Array pickup microphone MA5A-MINI

Multi-directional coaxial speaker for classroom PJ06

Adaptive pickup unit MA5A

Control processor panel CP88

SOUNDKING Self-adaptive Intelligent Sound Reinforcement System for Classroom

Healthy for teachers
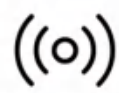
| six in one | smart control | vocal amplification | Auto sound source localization | noise reverberation suppression | volume auto-adjustment | uniform sound coverage |

DEVELOPMENT BACKGROUND

This system is a set of high-tech, multifunctional and intelligent indoor sound system specially developed by SOUNDKING for schools and various training institutions, which has obtained many national patents. Its system is composed of Intelligent Pickup Unit (Omni-directional Array Microphone), Array Pickup Microphones, Speakers, Control Panel, etc. Teachers can walk around the room without a microphone to achieve clear and natural sound reinforcement. 2-4 speakers can be installed on the top of classrooms according to different sizes of classrooms to achieve the excellent sound amplification. And it is controlled by the control panel in AI. It is also equipped with USB audio recording and playback function. Teachers can bring relevant recorded content to play in class, or record the contents of the class for students to review at home. Teacher can also check the quality of the lecture by themselves. The whole system has excellent sound reinforcement effect, clear voice and easy operation. This system can effectively protect the teacher's throat, which is a healthy project for teachers.

HONORS AND PATENTS

Practical patent No:202020562273.6

Appearance Patent No:202030085000.2

Practical patent No:202020562244.x

Invention patent No:202010942665X

"The First (Set) of Products in Key Areas of Equipment Manufacturing in Zhejiang Province" Award

"The First (Set) of Products in Key Areas of Equipment Manufacturing in Ningbo" Award

SELF-ADAPTIVE INTELLIGENT SOUND REINFORCEMENT SYSTEM MA5A-T

PRODUCTS COMPOSITIONS

PJ06
Multi-directional coaxial speaker for classroom

MA5A-MINI
Array pickup microphone

MA5A
Adaptive pickup unit

CP88
Control processor panel

TECHNOLOGICAL INNOVATION

Teachers can walk around the room without a microphone to achieve clear and natural sound reinforcement. 2-4 speakers can be installed on the top of classrooms according to different sizes of classrooms(one or two extensions can be installed in a large classroom) to achieve the excellent sound amplification. And it is controlled by the control panel in AI. It is also equipped with USB audio recording and playback function. Teachers can bring relevant recorded content to play in class, or record the contents of the class for students to review at home. Teacher can also check the quality of the lecture by themselves. The whole system has excellent sound reinforcement effect, clear voice and easy operation. This system can effectively protect the teacher's throat, which is a healthy project for teachers.

● Six-in-One Functional Integration System

Six in one
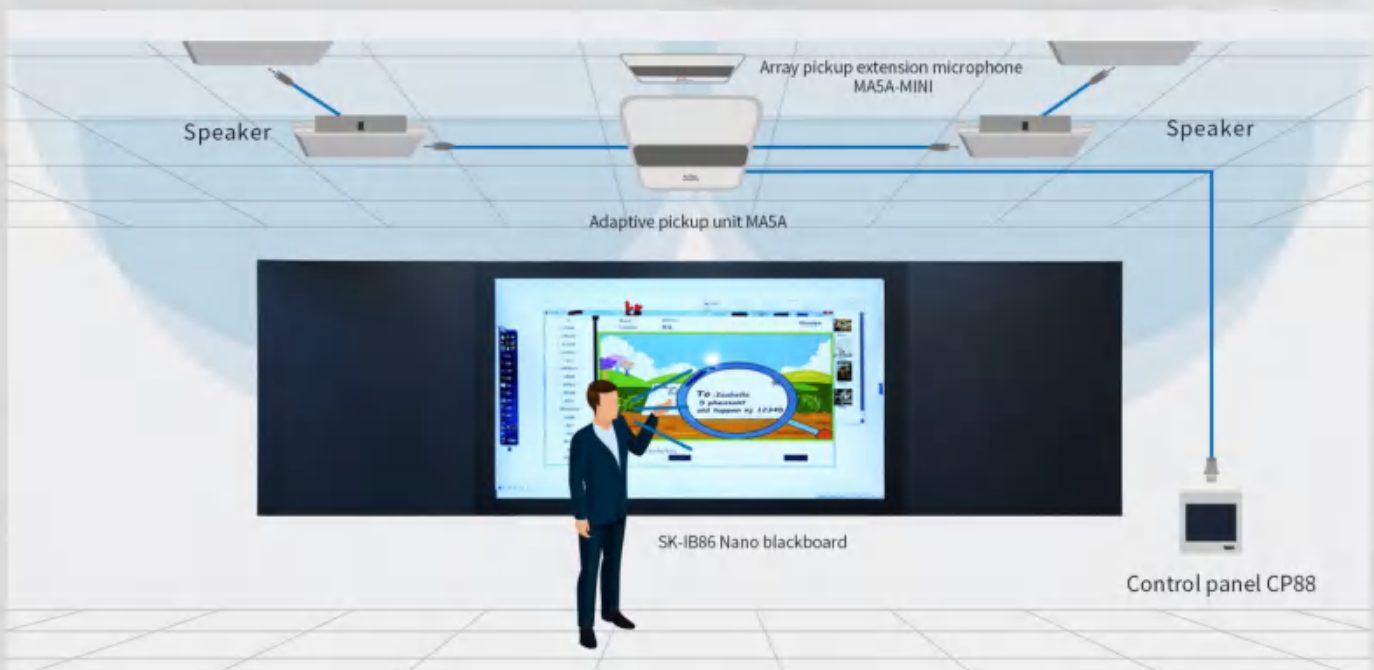① mixer
② digital amplifier
③ audio processor
④ feedback suppressor
⑤ PoE switch
⑥ array microphone

TECHNOLOGICAL INNOVATION

● Use host and extension together for large classroom

Considering the large space of school ladder classrooms, multimedia classrooms and conference rooms, the single adaptive pickup unit can not meet the needs of sound amplification, 1-2 extensions can be connected to the main machine as sound pickup compensation to enhance the pickup sensitivity. Adjusted by the host of the adaptive pickup unit, the sound pickup range reaches 300 square meters of fully covered and the language clarity is high.

Array pickup extension microphone MA5A-MINI

Speaker

Speaker

Adaptive pickup unit MA5A

SK-IB86 Nano blackboard

Control panel CP88

APPLICATIONS

Classroom is equipped with an array pickup microphone. If the space is larger, you can also equip 1-2 additional array pickup microphones to achieve the best pickup and amplification effect.

School Multimedia Classroom

School Classroom

Product Introduction

Self-Adaptive Pickup Unit MA5A

★ Integrated mixer, digital amplifier, audio processor, switch, feedback suppressor and array microphone, six equipments in one.

★ The built-in processor can equalize, filter and suppress the microphone signal. There are algorithms, AFC, AEC, ANC and other signal processing functions.

★ The pickup microphone is highly sensitive and has a pickup range of up to 5M. It improves clarity through the core algorithm of speech correction.

★ With built-in 2*150W digital amplifier(4Ω), it can connect 4-8 classroom speakers through analog signal input.

Installation method: ceiling mounting

Installation method: rigging mounting

Height from ground within 2.5 M and distance from blackboard within 2 M

SPECIFICATION

Gain difference between channels	±0.5dB（20Hz～20KHz）
Amplitude-frequency response	±1dB（20Hz～20kHz）
SNR (A weighted)	≥80dB（1000Hz）
Crosstalk	≥85dB（1000Hz）
THD with noise(A weighted)	≤0.35%（20Hz～20kHz）
Phase difference between channels	≤0.5o（1000Hz）
Dynamic range(A weighted)	≥95dB（1000Hz）
Input interface	2 12-core Phoenix plug, 1 3-core Phoenix plug, 1 network port, 1 USB2.0 interface
Output interface	2-ch amplifier output 10
Scenes	99
Sampling rate	24bit/48KHz
Net weight	5.5Kg
Dimension	420*420*115mm
Input voltage	AC 176-264V 50/60Hz

Array pickup extension microphone   MA5A-MINI (Use in the rear of the classroom)

★ Equipped with 5 high-sensitivity pickups to form a high-sensitivity microphone array

SPECIFICATION	
Power supply	48V phantom
Pickup	5-8m
Dimension	190x80x28mm
Interface	3-core Phoenix
Net weight	0.22kg
Package size	520x270x330mm
Gross weight	5.9kg
Package	20PCS

Installation method: install with exclusive fly boom
(size: 200-300mm/300-500mm/500-900mm)

exclusive fly boom

Array pickup extension microphone
MA5A-MINI

Control panel   CP88

CP88 is an intelligent audio controller, which cooperates with the adaptive integrated machine to achieve recording and playback functions, and meets the different needs of high-quality sound system in intelligent classrooms, meetings and other places.

FUNCTIONS

★ Touch control

★ Built-in Cortex-M3 + fast FPGA, dual-core processor

★ Communicate with PC through the network port, debug and
   monitor the equipment;

★ Support RS485 control interface, can connect with other
   central control devices;

★ Volume adjustment can be achieved with an self-adaptive integrated machine.

SPECIFICATION	
Model	CP88 (Resistance Touch)
Size	3.5"
Resolution	320x240
Power consumption	Backlight in brightest state: 200mA@5V; backlight off: 96mA@5V
Communication interface	RS485
Screen size	69.0mm x 51.5mm
Voltage	5-26V (±0.2V)
Product size	97.8x89.6x32.4mm

Multi-directional coaxial speaker for classroom   PJ06

★ PJ06 speakers are composed of five 1-inch neodymium dome tweeters and one

6.5-inch neodymium mid-woofer unit, forming a combination with great dynamic

balance.

★ Tweeter coaxial arc array above bass, which had accurate sound-image

localization and uniform sound-field coverage.

Installation method: hanging, optimal distance from ground about 3 meters
Installation orientation: The narrow side of the speaker faces the blackboard

Speaker structure drawing

SPECIFICATION

Frequency response	60Hz~20kHz
Sensitivity	(1W@1M) 89dB
Rated impedance	8Ω
Rated power	120W
Coverage (HxV)	100°x70°
Max SPL	(@1m)116dB
LF transducer	1x6.5" /φ38mm voice coil/Nd magnet/120W/8Ω
HF transducer	5x1" /φ25mm voice coil/Nd magnet/10W/2Ω
Dimension (WxHxD)	330x391x220 (mm)
Net weight	5kg
Package size	475x415x300mm
Gross weight	7kg
Package	1PCS

PRO AUDIO ACCESSORY HANGER

The hanger is made of lightweight aluminium alloy and is designed with length-adjustable lifting rods to meet the height requirements of the equipment to be lifted and installed. Depending on the height of the room, there are three types of products with different telescopic lengths, DB097-1 with an adjustable range of 200-300 (mm), DB097-2 with an adjustable range of 300-500 (mm) and DB097-3 with an adjustable range of 500-900 (mm), which can meet the needs of most room heights. The detachable rotating self-locking device between the regulating bar and the equipment facilitates the disassembly and reliability of use. This series of products can withstand equipment up to 25KG and is safe and reliable. This product is designed with a decorative cover on the fixed part of the ceiling, which also adopts a rotating self-locking design, making the overall effect of the installation more beautiful and harmonious.

Feature:

★ Lightweight aluminium profile   ★ Adjustable length
★ Suitable options according to room height   ★ Self-locking top cover
★ Bottom equipment connection swivel self-locking and removable design

DB097-1   DB097-2   DB097-3

Specifications	DB097-1	DB097-2	DB097-3
Height range	200-300 (mm)	300-500 (mm)	500-900 (mm)
Adjustable notch	5 (pcs)	5 (pcs)	5 (pcs)
Adjustment distance per notch	100 (mm)	100 (mm)	100 (mm)
Load capacity range	≤25KG	≤25KG	≤25KG
Main tube material	φ41*1 Aluminium profiles	φ41*1 Aluminium profiles	φ41*1 Aluminium profiles
Telescopic tube material	φ35*1 Aluminium profiles	φ35*1 Aluminium profiles	φ35*1 Aluminium profiles
Cover material	PP	PP	PP
Guide sleeve material	PP	PP	PP
Surface treatment	Sprayed white matt finish	Sprayed white matt finish	Sprayed white matt finish
Net weight	0.39kg (0.46kg gross weight)	0.46kg (0.54kg gross weight)	0.59kg (0.71kg gross weight)
Master carton size/mm	12pcs	12pcs	12pcs