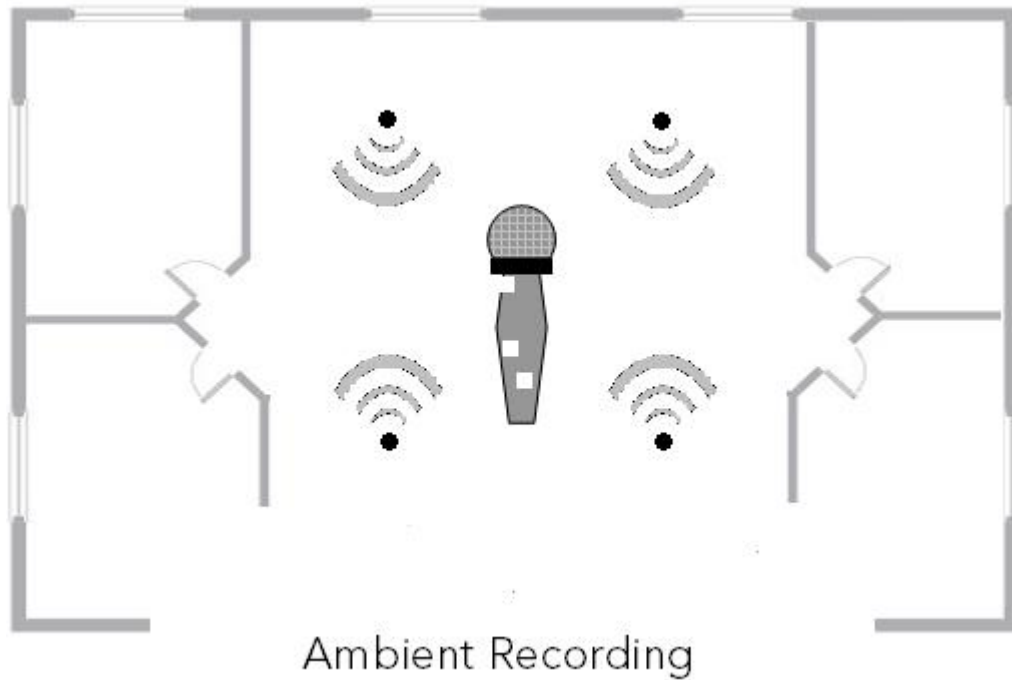


ArcAngel - Ambient Recording Solution



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What is Ambient recording

Ambient recording is an additional recording module/solution that forms part of the current ArcAngel product portfolio. This solution is in the main deployed in Police force control rooms to record important and relevant background conversations and instructions given during incidents. Recording of these important conversations is deemed to be vital to ensure that all communications are accurately logged and recorded. However this unique and powerful recording solution isn't just for force control rooms but can be deployed anywhere where the capturing of conversations is of important to the business concerned.

The ArcAngel recording solution is easily installed and configured meeting the customer's ambient recording requirements by connecting many microphones which are strategically placed throughout the room and independently connect to an audio mixer unit. There is also the option of encrypted wireless microphones, wearable or boundary with each independent channel of the receiver connected to a dedicated voice recorder channel. The mixer is connected to the analogue recording card and recording starts when the mixer is powered on.

Alternatively the microphone can be fed via a single channel amplifier directly into a single analogue channel of the recorder and the recorder set to VOX (Voice activation) mode, in this situation recording will take place automatically when any conversation takes place, necessary if any form of covert recording is required.

The recorded wav file can then be archived/stored and in the usual way for the necessary period of time to whatever storage device is deemed appropriate for its retrieval.

Increased server performance and overheads:

Question:

Will I have to increase the processing power, memory and the localised storage capacity of the recorder?

Answer:

No... The server's performance and overheads are directly comparable as if recording of an analogue phone as ambient recording is connected to the recorder via the analogue recording card. Yes, consideration needs to be factored in regards localised retention but this would be negligible.

Components required for ambient recording:

Recording server:



Example shown above: 1 x HP ProLiant ML110 Model 640GB (EU) Storage Server or similar depending on customers specific recording requirement

Microphones (Black or White)

Discrete Phantom Microphones (Black or White)

Note: For installation in false ceilings only!



Boundary microphones (Black or White):

Description

- DISCRETE PHANTOM MICROPHONE-BLACK
- Connector type:XLR
- Device type:Electret
- Diameter, external:30mm
- Directivity:Omni
- Frequency, operating max:17kHz
- Impedance, output:300ohm
- Length / Height, external:70mm
- Sensitivity:2.3mV/Pa at 1kHz
- Transducer Function:Microphone
- Frequency response, lower limit:30Hz
- Frequency response, upper limit:17kHz
- Impedance:300ohm
- Sound level SPL:110dB
- Weight:90g

Note: For installation on or under desks



Technical Data

System	Electret, cardioid/omni-directional
Frequency Range	30-20000HZ
Impedance	600 Ω
Sensitivity	7mV/Pa/1khz
Power Supply	1.5V button cell (LR44)
Dimensions	70 x 96 x 20 mm

Wireless microphones wearable



Size 2.3 cm x 2.03 cm x 6.6 cm
Weight 0.02 kg
Radio Frequency 1.92-1.93 GHz(DECT in UPCS)
Audio Bandwidth 100-6800 Hz
Encryption 128-bit
Range 20-30 M
RF Armor Impervious to GSM Noise
Up to 8 hours talk time, rechargeable batteries.

Wireless microphones. Table Top Boundary ,Omni and Uni-directional versions.



Size 3.8 x 2.03 x 8.4 cm
Weight 0.02 kg
Radio Frequency 1.92-1.93 GHZ (DECT in UPCS)
Audio Bandwidth 100-6800 Hz
Encryption 128-bit
Range 20-30 M
RF Armor Impervious to GSM Noise
Up to 8 hours talk time, rechargeable batteries.

Microphone mixer: Audio Technica AT-MX314a Smartmixer (example):



AT-MX314a

Notes: The example as shown above is a 4-channel mixer (able to record a maximum of 4 microphones only) but any mixer of reasonable quality would suffice. It is important that the mixer is able to drive the microphones and therefore it has to provide 'phantom power'. If no 'phantom power' is provided by the mixer then the solution will not work!

Illuminated recording signs:



Illuminated signs can be provided to indicate that the room is being recorded. They can be located in strategic locations to advise persons that a recording is in progress. Signs are normally placed above a door and in the recording room itself to provide the necessary confidence that the room is successfully being recorded. These lamps come pre-labeled or they can be labeled with a description of your choice. Lamps are mains driven with an optional 3volt switch to control the on/off illumination as required.

Things to consider – Pre-installation:

- How many microphones are required?
- Wireless, wired or combination?
- Colour of microphones?
- Are the microphones mounted in a false ceiling?
- Are Boundary microphones to be used (on or under desk)?
- What is the distance from the microphone to the mixer/wireless receiver (shouldn't exceed 30 meters)?
- Where should the mixer be located?
- Where should the switch for the illumination sign(s) be located?
- Receiver ,Mixer and illumination signs need power?
- Type of mixer and mixer channel capacity needed?
- How many illuminated signs, what colour and how named?

Things to consider – Post-installation:

During the set-up and commissioning of the ambient recording solution the ArcAngel engineer will test each and every microphone. The mixer's volume levels will be tuned so that the microphones perform as desired with the correct audio levels set. It is therefore essential that each recording level setting is documented as if inadvertently changed the ambient recording solution wont perform as it should and therefore conversations wont be captured. This documentation should be left on site and a copy returned to the ArcAngel office for reference if and when needed.

Note: Ambient recording starts when the mixer is switched on – recording stops when the mixer is switched off!

System & health checks – It is advisable that regular checks of the ambient recording solution should be performed on a weekly basis. This will give further confidence that the ambient recording solution will function and operate as expected.

Cost of solution:

POA - Each ambient recording solution is priced separately due to not knowing the amount of microphones, mixer channels, cable lengths needed. Therefore each solution requirement should be scoped as necessary including an initial site survey to help iron out any possible unforeseen hurdles and issues.

Service, Support & System Warranty: All components of the ambient recording solution are covered under the normal terms and conditions as detailed within the service contract.

Other possible applications for this solution:

Meeting rooms – General/Interview

Interview rooms – Police forces

Control rooms – Ambulance / Fire Services



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