Specification

Product Name: Digital Array Conference Microphone
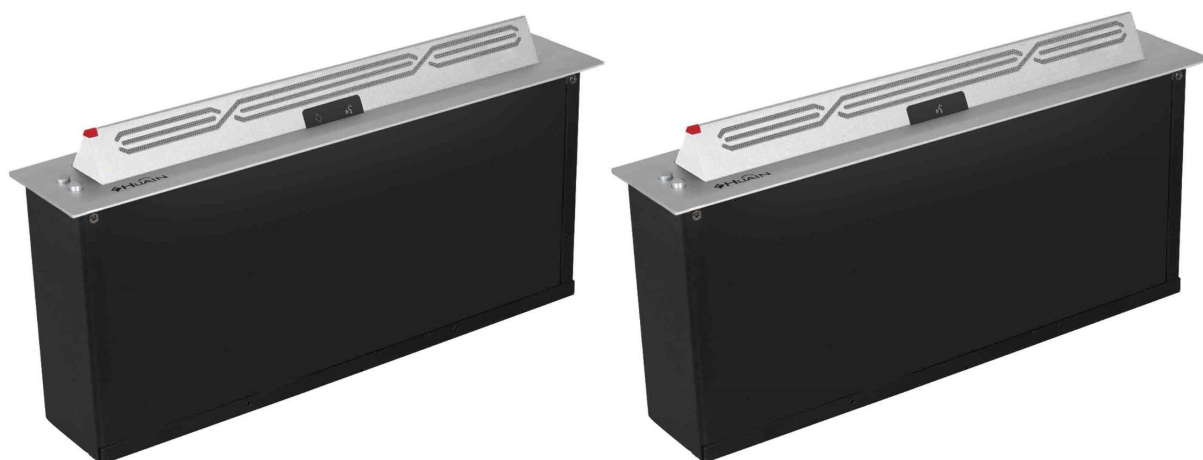
Product Model：HY-8020CS/HY-8020DS

Document Version：A/1（2024.4.15）

Production Department: Product Department

Huain (Zhuhai) Digital Technology Co., Ltd.

1、Product Overview

1.1 Product Image

1.2 Dimensions and Weight

Panel dimensions (LxWxH)	340×70×3mm
Cutout dimensions (LxWxH)	320×64×140mm
Weight	Net weight 0.8 kg, Gross weight 1.6 kg
Packaging	Foam + Carton

2、Product Specifications and Parameters

2.1 Product Description

It utilizes advanced and stable "IRIN" chips and DSP/DDOV digital conference technology to achieve digital signal transmission and processing, conforming to the IEC60065 international standard. The unit is equipped with 17 high-performance full-range pickup heads, combined with digital microphone array technology, enabling a pickup distance of up to 100 cm. The built-in digital circuit excitation chip ensures stable unit voltage, allowing all pickup heads to operate in their optimal state. With a 150° pickup angle, it covers a wider range, ensuring sound quality whether seated or standing. The touch-sensitive switch buttons offer precise positioning and quick control, with no mechanical wear and infinite lifespan. Additionally, the system employs digital intelligent

synchronization positioning and identification technology, ensuring precise positioning, uniform speed, and smooth operation of the motorized flip system.

2.2 Functional Parameters

1. Utilizes advanced and stable "IRIN" chips and DSP/DDOV digital conference technology for digital signal transmission and processing.

2. Built-in 17 gold-plated 9.7 mm condenser pickup heads, with lateral sound source and angle array technology to effectively capture every sound detail.

3. Gooseneck-free and streamlined desktop design enhances unobstructed communication among participants and provides better visual effects.

4. Equipped with the FTC334C professional capacitive touch sensing chip, featuring virtual touch buttons that operate silently without mechanical noise and offer a long lifespan.

5. Features automatic flip-up when the conference host is powered on and automatic return when powered off, eliminating the need for manual operation and making flipping convenient and efficient.

6. During the flipping process, it has an automatic mute function to prevent unnecessary sounds from being transmitted to the sound reinforcement system.

7. Unique cavity and pickup design, combined with pickup correction technology, accurately controls pickup quality and angle, avoiding acoustic feedback and howling.

8. High-sensitivity pickup design with built-in automatic gain control (AGC) function, offering an effective pickup distance of 60-100 cm.

9. Equipped with a 15×14 mm dual-position high-brightness red common-anode LED digital tube, capable of displaying ID addresses and group numbers.

10. Uses a 24V silent motor with low current, low noise, high durability, and stability, ensuring operating noise is kept below 30 decibels.

11. Low-power design allows a single conference host to connect to 30 flip conference units, with a maximum connection of 240 units per host.

12. Equipped with two RJ45 network interfaces, supporting various control methods such as manual control, remote control, wired control, central control, and group control.

13. Employs digital intelligent synchronization positioning and identification processing technology,

ensuring precise positioning, uniform speed, and smooth operation of the motorized flip system.

14. Comes with a removable safety device, featuring multiple protection functions such as limit, leakage, overload, current limiting, and constant speed, ensuring the system's safety, stability, and reliability.

15. Built-in loop-through output power interface allows daisy-chaining for power supply, reducing the need for power socket wiring and creating a cleaner and more aesthetically pleasing installation.

16. Supports multiple control methods, including manual panel control, daisy-chained RS-232 control, software control, remote control, central control, and group control.

17. Built-in digital circuit excitation chip ensures stable unit voltage, allowing all pickup heads to operate optimally.

18. Utilizes a 150° pickup angle, providing a broader pickup range, ensuring sound quality whether seated or standing.

19. Adopts high-fidelity lossless audio transmission technology with a 48KHz audio sampling rate, ensuring sensitive pickup, clear speech, and a frequency response of 30Hz-20KHz.

20. Features three indicator colors: red for normal speaking, green for VIP unit speaking, and yellow for ID state.

21. Intelligent audio detection function automatically inversely attenuates audio when two adjacent units are close to each other, preventing howling.

22. Equipped with two professional 8-pin interfaces using daisy-chain connections, with cables featuring full aluminum foil and waterline shielding to effectively prevent and avoid electromagnetic interference.

23. Supports eight conference modes: number limitation, FIFO (first-in, first-out), LIFO (last-in, first-out), chairman permission (request to speak), voice activation, time-limited speech, queue speaking, and free discussion.

24. The number of speakers can be set to 1/2/3/4/5/6/7/8/9, with no limit for the chairman and VIP units, and all units can be opened in free discussion mode.

25. When paired with high-definition cameras, it enables automatic tracking of speakers and automatic switching of camera angles, supporting screen freezing and tracking of the same conference unit by multiple cameras.

26. Supports the connection of up to 150 chairman units, with chairman units having the ability to control conference order and priority speaking rights, including the ability to mute other delegate units currently speaking.

27. Features three types of identity permissions and supports online application for modifying unit identities, allowing the reassignment and configuration of chairman, VIP, and delegate units.

28. Any chairman or delegate unit can be designated as a VIP unit, with VIP units having no speech restrictions, and up to 150 VIP units can be configured.

29. The system has an automatic detection function that can detect the number of online chairman units, VIP units, and delegate units, providing clear visibility of the system's operating status.

30. Supports hot-swapping with live wires, automatic repair, and quick system fault location without affecting the operation of other equipment.

31. Has strong anti-interference capabilities, effectively isolating interference from mobile phones, radio waves, Bluetooth, WiFi, etc., ensuring no noise is generated during incoming calls.
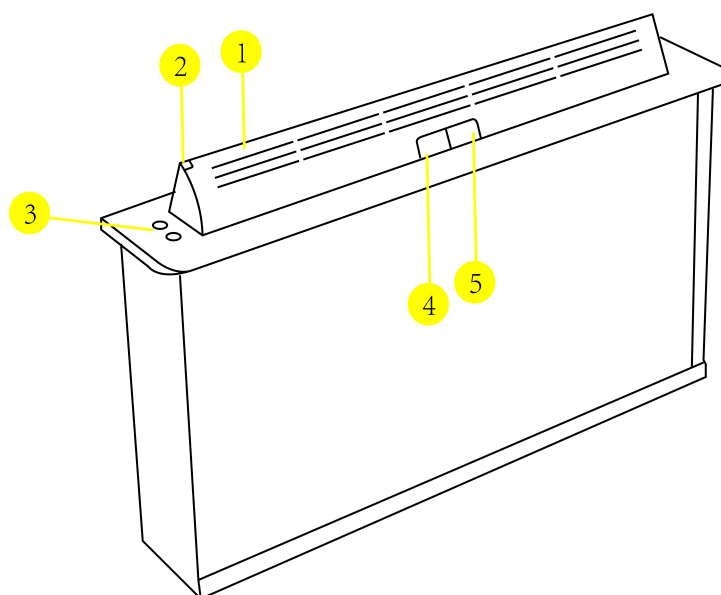
2.3 Technical Parameters

Compliance Standard	IEC60065 International Standard
System Capacity	Single channel supports 25 units, expandable up to 76,800 units
Microphone Type	Array type, 14mm gold-plated microphone capsule
Frequency Response	30Hz~20KHz
Signal-to-Noise Ratio (SNR)	>90dB
Dynamic Range	96dB
Total Harmonic Distortion (THD)	< 0.05%
Microphone Sensitivity	-37dB±2dB
Power Supply	AC100V~240V 50/60Hz，24V DC±5％

Operating Current	60mA ±5％
Connection Method	Splitter, T-connector, Daisy Chain
Connector Type	8-pin（or RJ45）
Number of Units Activated	1/2/3/4/5/6/7/8/9 or all
ID Numbering Function	Customizable ID numbering
Unit Power Consumption	5W
Equivalent Noise	20dBA (SPL)
Maximum Sound Pressure Level	125dB （THD<3%）
Color	Black, Silver
Flip Window Size	280×38mm
Installation Method	Embedded

3、Product Introduction

3.1 Product Interface Introduction

1、Array Microphone Heads: 17 gold-plated 9.7mm capacitive microphone heads

2、Indicator Light: Displays red when speaking

3、Lift Button: Controls the microphone flip

4、Chairman Button: Has priority function, can turn off all conference units (not available on delegate units)

5、Power Button: Can turn the conference unit on and off; the indicator light stays on when powered on

3.2 System Connection Diagram

Infrared transmitter HY-4200M

Infrared radiator HY-4200R

Recording equipment

Interpreter station HY-4200Y

Conference host HY-6500M5

Conference unit HY-8020CS/DS

Speaker box

Power amplifier

Wireless receiving unit HY-4200D

Hd camera HY-HD20　PC　Laptop　Physical booth

Tablet computer

Smart phone

Desktop computer

laptop

Touch screen

Power controller　Projection screen　Electric curtain　Projection hanger　lamplight

Network type central control host HY-CC80H

router

Hd hybrid matrix

projector　TV　Splicing screen　display

DVD　VCD　TV　booth