

# BLUESOUND

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## PROFESSIONAL

### PoE Application Guide

Bluesound Professional offers a versatile way to incorporate streaming music into a commercial installation. A fusion of hardware and software, Bluesound Professional's suite of streamers, amplifiers, speakers, controllers, and accessories bring easy-to-install, expandable, and conflict-free networked audio to retail shops, restaurants, bars, gyms, and other hospitality use cases.

Bluesound Professional uses PoE technology to support commercial installations of all sizes with the most efficient means of powering speakers. PoE (Power over ethernet) is a highly convenient innovation in network technology. Where normally two connections are made for networked devices; a network connection and a power connection; a PoE (15 watts), PoE+ (30 watts) or PoE++ (60 watts) device receives its supply of both power and data over a single Cat5e or Cat6 cable. Advantageously, Bluesound Professional's well-known line of network active loudspeakers including the BSP200, BSP500 and BSP1000, reap the benefits of this one-wire solution.



#### **Easily Create Branded Environments**

With hardware that supports nearly unlimited zones of audio and natively-integrated, commercially-licensed music streaming services in SoundMachine, Custom Channels, SiriusXM for Business, Qsic, and Tunify, Bluesound Professional works with our business music partners to provide seamless, convenient, and legal options to create the perfect atmosphere to drive your business goals.



#### **Be Supported by Network Stability**

Be equipped with a stable network connection to support the playback of high-quality, undistorted audio and music streaming with a PoE connection. Connecting via ethernet eliminates unwanted dropouts and ensures streaming stability.

#### **Save on Installation Costs**

Most powered speakers, even if claiming to be "wireless" require AC mains receptacles and power cables. The typical cost of hiring a qualified electrician to install an AC receptacle is very expensive. Radically reduce installation costs, especially in multi-channel systems with the ease of a PoE connection which allows for network and power through one ethernet cable connected to a PoE switch or injector.

#### **Have Flexible Placement Options**

Easily place multiple PoE network active loudspeakers anywhere in a commercial installation, without the need for tethering them to a power outlet. A wall-mount bracket allows for ease of installation.

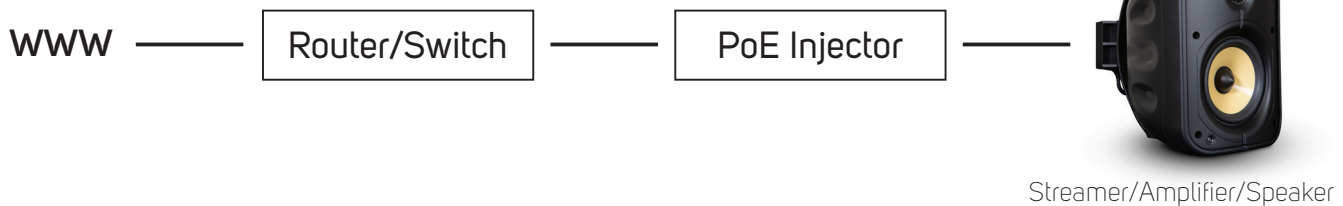
#### **A Simple Setup**

Take advantage of Bluesound Professional's integration of a built-in music streamer in every PoE-enabled speaker, allowing for grouping and zone flexibility. An easy setup and connection process takes away complicated cable runs.

## What are the PoE configuration choices?

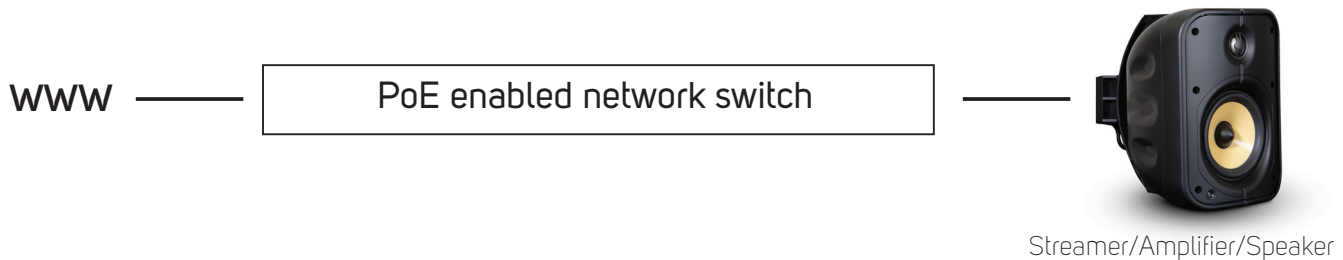
### Mid-Span

Usually defined as connecting your device to a PoE inline-injector. These injectors are cost-effective.



### PoE Enabled Switch

Usually defined as connecting your device to a PoE enabled network switch.



## When to Use PoE+ and PoE++

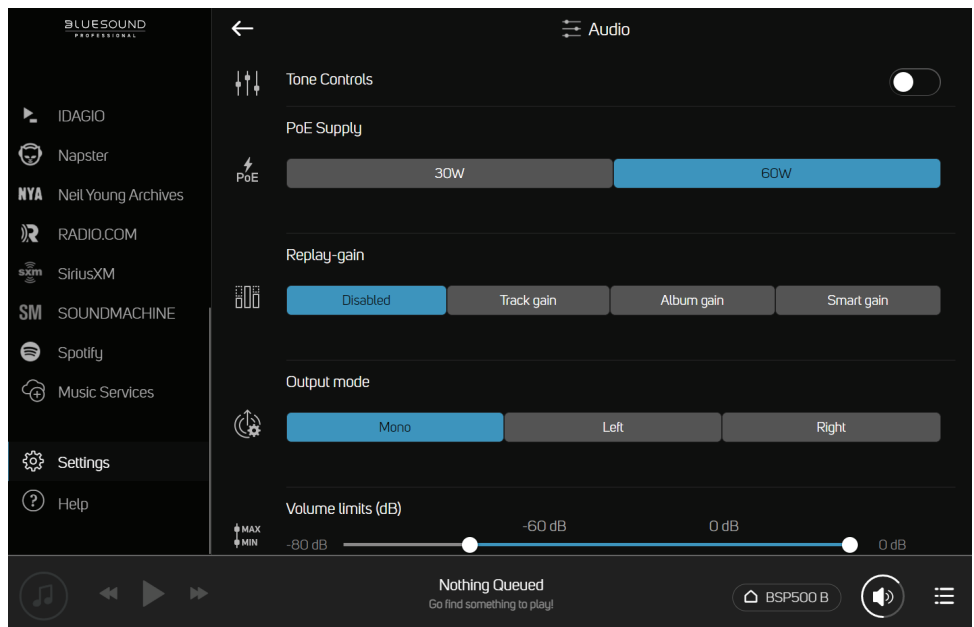
Speakers like our BSP500 and BSP1000 designed for medium to large sized commercial installations are compatible with both PoE+ (30 watts) and PoE++ (60 watts). By doubling the power, the maximum SPL will increase by 3dB. With both speakers, a setting on the speaker will indicate which power you are using. The default setting is 30 watts for a PoE+ supply.

When choosing switches, a PoE++ capable switch is the most capable option. The advantage of opting for a PoE++ switch is having access to more power (60 watts) leading to a 3dB higher maximum SPL and the option of downgrading to PoE+ if needed. A PoE+ (30-watt) switch is sufficient for a speaker like our BSP200 which does not require more than a 30-watt supply, or the BSP500 and 1000 when high SPLs are not required.

### Injector or Switch?

A single PoE+/++ injector can support a single speaker and is a cost-effective option. This option works best for installations that don't need to support a large number of speakers.

However, keep in mind that each injector will require AC. Thus, opting for a PoE+/++ switch (though slightly more costly) is the recommended option for installations requiring numerous speakers, since one switch can support many speakers, saving the need for installing or taking up multiple AC outlets.



## PoE as Part of an Ecosystem

### BluOS Enabled

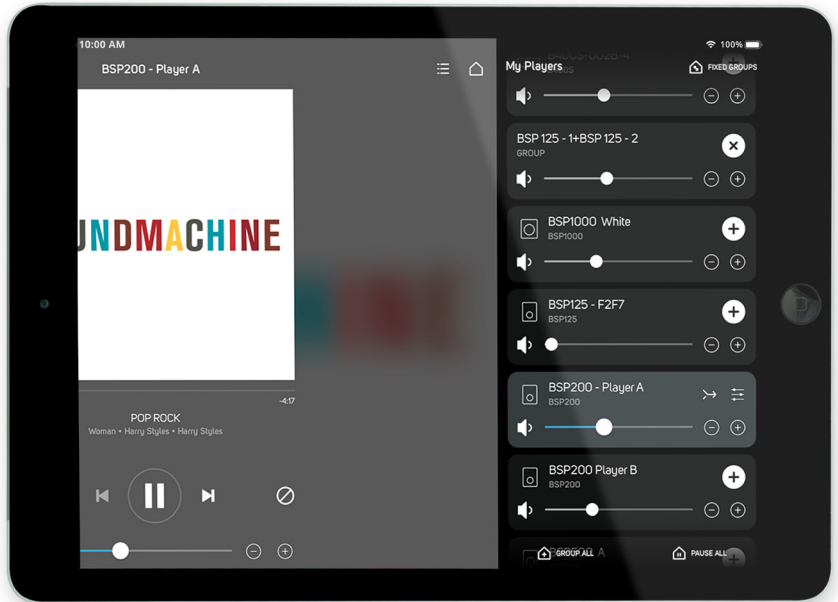
All Bluesound Professional PoE products operate using BluOS. BluOS is a premium, multi-room audio platform that lets you manage all your music and stream it directly to any BluOS enabled streamer or speaker using a phone, tablet, computer, or the optional CP100 wall mounted panel. The BluOS platform is an integrated system that is remotely accessible and voice command enabled.

### Flexible and Unlimited Grouping of Zones

Configuring PoE speakers in a larger BluOS system is possible, allowing for grouping into user-definable groups of whatever size is required with other connected Bluesound Professional players, amplifiers or network speakers in an installation.

### Easy to Configure

Self-discovery makes set-up and configuration painless, as Bluesound Professional players placed onto the same network will find each other automatically. A few taps on the intuitive icons in the BluOS Controller app will group players to create zoned audio content and lock-out unauthorized users.



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### What does Bluesound Professional do?

Bluesound Professional is a fusion of hardware and software that is purpose-built for high performance networked audio for retail shops, bars, restaurants, hotels, gyms, and other commercial applications. End users can connect and control nearly any audio source, including streaming services, internet radio, or networked hard drives, while installers can confidently specify rack-mounted hardware that integrates seamlessly with smart controllers.

Powered by BluOS, an award-winning multi-zone audio management software platform, running natively in a comprehensive range of streamers, amplifiers, and speakers, Bluesound Professional makes commercial audio installation projects easy to configure, deliver, and use.

Bluesound Professional provides peace of mind that your audio is expertly handled by quality hardware and intuitive, stable software.

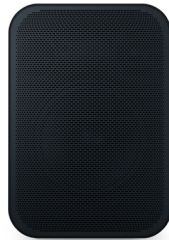
### How is Bluesound Professional different from its competitors?

Bluesound Professional is the first decentralized multi-zone streaming solution for commercial use. Bluesound Professional minimizes space requirements in the control room and offers the most flexibility for configuring a system. The players are equipped with an intuitive app and controls and are natively integrated with commercial streaming services. A Bluesound Professional system is easy to set-up and stable to run long-term; it is purpose-built for commercial spaces.

## Our PoE, PoE+, PoE++ Powered Products



CP100



BSP200



BSP500



BSP1000

**CP100:** The CP100 is an elegant unobtrusive wall mount control panel constructed from glass and aluminum and mountable over any international back box. It is powered by Power over Ethernet (PoE) and features illuminated controls for easy access and panel lockout for security. Control of volume, muting, play/pause and preset selection is possible from this low profile, surface mount unit.

**BSP200:** The BSP200 is a PoE+ powered network active loudspeaker with integrated streaming capability designed specifically for use in commercial installations. The player in the BSP200 is based on the established BluOS platform and is capable of playing and distributing content from local network storage as well as from a large number of streaming services, including some specifically designed for commercial use, such as SoundMachine, Custom Channels, QSIC, SiriusXM Music for Business and Tunify.

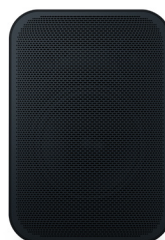
**BSP500:** The BSP500 is a network active loudspeaker with integrated streaming capability designed specifically for use in either indoor or outdoor commercial installations. This unit is powered by Power over Ethernet (PoE+ or ++), allowing a one-wire connection to the speaker for both power and audio. As well as stand-alone use, it is possible to use a pair of BSP500 speakers in stereo configuration and multiple BSP500's in a room in either mono or stereo configurations. Use of the BSP500 in a larger BluOS system is also possible, allowing for grouping into user-definable groups of whatever size is required with other BSP500 units and/or any other connected Bluesound Professional players, amplified players or network speakers on the network in an installation.

**BSP1000:** The BSP1000 is a network active loudspeaker with integrated streaming capability designed specifically for use in either indoor or outdoor commercial installations. This unit is powered by Power over Ethernet (PoE+ or ++), allowing a one-wire connection to the speaker for both power and audio. As well as stand-alone use, it is possible to use a pair of BSP1000 speakers in stereo configuration and multiple BSP1000's in a room in either mono or stereo configurations.

## Pair our AC Powered Products with PoE Speakers

**BSW150:** The BSW150 is a network active subwoofer with streaming capability designed specifically for use in commercial installations. The BSW150 is so discrete you'll forget where you put it. Designed to fit neatly in boardrooms or small commercial establishments, this compact subwoofer digs deeper and plays louder than its bulkier rivals and can be easily paired with our PoE speakers in a BluOS system.

**BSP125:** The BSP125 is a network active loudspeaker with integrated streaming capability designed specifically for use in commercial installations. As well as stand-alone use, it is possible to use a pair of BSP125 speakers in stereo configuration. Use of the BSP125 in a larger BluOS system is also possible, allowing for grouping into user-definable groups of whatever size is required with other BSP125 units and/or any other connected Bluesound Professional players on an installation.

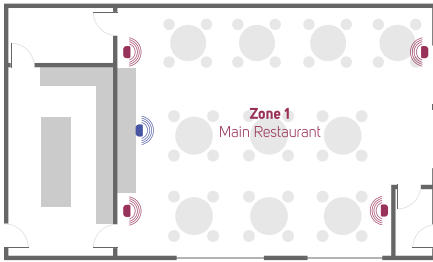


BSP125





BSW150

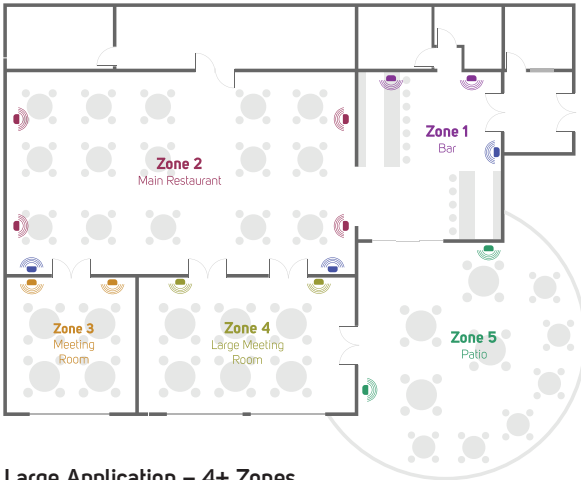
## Large and Small Application Usage for PoE+ and PoE++ Speakers







### Small Application – 1 Zone

-  **BSP200** Network Streaming Speaker x 4
-  **BSW150** Network Subwoofers

For smaller, single-zone indoor commercial installations, the compact BSP200 speakers powered by PoE+ (30-watt supply) are a viable option. In this example, four wall-mounted (4) BSP200s are configured in a restaurant or café setting with the addition of a BSW150 subwoofer for added depth of sound.



### Large Application – 4+ Zones

-  **BSP200** Network Streaming Speaker x 4
-  **BSP1000** Indoor/Outdoor Speakers x 4
-  **BSP500** Indoor/Outdoor Speakers x 4
-  **BSW150** Network Subwoofers

For large, multi-zone commercial installations with both indoor and outdoor areas, a combination of PoE+ and PoE++ speakers can be used. In this example, a 4-zone space such as a hotel includes a main restaurant, outdoor patio, bar, small and large meeting room. To sustain such size and function, a combination of four BSP200 (indoor), four BSP500 (indoor/outdoor), four BSP1000 (indoor/outdoor) speakers and one BSW150 (indoor) subwoofer is the recommended configuration to provide high-quality, undistorted audio to every area.