

# CS-200

## Wireless Conference System



# CONTENTS

## 1. COPYRIGHT NOTICE

## 2. ABOUT TRADEMARKS

## 3. INTENDED USE

## 4. SAFETY INSTRUCTIONS

## 5. CS-200 SYSTEM ARCHITECTURE

- 5.1. System Components
- 5.2. System Overview
  - 5.2.1. CS-200 Central Unit Front Panel
  - 5.2.2. CS-200 Central Unit Rear Panel
  - 5.2.3. CS-200C Chair Microphone
  - 5.2.4. CS-200D Delegate Microphone
  - 5.2.5. Microphone configuration
- 5.3. Example System

## 6. OPERATION

- 6.1. Central Unit System Interface
- 6.2. Control
- 6.3. Info
- 6.4. Mode
- 6.5. Config
- 6.6. Camera
- 6.7. Tracking
- 6.8. Preset
- 6.9. ID Config
- 6.10. Signal
- 6.11. IP
- 6.12. Time
- 6.13. Freq
- 6.14. Line

## 7. MICROPHONE CONFIGURATION

## 8. SPECIFICATIONS

- 8.1. CS-200 Central Unit
- 8.2. CS-200C / CS-200D Mic Units
- 8.3. AF-919 Microphone Processor
- 8.4. WF-UA80 - Antenna Amplifier
- 8.5. WF-UA88 - Omnidirectional Antenna
- 8.6. Antenna system diagram
- 8.7. CS-200P USB Power charger

## 1 - COPYRIGHT NOTICE

No part of this publication or the documentation accompanying this product may be reproduced in any form or by any means, or used to create any derivative work—such as a translation, transformation or adaptation—without the prior permission of the publisher, except for brief quotations included in critical articles or reviews. The contents are subject to change without notice.

© 2025 IAG Group Ltd. All rights reserved.

The authors of this manual have made every effort to ensure the accuracy of the information contained within. However, no guarantee is given, and neither the authors, IAG Group Ltd, nor its dealers or distributors shall be held responsible for any damages arising directly or indirectly from the use of this manual.

## 2 - ABOUT TRADEMARKS

All terms in this manual known to be trademarks or service marks have been appropriately capitalised.

The Conference Department at IAG Group Ltd cannot guarantee the accuracy of this information. The inclusion of any term in this manual should not be seen as affecting the validity of any trademark or service mark.

## 3 - INTENDED USE

The CS-200 conference system is designed for spoken communication in meetings, presentations and formal discussion settings. It provides wireless microphone control, clear speech reproduction and orderly turn-taking. The system is intended for indoor use by trained operators and should be installed following the guidance in this manual for reliable performance.

# 4 - SAFETY INSTRUCTIONS

The CS-200 conference system is designed with a focus on aesthetics and product quality. However, the system could pose a risk to personal or company property if:

- It is not used in accordance with the instructions
- It has been installed or operated by individuals unfamiliar with standard safety practices
- It has been improperly modified
- The following safety instructions have not been read carefully

## 4.1 Read Instructions

Read all safety and operating instructions before using the product, device, or system.

### 1. Retain Instructions

Keep the safety and operating instructions for future reference, ideally near the product or system.

### 2. Heed Warnings

Follow all warnings provided on the product and in the operating instructions.

### 3. Follow Instructions

Adhere strictly to all installation and operating instructions.

### 4. Cleaning

Unplug the product from the mains before cleaning. Do not use liquid or aerosol cleaners—use only a damp cloth.

### 5. Ventilation

Ensure that ventilation slots and openings are not blocked. Do not place the product on beds, sofas, rugs or similar surfaces, or in enclosed spaces like bookcases or racks unless proper ventilation is provided in line with the manufacturer's guidance.

### 6. Heat

Keep the product away from heat sources such as radiators, heaters, stoves, or other devices that produce heat, including amplifiers. Avoid using the product in environments that exceed standard operating temperatures.

### 7. Modifications

Do not use modifications, extensions, or attachments that are not approved by the manufacturer, as they may be hazardous.

### 8. Accessories

Only use accessories specified by the manufacturer. Do not place the product on unstable surfaces such as carts, stands, or tables not recommended by the manufacturer, as this may result in injury or damage.

### 9. Water and Moisture

Do not use the product near water or in damp environments—e.g., near bathtubs, sinks, or swimming pools, or in wet basements or unprotected outdoor areas.

### 10. Moving

If using a product and cart combination, move it with care. Sudden stops, excessive force, or uneven surfaces may cause the unit to tip over.

### 11. Power Sources

Use only the power source indicated on the product label. If unsure, consult your dealer or local electricity provider. For battery-powered models, follow the product instructions.

### 12. Power Lines

Do not install the system near overhead power lines or other electric circuits where it could fall or make contact. Take extreme care during outdoor installation.

### 13. Grounding or Polarisation

Do not defeat the safety purpose of a polarised or earthed plug. If the provided plug does not fit your socket, consult an electrician to replace the outlet.

### 14. Power Cord Protection

Route power cords so they are not likely to be walked on or pinched, particularly at plugs, sockets, and the point where they exit the product.

### 15. Lightning

Unplug the product during lightning storms or when unused for long periods. This helps protect against damage from lightning or power surges (unless the system needs to remain on for critical functions like evacuation alerts).

### 16. Overloading

Avoid overloading sockets, extension leads or built-in convenience outlets to reduce the risk of fire or electric shock.

### 17. Object and Liquid Entry

Never insert objects into the product through openings. Doing so may contact hazardous voltage or short-circuit parts. Never spill any liquid on the product.

### 18. Flammable or Explosive Substances

Do not use the product in areas where there are flammable gases or explosive substances.

### 19. Shock or Vibration

Avoid subjecting the product to heavy shock or vibration when transporting it.

### 20. Servicing

Do not attempt to service the product yourself. Opening covers may expose you to hazardous voltage. Refer servicing to qualified personnel.

### 21. Damage Requiring Service

Unplug the product and seek professional service if:

- The power cord or plug is damaged
- Liquid has been spilled or objects have entered the product
- The product has been exposed to water
- The product does not operate normally despite following instructions
- The product has been dropped or damaged
- There is a noticeable change in performance

### 22. Replacement Parts

Use only replacement parts recommended by the manufacturer. Substitutions may pose fire or shock risks.

### 23. Safety Check

After servicing, ask the technician to perform safety checks to confirm the product is in proper working condition.

### 24. Coaxial Grounding

If connecting an external cable system, ensure it is properly earthed. *U.S. models only:* Refer to NEC Article 810 for guidelines on grounding mounts, structures, and coaxial lines.

## 4 - SAFETY INSTRUCTIONS

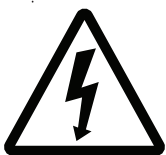
### Power Connections

For permanently connected equipment, a readily accessible disconnect device must be included in the fixed wiring. For equipment with a plug, the socket must be installed close to the equipment and be easy to access.

To reduce the risk of fire or electric shock, do not expose this appliance to rain or moisture. Do not open the cabinet—refer servicing to qualified personnel only.

To prevent electric shock, do not use this (polarised) plug with an extension lead or other outlet unless the blades can be fully inserted, ensuring no part of the blades is exposed.

Installation should be carried out by qualified service personnel only, in accordance with the National Electrical Code or relevant local regulations.



The lightning flash with an arrowhead symbol inside an equilateral triangle is intended to alert the user to the presence of uninsulated 'dangerous voltage' within the product's enclosure, which may be strong enough to pose a risk of electric shock.



The exclamation mark inside an equilateral triangle is intended to alert the user to important operating and maintenance (servicing) instructions in the documentation provided with the appliance.

## 5 - CS-200 SYSTEM ARCHITECTURE

The CS-200 system is a wireless digital conference solution ideal for multi-purpose meeting spaces. Designed for flexibility and ease of use, it offers high-quality audio and intuitive control for modern conferencing needs.

Key features include:

- **Wireless flexibility:** Ideal for reconfigurable or multi-use rooms, with quick setup and no cabling requirements.
- **User-friendly operation:** Intuitive touch screen interface on the main controller enables quick access to system settings.
- **High-quality audio:** Digital signal processing and an elegant microphone unit ensure rich timbre and excellent speech intelligibility.
- **Advanced meeting control:** Includes register and voting functions, various meeting modes, and remote microphone shutdown.
- **Comprehensive connectivity:** Supports USB audio recording, RS-232 and RS-485 control interfaces, plus VISCA and PELCO-D/P camera protocols.
- **Camera tracking support:** Enables intelligent camera control based on active microphone positioning.
- **Reliable performance:** Features anti-interference design, interference detection, changeable frequency configuration, and time display.
- **Scalable system:** Supports up to 200 discussion microphones with replaceable battery design for longer sessions.

### 5.1. CS-200 System Components:

- CS-200 Central Unit
- Power Adapter
- AC Cable
- User Manual
- CS-200C Chair Unit × 1
- CS-200D Delegate Unit × [number may vary per setup]
- Charging cables for microphone units
- Antennas (Control and Data, BNC connectors on rear panel)
- Optional: RS-232/RS-485 camera cables (if camera tracking is used)
- Optional: CS-200P USB charging station
- Optional WF-UA88 and optional WF-UA80 antenna systems
- Optional AF-919 Microphone processor - feedback suppressor

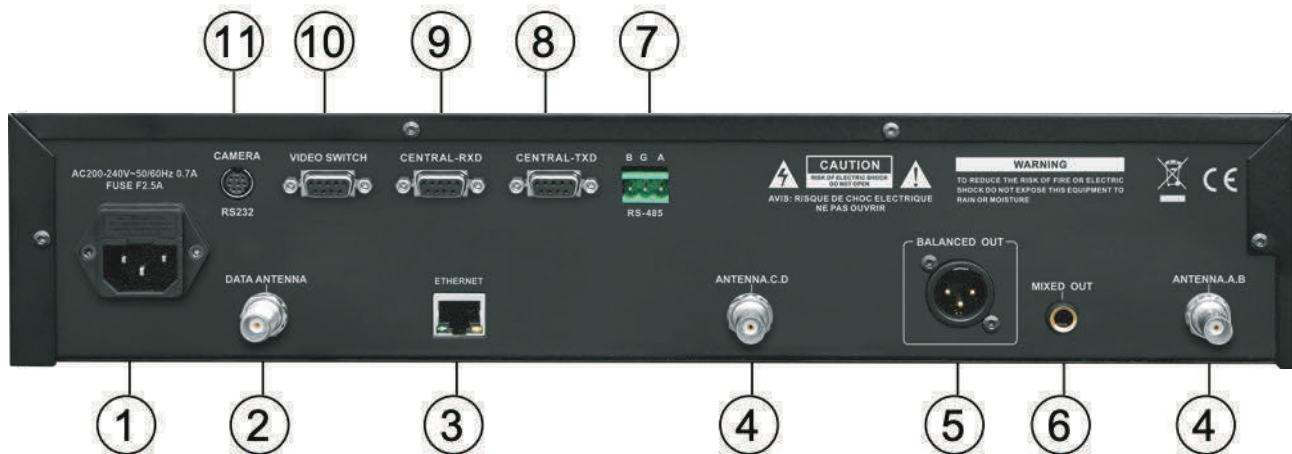
## 5.2 - SYSTEM OVERVIEW

### 5.2.1 CS-200 CENTRAL UNIT FRONT PANEL



1. REC with USB
2. 4.3" touch-screen display with full parameter access
3. Power switch & indicator

### 5.2.2 CS-200 CENTRAL UNIT REAR PANEL



- |                           |                         |
|---------------------------|-------------------------|
| 1. AC Power socket & fuse | 7. Camera RS-485        |
| 2. Data antenna BNC       | 8. Command TXD          |
| 3. RJ45 interface         | 9. Command RXD          |
| 4. Control antenna BNC    | 10. Video switch RS-232 |
| 5. XLR balanced output    | 11. Camera mini-RS-232  |
| 6. 6.35mm output          |                         |

### 5.2.3 CS-200C CHAIR MICROPHONE

Wireless mic unit for the chair with LCD display and 40 hour battery life.

#### 1. Condenser Microphone Capsule

#### 2. Mic Indicator

Indicates the working status of microphone. Red = Mic on.

#### 3. LCD Display

Displays the working state.

#### 4. Chair Priority Key

Press this switch to turn off all delegate microphones

#### 5. Mic On/Off Key

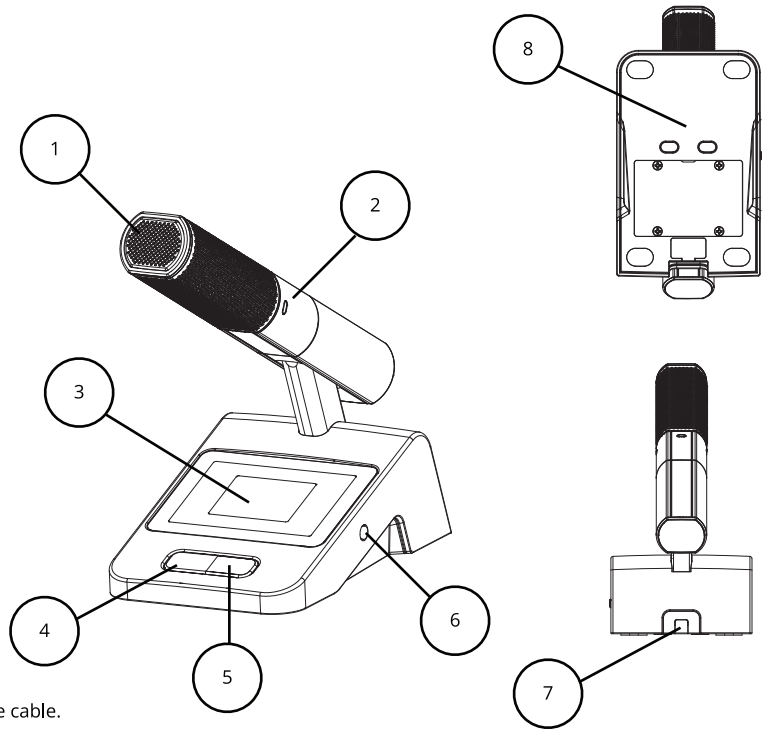
#### 6. Power Button

long press to turn on or off the microphone power (about 3s)

#### 7. USB-C Charging Port

Note - CS-200C will only charge using a USB-A to USB-C charge cable.

#### 8. Set and Enter buttons for system setup



### 5.2.4 CS-200D DELEGATE MICROPHONE

Wireless mic unit for the delegates with LCD display and 40 hour battery life.

#### 1. Condenser Microphone Capsule

#### 2. Mic Indicator

Indicates the working status of microphone. Red = Mic on.

#### 3. LCD Display

Displays the working state.

#### 4. Mic On/Off Key

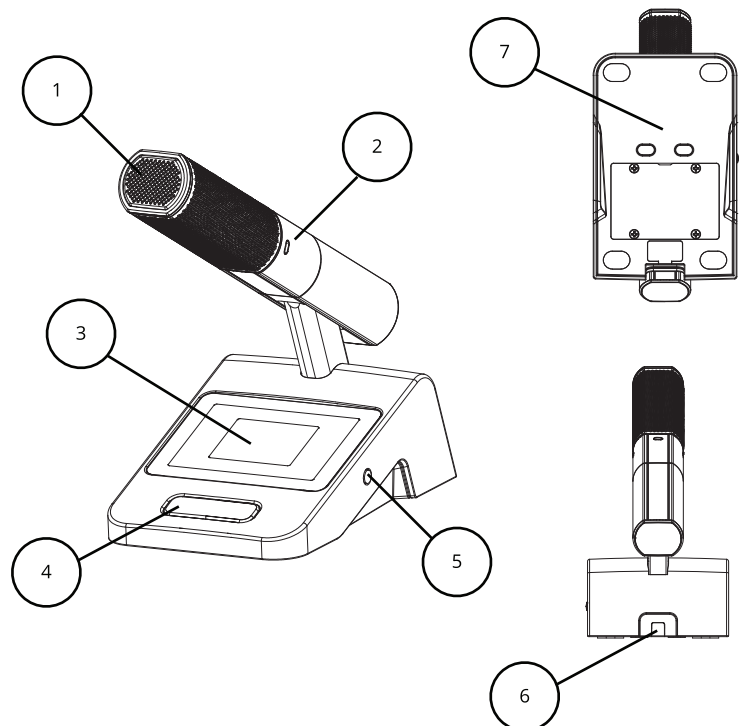
#### 5. Power Button

long press to turn on or off the microphone power (about 3s)

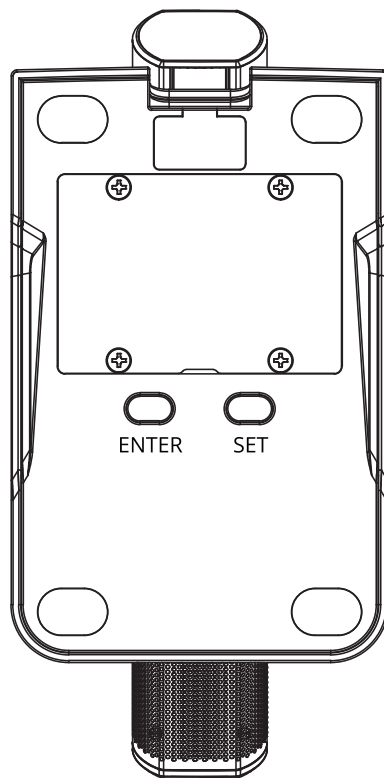
#### 6. USB-C Charging Port

Note - CS-200D will only charge using a USB-A to USB-C charge cable.

#### 7. Set and Enter buttons for system setup



## 5.2.5. Microphone configuration

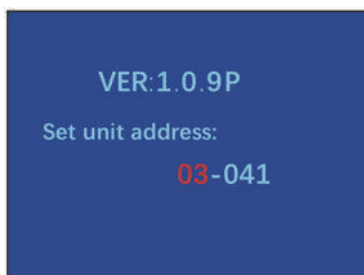


### 1.1. Modify the microphone ID

In the shutdown state, press the SET + power button for 3 seconds at the same time to enter the modification interface.

The value of red number is the value to be modified.

Press the ENTER key to switch, press the SET key to modify the value, and press the power key to save and exit.

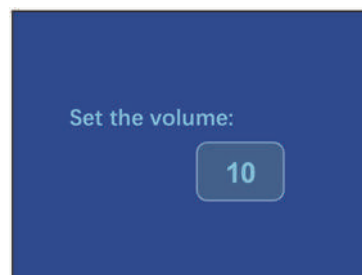


### 1.2. Modify microphone sensitivity

Press SET + ENTER at the same time for 5 seconds to enter the volume modification interface.

Press SET to adjust the volume from 0 to 10.

Press ENTER to save and exit.

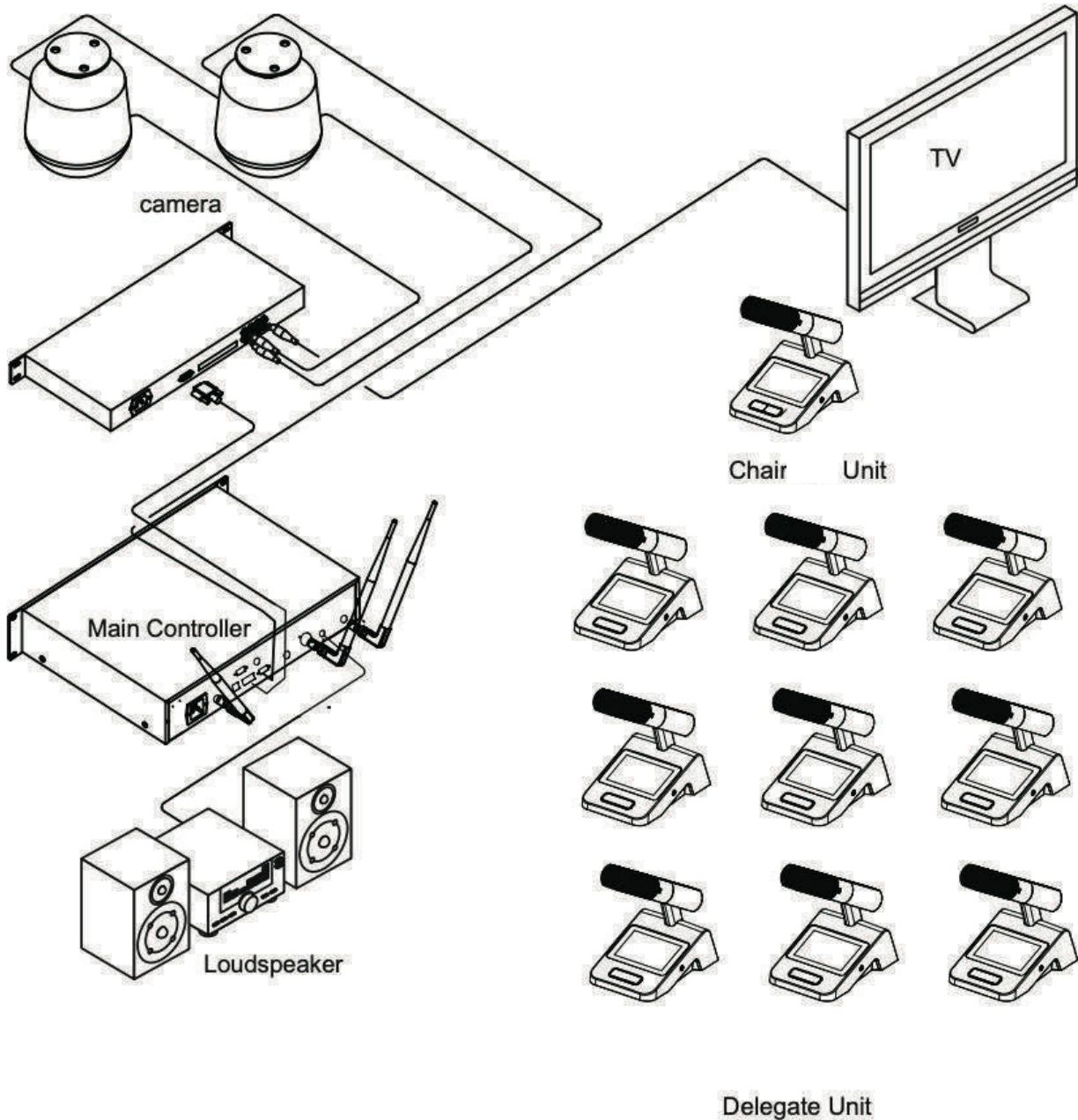


### 5.3 - EXAMPLE SYSTEM

The CS-200 uses a wireless communication system, eliminating the need for traditional conference cabling. Microphone units connect to the main controller via secure, configurable UHF channels.

The system supports up to 200 microphone units and includes features for frequency management, channel interference detection, and signal monitoring. Each microphone unit operates independently and includes a rechargeable battery with onboard charging.

Wireless frequency settings and unit IDs can be managed via the controller's touch screen interface or directly on the microphone units.



Note:

- The user can reset the ID for each microphone after installation.
- Avoid using the system in high humidity environments.
- It is recommended to use any cabling supplied with these products

# 6 - OPERATION


## 6.1 CENTRAL UNIT SYSTEM INTERFACE

### CHANNEL

Indicate the current working channel group of the system.

### UHF STATE

To indicate the occupancy status and signal level of each channel.

When  appears and is shown in a blue colour, it means that the channel is occupied by the units and communication is established.

When the signal icon shown in occupied state but is in white it means there is an interfering signal using the same frequency. Operator should switch the system to another channel group or alter the frequency to avoid the interference.

### VOL

This indicates the volume level of the main output of the system. The user can slide the volume bar to adjust.

### CONTROL

The shortcut menu to switch ON/OFF certain microphone units and to access fast shutdown function.

### SETUP

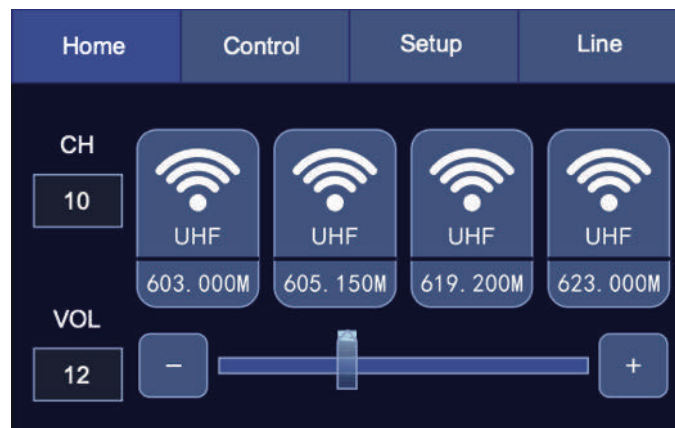
To enter the system setup menu, including System setup, Camera tracking , Group, Info, Advance.

### LINE

Line check.

### Tips:

- The user can select needed setup directly on controller display and can use the keypad to change the parameter shown on the text boxes.
- When text box is shown in a grey colour it means the related parameter is for indication only and is not editable.
- System will turn to "Pause" status and microphone units will be inactive when operation is carried out on the following menu : Camera, ID config, Channel, CH Detect.



## 6.2 CONTROL

### UNIT ID

Input the microphone ID needed for the operation.

### ON/OFF

The selected microphone unit can be switched ON/OFF from the host.

### ALL OFF

Enables the operator to switch off all the microphones connected to the host.

### SHUTDOWN

Power off all the microphones connected to the system.

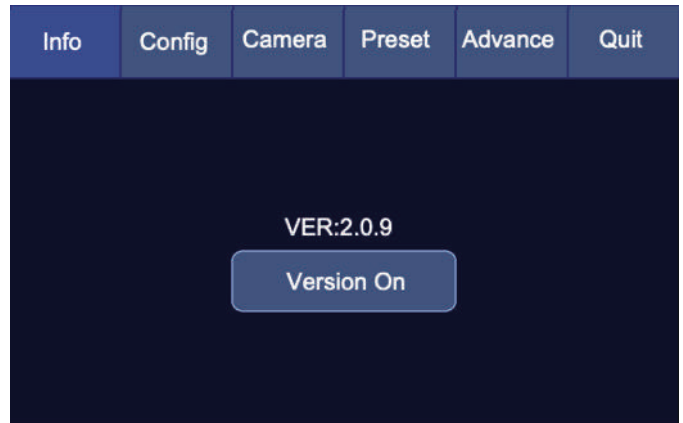


## 6.3 INFO

### INFO

Displays the firmware version of both the central unit and microphone units.

Pressing 'Version On' will display the version info on the screen of all connected microphone units.



## 6.4 MODE

### LIMIT

No more microphone units can be switched ON when the active mic no. reaches the OPEN MIC QTY.

### CHAIR

Only chair units can be switched ON.

### FIFO

First in first out. Under certain OPEN MIC qty, this pattern applied to delegate units. For instance, if the OPEN MIC qty is 2, the 1st active unit will be switched off when the 3rd unit switched on.

### LIFO

Last in first out. Under certain OPEN MIC qty, this pattern applied to delegate units. For instance, if the OPEN MIC qty is 2, the 2nd active unit will be switched off when the 3rd unit switched on.



**6.5 CONFIG**

**OPEN MIC**

The open mic quantity setup for delegate units active at the same time. The max open mic no. is 4pcs for the system.

**TIME OFF**

To set the active time (0~36000 sec) for turned on microphone unit. The active microphone units will be switched off automatically when the time is up. The function is disabled when value set to 0.

**UNIT VOL**

To unify the gain level of all the microphones connected to the system.

Note: The User can press ENTER + > for 5 sec. to enter gain adjustment menu on each microphone if needed.

**NOISE GATE**

The noise gate is designed to attenuate the reception of ambient noise, to enable a clear voice reception from the speakers.

**BUZZER**

The buzzer will response to the operations done on the touch screen, operator can enable.



**6.6 CAMERA**

**PROTOCOL**

VISCA/Pelco-D/Pelco-P (baud rate:9600)/Yaan(baud rate:4800)

**CAM ID**

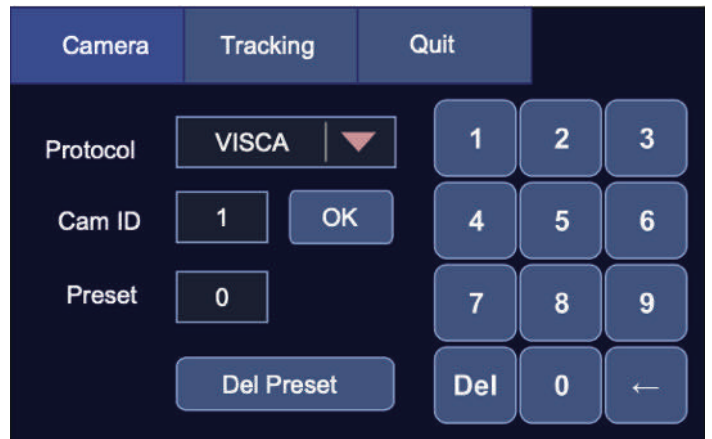
Cameras connected to the system will be assigned an ID. Operator should select the needed camera for the tracking position Setup. The setup range is 1 ~ 8.

**PRESET**

It indicates the total number of microphones which have been set for camera tracking.

**DEL PRESET**

To empty the presets saved on the host.



### 6.7 TRACKING

#### SPEED +/-

To adjust the speed of panning or tilting when doing the tracking setup.

#### APERT +/-

Operator can use this to adjust the aperture of the camera when the camera doesn't have an auto aperture adjustment.

#### ZOOM IN(+)/OUT(-)

For the zoom operation of connected camera.

#### UNIT ID

This is the microphone ID (0 ~200) for setting the camera tracking operation. The user should enter the ID at the beginning of the operation. When value is set to 0, that means to set the general view for the system.

#### TEST

To recall the position set for a certain microphone. To check if the tracking position is set correctly.

#### SAVE

All individual configured parameters will be saved on microphone ID basis.

Operational steps for camera tracking setup:

1. Select the protocol for the camera.
2. Input the camera ID needed for the operation then press OK.
3. Input unit ID and setting the position.
4. Press SAVE to store the setup info.

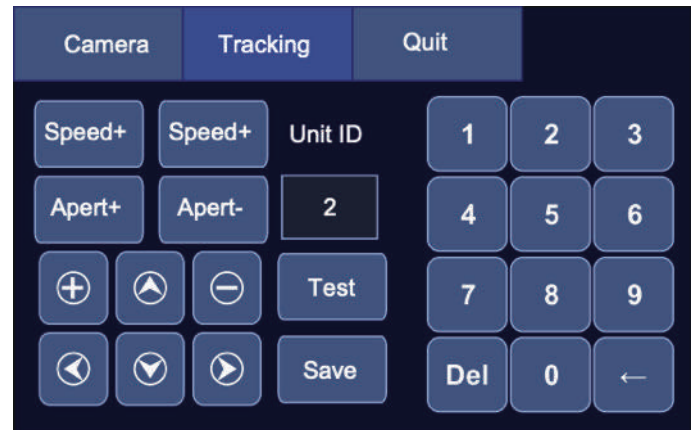
### 6.8 PRESET

PRESET is a collection of system configurations saved in advance, allowing the operator to quickly switch settings based on different meeting requirements.

Only parameters from the CONFIG menu—such as MODE, OPEN MIC, TIME OFF, and SYSTEM VOLUME—can be saved as a preset.

The operator must first complete the setup in the CONFIG menu, then save it using the PRESET function. There are four preset slots (Preset 1-4), and data will be overwritten when SAVE is selected.

Selecting 'Factory Setting' will restore the system to its default configuration: CH: 1, MODE: FIFO, OPEN MIC: 4, TIME OFF: 0, SYSTEM VOL: 31.



**Note:** The default baud rate of the system is 9600. User should set the same rate on the camera to enable the proper communication in between.



### 6.9 ID CONFIG

ID CONFIG allows you to assign unique IDs to microphone units and change system channels as needed. Each microphone must have a unique ID within the system, which can be reassigned if required.

#### All microphones ID config

- Power ON the mics and ensure they are connected to the host.
- Input the initial ID number, and press "Start".
- Mics connected the system will receive the config command and a message will show on the display.
- Press the TALK button on the mic unit to acquire the ID.
- Indicator LED will light when ID acquired.
- ID will be set in ascending order to each microphone unit.
- Press "End" to stop the operation.

Note: Any mic units that didn't successfully acquire a new ID during the operation will keep their previous IDs. If that happens, power off the mic and press POWER+ENTER for few seconds to enter the manual ID setup menu.

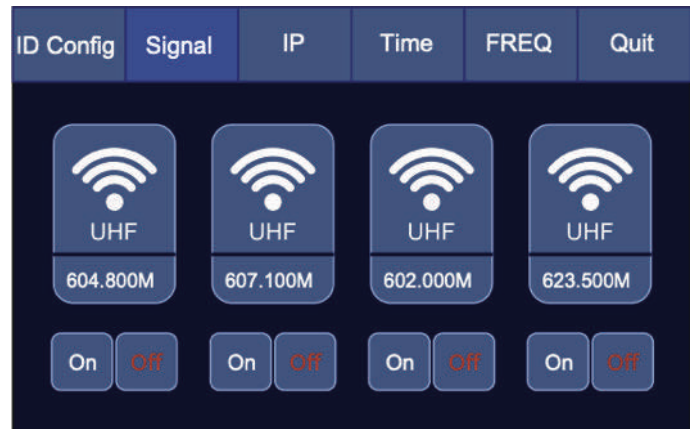
CH allows the user to change the frequency group (1-10) for the system. It enables multiple sets of systems to be used at the same venue.



### 6.10 SIGNAL

SIGNAL allows you to monitor the channels and frequencies which can help detect environmental signal interference.

Even when no microphones are active, the system can detect if any of the four channels are occupied and switched on. If interference is detected, its advised to switch the host to a different channel.



### 6.11 IP

IP allows you to configure the host unit IP address. This setting is required for the voting software to communicate with the host—both must use the same IP configuration.



### 6.12 TIME

This menu allows you to set the system time, which is used for time-related functions.



### 6.13 FREQ

This function is designed to help avoid frequency interference during operation. FREQ allows you to fine-tune the frequencies within each group to prevent conflicts.

To configure, select a frequency group (FREQ 1–10), press DEFAULT to move into the CUSTOM mode, then choose the desired channel (CH 1–4). Frequencies can be adjusted within the 600 MHz to 630 MHz range. Enter the frequency and press SET to apply.

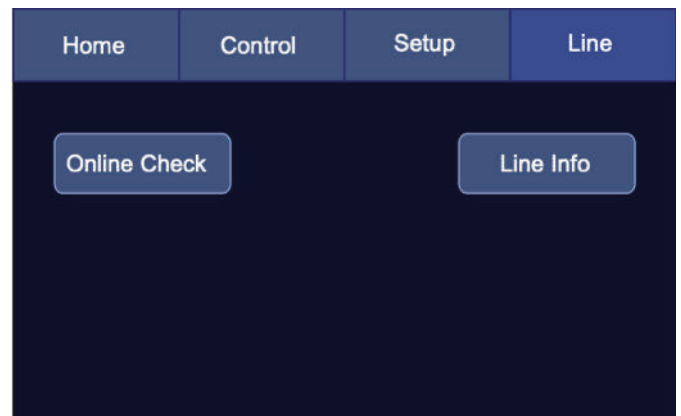
To restore factory settings, press LOAD DEFAULT or switch CUSTOM back to DEFAULT. All connected microphone units will automatically sync after each frequency change.



### 6.14 LINE

6.141, A system information check, showing the number of microphones currently detected and their ID numbers.

6.142, Circuit check, re-detect the online status of the current microphones.



## 8 - SPECIFICATIONS

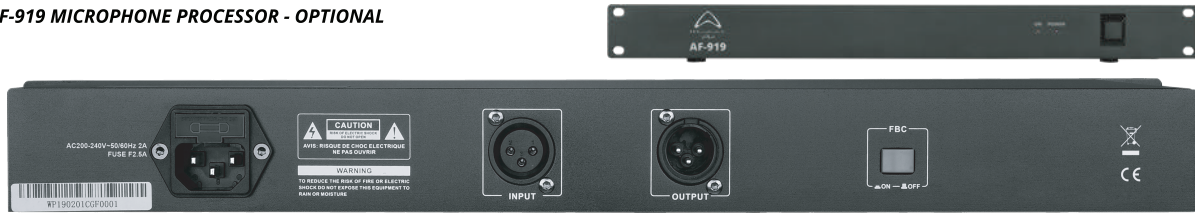
### 8.1 CS-200 CENTRAL UNIT

Feature	Specification
Model	CS-200 - Central Control Unit
Carrier band	UHF 600–630 MHz (modifiable)
Signal power	18 dB
Modulation	FM
Control channel	433 MHz
Operating effective distance	60 m
Oscillation method	PLL Phase-locked Frequency synthesis
Sensitivity	S/N > 60 dB (at an offset equal to 25 KHz input 6dBV)
Bandwidth	30 MHz
Maximum offset	±45 KHz
Combined S/N ratio	>105 dB
Combined T.H.D	<0.7% @1 kHz
Combined freq response	45 Hz–18 kHz ±1 dB
Supply voltage	AC110–220 V
Output power	25 W
Output socket	XLR, 6.3 mm
Output impedance	220Ω
Body size	465 × 325 × 97 mm

### 8.2 CS-200C / CS-200D MIC UNITS

Feature	Specification
Model	CS-200C / CS-200D Mic Units
Screen size	2.5"
Carrier Band	UHF 600–630 MHz
Power output	15 mW
Control channel	433 MHz
Oscillation method	PLL phase-locked frequency synthesis
Harmonic amplitude	< -65 dBm
Bandwidth	30 MHz
Microphone type	Capacitive, cardioid directional
Battery	18650 × 2
Charging method	Type-C
Current consumption	120 mA
Square bar angle	42 degrees longitudinal
Maximum offset	±45 kHz
Body size	120 × 157 × 56 mm
Microphone size	21.5 mm

### 8.3 AF-919 MICROPHONE PROCESSOR - OPTIONAL



Feature	Input	Output
Model	AF-919 - Microphone Processor	
Impedance	10 K $\Omega$	1 K $\Omega$
Max Signal	1Vrms (2.2 dBu)	1Vrms (2.2 dBu)
THD	< -85dBu	
Resolution	24 Bits	24 Bits
Sound Channel	Single Track	Single Track
Sampling Freq	40 kHz	
S/N	>90 dB	
Control Interface	J4	
Header Interface	PH2.0 mm Connector (J1, J2, J3)	
Current Consumption	VCC : (+4.5 V ~ +5.5 V)	<60 mA
	VCC : (+9 V ~ +12 V)	<50 mA
	VCC : (-9 V ~ -12 V)	<50 mA

### 8.4 WF-UA80 - ANTENNA AMPLIFIER - OPTIONAL



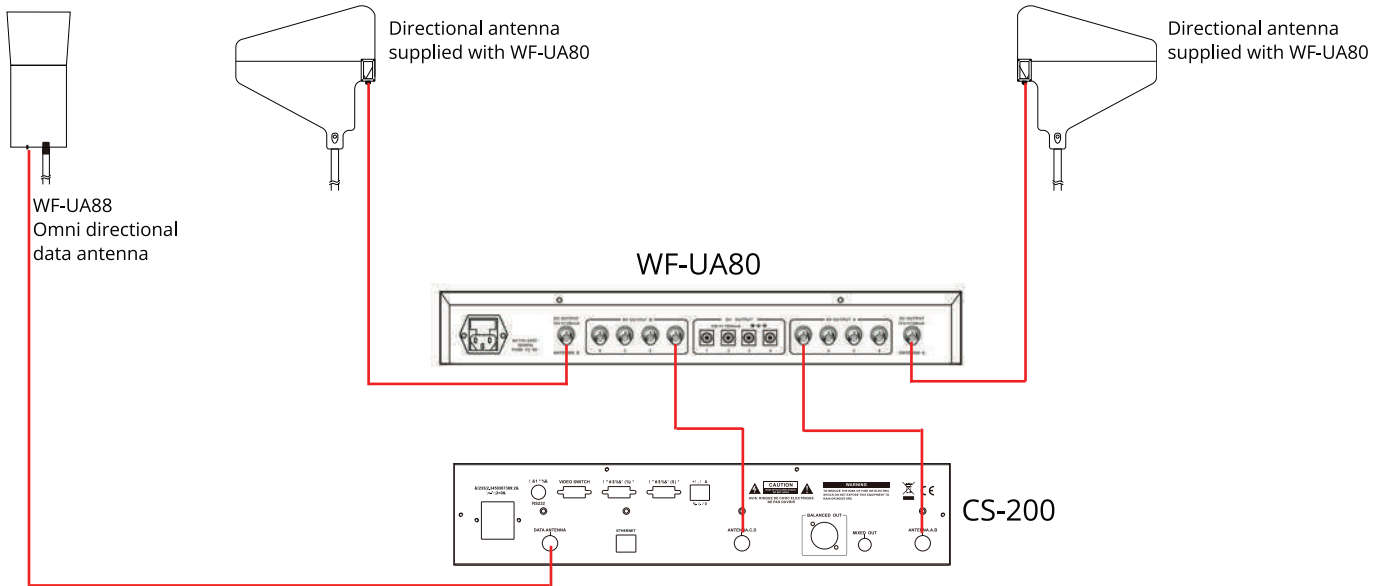
Feature	Specification
Model	WF-UA80 - Antenna amplifier
Frequency range	470-960 MHz
RF output gain	1.5 dB $\pm$ 0.5 dB
Third-order intermodulation intercept point	+14 dBm
Noise index	< 2 dB
System resistance	50 ohms
Antenna interface power	DC 12V / 150 mA
DC interface power supply	DC 12V / 1A per channel
Main unit input power	AC 90-230 V, 50/60 Hz
Connector	BNC
Size	(W) 482 $\times$ (H) 44 $\times$ (D) 220 mm
Weight	2.25 KG
Output power	5W
Current Consumption	VCC : (-9 V ~ -12 V)

### 8.5 WF-UA88 - OMNI DIRECTIONAL ANTENNA



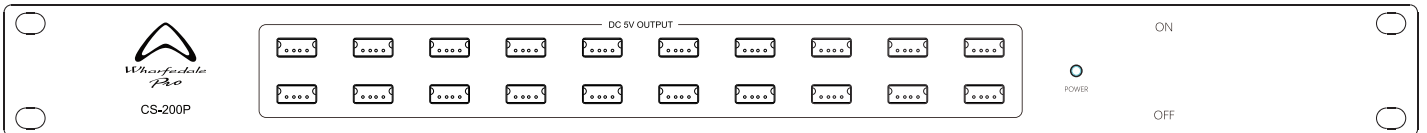
Feature	Specification
Model	WF-UA88 - OMNIDIRECTIONAL ANTENNA
Antenna Gain	2 - 4 dBi
VSWR	< 1.5
Impedance	50 $\Omega$
Connector	BNC

**8.6 ANTENNA CONFIGURATION USING OPTIONAL WF-UA80 AND WF-UA88 ANTENNA FOR LARGER DISTANCE SETUPS**

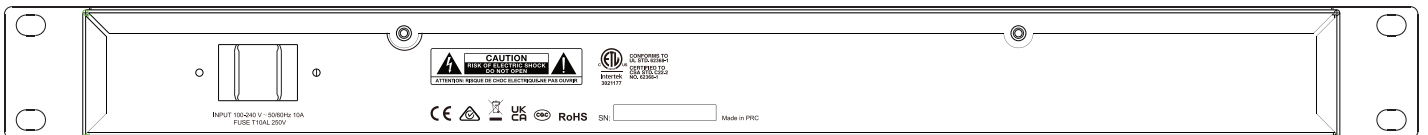


**8.7 CS-200P USB Power Charger - OPTIONAL**

**CS-200P Front**



**CS-200P Rear**



**CS-200P Features**

- Delivers 20 x 5 V DC USB power ports for simultaneous charging of external USB devices
- Supports a wide input voltage range (AC 90V–240V), compatible with global power standards
- Features a sleek metal enclosure with a 1U standard rackmount design
- Designed for the simultaneous tidy charging of up to 20 x CS-200D / C Wireless Conference Microphone units

**NOTE - CS-200D and CS-200C will only charge when using a USB-A to USB-C charge cable.**

## WHARFEDALE PRO LIMITED WARRANTY

Wharfedale Pro products are warranted of manufacturing or material defects for a period of three years from the original date of purchase. In the event of malfunction, contact your authorised Wharfedale Pro dealer or distributor for information. Please be aware that the warranty details may differ from country to country. Contact your dealer or distributor for information (available at [www.wharfedalepro.com](http://www.wharfedalepro.com)). These terms do not infringe your statutory rights.



Wharfedale Pro  
IAG House 13/14 Glebe Road Huntingdon Cambridgeshire PE29 7DL UK  
[www.wharfedalepro.com](http://www.wharfedalepro.com)

Wharfedale Professional reserves the right to alter or improve specifications without notice.  
All rights reserved © 2025 Wharfedale Pro. Wharfedale Pro is a member of the IAG Group.