

EDC-2051

Conference Main Control Unit Instruction Manual



Firmware: Ver.1.9.1

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Safety Instruction

01. Read the instruction manual carefully before installing and using this unit.
02. Follow the instructions and be aware of warning indications.
03. Please do not use any spare parts without the recommendation of your dealer.
04. Use the fixing accessories offered by BXB. If the system is broken due to the improper fixing, BXB would not bear the responsibility for compensation.
05. Make sure the power cord has been fixed properly.
06. Do not use any three-hole plugs or extension cords as this would result in fire or short circuit.
07. Do not stuff anything or spill liquid of any kind onto or into this unit.
08. Contact maintenance technicians if the conditions below occur:
 - a. Power cord or plug is damaged.
 - b. Liquid has been spilled into this unit.
 - c. The product does not work normally under normal operating conditions.
 - d. The unit has been dropped or the cover has been damaged.
 - e. The function cannot work completely.
09. To reduce the risk of damage caused by lightning strike, it is essential that all cables must be bonded well to the same grounding point.
10. Install this unit carefully. Impacting and fierce shaking should be avoided.
11. Do not disassemble or remodel this unit:
 - a. High voltage and sensitive electrical circuit are inside of the unit. Do not disassemble it to prevent electric shock. If needed, please ask for help from the qualified technicians.
 - b. The specification of any replaced spare part should be validated by manufacturer, or it may cause fire and short circuit.
12. Do not stuff anything onto the fan, or the unit would overheat and function abnormally.
13. Do not use this unit in the environment with improper temperature, moisture, and power level to avoid component damage. The adequate operation temperature is 0°C-40°C; storage temperature -15°C-55°C; relative humidity 45%-70% (non-condensing); atmospheric pressure 86KPa-106KPa; power input AC 90V-264V. Adequate coverage is requisite if the unit is used outside.
14. Do not clean this unit and its accessories with chemical detergent. Please do not clean it with liquid detergent. Just use a damp cloth for cleaning.
15. Do not switch on/off the power of this unit rapidly no matter it's operating or off. It can maintain the regular operation of the sensitive electronic circuit.

Caution: The static electricity treatment of printed circuit boards should follow ESD safety measure. Ground connection should also be done well.

Caution: Please be aware of the voltage accordance with that in your country.

Warning: Only qualified technicians can disassemble the cover of this unit. Before disassembling the top cover, it's essential to unplug the power. The power cord can be plugged in again only before the top cover has been put back.

Conference Main Control Unit

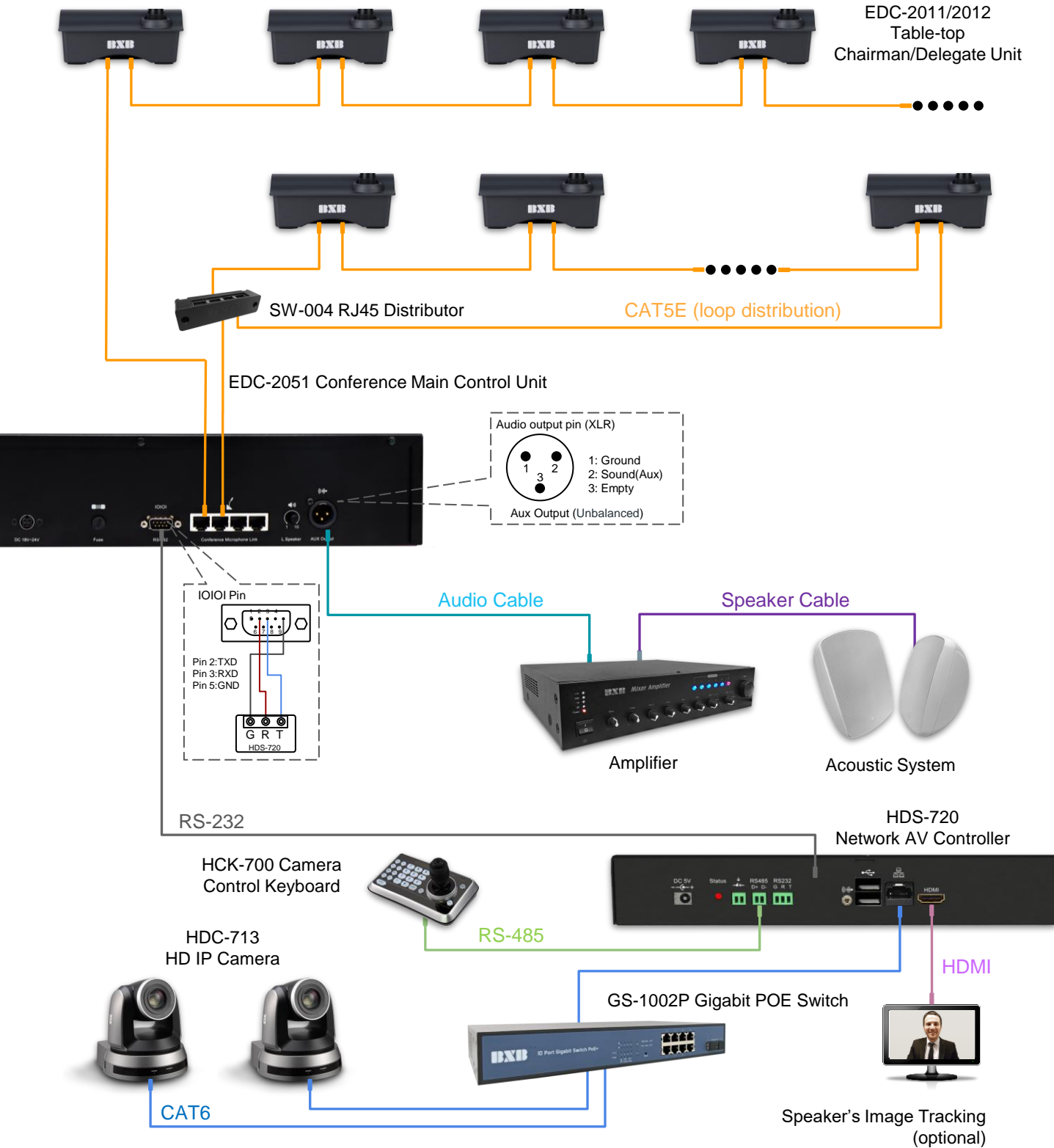
- Quick installation & easy maintenance via CAT5E cables.
- Equipped 4-chain RJ45 ports: each port enables the max. of 15 units; the total is 50 units. Via BXB extension power supply, it enables the max. of 265-unit connection.
- 4x20 digits LCD screen: showing conferencing modes, the ID of the operating microphones, microphone volume and other .
- Multiple operating modes: Normal/Chairman/Override.
- Equipped with RS-232 interface: connects with BXB HDS-720 IP Network AV Controller, camera, and other environmental control equipment for system integration.
- Equipped XLR plug for the connection with other recording and audio equipment.
- Microphone auto-off setting (30/45 seconds).
- Open-mic mode or the max. of 9 microphones activated at the same time.
- Microphone auto-scanning ensures the status of each microphone before meeting.

Table-top Chairman / Delegate Unit

- High stability: parallel and series connection are applicable. Even one of the units is disconnected/out of order, others can still operate normally.
- Featured with a built-in 2.5" loudspeaker. When the attendee presses the speaking button, the speaker would be auto-off to avoid sound feedback.
- Equipped with speaking button and back-lighted indicator to control/show the speaking status.
- Microphone capsule is equipped with illuminating red ring to show speaking status.
- No limitation of chairman unit's quantity; you can also randomly change the position and sequence.
- Chairman unit is equipped with speaking priority button.
- Built-in Ø3.5mm earphone and recording plugs (volume adjustable).
- Gooseneck microphone with shield and flexible tube, easy to be positioned and bent without noise (standard length: 43/48/56/70cm).
- Prevents the interference of electromagnetic wave.

System Connection

- There are 4 microphone ports at the back of main control unit, which can be connected randomly without sequence restriction.
- Microphone units are equipped with RJ45 ports x 2 for connecting Cat5e cables (STP).
- Chairman/delegate units can be positioned anywhere within the circuit.
- Please make sure the power is off before unplugging any unit. Re-start the unit after the installation has been completed.



Physical Description

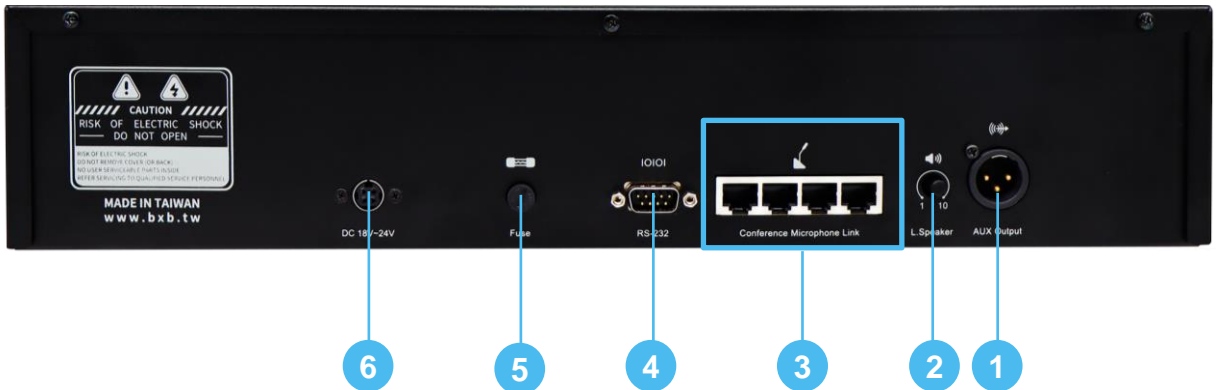
Front View



1. Power switch
2. Conference function control
 - MODE** Mode-selection
 - UP** Gain parameter setting/volume up
 - DOWN** Reduce parameter setting/volume down
3. Volume output LED indicator
4. 4 x 20 LCD screen

Physical Description

Rear View



1. AUX Output (Unbalance, XLR connector)

Pin 1: Ground

Pin 2: Sound (Aux)

Pin 3: Empty

2. Volume knob for the built-in speaker of the microphone unit

3. LINK 1~4: microphone unit port (RJ45)

4. RS-232 control port (see Appendix for protocol setting):

Pin 2: TXD

Pin 3: RXD

Pin 5: GND

5. DC power supply fuse (DC 250V/8A)

6. Operating voltage DC24V/6A (please use BXB's Power Supply).

Warning: RJ45 microphone unit ports (yellow square part) are not the standard LAN ports. Please do not plug in other equipment, or the unit would be damaged.

Basic Operation

Turn On the Unit

- After confirming all the wiring, switch on EDC-2051 and the LCD screen will display the version number of the firmware:

```
BXB EDC v1.9.1
Conference PA System
```

- Later, the system will start auto-scanning to check the memory capacity and all the linked microphone units. The condition would be shown as below:

```
Memory Check
.....OK
```

```
Test Link
.....
```

- After the scanning has completed, the LCD screen will display the following information (main menu):

```
1 NO: NO MIC
2 MODE: Normal
3 OPEN-MIC: 03 Mic
4 AUTO-OFF: 30 Sec
```

NOTE:

1. As EDC-2051 is on, the system will start microphone connection testing. At this moment, the red LED indicator on the microphone unit will be constantly on. 5 seconds later, if the connection goes wrong, the LED indicator of the malfunctioned microphone units will flash. It indicates the failed connection.
2. In this case, the power of EDC-2051 should be switched off and then switched on again after checking the microphone connection. If the red LED indicator of microphones is constantly on for more than 5 seconds, the connection is normal.
3. Press the speaking button of the chairman unit or any delegate unit, the red LED indicator of microphones can be turned off. Or, you can wait for 30 seconds until the test mode is cleared.

Basic Operation

Using the Front Panel LCD

```

1 NO: NO MIC
2 MODE: Normal
3 OPEN-MIC: 03 Mic
4 AUTO-OFF: 30 Sec

```

```

6.SPK SETTING
(SPK_ON) SPK_OFF

```

```

5.SYSTEM LEVEL
PA VOICE : 80%

```

```

7.CLEAR SOUND SET
(ON) OFF

```

1) NO: the ID number of the operating microphone; 3 sets of ID numbers displayed per page.

Chairman MIC: *01~*10

Delegate MIC: 001~255

2) MODE:

Normal: Normal Mode

Override: Override Mode

Chairman: Chairman Mode

3) OPEN-MIC: the number of speaking microphones at the same time; 1~9/all.

4) AUTO-OFF (Automatic Mic-off): 30/45 seconds/manually turn off.

5) SYSTEM LEVEL: adjust volume by pressing "UP ▲" or "Down ▼" button.

6) SPK SETTING: turn on/off the built-in loudspeaker of microphone units.

7) CLEAR SOUND SET: turn on/off the clear sound.

※ After you don't press setting buttons for 30 seconds, the system will save the present setting automatically and then go back to the default page. You don't need to press any button for saving and exiting.

Advanced Operation

Check the MIC ID

- When the conference microphone is in use, the red indicator ring on the microphone will be on constantly. Meanwhile, its ID number will be displayed on the LCD screen of EDC-2051. Max. of 3-set ID numbers can be shown on the main menu.

```

1 NO: *01 001 002
2 MODE: Normal
3 OPEN-MIC: 03 Mic
4 AUTO-OFF: 30 Sec
  
```

- If there're more than 3 microphones are in use, “← →” icon will be displayed at the up-right of the LCD screen. Just press the MODE button, LCD screen will show “■” ; and then press “UP▲” and “DOWN▼” button to check the number of the other using microphone.

```

1 NO: *01 001 002 (←→)
2 MODE: Normal
3 OPEN-MIC: 03 Mic
4 AUTO-OFF: 30 Sec
  
```

- The symbol of “■” icon indicates that the item is selected. Just press MODE button to select the item for setting all conference modes.

Note: All figures shown on this manual are only the examples for easier instruction. All the EDC-2051 are proceeded serious QC test before the delivery. Thus, the default values would be different for each unit. You can change settings by simply following the instructions.

Advanced Operation

Set the Meeting Mode

- Press MODE button and move the “■” icon to “2. MODE”. Meanwhile, the “Normal” item is flashing. Just press “UP▲” or “DOWN▼” button to change the conference mode.

```
1 NO: *01 001 002
2.MODE: Normal
3 OPEN-MIC: 03 Mic
4 AUTO-OFF: 30 Sec
```

- Following are all the conference modes offered:
 - ※ Chairman microphone can be operated anytime; it will not be restricted by any conference mode.

Normal: delegate can randomly speak (within open-mic limit) and stop talking. Chairman Mode and Override Mode cannot function in this mode.

Chairman: only chairman can speak.

```
1 NO: No Mic
2.MODE: Chairman
3 OPEN-MIC: No Mic
4 AUTO-OFF: 30 Sec
```

Override: delegates take turn speaking. For example, if Open Mic Qty is set as one, only one delegate microphone can be turned on. If the second delegate presses the speaking button, the first microphone will be overridden and then turned off. If the Open Mic Qty is set as three. When the fourth microphone is on, the first one will be off; when the fifth microphone is on, the second one will be off. In short, always 3 delegates can talk; and so forth. However, chairman microphone is always unrestricted in this mode.

```
1 NO: No Mic
2.MODE: Override
3 OPEN-MIC: 03 Mic
4 AUTO-OFF: 30 Sec
```

Advanced Operation

Set the Open-Mic Qty

- ❑ ALL Mic/1-9 delegate microphones turn on at the same time.
- ❑ Press MODE button and then move "■" to "OPEN-MIC", Meanwhile, "03 Mic" item will flash. Just press "UP▲" or "DOWN▼" button to change the Open-Mic quantity.

```

1 NO: *01 001 002
2 MODE: Normal
3. OPEN-MIC: 03 Mic
4 AUTO-OFF: 30 Sec
  
```

The 1~9 number indicates the Open-Mic quantity.

OPEN-MIC: 1 Mic

→ Only 1 delegate can talk.

OPEN-MIC: 9 Mic

→ 9 delegates can talk at the same time.

OPEN-MIC: ALL Mic

→ All delegates can talk freely at the same time.

Advanced Operation

Set the MIC Auto-OFF Time

- ❑ Delegate unit will be automatically off after receiving no sound for 30/45 sec. The delegate can also switch off the speaking button manually.
- ❑ Press MODE button and move “■” to “AUTO-OFF”. Meanwhile, “30 Sec” item will be flashing. Just press “UP▲” or “DOWN▼” button to set 30 or 45 sec.

```

1 NO: *01 001 002
2 MODE: Normal
3 OPEN-MIC: 03 Mic
4. AUTO-OFF: 30 Sec
  
```

AUTO-OFF: 30 Sec

→ Delegate microphones will be turned off in 30 sec after receiving no sound.

AUTO-OFF: 45 Sec

→ Delegate microphones will be turned off in 45 sec after receiving no sound.

AUTO-OFF: Invalid

→ Delegate microphones will not be turned off all the time. The delegate should switch off the speaking button manually.

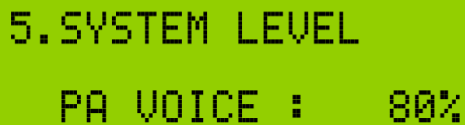
Note:

1. EDC microphone unit belongs to cardioid type. It perfectly receives the voice of the in-front speaker. The sound reception from other directions would be reduced.
2. The in-front speaker and the microphone unit should keep with the proper distance to make the microphone completely receive the human voice. Or, it would cause sound offset due to the time difference of sound receiving.

Advanced Operation

Volume Setting

- ❑ The default volume level is 80%; 0% indicates mute. You can adjust the level based on the needs.
- ❑ Press MODE button and move “■” to “5. SYSTEM LEVEL”. Press “UP▲” or “Down▼” button to adjust the system volume.
- ❑ Press "UP▲" button to volume up. Each press would increase +2 level; press "Down▼" button to volume down. Each press would decrease -2 level.
- ❑ Adjust this volume level would also affect the volume of the built-in loudspeaker of the microphone unit as well as the volume of earphone /recording output.



```
5.SYSTEM LEVEL
PA VOICE : 80%
```

- ❑ If EDC-2051 doesn't detect any action, it would go back to the main menu. The current setting would be also saved automatically. You don't need to press any button for saving and exiting.

Advanced Operation

Microphone SPK Setting

- ❑ The default setting of the built-in loudspeaker is ON. You can set as OFF based on your need.
- ❑ Press MODE button and then move "■" to "6. SPK SETTING". Press "UP ▲" or "Down ▼" button to select "SPK_ON" or "SPK_OFF" mode. The brackets indicates that the item has been selected.
- ❑ With the "SPK_OFF" mode, the audio output of the earphone and recording still work normally.



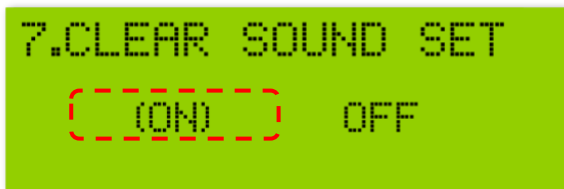
```
6.SPK SETTING
(SPK_ON) SPK_OFF
```

- ❑ If EDC-2051 doesn't detect any action, it would go back to the main menu. The current setting would be also saved automatically. You don't need to press any button for saving and exiting.

Advanced Operation

Clear Sound Set On/Off

- ❑ The default setting for clearing the sound is enabled and can be adjusted to on or off mode according to the needs.
- ❑ Press the "MODE" button to shift the "■" to the 7. CLEAR SOUND SET mode. Press the "UP" button ▲ or the "Down" button ▼ to select the "ON" or "OFF" mode. The double brackets indicate the selected state.



- ❑ The LCD display screen will automatically return to the general function screen and save the recent settings after approximately 30 seconds of inactivity, without requiring any further button presses to save or exit.

Microphone Unit

EDC-2011 Table-top Chairman Unit



- | | |
|--|---|
| 1. Gooseneck MIC plug (DIN TYPE) | 2. Built-in 2.5" loudspeaker |
| 3. Control button with indicator light | 4. Speaking button with indicator light |
| 5. Earphone volume control | 6. Earphone plug (Φ 3.5 stereo) |
| 7. Recording plug (Φ 3.5 stereo) | 8. DIP switch for MIC ID setting (please refer to the appendix) |
| 9. Loop connector (CAT5E) | |

Product Features

- ❑ Quick installation via CAT5E cables; easily applicable to small-scale meetings.
- ❑ High stability: parallel and series connection are applicable. Even one of the units is disconnected/out of order, others can still operate normally.
- ❑ Featured with a built-in 2.5" loudspeaker. When the attendee presses the speaking button, the speaker would be auto-off to avoid sound feedback.
- ❑ Speaking button and back-lighted indicator to control/show the speaking status.
- ❑ Microphone capsule is equipped with illuminating red ring to show speaking status.
- ❑ No limitation of chairman unit's quantity; you can also randomly change the position and sequence.
- ❑ Chairman unit is equipped with speaking priority button.
- ❑ Built-in Ø3.5mm earphone and recording plugs (volume adjustable).
- ❑ Gooseneck microphone with shield and flexible tube, easy to be positioned and bent without noise (standard length: 43/48/56/70cm).
- ❑ Prevents the interference of electromagnetic wave.

Microphone Unit

EDC-2012 Table-top Delegate Unit



- | | |
|---|---------------------------------|
| 1. Gooseneck MIC plug (DIN TYPE) | 2. Built-in 2.5" loudspeaker |
| 3. Speaking button with indicator light | 4. Earphone volume control |
| 5. Earphone plug (Φ3.5 stereo) | 6. Recording plug (Φ3.5 stereo) |
| 7. DIP switch for MIC ID setting | 8. Loop connector (CAT5E) |

Product Features

- ❑ Quick installation via CAT5E cables; easily applicable to small-scale meetings.
- ❑ High stability: parallel and series connection are applicable. Even one of the units is disconnected/out of order, others can still operate normally.
- ❑ Featured with a built-in 2.5" loudspeaker. When the attendee presses the speaking button, the speaker would be auto-off to avoid sound feedback.
- ❑ Speaking button and back-lighted indicator to control/show the speaking status.
- ❑ Microphone capsule is equipped with illuminating red ring to show speaking status.
- ❑ No limitation of chairman unit's quantity; you can also randomly change the position and sequence.
- ❑ Built-in Ø3.5mm earphone and recording plugs (volume adjustable).
- ❑ Gooseneck microphone with shield and flexible tube, easy to be positioned and bent without noise (standard length: 43/48/56/70cm).
- ❑ Prevents the interference of electromagnetic wave.

Set the DIP Switch of Microphone Unit

- ❑ Each of the EDC-2011/2012 already has a preset ID number, which will show on the label at the bottom of the unit.
- ❑ Change the ID number via the DIP Switch at the bottom of the unit.
- ❑ All the adjustments should be done after the system has been shut down. Please reboot after setting.
- ❑ 10-digit DIP switch is set based on the binary combination; chairman unit's ID cannot share with delegate unit's ID.
- ❑ Please refer to the table below for Chairman/Delegate DIP Switch setting.

Chairman Unit DIP Switch										
DIP	1	2	3	4	5	6	7	8	9	10
Value	1	2	4	8	OFF				Chairman	

EDC-2011 chairman ID range→ *01~*10

Delegate Unit DIP Switch										
DIP	1	2	3	4	5	6	7	8	9	10
Value	1	2	4	8	16	32	64	128	OFF	

EDC-2012 delegate ID range→ 1~255

Note: When switching to the number out of the range, the microphone's indicator light will flash as EDC-2051 is turned on.

Protocol Setting

Type	RS-232	Baud Rate	2400 bps N,8,1 (Hex)	
	Byte1	Byte2	Byte3	Byte4
DELEGATE-MIC ON	0x55	0x55	0x01 ~ 0x7f	0x0D
DELEGATE-MIC OFF	0xAA	0x55	0x01 ~ 0x7f	0x0D
CHAIRMAN-MIC ON	0x55	0xAA	0x01 ~ 0x7F	0x0D
CHAIRMAN-MIC OFF	0xAA	0xAA	0x01 ~ 0x7f	0x0D
ex.				
DELEGATE 1 On	0x55	0x55	0x01	0x0D
DELEGATE 1 Off	0xAA	0x55	0x01	0x0D
DELEGATE 127 On	0x55	0x55	0x7F	0x0D
DELEGATE 127 Off	0xAA	0x55	0x7F	0x0D

Appendix

Connected Qty. of Microphone Units

Total connected microphone units of the MCU:

Cable length of each circuit	20M	40M	60M	80M	120M
Suggested qty. of connected units of 4 circuits	50	50	50	44	36

Notice:

- ❑ Within 100M of each circuit, the maximum of connected microphone units is 15. The quantity would decrease gradually if the cable length is over 120M.
- ❑ If you need to connected more than 15 microphone units for single circuit, an extension power supply (BXB's EPS-C083-C) would be required.



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