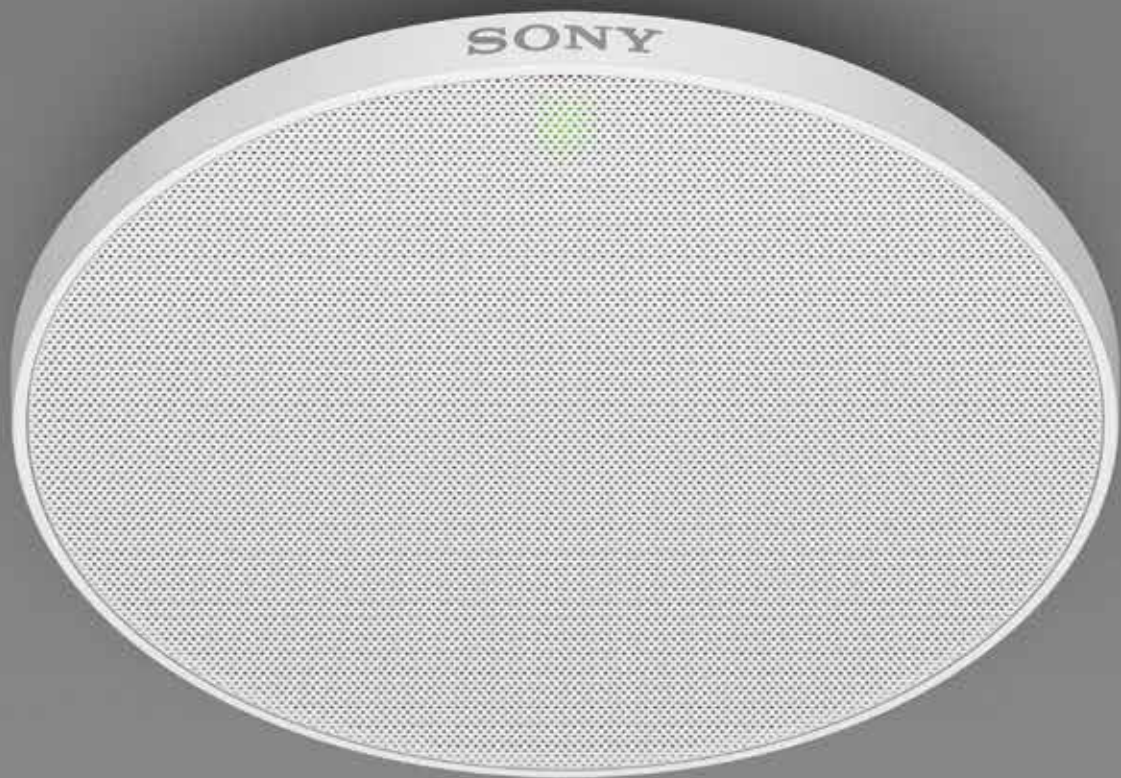# SONY

Beamforming Microphone
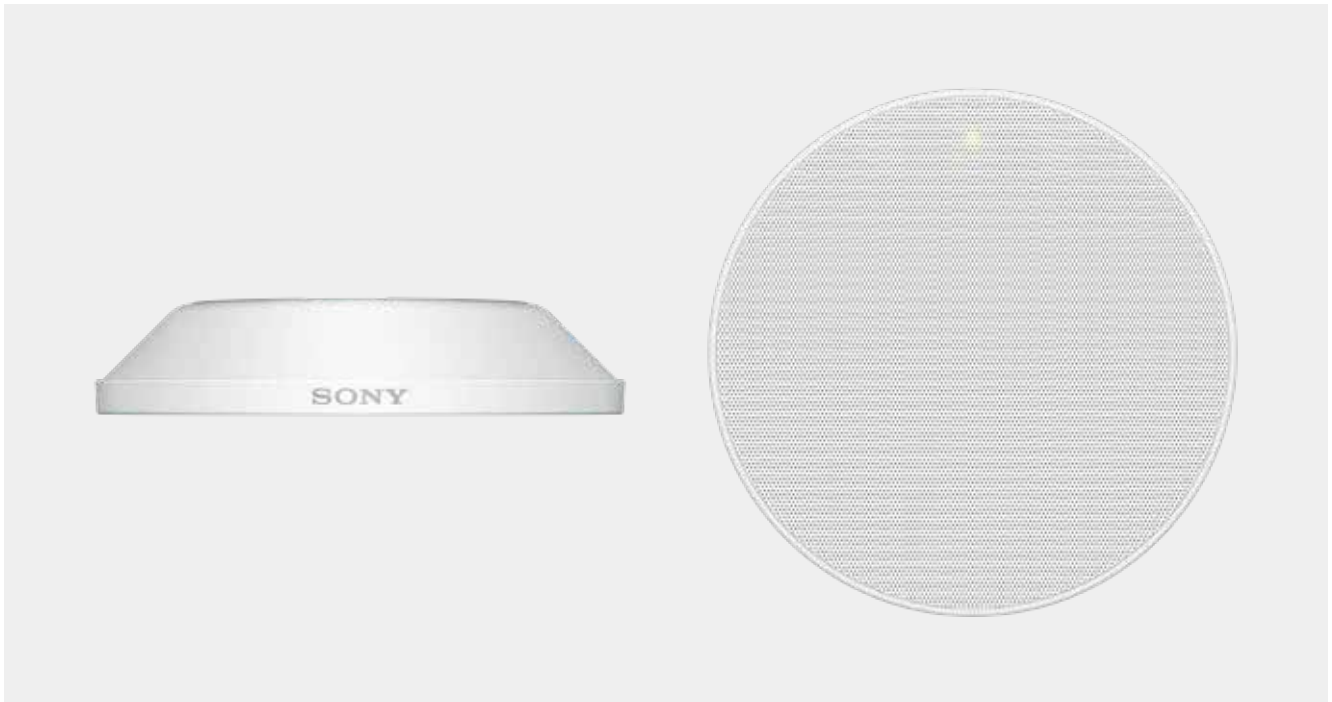# MAS-A100

# MAS-A100 Beamforming Microphone
## A hands-free lecture and presentation solution

Introducing Sony's beamforming ceiling microphone with advanced speech reinforcement technology – enabling truly hands-free lectures and presentations.

## Hands-free ceiling beamforming microphone with speech reinforcement capability

The MAS-A100 is a state-of-the-art speech reinforcement* and recording solution. Attaching and positioning lavalier microphones is time-consuming, and handheld microphones restrict movement. However, the Beamforming Microphone is simply affixed to the ceiling, then ready to use – leaving the orator location-free, hassle-free and hands-free to focus on presenting.   *Loud speaker system is required for speech reinforcement

## Dedicated channels for speech reinforcement and recording

Our comprehensive solution employs audio volume stabilisation and clear audio processing to produce sharp recordings. The MAS-A100 has two channel outputs. The dual output channel enables speech reinforcement and recording simultaneously. The dedicated rec channel records with a wider capture range and optimal intelligibility – perfect for lecture capture.

## Simple installation and management

Supporting Dante® and PoE, MAS-A100 links with third-party systems via a single cable connection. Auto-calibration streamlines system configuration, and settings can easily be adjusted via the network using free MASM-1 management software. With simple settings, central management and no need to monitor battery use, MAS-A100 is a convenient classroom audio solution.



Single cabling
by Dante® and PoE
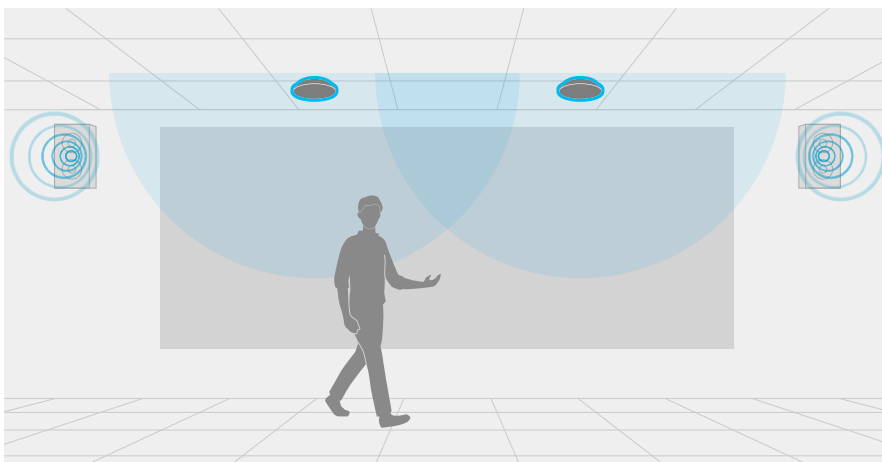
**The MAS-A100 Beamforming Microphone features a range of unique Sony's technologies which work together to create the ultimate hands-free lecture and presentation solution.**
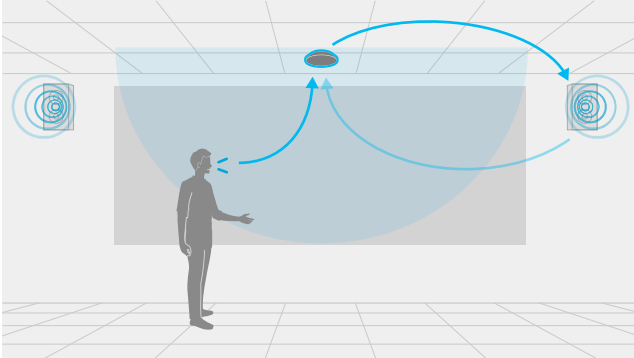
## Beamforming and Intelligent Feedback Reducer

The integration of beamforming technology and our market-leading Intelligent Feedback Reducer produces clear audio with hands-free speech reinforcement, leaving the presenter hands-free. Sony's high-performance digital signal processing and unique algorithms extract speech sound while supressing unwanted feedback (howling).
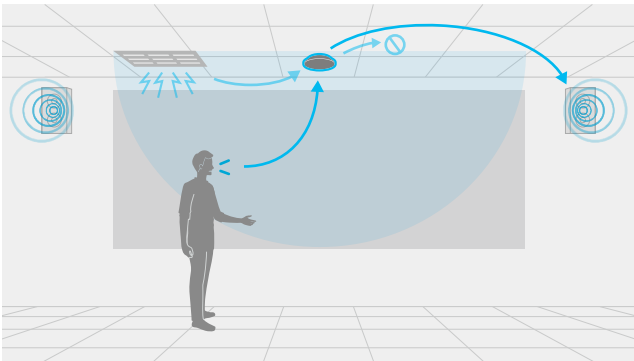
## Noise reduction

Our Beamforming Microphone incorporates advanced noise reduction technologies to minimise ambient noise. Stationary background noise arising from projectors and air conditioning are automatically detected and reduced to achieve clear sound resulting in better intelligibility and, ultimately, better understanding for listeners.
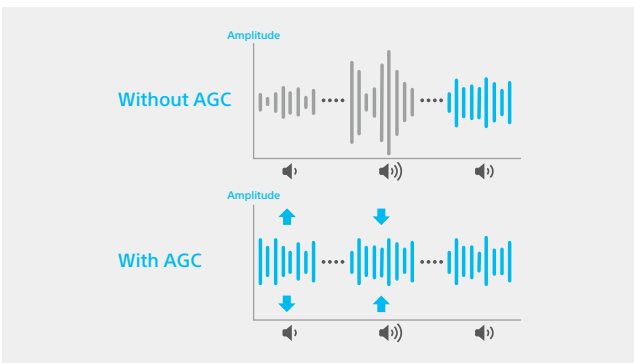
## Automatic gain control

The MAS-A100 has a useful inbuilt volume normalisation feature to maintain stable volume regardless of the distance between the presenter and the microphone, leaving the presenter free to move around the space without the audio quality deteriorating. Automatic gain control adjusts the strength of the signal received to ensure clear and consistent sound for easy listening.
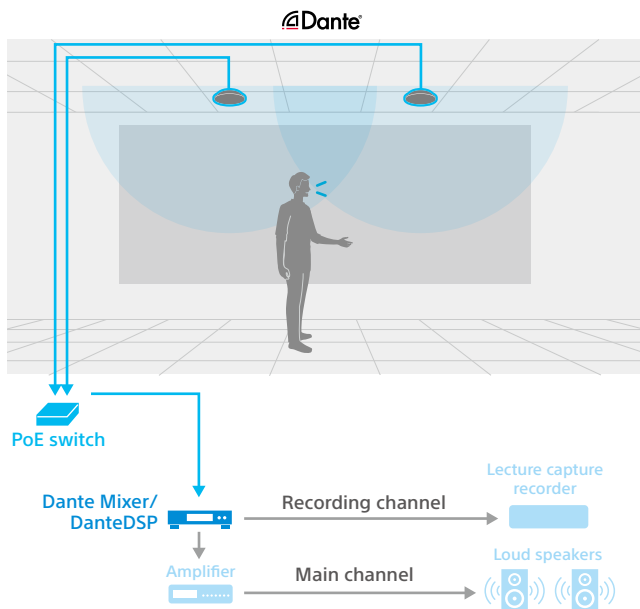
Without AGC

With AGC
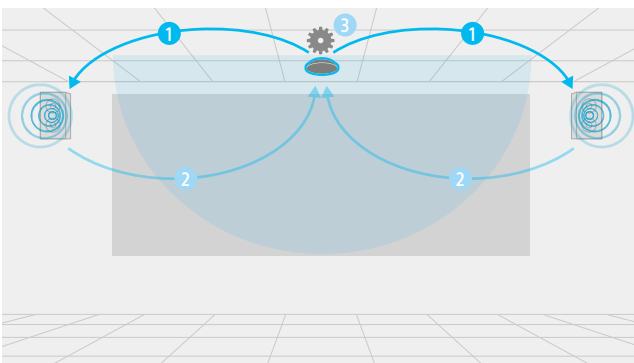
## Automatic calibration

The Beamforming Microphone optimises the parameters of audio processing for speech reinforcement automatically. The microphone generates a test signal, which is captured by the loud speakers. The system then calculates and configures the parameters for speech reinforcement. This calibration is required only on initial installation, minimising time-consuming set-up and system maintenance.

1. Generate test signal
2. Capture test signal from loud speakers
3. Calculate and configure optimal parameters for speech reinforcement

## Connect to Dante audio system



**PoE switch**

**Dante Mixer/ DanteDSP** → **Recording channel** → Lecture capture recorder

**Amplifier** → **Main channel** → Loud speakers

## Connect to Analog audio system



**PoE switch**

**Converter Dante to analog**

**Mixer/DSP** → **Recording channel** → Lecture capture recorder

**Amplifier** → **Main channel** → Loud speakers
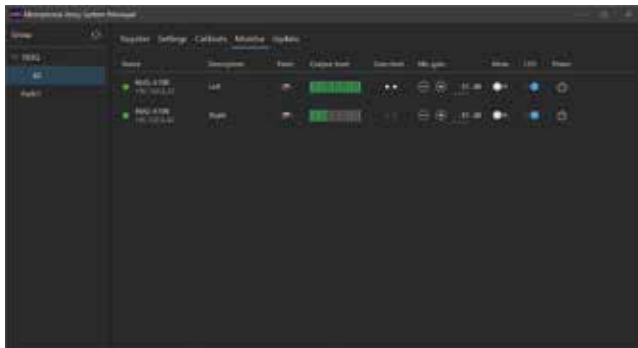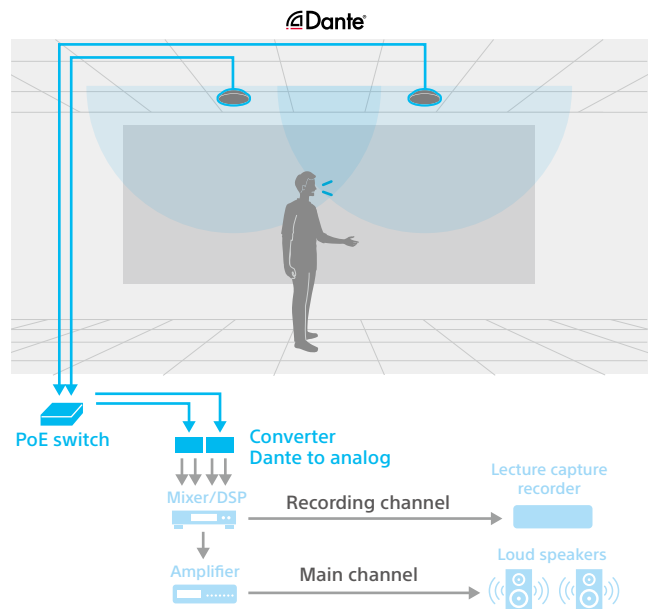


## Microphone Array System Manager (free download)

Our comprehensive solution includes free Microphone Array System Manager software (MASM-1). The software supports installation and configuration of initial settings, as well as monitoring, operations and firmware management. MASM-1 is a total management solution, enabling users to manage multiple microphones in multiple locations centrally and easily via the local network.

# Additional features

## Dante and PoE compatibility

The MAS-A100 is compatible with third-party Dante mixers, converters and other devices, as well as power over ethernet (PoE). There's no complicated wiring – a single cable can connect the microphone to the system.

## Status LED

The microphone has an inbuilt status LED, enabling both instructor and operator to easily recognise the microphone status.

## API

Our Beamforming Microphone can be operated by API, permitting simple external control and customisation as well as linking with existing systems.

# Spacifications

| Networking | |
|---|---|
| Cable requirements | Cat5e UTP or higher |

| Audio | |
|---|---|
| Frequency response | 100-10,000 Hz * |
| Sensitivity | 0 dBFS/Pa at 1 kHz * |
| Maximum SPL | 94 dBSPL |
| Signal to noise ratio | 75 dB (A-weighted, 1 kHz, 1 Pa) * |
| Latency | Under 24 ms (Not including Dante latency) |
| Self noise | 19 dBSPL (A-weighted) * |
| Dynamic range | 75 dB * |

| Dante digital output | |
|---|---|
| Channel count | 2 channels (Main, Rec) with Dante |
| Sampling rate | 48 kHz |
| Bit depth | 24 |
| Audio interface | Dante, AES67 |

| Digital Signal Processing | |
|---|---|
| **Audio technoligies** | |
| | Beamforming |
| | Feedback reducer |
| | Automatic gain control |
| | Noise reduction |
| | Noise gate |
| | Automatic calibration with test signal |
| | Equalizer |
| | API for external control system |
| **Performance** | |
| Maximum noise reduction | 24 dB |
| Maximum feedback reduction | 32 dB |
| **Configuration** | |
| Mic gain (output volume) | -60 dB ~ +12 dB |
| Capture range | narrow/standard/wide |
| Feedback reduction | low/middle/high |
| Noise reduction | low/middle/high |
| Noise gate | off/low/middle/high |
| Equalizer | Fixed 5-band, ±12 dB (1 dB Step) |

| General | |
|---|---|
| Connector type | RJ45 |
| Power requirements | Power over Eithenet (PoE), Class 0 |
| Power consumption | 13 W, maximum  9 W@25℃, typical |
| Weight | Approx. 1 kg (2 lb 3.2 oz) (main unit only)<br>Approx. 1.3 kg (2 lb 14 oz) (with ceiling bracket) |
| Dimensions | Φ      : approx. 240 mm (9 1/2 inch)<br>Height : approx. 50 mm (2 inch) |
| Control browser (MAS-A100) | Google Chrome |
| Operating temperature range | 0-40 ℃ |
| Operating humidity | 20 % to 80 % (no condensation allowed) |
| Storage temperature | -20 ℃ to +60 ℃ (-4 ℉ to 140 ℉) |
| Storage humidity | 20 % to 80 % (no condensation allowed) |
| Supplied accessories | Ceiling bracket (1)<br>Safety regurations (3)<br>Template (1) |

* Not Including signal processing

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