

AMBIENT NOISE SENSING COMBO

The Intelligence of Sound



CONTROLLER

Model: KNCMICM01



MICROPHONE

Model: KNCMIC1

WHEN NOISE THREATENS CLARITY. LISTEN WITH ABSOLUTE CERTAINTY.

In environments where clarity is non-negotiable and every auditory detail matters, standard monitoring falls short. Imagine a system so intelligent it doesn't just capture sound, but discerns, clarifies, and adapts to its surroundings in real time. A system that acts as the vigilant ear of your entire operation, ensuring that from the quietest whisper to the most critical alert, every sound is captured with pristine intelligibility.


This is the **KNTECH Ambient Noise Sensing Combo**. It is more than just hardware; it is the central nervous system for your audio monitoring environment, engineered to overcome the inherent challenges of complex acoustic spaces. For leaders in public transport, finance, justice, and secure facilities, this system is your guarantee of auditory control and operational certainty.

■ Key Functional Features & Benefits: Engineered for Auditory Assurance


I. Advanced Acoustic Intelligence & Performance



Dynamic Noise & Echo Annihilation: Imagine an audio feed completely free from the distractions of background hum, sudden noises, and cavernous echoes. Our high-performance noise and echo elimination algorithms act with surgical precision. They intelligently identify and neutralize continuous and sudden noise while dynamically adjusting suppression levels. This ensures that in a bustling hall or a quiet office, the voice you need to hear is always front and centre, crystal clear and intelligible.




Adaptive Audio Pickup with Auto-Gain: Your environment is constantly changing, and your audio system must adapt instantly. The system's automatic gain control and voice enhancement algorithms anticipate and adjust to changes in sound source distance and volume. This ensures a stable, clear, and consistent audio output, eliminating the uncertainty of manual adjustments and guaranteeing you never miss a crucial detail.




Acoustic-First Structural Design: Superior clarity begins at the physical level. The microphone and controller are designed with a professional acoustic structure that inherently weakens noise and echo. This foundational design choice improves pickup performance from the source, creating a cleaner signal for our advanced digital processing and ensuring unparalleled sound quality.


II. Seamless Integration & Intuitive Management




Effortless Centralized Command: True operational efficiency comes from total control. Our platform-based centralized management allows you to monitor the status of every connected microphone from a single interface. Receive instant fault alarms, perform remote software upgrades, and fine-tune parameters on the fly. This system empowers you to proactively manage your entire audio network with confidence.




Simplified, Secure Installation: We understand that project efficiency is paramount. The system utilizes industrial standard terminals for quick, secure, and reliable connection and disassembly. This thoughtful design drastically improves the speed and safety of both initial installation and ongoing maintenance, reducing downtime and labour costs.




Web-Based Configuration & Remote Adjustment: Forget cumbersome on-site adjustments. The entire system is configurable via an intuitive web interface. Furthermore, key pickup parameters can be adjusted using our self-developed sound wave configuration tool  without ever needing to touch or disassemble the microphone. This doubles your team's maintenance and debugging efficiency.


III. Robust, All-Weather Reliability



Built for the Harshest Environments: Your operations don't stop for bad weather, and neither should your equipment. The KNCMIC1 Microphone boasts a rugged, all-metal aluminum alloy shell and an IP66 waterproof rating. With an operating temperature range of -30°C to 70°C, it is engineered to deliver unwavering performance in the most demanding indoor and outdoor conditions.



Failsafe Electrical Protection: In critical infrastructure, there is no room for error. The system features built-in power polarity reversal and lightning protection (8kV Air contact ESD), eliminating worries about wiring errors or electrical surges during installation and operation.



Extreme Transmission Distance: Overcome the limitations of distance. Our super-strong line audio transmission technology ensures a clear, stable signal can travel up to 200m when using shielded cable, making it the ideal solution for large-scale facilities and complex electromagnetic environments.

■ Specifications

(a) Ambient Noise Sensing Controller

Parameter	Description
Model	KNCMICM01
Input Channel	8 Channel Ambient Noise Sensing Microphone Channel
Output Connection	RJ45 CAT5
Input Connection	Pair Cable (22-24 AWG)
Power supply	AC110V~240V
Mounting Size	Standard 1U rack mounting
Unit Size	521 X 440 X 45mm

(b) Ambient Noise Sensing Microphone

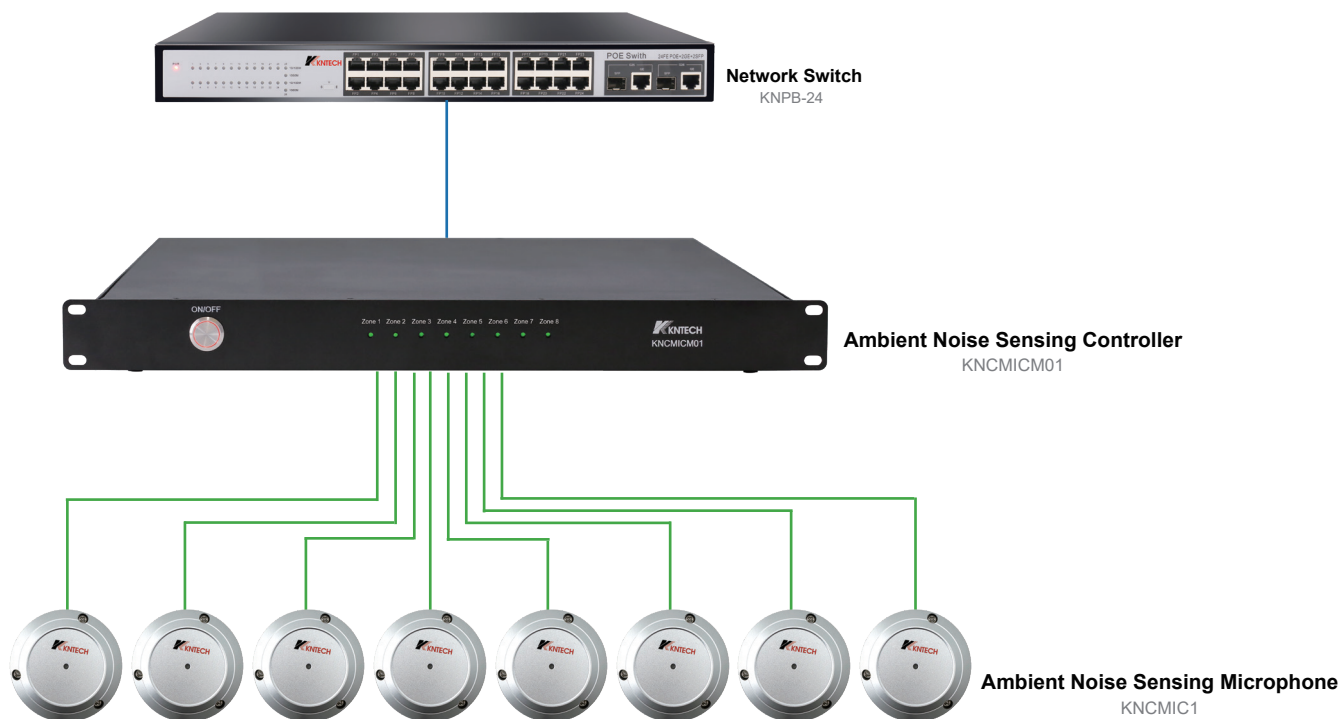
Parameter	Description
Model	KNCMIC1
Pickup range	5-40 square meters
Audio transmission distance	200 meters
Sensitivity	-45dB
Frequency response	20Hz ~ 20kHz
Directional characteristics	Omnidirectional
Signal-to-noise ratio	58dB
Dynamic range	74dB
Sound pressure resistance	11dB SPL (11kHz, THD ≤ 1%)
Output impedance	600 ohm unbalanced
Output signal amplitude	2.5Vpp / 81dB SPL
Microphone	Omnidirectional microphone
Signal processing circuit	Adopt high-fidelity / low-noise processing chip
Protection circuit	8kV Air contact ESD, lightning protection, power supply polarity reverse protection
Drive capability	Built-in preamplifier circuit, can directly drive headphones
Connection method	one 3.5mm audio interface, two leads (power, common ground)
Transmission cable	3-core 0.5mm ² RVVP shielded cable
Power supply voltage	DC 12V (9V~15V)
Power supply current	40mA
Working environment temperature	-30°C to 70°C
Color	White + Silver
Shell material	ABS & Aluminum Alloy

Parameter	Description
Dimensions	Φ60 x 16mm
Weight	About ~ 70g
Index of Protection	IP66
Certification	Certified Compliance with EN 54-16 and ISO 7240-16 Standard
	CE Marked / IEC 61082 / IEC 60300 / IEC 60068
	IEC 60050 / IEC 62368 / IEC 60601-1 and IEC60601-1-2

■ System Architecture

— RJ45 Network Cable

— Audio Cable (3 core)



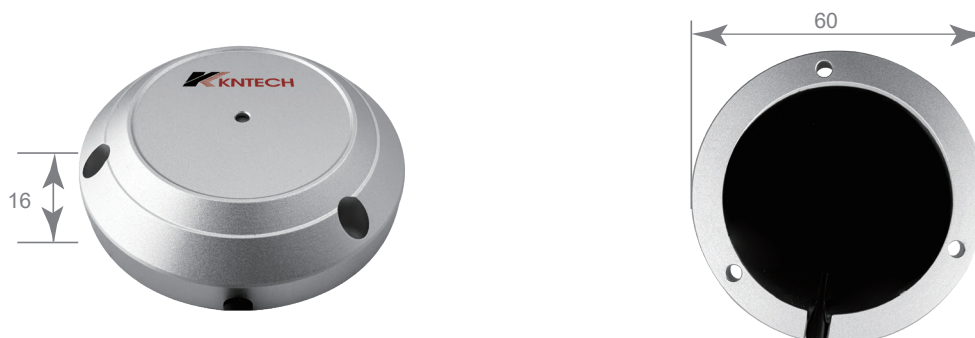
■ Dimension

Unit in mm

Model: KNCMICM01



(b) Ambient Noise Sensing Microphone



Model : KNCMIC1

Your Partner in Building a More Secure and Intelligent Future

Choosing the right technology is about more than just specifications; it's about choosing a partner you can trust. With over 20 years of global experience in equipment design and marketing, we understand the unique challenges and stringent requirements of large-scale public and private sector projects.

The **KNTech Ambient Noise Sensing Combo** is the culmination of this experience, engineered to provide not just a solution, but confidence. It is a commitment to quality, reliability, and the unwavering safety of the environments you manage.

Take the first step towards a more secure and intelligent audio ecosystem.

Contact us today to schedule a personalized demonstration and discover how the KNTech system can become the intelligent heart of your operations.

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