

ATND971

Cardioid Condenser Boundary Microphone with Dante™ Network Output

network microphones



Features

- Connects directly to network via Ethernet cable - no soldering or additional cable required
- Integrated user switch controls talk/mute in Local mode and triggers Dante-enabled devices in Remote mode
- Local or remote control of gain, low-cut UniSteep® filter and red/green LED status indicator
- Powered by network PoE
- Scalable across Dante's 512 bidirectional audio channels
- Touch-sensitive capacitive-type user switch
- UniGuard® RFI-shielding technology offers outstanding rejection of radio frequency interference (RFI)
- UniSteep® filter provides a steep low-frequency attenuation to improve sound pickup without affecting voice quality
- Available interchangeable elements permit angle of acceptance from 100° to 360°
- Heavy die-cast case and non-slip silicone foam bottom pads minimize coupling of surface vibration to the microphone

Description

The ATND971 is a Dante-enabled, wide-range condenser microphone with a cardioid polar pattern. It is designed for surface-mount applications such as high-quality sound reinforcement, conferencing, distance learning and other demanding sound pickup applications.

The microphone features a touch-sensitive capacitive-type user switch with integral red/green LED status indicator. In Local mode the user switch mutes and unmutes the microphone. It can be set to toggle between live and muted audio (toggle on/off), to permit live audio only while the switch is pressed (press to talk), or to mute the audio while the switch is pressed (press to mute). In Remote mode the user switch can be used to trigger functions on compatible Dante-enabled devices, such as a video camera's pan/tilt or a room's lighting preset. While in Remote mode the microphone's audio output is controlled remotely.

The audio output of the ATND971 can be routed using Audinate's Dante Controller, which is available for download at the Audinate website (www.audinate.com). The site also provides Dante routing and software instructions.

The microphone is equipped with UniGuard® RFI-shielding technology, which offers outstanding rejection of radio frequency interference (RFI).

The microphone's cardioid polar pattern provides a 120° angle of acceptance (cardioid in hemisphere above mounting surface). Additional interchangeable elements with omnidirectional (360°) and hypercardioid (100°) pickup patterns are available.

Operation and Maintenance

The ATND971 is powered by network PoE. The electronics in the microphone take up to 30 seconds to stabilize after power is applied.

The microphone should be placed on a flat, unobstructed mounting surface, with the front of the microphone facing the sound source. The sound source should not be below, or higher than 60° above, the plane of the mounting surface.

The microphone features a touch-sensitive user switch with integral red/green LED status indicator. The user switch has four Local settings that can be chosen by pressing the button beneath "SWITCH FUNCTION" and "DEFAULT MODE." The default setting is TOGGLE ON/OFF. Press the button once to change setting to TOGGLE ON/OFF. In both settings the user switch will toggle between mute and unmute – the only difference is the status of the audio when the microphone is turned on. Press the button a second time to select MOM. ON (momentary on), wherein the audio will be on only while the user switch is being pressed (press to talk). Press the button a third time to select MOM. OFF (momentary off), wherein the audio will be muted while the user switch is being pressed. Press the button a fourth time to cycle the setting back to the default. The "SWITCH FUNCTION" and "DEFAULT MODE" LEDs will illuminate red or green to indicate the current setting.

Turn the low-cut UniSteep® filter on and off by pressing the button beneath "LOW CUT" on the bottom of the microphone. The filter is off by default. The LED above "LOW CUT" illuminates red when the filter is off, green when it is on.

There are three input gain levels that can be selected: +30 dB (for loudest voices), +40 dB and +50 dB (for softest voices). To adjust the gain level, press the button beneath "GAIN" on the bottom of the microphone. Pressing the button once changes the level from +30 dB to +40 dB, pressing it again changes the level to +50 dB and pressing a third time returns the level to +30 dB. The LED above "GAIN" illuminates green for +30 dB, orange for +40 dB and red for +50 dB.

To lock the Local settings, press and hold the button beneath "LOCK" on the bottom of the microphone. Press and hold again to unlock settings. The LED above "LOCK" will illuminate red when locked and remain unlit when not locked. If a setting button is pressed while the lock is on, the LOCK LED will blink.

All LEDs on the bottom of the microphone will turn off seven seconds after the last button is pressed. Pressing any button will cause the LEDs to relight.

To return the microphone to its default Local settings, press the GAIN and LOW CUT buttons simultaneously.

The microphone can also be controlled remotely via third-party software.* When this software is used it will override local control, causing the audio to remain on and the red/green LED status indicator, low-cut filter and input gain level to be controlled remotely. In Remote mode the microphone's user switch can be programmed to trigger functions on compatible Dante-enabled devices. When in remote mode the Remote LED is illuminated.

Avoid leaving the microphone in the open sun or in areas where temperatures exceed 43° C for extended periods. Extremely high humidity should also be avoided.

User Switch Settings and Functions in Local Mode

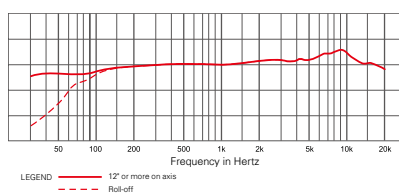
CONTROL

	User Switch Mode	SWITCH FUNCTION LED Color	DEFAULT MODE LED Color
Default	Toggle (mute on power up)	Green	Red
1st Press	Toggle (talk on power up)	Green	Green
2nd Press	Press to Talk	Red	Red
3rd Press	Press to Mute	Red	Green

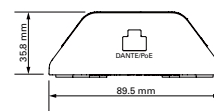
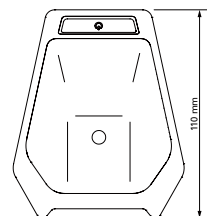
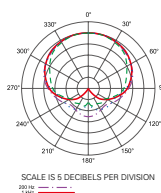
Specifications

Element	Fixed-charge back plate, permanently polarized condenser
Polar pattern	Half-cardioid (cardioid in hemisphere above mounting surface)
Frequency response	30-20,000 Hz
Low frequency roll-off	80 Hz, 18 dB/octave
Maximum input sound level	117 dB SPL, 1 kHz at 1% T.H.D.
Signal-to-noise ratio	68 dB, 1 kHz at 1 Pa
Power requirements	PoE IEEE802.3af standard
Power consumption	1.5W
Switches	Local Mode: Touch-sensitive capacitive type user switch function: toggle (mute on power up), toggle (talk on power up), momentary on, momentary off; Low-cut filter: flat, roll-off; Gain: +30 dB, +40 dB, +50 dB Remote Mode: Low-cut and Gain via third-party software*
Weight	393 g
Dimensions	110.0 mm (L), 89.5 mm (W), 35.8 mm (H)
Output connector	RJ45
Dante network	Physical level: standard Ethernet Connector: single RJ45 Cable quality: Shielded CAT5 or CAT6 recommended Transmission speed: 100 Mbps
Optional interchangeable elements	UE-O omnidirectional (360°) UE-H hypercardioid (100°)
Accessory furnished	Soft protective pouch

frequency response: 30–20,000 Hz



polar pattern



ATND971

心形指向性界面电容话筒带Dante™网络输出

network microphones



特性

- 使用以太网线直接连接至网络中 - 无需再外加及焊接音频线
- 整合了用户开关, 可在本地模式中控制讲话/静音; 亦可在远程模式中操控Dante设备
- 本地或远程控制增益、UniSteep®高通滤波器和LED指示灯的状态红/绿显示
- 以网络的PoE供电
- 整个可扩展性的Dante系统, 具有512双向音频通道
- 电容式触控感应的用户开关
- UniGuard® - 射频干扰(RFI)屏蔽技术, 提供杰出的防止射频干扰能力
- UniSteep® - 高通滤波器, 提供了一个高效能的高通滤波, 把低频噪声作出衰减而无损语音的收音质量
- 可选配适合的收音头更换配合实际的应用, 收音角度可由100°至360°
- 以压铸铸造的坚固外壳及话筒底部的防滑矽泡棉, 可减低桌面震动对话筒的影响

说明

ATND971是一枚具有Dante功能, 宽阔频宽的电容式心形指向性界面话筒, 设计于平面放置应用, 提供高质量收音、会议、远程教学等高要求的收音应用。

话筒设有电容感应轻触开关, 并设置有以红/绿色显示LED指示灯。在本地模式下, 用户可开关话筒以静音或讲话操作, 当中可以设置讲话和静音间的反覆切换(锁存式开/关)之间的实时和静音音频切换; 或预设静音而只在按下时讲话(点动讲话), 或预设讲话而只在按下时静音(点动静音)。在远程模式中, 轻触开关可用来控制兼容Dante功能的设备, 例如视频摄像机的拍摄目标位置或房间的照明预置功能。同时话筒的音频输出亦可在远程模式中作出远端控制。

ATND971的音频输出可以使用Audinate公司的Dante控制器作路线布局, 可在Audinate网站(www.audinate.com)下载有关软件。该网站还提供Dante的路由控制和软件说明。

话筒配备有UniGuard® 射频干扰(RFI)屏蔽技术, 提供杰出的防止射频干扰能力, 避免收音时受到如手提电话等的干扰。

话筒的心形指向性提供120°的收音角度(平面上的心形半圆), 并可选配其他适合的收音头配合实际的应用, 包括全指向性360°、超心形指向性100°。

操作与维护

ATND971需要由网络的PoE供电。话筒的电子部份需要在上电30秒后才达到稳定的状态。

话筒应放置在平面上, 及没有障碍物的环境使用。音源应在话筒的前方发声, 理想的收音角度应在平面至60°高度之内。

话筒配置有一个整合式的轻感应用户开关, 和红/绿色LED状态指示灯。此用户开关设有四组设置选择, 可以通过按下底部的按钮选择“开关功能(SWITCH FUNCTION)”和“默认模式(DEFAULT MODE)”。在预设状态下为“锁存开关模式(TOGGLE ON/OFF)”, 按下一次可按钮来更改默认模式, 两种模式同样是设置用户开关在静音和讲话间的反覆切换 - 唯一的区别只是在话筒上电时的音频状态。再按下第二次, 会设置为“点动开启模式(MOM.ON)”, 话筒正常时为静音, 只在按下用户开关时才开启讲话(按下讲话)。再按下第三次, 会设置为“点动关闭模式(MOM.OFF)”, 话筒正常时为开启, 只在按下用户开关时才会关闭静音(按下静音)。当再按下第四次时, 会恢复到周期设置的预设状态。在“开关功能(SWITCH FUNCTION)”和“默认模式(DEFAULT MODE)”的指示灯会亮起红色或绿色来显示当前设置。

话筒配置有UniSteep® 高通滤波器开闭, 可按下方话筒底部的“LOW CUT”按钮选择。该滤波器预设是关闭的, 即“LOW CUT”的LED会亮起红色; 而在选择于开启状态时, LED会亮起绿色显示。

另外, 话筒亦配置有三种输入增益选择, 亦即是 +30dB (在大音量讲话)、+40dB 和 +50dB (用于柔弱的音量)。要调整增益电平, 可按下方话筒底部的“GAIN”按钮。按下一次可把级别从 +30dB 改至 +40dB, 再按第二次会把增益改变至 +50dB, 如再按第三次会把增益电平返回+30dB。上述“GAIN”的LED会分别以绿色(+30dB), 橙色(+40dB)和红色(+50dB)显示。

如要锁定本地设置, 可持续按下话筒底部的“LOCK”按钮, 再次持续按下可解除锁定。当锁定时, “LOCK”的LED会显示红色; 而在未锁定时会保持熄灭。当锁定时如果按下其他按钮, LOCK指示灯会闪烁显示。

在最后一之按下按钮后, 话筒底部的所有LED将会保持7秒后关闭, 直至再按下任何按钮后, LED指示灯才重新亮起。

把话筒的本地模式恢复回默认预设状态, 可同时按下“GAIN”和“LOW CUT”按钮即可。

话筒也可以通过第三方软件进行远程控制。*在使用这些软件时, 软件将会无视本地控制的设计, 从而使音频维持开启, 而LED指示灯的红/绿状态、高通滤波器和输入增益均由远程控制所取代。在远程模式时, 话筒上的用户开关可以被编程为控制其他兼容Dante设备的操作。在操作于远程模式时, 远程(Remote)LED将亮起显示。

把话筒暴露于高温中可能导致输出电平逐渐及永久性减弱, 应避免将话筒留在日晒的地方或长时间置于温度超过43°C的地方, 而极高温度也应避免。

本地模式时用户开关的设定与功能

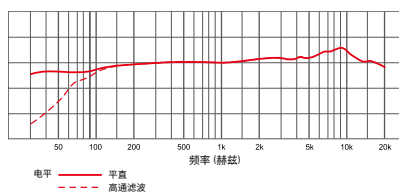
控制

	用户开关模式	开关功能的LED颜色 (SWITCH FUNCTION)	默认模式的LED颜色 (DEFAULT MODE)
预设	锁存式 (上电静音)	绿色	红色
第一次按下	锁存式 (上电讲话)	绿色	绿色
第二次按下	点动开启	红色	红色
第三次按下	点动关闭	红色	绿色

技术指标

收音头	固定充电背板, 静电型电容式
指向特性	半心形单指向性
频率响应	30-20,000 Hz
高通滤波	80 Hz, 18 dB/octave
最大承受声压	117 dB 声压级, 1 kHz 于 1% T.H.D.
讯噪比	68 dB, 1 kHz 于 1 Pa
供电	PoE IEEE802.3af 标准
耗电量	1.5 瓦
开关	本地模式: 电容式轻触感应的开关方式: 锁存(上电静音)、锁存(上电讲话)、点动开启、点动关闭; 滤波器: 平直、高通滤波; 增益: +30 dB, +40 dB, +50 dB 远程模式: 通过第三方软件作高通滤波和增益控制*
重量	393 克
外形尺寸	长110.0 mm, 宽89.5 mm, 高35.8 mm
输出端子	RJ45
Dante 网络	物理层: 标准以太网 接口: RJ45 网线质量: 建议使用屏蔽式CAT5或CAT6网线 传输速度: 100 Mbps
可转换收音头	UE-O 全方向性 (360°) UE-H 超心形指向 (100°)
标准配置	软质保护袋

频率响应: 30-20,000 Hz



指向特性

