- 1. First insert the small plug of the AC adapter into the socket marked with "48VDC ".



- 2. Connect the first microphone unit of the chain by plugging in the connector (DisplayPort ®) of the unit into the socket marked with "CMic LINE" until it locks.



For use with units of the Pro Series (DMic / DChair) the adapter cable is inserted in the same way into the socket marked with " CMic LINE".

- 3. Connect the IEC power connector with the included AC power supply. The other end of the power cable is plugged into the country-specified mains socket. The central unit will power up automatically.
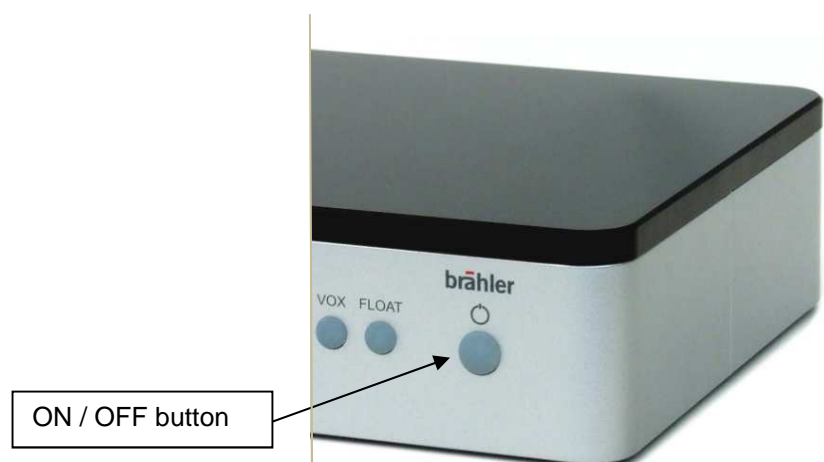


## Switching on and setting

- To power up the central unit, please see steps 1-3 in the section before.

During the boot sequence the ON / OFF button flashes in different levels of intensity: ●●●○○

In sequence the lights of the button VOLUME down (-), VOLUME up (+), BALANCE LS and BALANCE PA.

When the four left buttons are off (not illuminated), the startup is complete. The buttons are now set to correct brightness on volume, balance and microphone mode. The ON / OFF button lights up permanently.



ON / OFF button

All connected microphone units are automatically identified.

- You should now perform a test. Conveniently, this occurs in the operating mode AUT-U, i.e. neither button VOX nor button FLOAT light up. Otherwise you press the two buttons simultaneously to get into this mode.

- Press the microphone button on each unit to switch it on and press repeatedly to switch it off. When switched on, the microphone button and microphone ring indicator must light up.

# Operation

## Volume

With the two buttons VOLUME (-) and VOLUME (+) the volume can be adjusted. The illumination of these buttons depends on the set level.

dark: low or off
bright: loud

This setting affects the volume of the microphones loudspeakers as well as the level of the PA OUT connector.

## Balance

With the second pair of buttons, the balance between the microphone speakers and the output level at the PA OUT connector is set.

If the balance is in the middle both buttons light up brightly and both outputs are at full capacity. Pressing the button BALANCE LS the button BALANCE PA gets darker and the level at the output OUT PA gets lower.

## REC

In conjunction with APP Rec&Go the REC button enables the audio streaming function. While waiting for a client to connect, the buttons' backlight blinks slowly. When a device is connected, the button lights continuously.

Pressing the REC button again disables the streaming function and disconnects any connected client.

For more information see manual "Rec&Go".

## Microphone operation mode

With the buttons VOX and FLOAT the microphone mode is selected. The default mode is the AUT-U Microphone (automatic unlimited).

Pressing the button VOX the mode voice activation limit is selected. Pressing the button FLOAT the microphone mode AUTF (Automatic FLOAT) is selected. If an external control via network changes to the mode MAN (manual), both buttons light up. If another mode is selected, the both buttons light up with half brightness.

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**AUT-U** push to talk up to all delegates. Participants can switch off or on their microphones at all times.

**VOX** limited: voice activation for up to 3 activated microphone units.

**AUTF**loat AUTF3, the first of three speakers will be replaced by the last speaker (FIFO = **F**irst **I**n **F**irst **O**ut).

Several participants can be active simultaneously up to a set limit. If another microphone is switched on, the microphone was turned on first, is switched off.

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## Switch for different sensitivities

Often the microphone signal of the delegate units is send to an external amplifier or mixing console. For this is the PA OUT connector. Usually this occurs setting the switch to +4 dBu (line level). For amplifier systems (PA), which have only a microphone input, the switch position is -36 dBu. With this setting such a device is feed in with a microphone instead of a line level.

## Shut off

Unplug AC-Adapter from central-unit or unplug power-cable from main socket.

## Factory setting

In the initial phase, the current configuration of the system can be erased and reset to the factory settings. This requires that the buttons FLOAT and VOX are pressed simultaneously and maintained while the system is switched on.

To confirm the procedure the four buttons located on the left are flashing cyclical (Volume -, Volume +, LS balance, balance, PA).

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## Firmware Update

The central unit DCen mini can be updated via firmware update.

### 1. Requirement:

- The central unit to be updated must be online in a network.
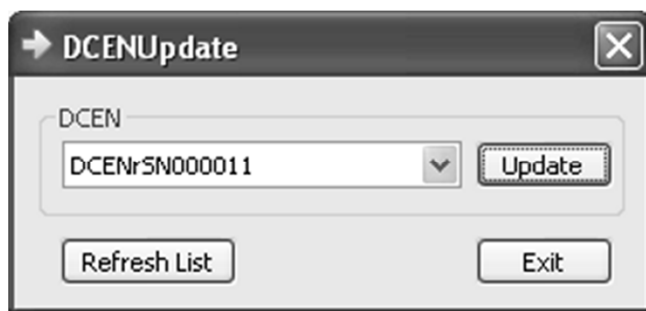- The update files you get are only valid for the central unit to be updated.

### 2. Unzip the files

The update files will be delivered as a zip archive. Unzip all files to your computer while keeping the folder structure intact.

There are usually 4 files per DCen mini for the update and an executable file "DCenUpdate.exe". If more than one central unit has to be updated, please unzip all the zip archives to the update directory.

### 3. Copying the data files to the DCen mini

Locate and start the **file DCenUpdate.exe** from within the unzipped directory tree. The software will start with the following main window:
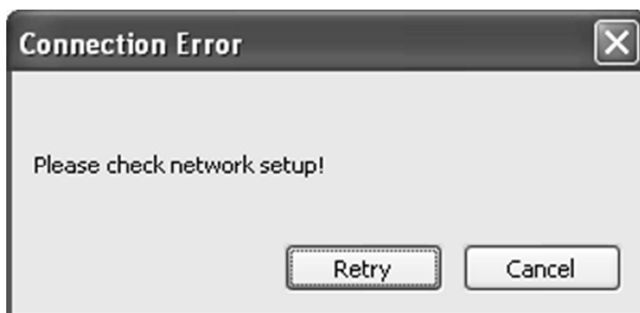


Select the SN (serial number) of the DCen mini you intend to update. Remember that you will see all DCen systems found on the network in the list.

Click on the button "Refresh List" to refresh the list of available DCen systems in your network.

You can leave the program without installing the files by pressing the "Exit" button.

Click on button "Update" to start the file transfer for the update. The program will show a progress indicator while copying the files necessary for the update to the DCen system.

In case of a network problem, the following requester will pop up:



Please check the network connections and settings of your computer and the DCen mini to be updated and click on "Retry". Otherwise contact your system administrator.

If the procedure was only partially successful and cannot be continued at this time, it can be restarted from the beginning without problems later on. Incomplete or corrupted files will be detected by the DCen mini and will not be installed.

On successful completion, the following requester will pop up: „File transfer successful! "

### 4. Installation on the DCen mini

The final step of the updating process is done locally on the DCen mini.

Turn off the central unit. Wait at least 5 seconds before switching it on again. The DCen mini will verify the integrity of the transferred files and will offer to upgrade the firmware from the old to the new release.

Should an update be offered, the two buttons BALANCE are flashes in the following way:

The button **Balance LS** flashes ●●◐○ and indicates with increasing brightness "YES".

Die button **Balance PA** flashes ○◐●● and indicates with decreasing brightness „NO".

By pressing the corresponding button you can start or rejected the update process.
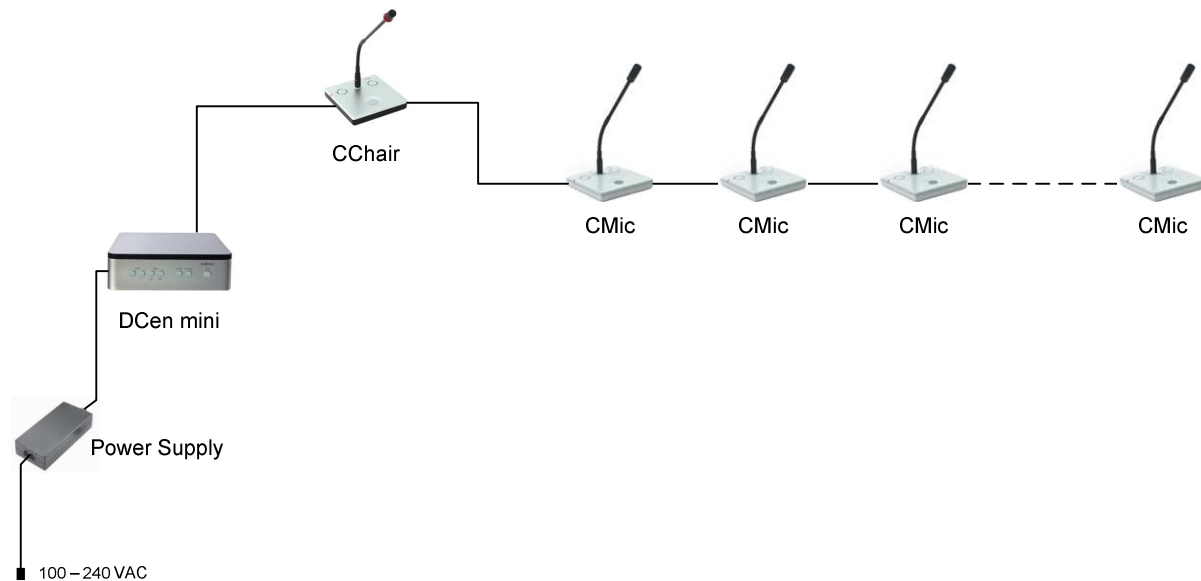
⚠️ **Note: Do not switch off the DCen mini during installation process!!**

After the successful update the Central Unit DCen it will continue with the standard start-up procedure.

# Application examples

The cabling is limited to connecting the external power supply, and the delegate units with each other. Here are shown some of the many possibilities.
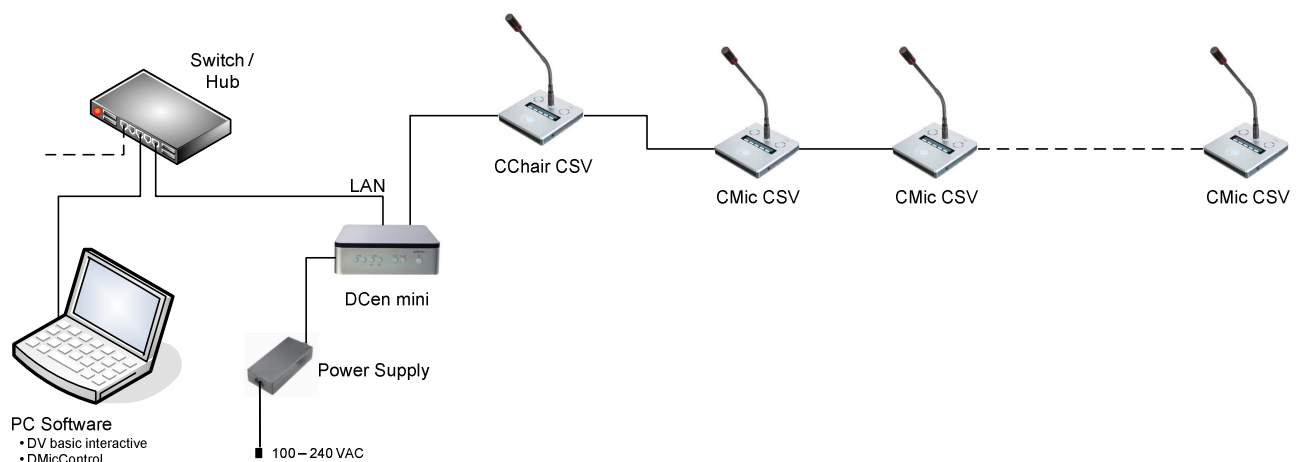
## Microphone units Classic:



The chain consists of Chairpersons' microphone CChair and delegate units CMic. The connections are done via lockable DisplayPort® connectors. Appropriate extension cables are available in different lengths.
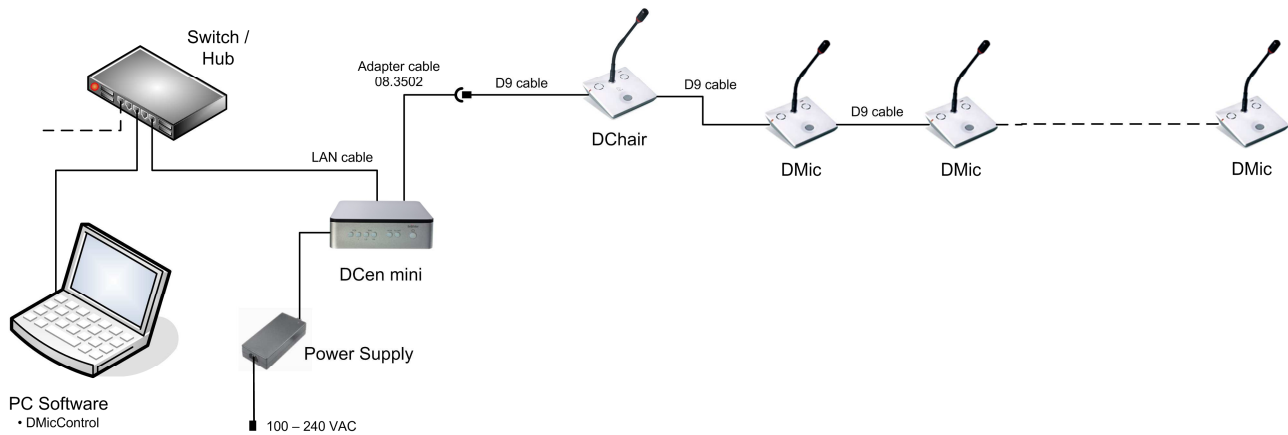
## Microphone units Classic CSV (voting)

For operation in a LAN, you may use CMic CSV units for voting purpose. Using the PC software DIGIVOTE basic interactive several opinion polls or voting are done.



With the PC software DMicControl the connected microphones can be controlled very easy. Using this software more microphone modes such as MAN (manual control) are available.
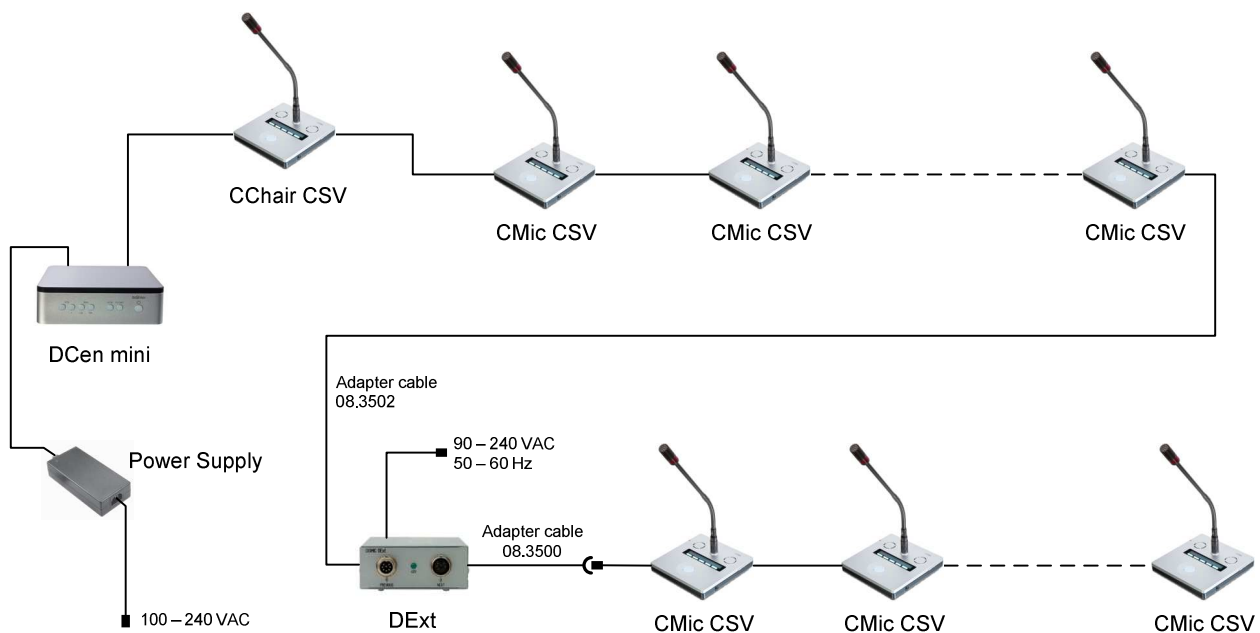
## Microphone units Pro Series

DCEN mini also works with the microphone units of the DIGIMIC Pro Series. With access to a LAN and the PC software DMicControl, all connected microphones can be controlled. Using this software more microphone modes such as MAN (manual control) are available.

Switch / Hub

Adapter cable 08.3502

D9 cable

D9 cable

DChair

D9 cable

DMic

DMic

DMic

LAN cable

DCen mini

Power Supply

PC Software
• DMicControl

100 – 240 VAC

## Expansion with additional power supply

With a DExt (additional power supply), a discussion system with classic units can be extended. To do so adapter cables are required.

CChair CSV

CMic CSV

CMic CSV

CMic CSV

DCen mini

Power Supply

Adapter cable 08.3502

90 – 240 VAC
50 – 60 Hz

Adapter cable 08.3500

100 – 240 VAC

DExt

CMic CSV

CMic CSV

CMic CSV

Up to 100 delegates units including 3 power supplies DExt are possible

In conjunction with microphone units of the Pro Series there is just the adapter cable for the direct connection (08.3502) to DCEN mini necassary.

# Appendix

## Technical data

This products complies with international standards IEC60914

## Connectors

- Socket for external power supply (48 VDC)
- Socket for network connection LAN (10/100 Mbit/s)
- Socket for delegate units (25 microphone units; DisplayPort®)
- Connector for analog output, XLR, balanced (switchable mic / line level)
- Connectors for Line Out / In (RCA jack)

## Audio

- Sampling rate            48 kHz
- Frequency response      20 – 20,000 Hz
- Low susceptibility to mobile phone interference, like Bluetooth, UMTS, WiFi and others

## Features

- Power switch with indicator light
- Six illuminated keys for different operating modes
- Protection against short circuit and overload at the output (CMic LINE)

## Power supply

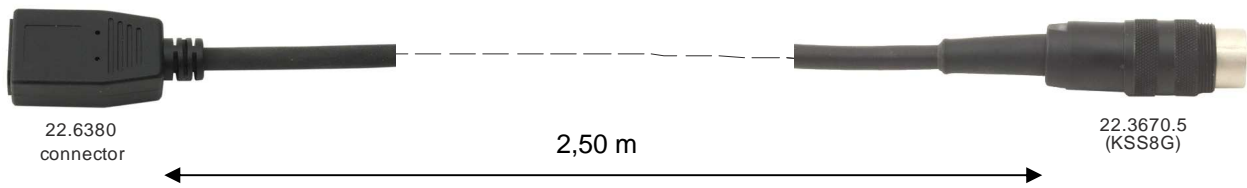- 48VDC, external AC Power Supply

## Housing

- plastic, silver painted, top black
- W x H x D: (200 x 65 x 200) mm
  approx. (7.9 x 2.6 x 7.9) inch
- Weight about 2 kg

## Adapter cable

08.3500 DisplayPort® connector socket (Classic units) < -- > S8G plug (Pro Series DMic, DChair)

Application: DExt < -- > CMic/CChair



22.6380
connector

2,50 m

22.3670.5
(KSS8G)
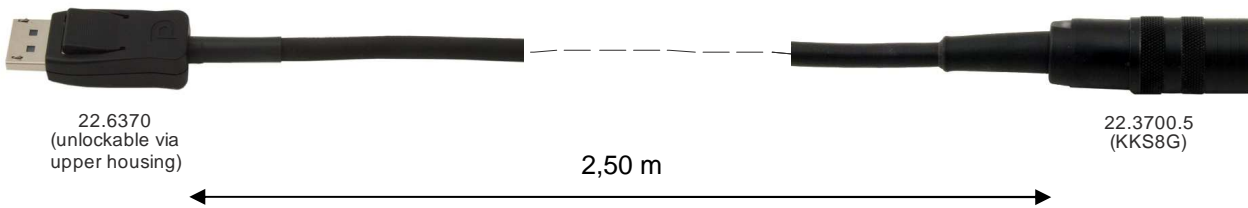
08.3502 DisplayPort® plug (Classic units) < -- > S8G connector socket (Pro Series DMic, DChair)

Application: DCen mini < -- > DChair/DMic

Application: CMic/CChair < -- > DExt



22.6370
(unlockable via
upper housing)

2,50 m

22.3700.5
(KKS8G)

## Trouble shooting

| Error description | Error cause | Error solutiom |
|---|---|---|
| Indicator light of power switch does not light (power supply is missing) | External power supply not connected | Connect the external power adapter<br><br>Check wiring at power supply |
| 48VDC power supply LED at DExt does not light up | Power Supply (DExt) is not connected to the network<br><br>Failure on the line | Connect the microphone line<br><br>Überprüfen der Mikrofonlinie auf Unterbrechung |
| No function of the microphone behind a certain point | Error in the microphone unit<br><br>Faulty wiring | Replace microphone unit<br><br>Check cable connection |

**Warranty**

BRÄHLER ICS allows for the DIGIMIC® products a warranty period of 24 months, from date of delivery, for faulty materials and/or manufacturing faults. The warranty does not include rechargeable or disposable batteries, misuse, negligence, breakage, wrong installation, use outside the existing rules and any unauthorized modifications.

BRÄHLER ICS rejects any guarantee, if the safety label with the serial number is removed.

BRÄHLER ICS declares itself to agree to exchange or repair defective components due to faulty materials or manufacturing, dependent on following procedure:

1)  The client declares that the fault is not due to empty, discharged, wrongly inserted, or faulty batteries.

2)  Before sending the faulty product back to the company, please obtain an RMA (Return Material Authorization) number. An RMA can be obtained by contacting us at the details below

Phone    +49 (0) 2244 930-0
or email: sales@braehler.com

3)  You may send the defective product free of charge to (refer to the service form):

>           BRÄHLER ICS Konferenztechnik
>           International Congress Service AG
>           Auf der Alten Burg 6
>           53639 Königswinter
>           Germany

4)  Should it turn out that the fault was caused through inattentiveness or inappropriate use, the service and shipping charges will be added to the clients account.

# SERVICE FORM

Material return shipments for repair-, service-, or guaranty purposes please send to:

BRÄHLER ICS Konferenztechnik AG
Auf der Alten Burg 6
53639 Königswinter, Germany
Phone +49 (0)2244 930-0, Fax +49 (0)2244 930-450

Dear customer,
Please ask our sales staff for the **RMA number** *(Return of Material Authorization)*.
**Without RMA number a treatment is not possible!**
Please always include this service form, fully completed, with any complaint or repair wish you may have.
Please note that only returns with the proper and complete paperwork can be dealt with in time.

**A detailed fault description will reduce costs and period of repair.**
Please contact us before you return equipment in order to find the most efficient way of sending.

**RMA number:** _____

Article description: _____ Serial no.: _____ Code: _____

Delivery note no.: _____ Invoice no.: _____

Reason for return/Fault description:

_____

_____

_____

Company: _____

Contact person: _____

Phone: _____ Fax: _____

Notes/Comments:

_____

_____

_____

Transport damages have to be reported immediately to the responsible forwarding agent.

**Remarks for Non-EU customers:**

Please always contact our sales staff to clarify the return procedure and the most efficient way of sending. In any case kindly add a proforma invoice, addressed to Brähler ICS AG, Königswinter with the following statements:

- reason for return (repair or credit note)

- exact declaration of the goods, exact no. of pieces, article no. / model, serial no.

Please be informed that we will reject any return shipment not arranged with our sales staff.

# Contact addresses

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F  +49 (0) 2244 930-450
   sales@braehler.com