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# Restaurants

**Comprehensive Guide to Designing Audio and  
Lighting Systems for Flexible Restaurant Spaces**



# Comprehensive Guide to Designing Audio and Lighting Systems for Flexible Restaurant Spaces

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Designing an audio and lighting system for a restaurant with flexible spaces requires careful planning to ensure both functionality and ambiance. This guide will help you, as a restaurant owner, create a detailed specification to get an accurate quote from an audio-visual systems design and installation specialist, with a particular focus on managing noise abatement in relation to noise laws and regulations.

## Understanding the requirements.

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### Assessing the Space

**Layout:** Identify different zones within your restaurant (e.g., dining area, bar, private event space, outdoor seating).

**Dimensions:** Measure the dimensions of each zone.

**Materials:** Note the materials used in walls, floors, and ceilings, as these affect acoustics and lighting.

### Defining Audio Requirements

**Sound Zones:** Determine the number of distinct audio zones required. Typically, dining areas, bars, and private event spaces need separate audio control.

**Noise Control:** Plan for soundproofing or acoustic treatments between zones to prevent noise spillage. Consider using sound barriers or acoustic panels.

**Audio Sources:** Identify the types of audio sources (e.g., background music, live performances, announcements). Specify any special audio needs for events like presentations or DJ setups.

**Volume Control:** Ensure each zone has independent volume control for flexibility during private events.

**Speakers:** Choose appropriate speakers for each zone. Dining areas may need softer, ambient sound, while bars might require more robust speakers for higher volumes.

## Understanding the requirements.

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### Defining Lighting Requirements

**Lighting Zones:** Identify different lighting zones in the restaurant, similar to audio zones.

**Ambiance:** Define the desired ambiance for each area (e.g., warm, dim lighting for dining areas; brighter, dynamic lighting for the bar).

**Flexibility:** Plan for adjustable lighting in areas that can be used for private events. Use dimmable lights or programmable lighting systems to easily switch between everyday use and event mode.

**Types of Lighting:** Consider various types of lighting:

**Ambient Lighting:** General illumination for overall visibility.

**Task Lighting:** Focused lighting for specific tasks, like reading menus or preparing drinks.

**Accent Lighting:** Highlights architectural features or decor.

**Decorative Lighting:** Adds to the aesthetic appeal.

# Integration of Audio and Lighting Systems

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## Integration of Audio and Lighting Systems

**Control System:** Invest in an integrated control system that allows seamless control of both audio and lighting from a single interface. Ensure it's user-friendly for staff.

**Pre-set Modes:** Set up pre-configured modes for different scenarios (e.g., regular dining, private events, cleaning/closing).

**Remote Access:** Consider systems that offer remote access for troubleshooting or adjustments without being on-site.

## Noise Abatement and Compliance with Noise Laws.

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**Local Noise Ordinances:** Research and understand local noise ordinances and regulations. Many areas have specific decibel limits for different times of day and types of zones (residential, commercial, mixed-use).

**Decibel Monitoring:** Install decibel meters in critical areas to monitor noise levels continuously. Ensure you stay within legal limits, especially during peak hours and events.

### Soundproofing

Install soundproofing materials between different zones to minimize noise spillage. Options include:

**Acoustic Panels:** Use these on walls and ceilings to absorb sound.

**Sound Barriers:** Install sound barriers between noisy and quiet areas.

**Insulated Walls:** Build or retrofit walls with sound insulation materials.

**Flooring and Ceilings:** Consider materials that help in noise absorption, such as carpets, rugs, and acoustic ceiling tiles.

**Doors and Windows:** Use heavy, insulated doors and double-glazed windows to prevent noise leakage to the outside and between internal zones.

**Regulatory Compliance:** Ensure all systems comply with local and state regulations regarding noise levels. Regularly check for updates on noise laws and adjust your systems accordingly.

**Community Relations:** Engage with neighbouring businesses and residents to understand their concerns about noise. Being proactive can help avoid complaints and potential legal issues.

### Technical Specifications

**Wiring and Connectivity:** Detail the wiring infrastructure needed for audio and lighting systems. Plan for hidden wiring to maintain aesthetics.

**Power Supply:** Ensure adequate power supply and backup options, especially for high-demand areas like the kitchen and bar.

**Network Infrastructure:** Plan for a robust network to support smart control systems. This may include Wi-Fi access points and Ethernet cabling.

### Environmental and Regulatory Considerations

**Compliance:** Ensure all systems comply with local regulations regarding noise levels and lighting.

**Energy Efficiency:** Choose energy-efficient lighting and audio systems to reduce operational costs and environmental impact.

### Maintenance and Support

**Warranty and Support:** Include requirements for warranties and post-installation support in your specification.

**Staff Training:** Plan for staff training on how to operate the integrated systems.

## Creating the Specification Document

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To create a detailed specification for quotes, include:

**Overview:** Brief description of your restaurant and the purpose of the audio and lighting systems.

**Zones:** Detailed description of each audio and lighting zone.

**Requirements:** Specific requirements for audio and lighting in each zone.

**Integration:** Details about the integrated control system.

**Technical Specs:** Technical specifications for wiring, power supply, and network infrastructure.

**Acoustic Treatments:** Description of required acoustic treatments.

**Compliance:** Any regulatory compliance requirements, especially related to noise control.

**Maintenance:** Maintenance and support expectations.

**Timeline:** Project timeline and deadlines.

By following this comprehensive guide, you'll be able to create a detailed specification that will help audio visual specialists provide accurate and competitive quotes for your restaurant's needs while ensuring compliance with noise laws and maintaining a pleasant environment for your patrons.



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# Case Studies



# Herringbone.

## Venue

R e s t a u r a n t

A high-end fish and meat concept restaurant, with Audiotek supplying a Tannoy/JBL sound system.

## Location

W a i k i k i

This project was fully designed and implemented from our remote base in order to give the same sound and experience as all other Herringbone projects worldwide, working closely with Herringbones local teams, as well as their London-based head office team.

## Product

T a n n o y  
J B L

Remote access was also implemented, so that any changes to the system can be done from our base in Farnborough.



# Ling Ling.

## Venue

R e s t a u r a n t

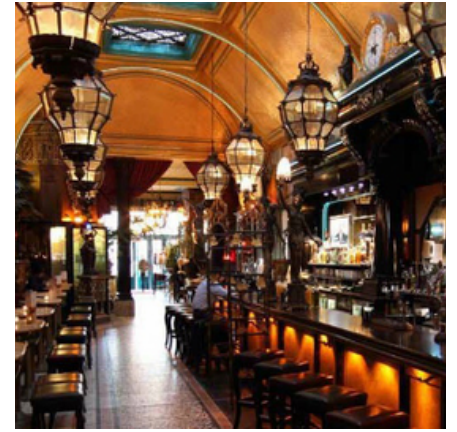
## Location

M a r r a k e c h

## Product

T a n n o y

Audiotek's long standing collaboration with the Hakkasan Group has resulted in a subtle and very flexible audio system at Ling Ling Marrakech that caters specifically for the exclusive bar and dining environment, including its use as a pre-dinner meeting space as well as DJ-driven party events.



# Café En Seine.

## Venue

R e s t a u r a n t

One of Dublin's largest and most prestigious bars, this art nouveau haven features designated dining, several beautiful bars and an impressive indoor street garden spanning three floors.

## Location

D u b l i n

Integrating with a complete refurbishment by main contractor Adston, Audiotek introduced a new AV system consisting of Ecler and Tannoy loudspeakers and Samsung screens controlled by a QSC processing system, with zone control throughout over IP.

## Product

E c l e r

T a n n o y

S a m s u n g

Q S C Q - S Y S



# Yauatcha.

## Venue

R e s t a u r a n t

Audiotek specified and installed entirely Tannoy sound systems in the new Waikiki and Houston properties. With music playing such a major role, ramping up with regular DJ slots after dinner service, this is more than just a background music system.

## Location

H o u s t o n

These systems had the same QSC remote access system as all other Hakkasan properties. System zoning was essential to these properties, due to the changes in mood throughout the venue from Fine Dining through to more lively bar areas. Zones have the capability to become more upbeat as the DJ leads the night from dining into evening.

## Product

T a n n o y  
Q S C