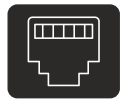
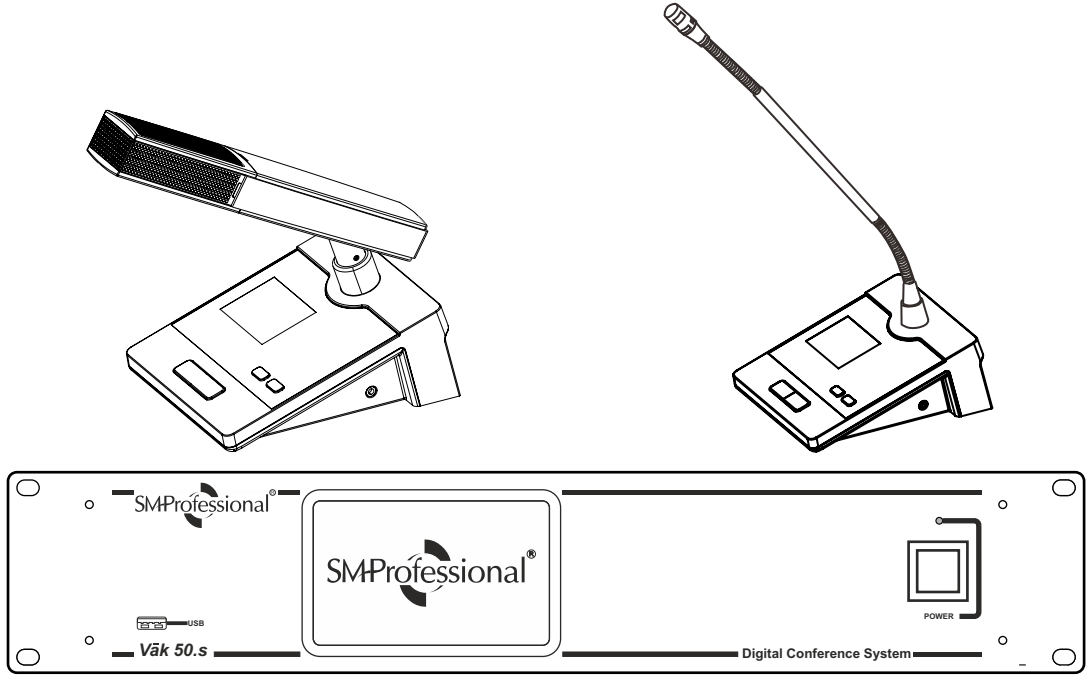


SMProfessional®

Vāk 50

Digital Wired Conference System with Network Connectivity & Camera Tracking



**NETWORK
BASED**



**INTUITIVE
INTERFACE**



**USB MP2
RECORDER**



**CAMERA
TRACKING**



**REMOTE WEB
MANAGEMENT SYSTEM**

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1. Introduction

Thank you for buying the SMProfessional Vāk 50 conference system.

To ensure maximum performance & safety, please follow this instruction manual carefully.

Please retain this manual for future reference.

For any complaint, feedback or testimonials please contact our distributor/dealer.

Retain the cartons for future use should the product require servicing / maintenance.

2. Features at a Glance

Vak 50.s System Controller Unit

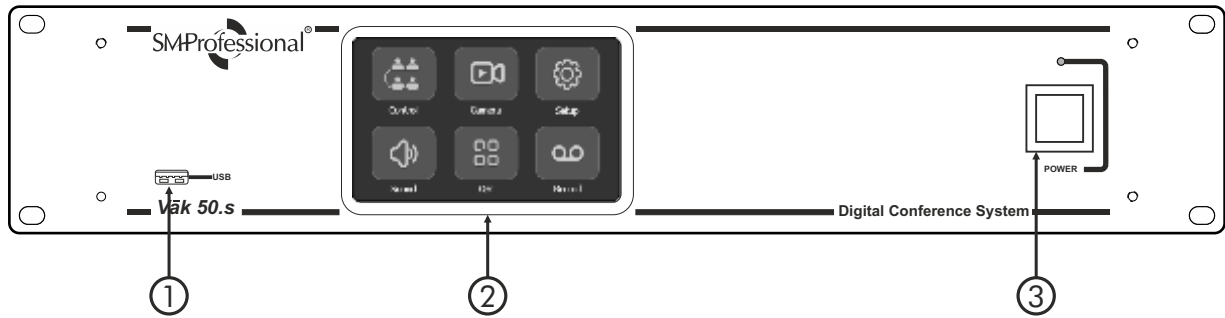
- Seamless network connectivity via standard RJ45 ethernet connectors.
- Supports up to 100 participants by default for small to medium meeting scenarios.
- Can support up to 1000 participants via optional extender for larger meeting scenarios.
- Multifunctional operating modes such as FIFO, LIFO, Chairman, All ON, Discussion mode and more.
- Advanced priority control with manual and auto recover options.
- Remote microphone ON/OFF.
- Built-in USB MP2 recorder with sequential file saving and storage.
- Intuitive camera tracking with industry-standard VISCA and PELCO-D/P protocol compatibility.
- RS-232 and RS-485 camera controller interface.
- Supports one camera system out-of-the-box and multi camera systems via optional extender.
- Embedded browser-based web management system for remote configuration and control via a PC, laptop or smartphone.
- User-friendly interface with responsive LCD touch screen.
- Quick plug-and-play installation, easy-to-use, no operator required.
- Ideal for boardrooms, conference rooms, legislative chambers and other large and complex meeting scenarios.

Vak 50.c Chairman & Vak 50.d Delegate units

- Sleek and classy 21" 2-bend goose neck and short neck microphone with base.
- High-quality condenser microphone capsule for superior voice reproduction.
- Illuminated ON/OFF talk switch.
- Clear TFT colour screen displays microphone ON/OFF status, selected channel number, unit ID, microphone ON time and analogue watch dial.
- LED to indicate 'Mic Active' status.
- Priority switch on the chairman unit to override all delegates during a discussion.
- 3.5mm jack for headphone connectivity.
- Quick access switches to increase/decrease headphone volume.

3. System Features

a. Main Controller Front Panel:



- 1. USB Socket:** To insert USB disk for recording. Maximum 32 GB USB drive can be connected.
- 2. LCD Display:** This touchscreen LCD lets you view, access and edit the various parameters, modes and settings of the system controller unit.
- 3. Power Switch:** Press this switch to turn the system controller unit ON or OFF. When powered ON, the screen shows the system initialization page followed by SMProfessional logo and shows the Home screen when the boot sequence is successfully completed



Figure 3.1
Blank Screen

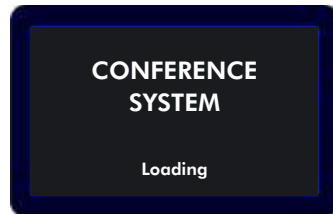


Figure 3.2
Initialization Screen

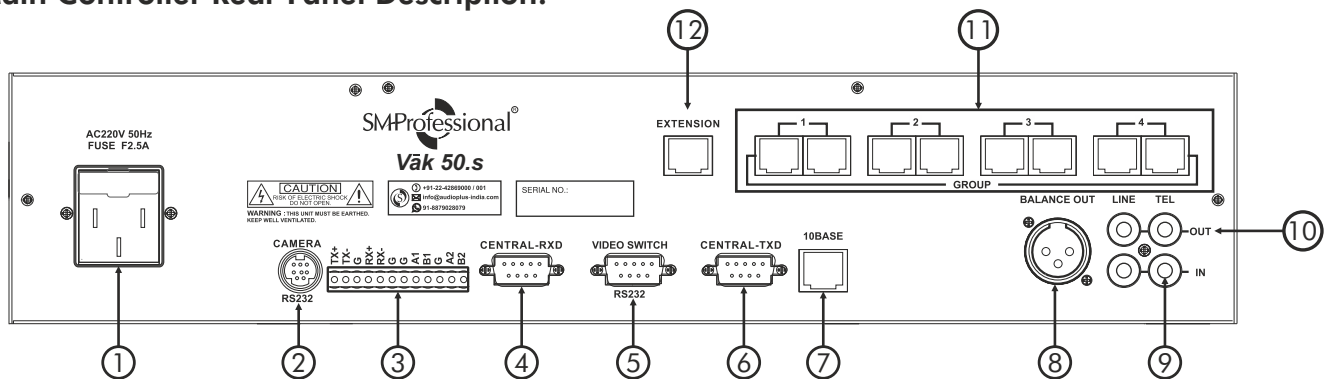


Figure 3.3
SMProfessional Logo Screen



Figure 3.4
Main Screen

b. Main Controller Rear Panel Description:

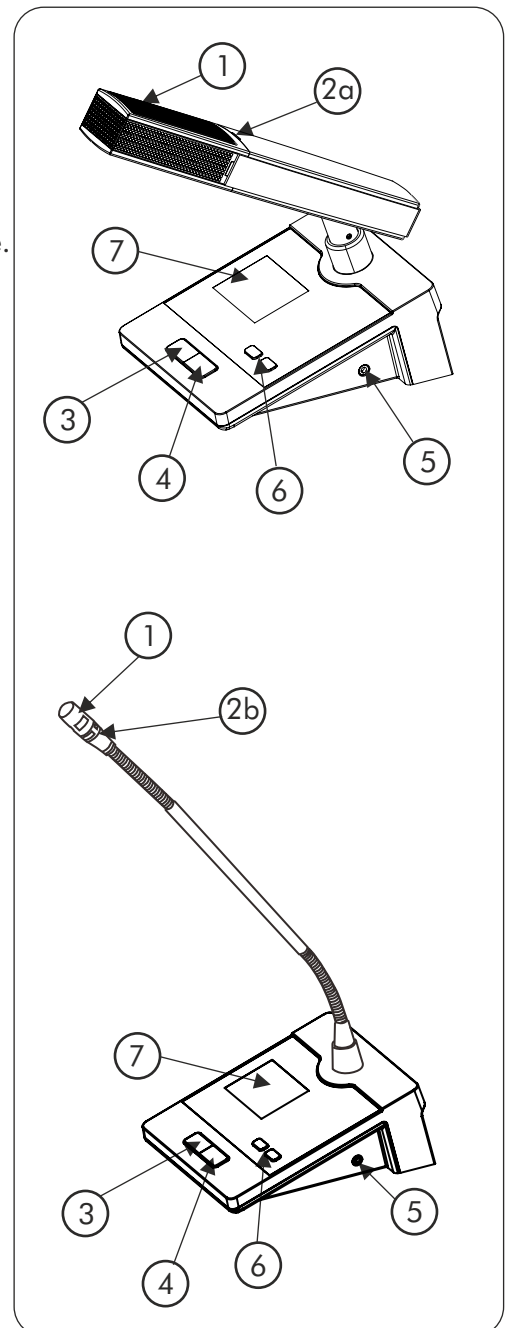


- 1. AC Inlet & Fuse Holder:** Use the supplied AC cord to connect the unit to AC mains. Make sure voltage and frequency stated on the unit matches with your local AC supply. The fuse can be accessed by the small drawer at the AC inlet. To change the fuse, unplug the AC cord first, pull out the fuse drawer and replace the fuse **ONLY** with a fuse of same voltage and rating.
⚠ If the fuse blows again after replacement, hand over the unit to qualified service personnel.
- 2. Camera RS-232:** This 8-pin mini DIN RS232 port is provided for easy connection to an external PTZ conferencing camera.
- 3. Camera RS-485/422 connector:** The RS-485 connector is provided for easy camera connection.
- 4. Central RXD:** This receiver connector can be used to integrate third party control and automation equipment.
- 5. Video Switch RS-232:** Use this 9-pin D-SUB port to deploy external video switchers to manage and switch between multiple cameras and video feeds connected during the conference.

6. **Central TXD:** This Transmitter connector can be used to integrate third party control and automation equipment.
7. **10 Base:** This LAN connector is provided to interface with the PC / laptop for remote operation.
8. **Balanced Audio Output:** Use this 3 pin XLR male connector to connect audio output into the input of the Mixer / Amplifier / Powered Speaker or other sound reinforcement solution of the room.
9. **Line / Tel Audio Input:** Use these unbalanced RCA jacks to connect external audio input sources.
10. **Line / Tel Audio Output:** Use these unbalanced RCA jacks to connect into the input of the Mixer / Amplifier / Powered Speaker or other playback source as required.
11. **Microphone Interface (Group):** Use this RJ45 connectors to connect chairman / delegate microphone units to the main controller system.
12. **Extension Interface:** Use this RJ45 connector to connect an extender or additional interface to expand the number of microphones in use as needed.

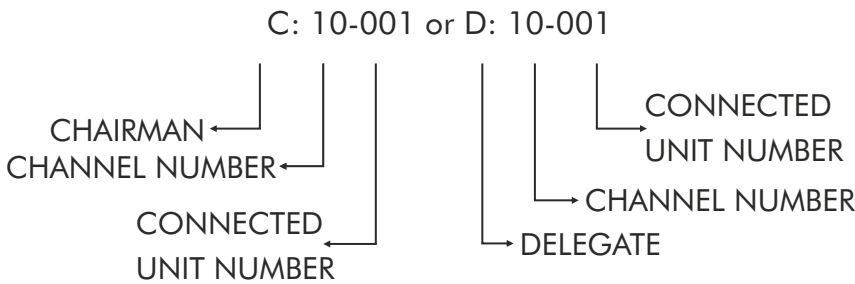
c. Chairman / Delegate Unit:

1. **Mic Capsule:** This high quality microphone is used to pick up the voice of the person speaking.
2.
 - a. **Shortneck Mic LED:** This LED displays the status of the Microphone, the LED lights up when the microphone is active.
 - b. **Gooseneck Mic LED Ring:** This LED Ring displays the status of the Microphone, the LED lights up when the microphone is active.
Note: Do not start speaking if this LED is flashing.
3. **Priority Button:** When enabled, it overrides (Mute) all delegates. When disabled, the delegates resume their original status. This feature is available only on the Vak 50.c chairman unit.
4. **MIC Button:** To activate or deactivate the Microphone when required.
Note: Do not start speaking if this Button is flashing.
5. **Headphone Jack:** Use this 3.5mm headphone jack to listen to ongoing conference meeting.
6. **Volume Button:** Use this button to increase or decrease the headphone volume.



7. **Display:** Every Chairman and delegate unit sports a clear 2" TFT colour screen that displays the following information:

A) Channel / Unit: number:



B) Microphone ON/OFF Status:



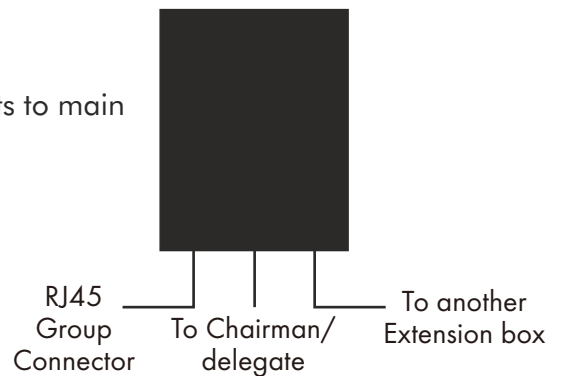
C) Analog clock: This classy analogue watch dial displays the local standard time where the system is installed. It syncs with the system controller's time settings.

D) System on status: It displays the elapsed run time and connection duration between the microphone and the system controller unit.

Note: You can power up the microphone unit using RJ45 cable provided with unit.

d) RJ45 Extension BOX:

This is used to connect more no. of chairman / delegate units to main controller unit.



4. Operating Instructions

Main Screen:

4.1 Control: The control menu includes various parameters setup related to pre-meeting program.

A. Queue: Use this tab to select the desired Queue mode. When selected, the message will be displayed on the microphone unit.

FIFO: It is the order in which the participants enter the discussion and the order in which they are switched OFF (muted), when a new 'speak' request comes in.

E.g. Active NOM = 4 | Del = Delegate When Del.1, Del.2, Del.3 and Del.4 press the talk switch in succession, they are able to speak. When Del.5 presses the talk switch last, Del.1 shuts off automatically and Del.5 is able to speak.

LIFO: It is the order in which the participants enter the discussion and the order in which they are switched OFF is reversed, when a new 'speak' request comes in.

E.g. Active NOM = 4 | Del = Delegate When Del.1, Del.2, Del.3 and Del.4 press the talk switch in succession, they are able to speak. When Del.5 presses the talk switch last, Del.4 shuts off automatically and Del.5 is able to speak.



Figure 4.1 Main Screen



Figure 4.2 Queue Mode

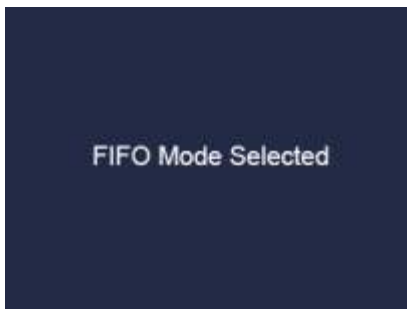


Figure 4.3 FIFO mode selected



Figure 4.4 LIFO mode selected

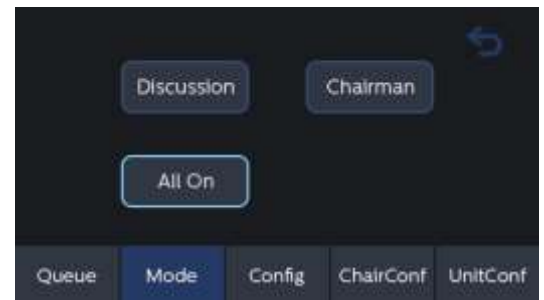


Figure 4.5: Mode Selection

B. Mode: Use this section to activate or deactivate the ultra-functional meeting modes mentioned below as required.

Note: Most of the meeting modes work in conjunction with the Number of Open Microphones (NOM). The Vak 50 system supports a maximum NOM of up to 24 active units. The chairman units are not affected by active NOM settings (See 4.1 C NOM Section for more details).

Discussion Mode: This is the most commonly used mode, within the limits of the pre set maximum number of active mics and the selected queue mode, delegate microphones can be freely switched ON.

Chairman Mode: In this mode, only the chairman units can be switched ON.

All ON Mode: All connected microphones can be freely switched ON and there is no active MIC quantity limit.

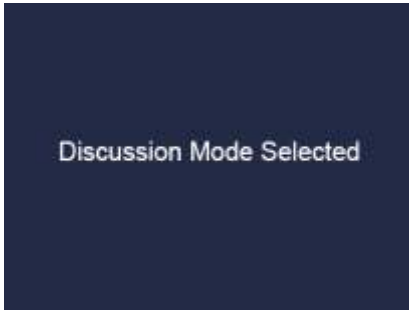


Figure 4.6 Discussion Mode Selected

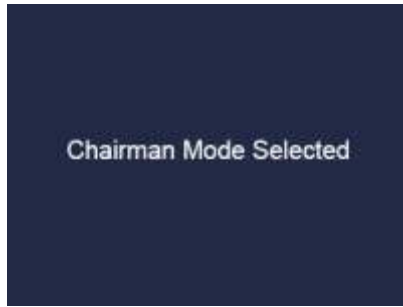


Figure 4.7 Chairman Mode Selected

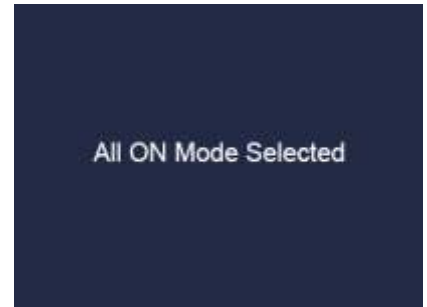


Figure 4.8 All ON Mode Selected

C. Config:

Active Mic: This is the NOM or Number of Microphones setting. It lets you set the number of delegate units that can be active at any given time. The maximum NOM in this system is 24. This feature helps to regulate the meetings effectively. To set the number of Active MICs, tap on the adjacent box and edit using keypad and press "OK". If you keep this field empty or enter a number more than 24 and press "OK", it will display a prompt reading **"Please input from 1 ~ 24"** along with an "OK" button. (Refer Figure 4.10)

Note: The chairman units are not affected by this parameter.



Figure 4.9: Config

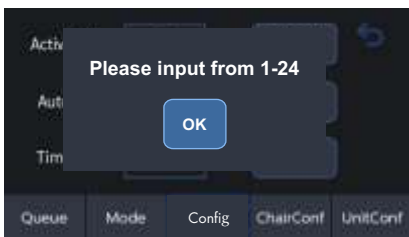


Figure 4.10: Active MIC Error Message

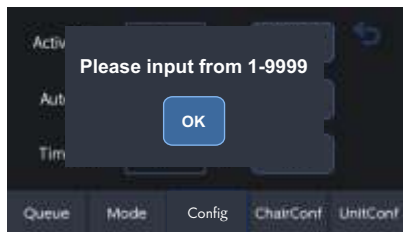


Figure 4.11: Auto Off Error Message

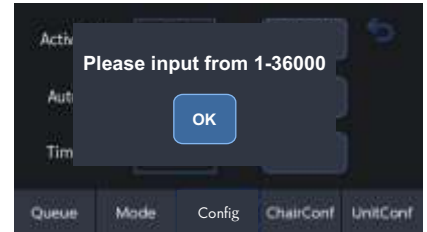


Figure 4.12: Time Off Error Message

Auto Off: In this mode, the delegate units will be automatically "Turned OFF (Muted)" if no speech is detected by the microphone within the preset time period. The mic active time range is between 1~9999 seconds. To set the active time, tap on the adjacent box, edit using keypad and press "OK" and press **On** button to enable **Auto off** mode. If you enter a time value more than 9999 sec. it will display a prompt reading **"Please input from 1 ~ 9999"** along with an "OK" button (See Figure 4.11).

Time Off: In this mode, the delegate units will be automatically "Turned OFF (Muted)" after the "Set" time. The MIC active time range is between 1~36000 minutes. To set the active time, tap on the adjacent box, edit using keypad and press "OK" and press **On** button to enable **Time off** mode. If you enter a time value more than 36000 min it will display a prompt reading **"Please input from 1 ~ 36000"** along with an "OK" button (See Figure 4.12).

D. Chairman Config:

Auto: Automatic speech recovery. When the chairman presses the Priority button, the delegate microphones will be muted. Once the Priority button is released, the delegate microphones will automatically resume their speaking state.

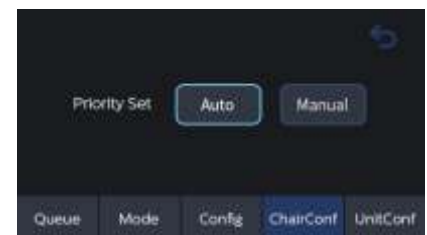


Figure 4.13: Chair Config

Manual: Manual speech recovery. When the chairman presses the Priority button, the delegate microphones will be turned off. Once the Priority button is released, the delegate microphones must be manually reactivated in order to speak again.

E. Unit Config:

All Unit: All connected Chairman and Delegate units can be Unmuted / Muted. When unmute is pressed the system will pop up a message **"All Microphones are Unmuted."** When Mute is pressed the system will pop up a message **"All Microphones are muted."** along with an "OK" button (See Figure 4.15 & 4.16).

Unit Light: It is used to turn the microphone indicator ON or OFF for a specific unit, allowing the operator to check the microphone's position and connection status. If you enter a value more than 1000 it will display a prompt reading **"Please input from 1 ~ 1000"** along with an "OK" button (See Figure 4.17).



Figure 4.14: Unit Config

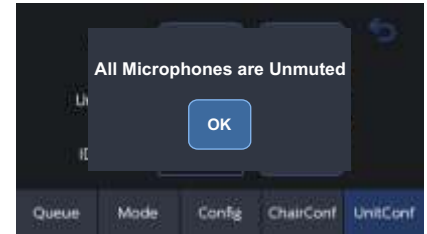


Figure 4.15: All unit Unmute Message

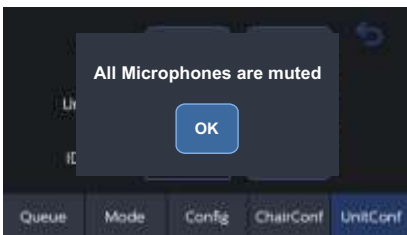


Figure 4.16: All unit mute Message

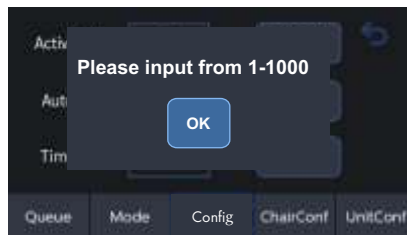


Figure 4.17: Unit light Error Message

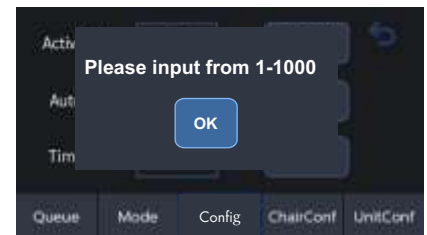


Figure 4.18: ID config Error Message

ID Config: Use this to assign/ re-assign a single or all microphone unit IDs as required. The user can enter an initial number and press SET. If you enter a value more than 1000 it will display a prompt reading **"Please input from 1 ~ 1000"** along with an "OK" button (See Figure 4.18). The system will display an ID assignment prompt on the microphone **"ID Configuring: xxx, Please press the ON button"** as shown in the figure 4.19. User only needs to press the ON/ (Speak) button on the microphone to complete the ID assignment. On pressing ON/ (Speak) switch, microphone unit ID will be assigned and prompt will be shown **"ID Configuring"** till IDs of all the units are configured. Press Stop button on the main unit to stop the ID configuration process.



Figure 4.19: ID Configuration Screen

Note: When new microphones need to be added to the system, the user only needs to connect the new microphones to the main unit, start the ID assignment process, and complete the ID assignment on the new microphones. The IDs of the existing microphones that have already been assigned will remain unchanged.

4.2 Sound:

Input: Use to adjust the audio level of input.

Output: Use to adjust the audio level of output.

Headphone: Use to adjust volume of headphone of all microphone units.

MIC: Use to adjust sensitivity of voice activation function.

HP Mute (ON/OFF): Use this to Mute/Unmute the headphone output.



Figure 4.20: Sound Screen

Buzzer Mute (ON/OFF): Use to enable or disable the Buzzer. When enabled, the buzzer will sound during system operations.

Back arrow: To exit the Control menu.

4.3 Camera:

A. Camera Preset: This is a bundle of system settings that can be pre-configured and saved in advance. This lets you quickly recall and switch system configurations depending on the different meeting scenarios. Only data from the **"CONFIG"** menu can be stored in presets. This includes MODE, OPEN MIC, TIME OFF. We recommend finishing the setup at the **"CONFIG"** menu and then saving it in the **"PRESET"** section. You can save up to 4 presets in the Vak 50 system.



Figure 4.21 Camera Preset

Note: Data will be overwritten once **"SAVE"** is pressed

Protocol: Use this drop menu to set and match the communication protocol between the system controller unit and the connected PTZ camera. Vak 50 Supports Pelco-D / Pelco-P(baud rate: 9600)/ Yaan (baud rate 4800) and BRC-Z330 protocols.

Cam ID: You can connect up to 8 cameras to the Vak 50 system. The connected cameras will be assigned an ID number.

Unit ID: This is used to set the camera to a dedicated microphone unit. If you enter a value more than 1000 it will display a prompt reading **"Please input from 0 ~ 1000"** along with an **"OK"** button (See Figure 4.22).

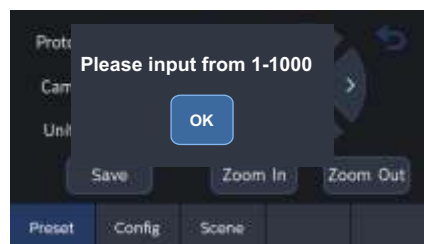


Figure 4.22 Camera Unit ID Error Message

Note:

1. We recommend setting this up before the meeting begins. If the value is set to "0", the camera will default to the general view of the meeting room.
2. The system supports multiple cameras when used with a video switcher. The controller will automatically assign an ID to each camera. In rare cases where automatic assignment fails, the user may need to manually configure the camera ID. Please follow the correct power-on sequence: power on the cameras first, and then switch on the controller unit for proper operation of camera.

Save: All individual configured parameters will be saved based on the microphone Ids. If this option is selected, it will display a prompt reading **"Preset saved successfully"** along with an **"OK"** button. (See Figure 4.23).

Direction Arrows: Press direction arrows left / right / Up / Down for camera lens movement.

Zoom In / Zoom Out: Use this function to adjust camera zoom level.

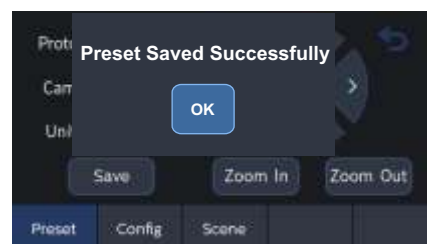


Figure 4.23 Preset Saved Message

B. Camera Config:

Aperture +/-: Operator can use this to adjust the aperture of the camera when camera doesn't have the auto aperture adjustment.

Speed +/-: Use this to adjust the speed of panning or tilting while setting up camera tracking.

Auto Track: When the AUTO TRACK function is enabled, the camera will automatically move to the microphone as soon as the microphone picks up sound. In general, it is recommended to keep this function disabled. This function can only be activated in DISCUSSION mode.

Freeze ON/ Freeze OFF: It is used during camera movement. If enabled camera image will be frozen during movement.

Delete All Preset: It is used to delete all saved presets on the system controller unit. If this option is selected, it will display a prompt reading **"Do you want to delete all Presets?"** followed by "Yes" and "No" button. If pressed "Yes", After deleting the preset, it will display a prompt reading **"Presets Deleted"** along with an "OK" button. (See Figure 4.25 and 4.26)

C. Scene:

After the camera tracking preset have been configured for all connected microphones, the user can save the settings in the scene menu. The system will then store the current configuration as a scene. Users can save different scenes for various meeting table formats, different numbers of microphones, and different camera positions, allowing quick recall when needed.

Kindly note, this function is only applicable to the VISCA protocol.

Save: To save scenes.

Load: To load scenes.

Back Arrow: To exit the Camera menu.

How to Setup Camera Tracking:

Step 1. Check if the camera is in default mode. If not, reset the camera into default mode.

Step 2. Reset the system controller to default setting.

Step 3. Ensure to match the protocol settings between the camera and the system controller unit.

Step 4. Use the keypad to enter the number into the unit ID section. Set the position you want to track using the Up / Down / Left / Right keys as shown in Figure 4.21. After setting up, press the "Save" button. The unit ID will be automatically increase by one.

Step 5. Follow Step 3 to configure all other microphone positions as required. Kindly note, the maximum number of microphones that can be deployed is 200 and the maximum number of cameras that can be connected is 8.

Step 6. Use "Speed +/-" buttons to control the camera tracking speed, the "Aperture +/-" buttons to adjust the aperture to set the Zoom level and fine tune the visuals as required.

Note: The default baud rate of the Vak 50 system is 9600. Ensure to set and match the same rate on the camera to enable the proper communication in between the two.



Figure 4.24
Camera Config

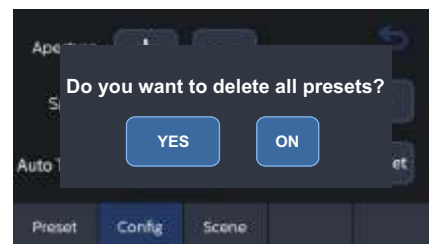


Figure 4.25
Delete Preset Message

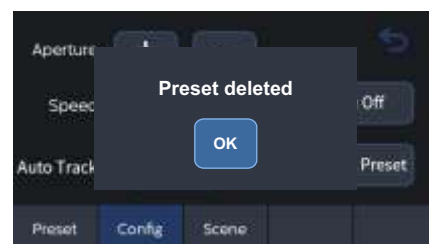


Figure 4.26:
Preset deleted message

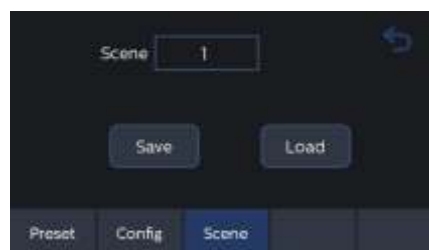


Figure 4.27
Camera Scene

4.4 QR Code: QR Code provides a convenient access point, allowing users to scan with a mobile phone or tablet to enter the web-based management system for system configuration.

When selected it will show the QR code for loading Control Center Pages. After scanning code you will get a local IP address i.e. 192.168.1.236.

Back Arrow: Press back arrow to come out of QR menu.



Figure 4.28
Camera Scene



Figure 4.29
Camera Scene

4.5 Setup:

A. IP: IP setup is used to set the IP address of the controller, allowing users to access the web-based management system for system configuration. (See Figure 4.30)

B. Time: Use this to access and edit the date and time information being displayed on the system controller and microphone unit. (See Figure 4.31) To setup the system date and time press on the respective box. A keypad will appear. Enter the current date and time using keypad. After entering all details press "Ok". A prompt message will appear "**Time setting completed.**" followed by "OK". (See Figure 4.32 & 4.33).



Figure 4.30 IP Screen



Figure 4.31 Time Setting Screen

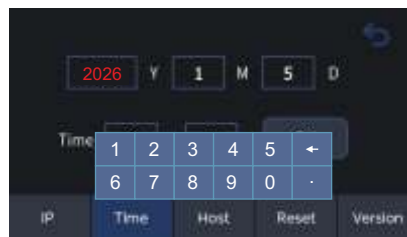


Figure 4.32 Time Setting

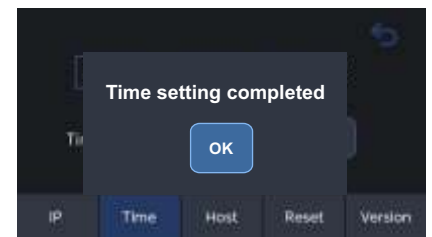


Figure 4.33 Time Setting Message

C. Host: When multiple systems are deployed, the user can assign a unique ID to each host. The system default host ID is 1. (See Figure 4.34).

D. Reset: Use to restore settings to factory default. A prompt will be displayed "**Do you want to reset the system to factory setup?**" followed by "OK" button. On pressing OK, all system settings will be deleted and restored to factory default settings. (See Figure 4.35).

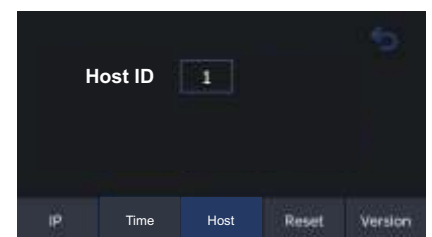


Figure 4.34 Time Setting Message

E. Version: It allows you to check the firmware version of both the controller and microphone unit. Controller version is displayed on the controller screen. If you want to check microphone version click show, the version info will flash on the display of the microphone units (See Figure 4.36 & 4.37). Press Hide to hide the version information from microphone unit.

F. Back Arrow: To exit the Setup menu.

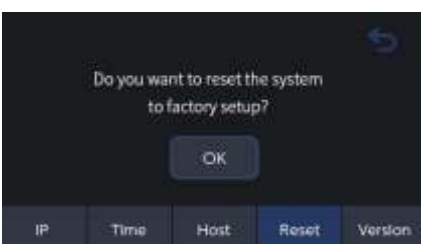


Figure 4.35 Reset Screen

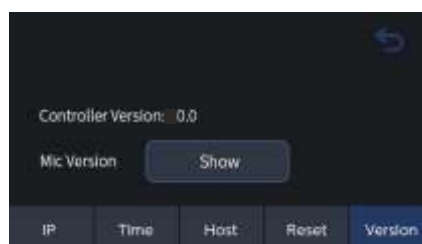


Figure 4.36 Version Screen Controller

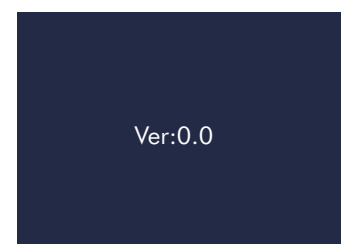


Figure 4.37
Version Screen Microphone

4. 6 Recording: System provides audio recording and playback functions, allowing users to record meetings as required. The recording format is MP2, and it supports a FAT-formatted USB thumb drive with a maximum capacity of 32 GB. The recording will be saved in USB device with date of recording i.e. date in Year-month-date format, 2026-02-15.

How to record an Audio:

Step 1. Insert an USB device into the USB socket, the system will take 3 to 5 sec. to detect the device.

Step 2. Select the recording icon on main screen to enter the recording menu and wait for 5 sec after screen shows recording menu. If **"Start"** is pressed before that it will display prompt message **"No devices connected."** followed by **"Ok"** button.

Step 3. Press start button to start recording.

Step 4. Press stop button to stop the recording.

Start/ Stop: Use Start/Stop button to start/ stop recording.

Delete: Use Delete button to delete the recorded meeting.

Play: Use Play button to listen/play the recorded meeting.

Remove: Use Remove button to disconnect USB drive safely. Once pressed, it will display prompt message **"Storage device ejected, remove now."** followed by **"Ok"** button.

Back Arrow: Use this to exit the recording menu. It will continue recording even if you exit the recording menu. User can access recording screen by entering in recording menu again.

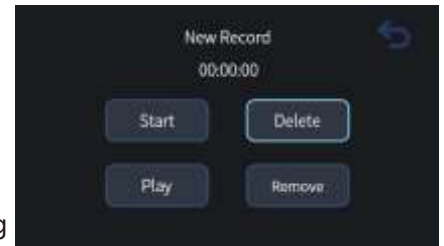


Figure 4. 38 Recording Screen



Figure 4. 39 Recording Playback

5. Web Management System

Web management system is the portal to allow user to configure the Vak 50 system from computer/ Laptop/ Mobile phones.

How to use Web Management System with Vak 50 System

A. On PC/Laptop:

Step 1: Connect the Vak 50 Main controller (10 Base) to PC/Laptop using RJ45 connector cable provided with the microphone unit.

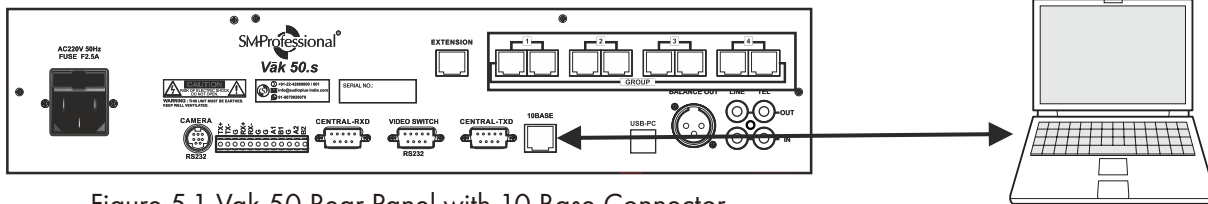


Figure 5.1 Vak 50 Rear Panel with 10 Base Connector

Note: The system is embedded in the controller, no software installation required. User should just enter the IP address in the browser to access the system.

Step 2: Set IP address of the controller in the same network segment as the computer device in advance, user can check and configure the IP address from SYSTEM SETUP of PC/Laptop.

Step 3: Check PC/laptop IPV4 address and note it down (Example: 10.123.0.68).

Step 4: Change main controller IP address (refer section 4.5.a) same as PC/Laptop IPV4 address with last number changed (Example: 10.123.0.69).

Step 5: Open Web browser on your PC or laptop and enter the controller's IP address in the address bar. (Example: 10.123.0.69).

You will see a Web Management System login page (see figure 5.4).

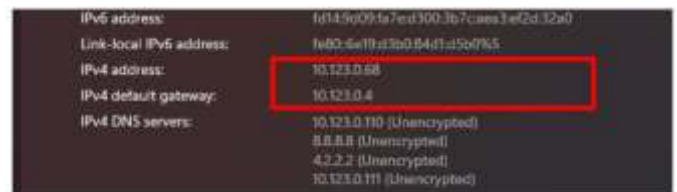


Figure 5.2 IPv4 Address of PC/ Laptop



Figure 5.3: Web Browser Screen

Step 6: Enter the username and password and the portal will be ready to use.

Default user name and password:

User name: admin, **Password:** 123456.

Note: If Web management system doesn't start with PC/Laptop IPV4 address, follow the below steps;

1. Go to PC/Laptop Ethernet status.
2. Go to details option and note down the Auto configuration IPV4 address.
3. Use this IP address to open Web management system in your PC/laptop's web browser.



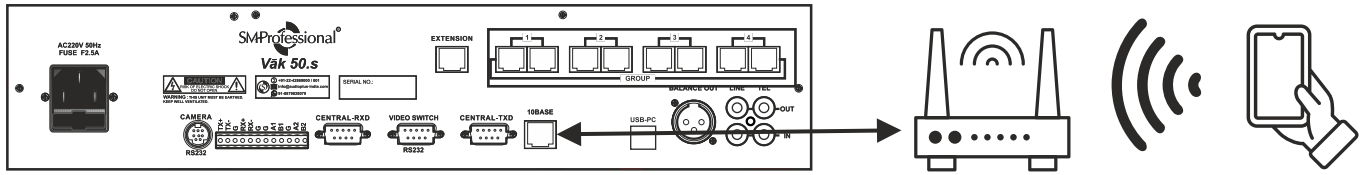
Figure 5.4: Web Management System Login Page



Figure 5.5: WMS Homepage

B. On Android/iOS Phones:

Step 1: Connect the Main Controller 10 Base connector to WiFi Router.



Step 2: Check the WiFi router IP address.

(Example: 192.168.1.1)

Step 3: Change main controller IP address same as WiFi router IP address with last number changed

(Example: 192.168.1.2).

Step 4: Enable mobile phone WiFi and connect it to Wifi Router.

Step 5: Open the web browser on your smartphone and enter the Controller IP address (Example: 192.168.1.2).

Step 6: You will see a Web Management System login page.

Step 7: Enter the username and password and the portal will be ready to use.

Default user name and password: User name: admin, **Password:** 123456.

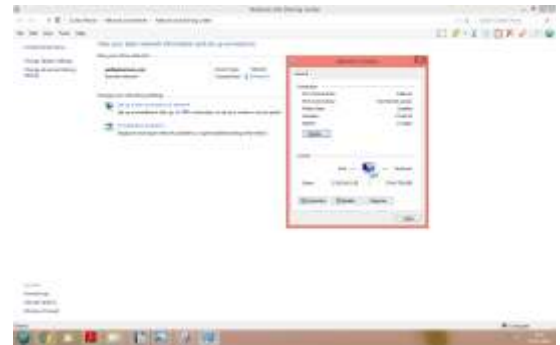


Figure 5.6: Ethernet Setting

5.1 ID Config: Use this to assign/ re-assign a single or all microphone unit IDs as required.

This function is only available when you login in WMS using admin login. If you login using different user it will display prompt message "**Please use administrator login to set the address!**" (see figure 5.8) followed by "OK" button.

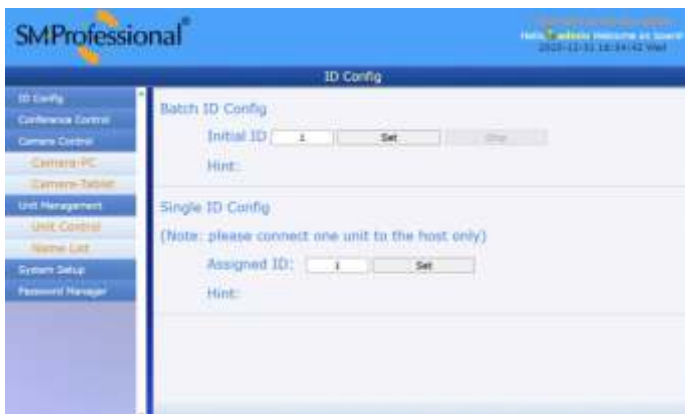


Figure 5.7: ID Config

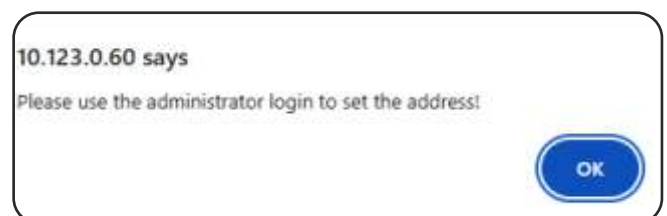



Figure 5.8: ID Config Error Message

a. Batch ID Config: This is used to assign IDs to connected microphones. The user can enter an initial number and press SET. The system will display an ID assignment prompt on the microphone. User only needs to press the talk() button on the microphone to complete the ID assignment. Users need to press STOP to end the ID assignment process.

b. Single ID Config: This function is used when the user needs to assign an ID to a single microphone. The user can enter the desired ID and click SET to complete the ID assignment.

Note: When using this function, it is recommended to connect only the microphone that requires ID assignment. If other microphones are connected to the controller at the same time, they will also be assigned the same ID.

5.2 Conference Control: This menu provides all the controls required for conference meeting. Select the desired controls from the drop down menu.

Mode: For detail refer section 4.1 Control on page no. 6.

Volume Control: For detail refer section 4.2 Sound on page no. 9.



Figure 5.9 Conference Setup

5.3 Camera Control: When you enter into this setting and if your camera is slow it will display a prompt message "**Please increase the speed of camera, or it will lead to slow camera movement.**" followed by "Ok" button.

This provides two control interfaces: **Camera-PC and Camera-Tablet.**

Camera-PC is used for configuring camera tracking on a computer, while Camera-Tablet is designed for operation on a tablet or mobile phone. The Camera-Tablet interface includes a touch Interval option, allowing users to set the touch response interval when operating on a tablet device. For detailed other camera setup control settings refer section 4.3 Camera on page no. 9.



Figure 5.10 PC Camera Tracking



Figure 5.11 Tablet Camera Tracking

5.4 Unit Management:

a. Unit Control: The Unit Control page allows users to view the status of all connected microphones. Total of status of 1000 microphones can be checked. Green indicates that the microphone is active, white indicates online, and blue indicates offline. Users can turn microphones on or off by directly clicking the corresponding microphone ID.

Status Update: Used to show status of microphones connected to the system.

Online Update: Used to show status of the number of online microphones. The no. of online unit will be shown in the Online No. Box. When pressed this will display a prompt message "**Online unit status checking**" followed by "Ok" button.

Active Update: Used to show status of the number of active microphones. The no. of online unit will be shown in the Active No. box.



Figure 5.12 Unit Control

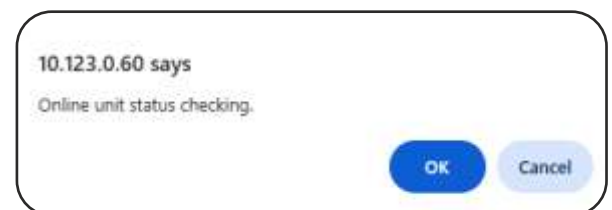


Figure 5.13 Online Status Checking

Active No Update in X sec.: Used to set the automatic refresh interval for active microphone data. It is recommended not to set this interval too short, as an excessively high refresh frequency may increase the system's data processing load.

All Unit Unmute/Mute: It is used to enable or disable all connected microphones, making it convenient to check the microphone connection status. This function works only when unit is in All ON mode. When you try to unmute all microphones it will display a prompt message **"This operation can only be performed when All ON mode is enabled."** followed by "OK" button.

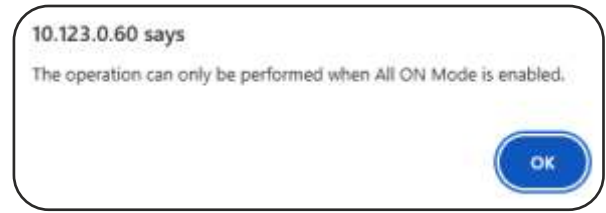


Figure 5.14 All Unit Unmute/Mute

Name:

b. Name List: User can enter upto 1000 participants name list on the Name List page. Click on the number button and add the name you wish to add using keypad. Press save to save the list. After the list is completed, it can be loaded on the Unit Control page. Use delete button to delete the stored name list.

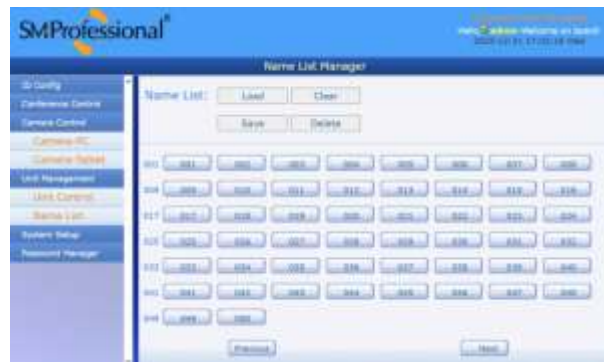


Figure 5.15 Name List

Load: Used to load the name of all participant microphones set in the name list section. When we press load it will display a prompt message **"Name list has been loaded."** followed by "OK" button.

Clear: Used to clear the name of all participant microphones set in the name list section. When we press clear it will display a prompt message **"Do you want to clear the name list?."** followed by "OK" button.



Figure 5.16 Name List Load Message



Figure 5.17 Name List Clear Message

5.5 System Setup: System setup is used to set time, date and IP address of the system. Click on the box and add time / date and press sync to sync the time to main controller. Click on the box and add IP address and press set to set IP address to main controller.

5.6 Password Manager: The Password Manager page is used to manage system passwords. Only users with administrator privileges can perform operations on this page.

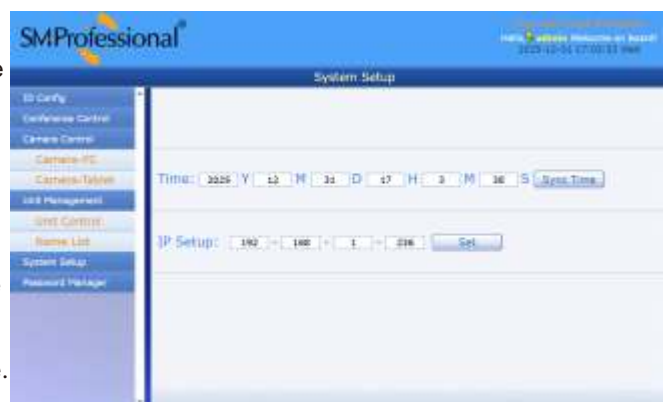


Figure 5.18 System Setup

Default admin credentials are:

User Name: admin

Password: 123456

If you try to create new user, Change admin password or screen lock manager function using other user credentials it will display a prompt message **"General users can't change any password. Please use administrator login to change any password."** followed by "OK" button.

Create New User: Used to create new user account.

Change Admin Password: Used to change admin password.

Screen Lock Manger: Used to enable/ disable the main controller screen lock. If the screen lock password is forgotten, it can be resetted on this page.

Enable/ Disable: This is used to enable/ disable password lock for main controller.

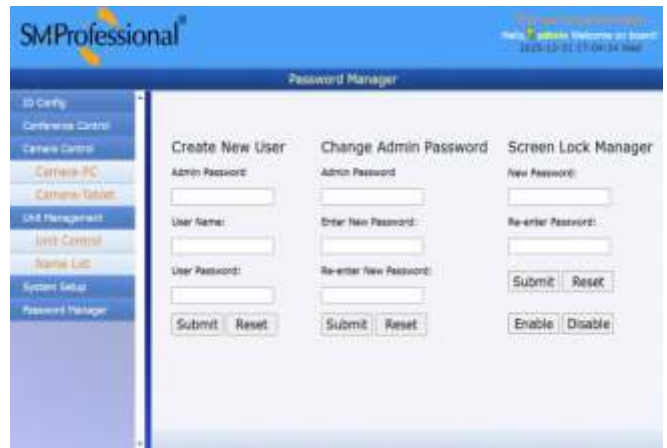


Figure 5.19 Password Manager

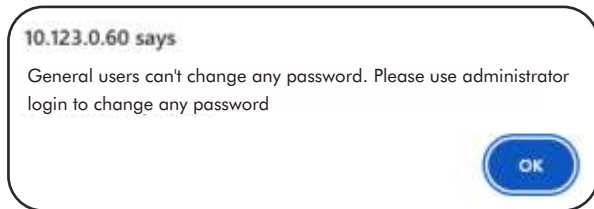


Figure 5.20
Password Manager Error Message

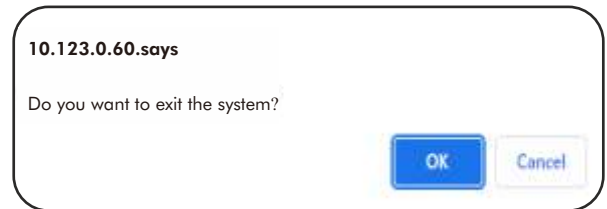


Figure 5.21
WMS Exit (Logout) Screen

5.7 Exit (Logout): To exit the Web Management System click on the 'user name' (e.g. admin) on the right hand corner of the screen . A prompt is displayed **"Do you want to exit the system?"** followed by **"OK"** and **"Cancel"** button. Press OK to exit the system or else press Cancel.

6. Installation

A. System Installation:

- 1) Connect the XLR or RCA output to the PA system.
- 2) Keep the amplifier gain controls and mixer levels at minimum before switching ON the microphone unit.

B. Vak 50 System Installation Guidelines:

To ensure stable and reliable operation of the Vak 50 conference system, please follow the installation recommendations below:

1) Power grounding requirement

The power supply used for the main unit must be properly grounded to prevent static interference and potential damage to the equipment.

2) Cable configuration

The Vak 50 system uses Cat.5 cables for microphone connections. Microphone units are connected in a daisy-chain configuration. Please ensure that all cables used meet the required specifications and are securely connected.

3) Microphone capacity of a single main unit

A single Vak 50.s main unit can support up to 100 microphone units under normal installation conditions without extensive cable routing. If the site requires long cable runs or complex wiring, it is recommended to limit the total number of connected microphones to 80 units to ensure stable communication and sufficient power supply.

4) Microphone allocation and line distribution

The main unit provides four independent output lines on the rear panel. It is strongly recommended not to connect all microphones to a single line. For optimal performance, microphones should be evenly distributed across the four lines.

- It is recommended to connect no more than 25 microphones per line.
- If more than 20 microphones are connected on a single line, or if the cable length of that line exceeds 60 meters, a loop-back connection is recommended to improve power delivery and communication stability.
- Connecting all microphones to a single line may result in insufficient power supply and unstable system operation.

5) Cable length limit per line

The total cable length per line, including all microphone connection cables, should not exceed 80 meters. Exceeding this length may cause signal attenuation, power insufficiency, or communication failure.

6) System extension using Vak 50.e

When the total number of microphones exceeds 100 units, it is recommended to use the Vak 50.e extension unit. Each Vak 50.e extension unit supports up to 80 microphones. By using multiple extension units, the system can be extended to support up to 1000 microphones in total.

7. Standard Setup

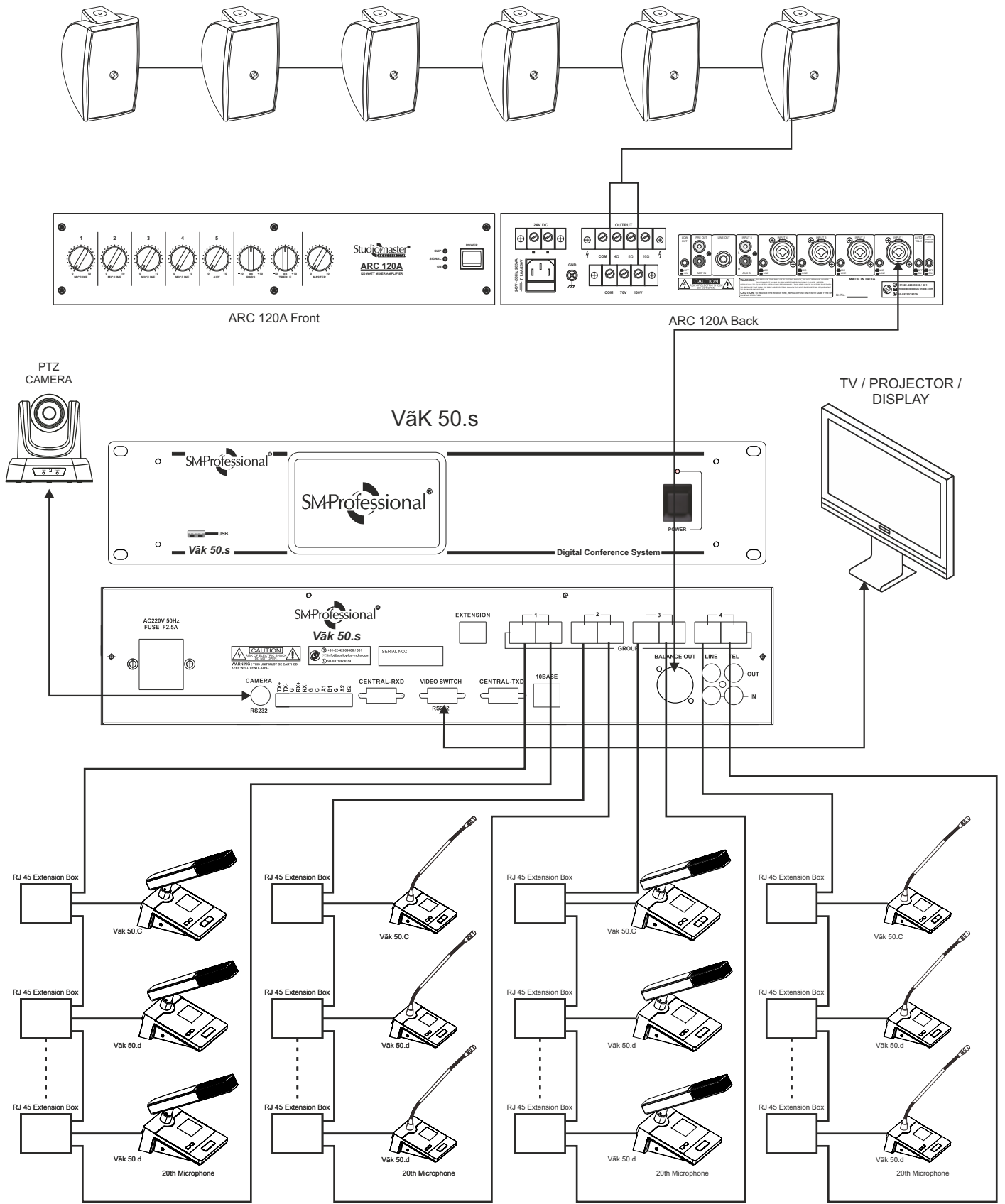


Figure 7.1: System Connection Diagram

8. Extension Setup

The Vak 50.e Extension Unit is designed to extend the microphone capacity of the Vak 50 conference system. Each Vak 50.e extension unit supports up to 80 microphone units. By connecting multiple Vak 50.e extension units, the system can be expanded to support up to 1000 microphones in total.

Extension unit Front panel:

1. Microphone interface: Used to connect total 80 microphones to the system.

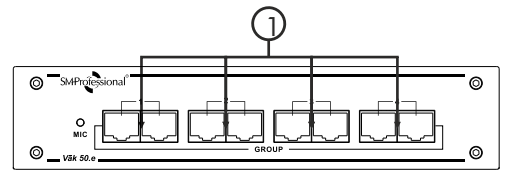


Figure 8.1 Extender Unit Front Panel

Extension unit Rear panel:

1. Power Socket: Use the supplied AC cord to connect the unit to AC mains. Make sure voltage and frequency stated on the unit matches with your local AC supply. The fuse can be accessed by the small drawer at the AC inlet. To change the fuse, unplug the AC cord first, pull out the fuse drawer and replace the fuse ONLY with a fuse of same voltage and rating. If the fuse blows again after replacement, hand over the unit to qualified service personnel.



Figure 8.2 Extender Unit Rear Panel

2. Extension IN: Used to connect main controller unit to extension unit.

3. Extension OUT: Used to connect first extension unit to next extension unit.

System Extension Connection Methods:

- Connect the EXTENSION port on the rear panel of the Vak 50.s controller to the EXTENSION IN port of the Vak 50.e extension unit using the network cable.
- If multiple extension units are required, connect the EXTENSION OUT port of the first Vak 50.e unit to the EXTENSION IN port of the next Vak 50.e unit.
- Ensure all connections are secure before powering ON the system.
The Vak 50.e extension units can be deployed in different ways depending on the project layout and cabling requirements.

The following two connection methods are recommended:

Method 1: Centralized Extension Units Installed in the Equipment Room.

When the system requires all extension units to be installed in the equipment room.

- The connection cable between the Vak 50.s controller and the first Vak 50.e extension unit should be kept within 2 meters.
- If multiple extension units are used, the connection cables between extension units should also be kept within 2 meters.
- Each Vak 50.e extension unit supports up to 80 microphones, distributed across 4 lines with up to 20 microphones per line.
- The cable length for each microphone line should be controlled within 80–100 meters and loop back connection in each line is necessary to enable stable power supply.
This method allows the system to support a large number of microphones. However, when multiple extension units are used, a larger amount of cabling is required from the equipment room to the conference venue.

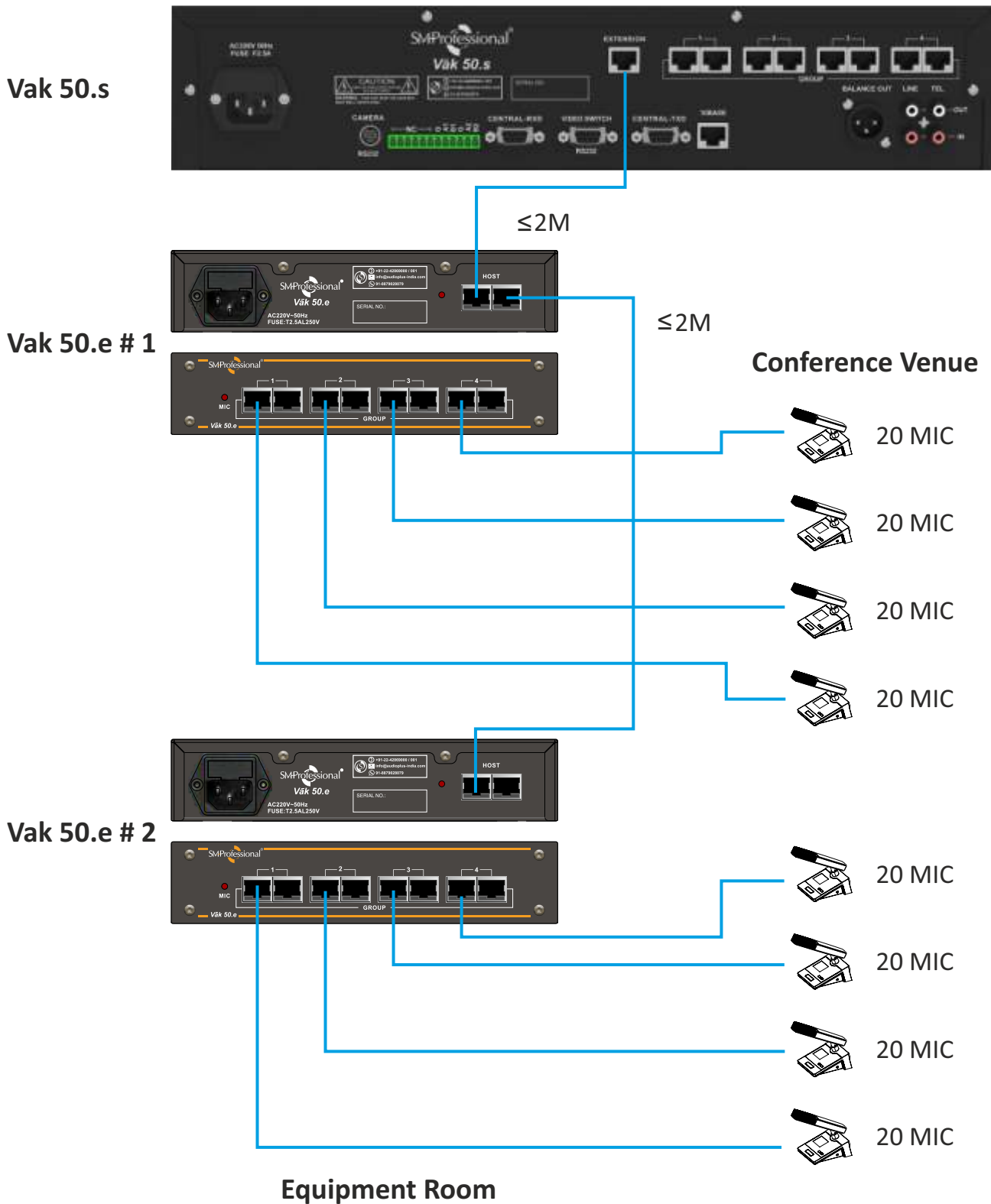


Figure 8.3: Method 1: Centralized Extension Units

Method 2 : Distributed Extension Units Installed at Different Locations in the Venue.

When the extension units to be installed at different locations within the conference venue, a distributed extension method is recommended.

- The cable length between the Vak 50.s controller and the first Vak 50.e extension unit can be up to 80-100 meters.
- Each Vak 50.e extension unit supports up to 80 microphones, distributed across 4 lines with up to 20 microphones per line.

- The cable length for each microphone line should be controlled within 80–100 meters and loop back connection in each line is necessary to enable stable power supply.
- The connection cable between extension units installed in different areas of the venue can be up to 50 meters.

This distributed installation method allows extension units to be placed closer to microphone groups, significantly reducing the amount of cabling required from the equipment room to the venue. Extension is achieved by cascading multiple Vak 50.e units, improving cabling flexibility and simplifying overall system wiring.

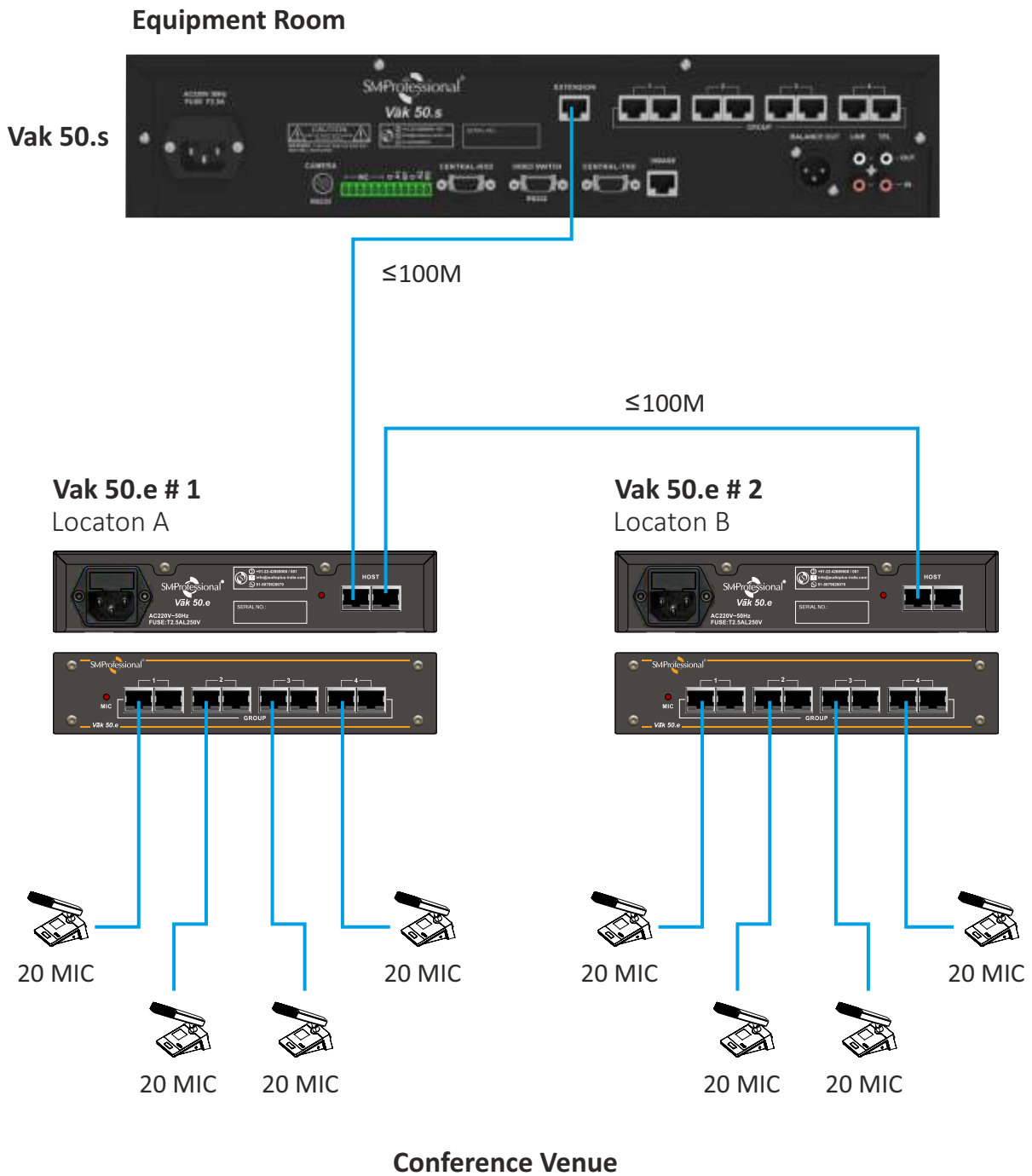


Figure 8.4: Method 2: Distributed Extension Units (Different Location)

9. Basic Troubleshooting

Problem	Solution
Main Controller is not turning ON	<ul style="list-style-type: none"> • Check whether power cord is in good condition and securely connected. • Check the fuse above the power socket is in good condition and securely connected.
Microphone is not turning ON	<ul style="list-style-type: none"> • Check the RJ45 connector at main controller group output. It should be lit. • If microphone is connected through extension box check whether it is securely connected..
No Voice	<ul style="list-style-type: none"> • Check if the connection between the receiver & mixer, the mixer & amplifier or the amplifier & speaker are correct. Also, check if the mixer or amplifier volume levels are ok.

10. Technical Specifications

VáK 50.s System Controller Unit

Operating Distance	Between 2 microphones (2m), From 1st MIC to last MIC (70m-80m)
Balanced Output Level	-4dBV
Frequency Response	100Hz-15kHz
Signal to Noise Ratio	90dB
Connector for Chairman/ Delegate Unit	RJ45
Audio Input Connector	Line: RCA x 1, TEL: RCA x 1
Audio Output Connector	Line: XLR x 1, RCA x1, TEL: RCA x 1
Line Sensitivity	-15dB
Power Supply	AC 220 V, 50 Hz
Max. Current Consumption	200mA
Dimension (W x D x H)mm	483 x 326 x 90
Net Weight (Kg)	5.5

VáK 50.c Chairman & VáK 50.d Delegate Units

Frequency Response	100Hz-10kHz
Signal to Noise Ratio	80dB
Microphone Sensitivity	-50dB/Pa
Microphone Polar Pattern	Cardioid
Connection with Main Controller	RJ45
Length of Cable	1.5m
Length of MIC Tube	215mm (Shortneck) / 540mm (Gooseneck - 2 Bends)
Priority Button	Only on the Vak 50.c Chairman Unit
Max. Current Consumption	60mA
Dimension (W x D x H)mm	148 x 124 x 60 (Base)
Net Weight (Kg)	0.75

11. Safety Instructions

- Please keep the product away from direct sunrays & rain.
- Please keep the product away from heavy magnetic or electromagnetic fields, it could affect product performance.
- Please remove the power supply when the product is not being used for a long time.
- Do not open any of the components yourself, for repairs please contact an authorised Studiomaster Professional dealer.

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