

Technomad Systems Application Guide For Athletics



Choosing a Technomad System for your athletic facility

Technomad offers a wide range of turnkey solutions for all types of sports facilities. Our systems are highly configurable, allowing us to offer just the right solution for customer applications.

The core of any Technomad system are our weatherproof, professional grade loudspeakers. All of our speakers deliver the highest quality audio and have a rugged, dependable design. All cabinets are rotomolded polyethylene plastic, which is impervious to the elements. Only stainless steel is used for external hardware. All components are weatherized and will provide years of performance, even in the toughest climates.

Technomad offers a variety of install turnkey system building blocks. This guide will provide an overview for how each type of system might be used for standard configurations. Most solutions and systems can be further tailored with options and expansions to provide the best possible sound for your facility. Please note that coverage diagrams are schematic and don't perfectly represent the exact coverage patterns of the speakers, but are intended as a guideline. Where two speakers are in direct overlap, the sound pressure level (SPL) can be assumed to be higher than that of a single speaker for example. Sound generated by the system will also continue to travel beyond the coverage arc shown, although neighborhood spill-over can be reduced with speaker positioning.

IPA Systems

These pre-assembled packages provide everything you need to upgrade your facility to great sound. When we say everything, we mean everything – microphone, mixer with mic and iPod™/CD/Tape inputs, amplifier, wire, mounting brackets, and most importantly a pair of high-powered, high-fidelity, completely weatherproof Technomad loudspeakers.

PowerChiton based Systems

For applications where there is not a sheltered location to house the electronics rack, Technomad PowerChiton weatherproof amplifiers are the right choice. These low profile amplifiers can be easily installed on crow's nests, scoreboards, light poles or just about anywhere. There is a PowerChiton model suitable for driving every model of Technomad speaker from the Vernal to the Oslo. There are several different accessory products for connecting and controlling audio sources to the amplifiers. All except the ControlRack feature a four input audio mixer with 1x XLR mic input, 3x line level inputs. This four input mixer features a standard ducking feature with a selector switch.

BreakoutBox / BreakoutBox XL

The BreakoutBox and BreakoutBox XL are both front end units for the PowerChiton amplifiers. They feature lockable, weatherproof enclosures which feature the four input audio mixer. The BreakoutBox XL is a larger enclosure and features three expansion bays where wireless microphone receivers can be integrated or the Schedulon audio player. In the standard configuration, the BreakoutBox series connect to PowerChiton amplifiers with a weatherproof CAT5 cable connection. This cable provides the audio output from the BreakoutBox to the amplifier inputs as well as the DC power to run the BreakoutBox. The 12V power option can be used when the BreakoutBox needs power independent of the PowerChiton, for example in a remote installation.

DesktopBox

The DesktopBox is a compact, elegant front end system intended to be used with PowerChiton amplifiers. The DesktopBox can sit right in front of the announcer for quick and easy adjustment of

audio levels and triggering of playback from (optional) audio sources like a MP3 player, etc.... There are two expansion bays to accommodate wireless microphone receivers, Bluetooth receivers, audio players, etc... There is also one output bay where an audio distribution module to link to the PowerChiton can be installed. Standard available links are ethernet, wireless, TwistedPair. The unit also has a balanced line level output. The DesktopBox requires AC power to operate.

FieldBox

The FieldBox is a portable version of the DesktopBox. The input mixer is housed in a rugged, portable plastic road case with a strap and handle for improved portability. The unit includes two expansion slots along with the standard mic and line level inputs. The unit also includes a storage compartment for a wired microphone or other small accessories. When ordered with optional battery power option and a wireless link, the FieldBox is a truly portable source system.

ControlRack

The ControlRack is a 13" deep 4U double-ended rack case with a six input audio mixer (2x mic, 4x line) and power distribution strip. The ControlRack is a great option for situations where additional 19" rack gear needs to be integrated into the source rack such as CD players, various wireless microphone receivers, Schedulon audio players and more.

Mobile System Options

For customers who need portable, temporary solutions, there are some great Technomad options.

DragonFly PA System

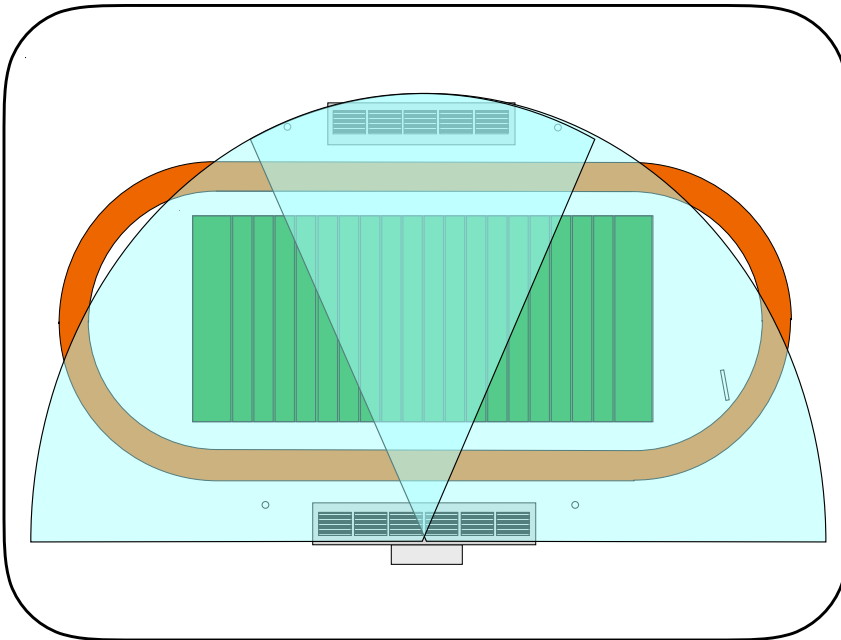
The DragonFly gives you the best possible audio in a compact and reliable design that serve for years. Fully weatherproof, the DragonFly can easily be transported and set up by one person. A molded in stand-mount socket on the bottom of the unit and inserts on the sides for yoke mounting give the DragonFly a range of deployment options.

MPA Mobile PA Systems

These pre-assembled and tested packages give you everything you need for great mobile sound. When we say everything, we mean everything – microphone, mixer with mic and iPod™/CD/Tape inputs, amplifier, wire, speaker stands, and (most importantly) a pair of high-powered, high-fidelity, completely weatherproof Mil-Spec IP56 rated Technomad loudspeakers. Technomad loudspeakers form their own military-specification flight cases for secure storage and transport

The following pages show some common solutions for standard applications. If you don't see your application detail here, give us a call - we're happy to help design the perfect solution for your needs.

Football Field, Press Box Installation



IPA2 or IPA3 PA system

Pros:

Easy to install
Coherent, unified sound source
Best sound for home stands

Overview

The IPA2 and IPA3 systems are the most popular Technomad turnkey systems for small to medium football field applications. By installing the speakers on the press box, cabling is kept to a minimum and audio quality is enhanced by having a relatively unified sound point.

The speakers are driven by a 500w power amplifier integrated into a 6U rack which is located in the press box. The system includes a six input audio mixer with XLR microphone input and RCA and 3.5mm line level inputs. Available source options such as wireless microphone systems, CD or audio players, etc... can be installed into the rack, either as factory options or at a later date.

Given the powerful output of the speakers, this system is recommended when the speakers can be located 15'+ above the highest row of bleacher seating.

Mounting Options

Use wall mounts included with IPA system to mount to press box wall or use yoke mount upgrade if the speaker will be mounted on the press box roof.

Equipment List

IPA2 system:

2x Noho loudspeakers
2x 50' speaker cables
2x stainless wall mounts
1x control rack with amplifier, audio mixer, power distribution unit and wired microphone

IPA3 system:

2x Berlin loudspeakers
2x 50' speaker cables
2x stainless wall mounts
1x control rack with amplifier, audio mixer, power distribution unit and wired microphone

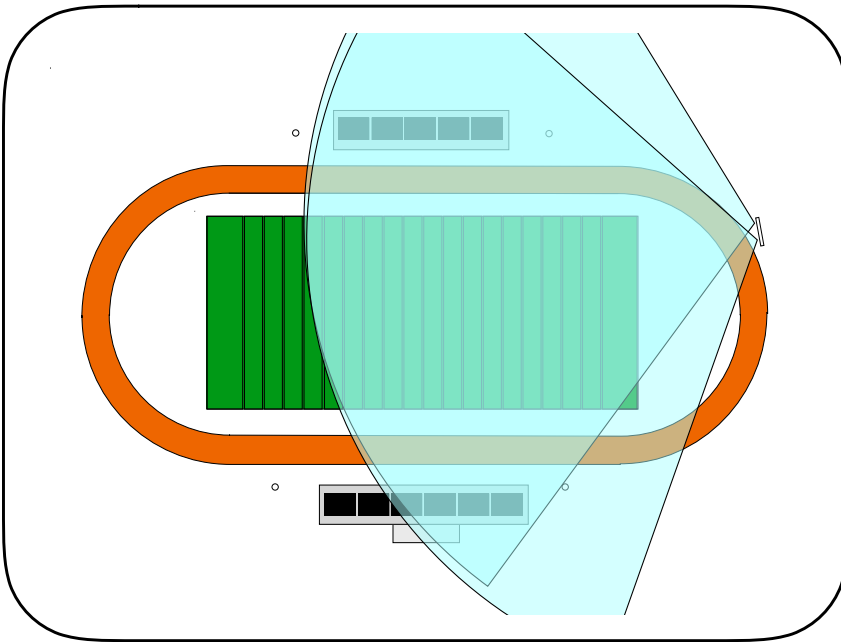
System Expansions

Add up to four Noho or Berlin loudspeakers to the core system for additional output or coverage.

System Options

Wireless microphone (headset or handheld)
CD player
Touchdown™ player
ADA system

Football Field, Scoreboard Installation



Option 1:
Scoreboard2, Scoreboard3 or
Scoreboard4 system
DesktopBox or Source Rack
TwistedPair™ or wireless audio link

Option 2:
IPA3 system with 70V upgrade

Overview

Typically scoreboards are located farther from the core audience for the audio system. Therefore the Scoreboard3 and Scoreboard4 systems, featuring higher output Berlin speakers, are often the best building block for a scoreboard system. Two to four speakers are generally used to ensure sufficient SPL to properly cover the stands and field.

The speakers are driven by a 500w PowerChiton3 or 1500w PowerChiton4 depending on the number of speakers. The audio source is usually either a DesktopBox or ControlRack located in the press box and linked to the PowerChiton via direct balanced audio cabling connection, CAT5 TwistedPair connection or wireless.

Available source options such as wireless microphone systems, CD or audio players, etc... can be installed into the rack or DesktopBox, either as factory options or at a later date.

Mounting Options

Depending on the specifics of the scoreboard, either the standard Technomad wall mount or yoke mount bracket can be used. The Scoreboard systems include yoke brackets as standard config.

Equipment List

Scoreboard2:

2x Noho w/ PowerChiton3, yoke brackets

Scoreboard3:

2x Berlin w/ PowerChiton3, yoke brackets

Scoreboard4:

4x Berlin w/ 2x PowerChiton3, yoke brackets

1x control rack or DesktopBox

System Expansions

Additional PowerChitons can be added to power extra speakers and subwoofers as needed. The audio feed from the press box can be split as needed.

System Options

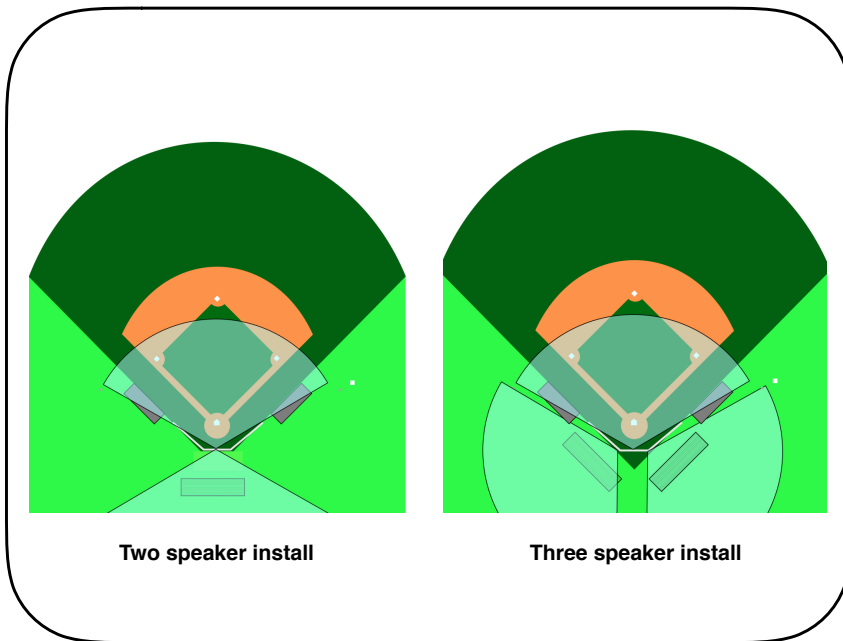
Wireless microphone (headset or handheld)

CD player

Touchdown™ player

ADA system

Baseball Field, Backstop Installation



**PowerChiton1, PowerChiton2,
PowerChiton Micro,
Vienna, Paris or Vernal speakers
Wall or Yoke Mount Brackets
BreakoutBox or BreakoutBox XL**

Overview

Baseball fields are built with a greater variety of seating and press box configurations. For a typical field where there is not a small building such as a press box or concession stand behind the back stop, a PowerChiton based solution is a great option. One speaker can be aimed at the field and then one to three speakers can be installed to cover the stands. A BreakoutBox or BreakoutBox XL provides the local audio inputs and controls for the system, often mounted on the side of the dugout or back stop.

Depending on the size of the stands, the Vernal, Vienna or Paris speakers can be used, paired with appropriate PowerChiton amplifier. Vernal speakers are only recommended for very small seating areas.

A wireless microphone system can be installed into the BreakoutBox XL as factory option.

Mounting Options

Depending on the specifics of the backstop, either the standard Technomad wall mount or yoke mount bracket can be used.

Equipment List

- 2-4 Vienna, Paris or Vernal loudspeakers
- 2-4 25' speaker cables
- 2-4 wall mounts or yoke mounts
- 1-2 PC Micro, PC1 or PC2 amplifiers
- 1x BreakoutBox or BreakoutBox XL

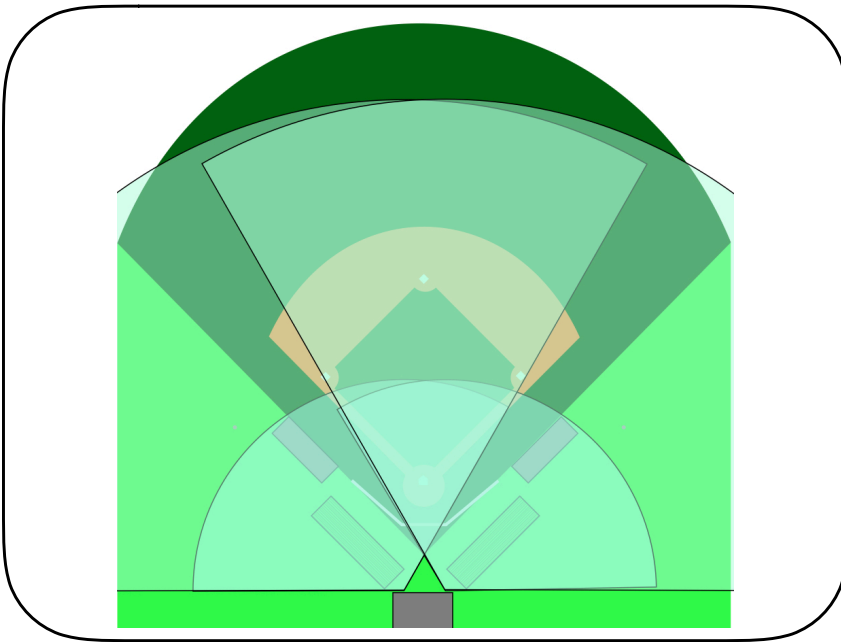
System Expansions

Additional PowerChitons can be added to power extra speakers and subwoofers as needed. The audio feed from the BreakoutBox can be split as needed.

System Options

Wireless microphone (headset or handheld)

Baseball / Softball Field, Press Box Installation



IPA1 system
IPA2 system

Overview

Baseball fields are built with a greater variety of seating and press box configurations. For a typical field with a small building such as a press box or concession stand behind the back stop, an IPA1 or IPA2 system is a great option. One speaker can be pointed towards 1st base and one towards 3rd base and both the stands and field will share excellent audio.

Depending on the size of the stands, height and location of the press box and other factors, the Vienna or Noho speakers can be used. As always, systems can easily be customized with additional speakers for optimum performance.

Mounting Options

Depending on the specifics of the structure, either the standard Technomad wall mount (included with the IPA systems) or yoke mount bracket can be used.

Equipment List

IPA1 system:

- 2x Vienna loudspeakers
- 2x 50' speaker cables
- 2x stainless wall mounts
- 1x control rack with amplifier, audio mixer, power distribution unit and wired microphone

IPA2 system:

- 2x Noho loudspeakers
- 2x 50' speaker cables
- 2x stainless wall mounts
- 1x control rack with amplifier, audio mixer, power distribution unit and wired microphone

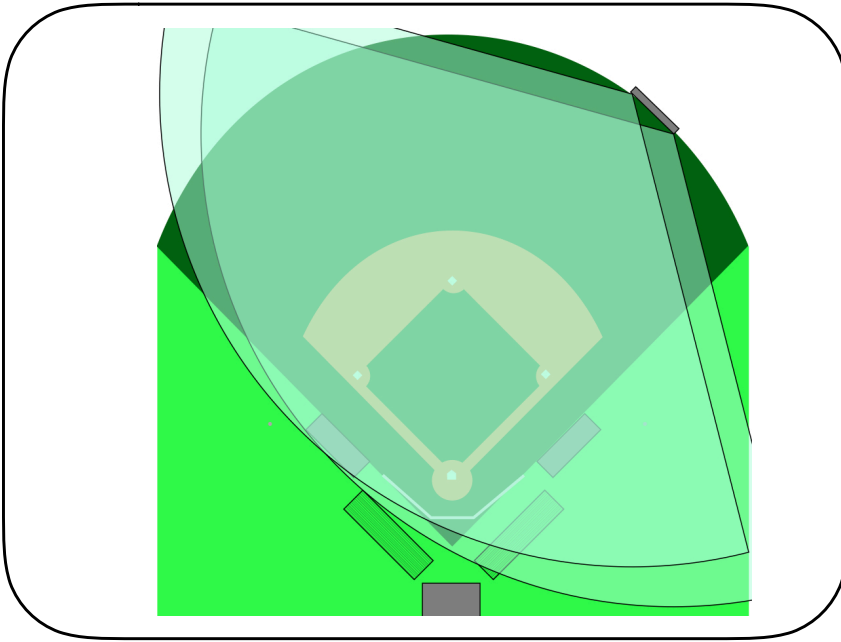
System Expansions

Up to four additional speakers can be added to the system without needing a second amplifier.

System Options

- Wireless microphone (headset or handheld)
- CD player
- Touchdown™ player
- ADA system

Baseball / Softball Field, Score Board Installation



Option 1:
Scoreboard1, Scoreboard2 or
Scoreboard3 system
DesktopBox, BreakoutBox or Source
Rack
TwistedPair™ or wireless audio link

Option 2:
IPA2 system with 70V upgrade

Overview

Typically scoreboards are located farther from the core audience for the audio system than with a press box installation. Therefore Scoreboard2 and Scoreboard3 systems, featuring higher output Noho and Berlin speakers, are often the best building block for a scoreboard system. For a smaller field, the Scoreboard1 may be sufficient. The speakers are driven by an appropriate size PowerChiton amplifier. The audio source can be a DesktopBox or ControlRack located in the press box and linked to the PowerChiton via direct balanced audio cabling connection, CAT5 TwistedPair connection or wireless. If there is no sheltered location, a BreakoutBox or BreakoutBox XL can be used.

Available source options such as wireless microphone systems, CD or audio players, etc... can be installed into the rack or DesktopBox, either as factory options or at a later date.

Mounting Options

Depending on the specifics of the scoreboard, either the standard Technomad wall mount or yoke mount bracket can be used. The Scoreboard systems include yoke brackets as standard config.

Equipment List

Scoreboard1:
2x Vienna w/ PowerChiton1, yoke brackets
Scoreboard2:
2x Noho w/ PowerChiton3, yoke brackets
Scoreboard3:
2x Berlin w/ PowerChiton3, yoke brackets
Scoreboard4:
4x Berlin w/ 2x PowerChiton3, yoke brackets

Source1 Rack, DesktopBox, BreakoutBox XL

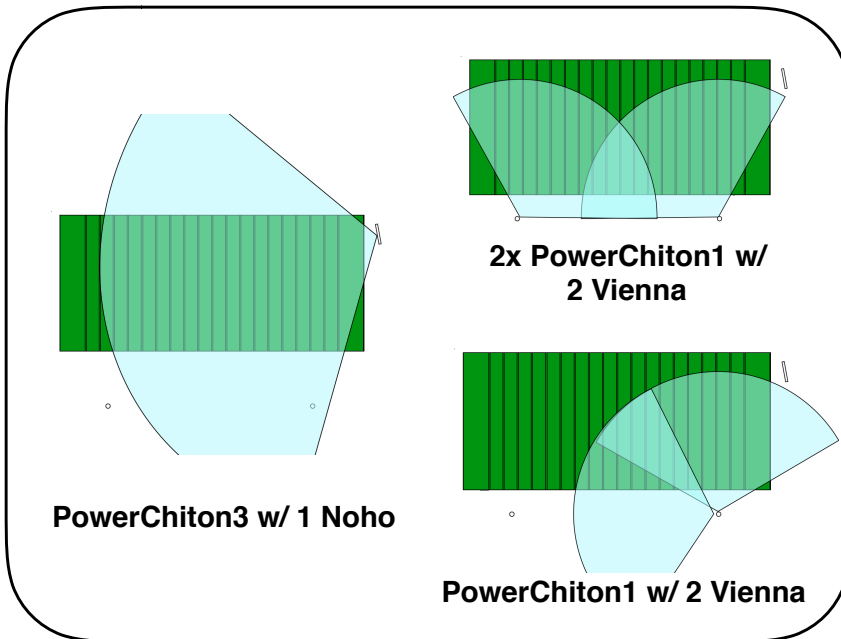
System Expansions

Additional PowerChitons can be added to power extra speakers and subwoofers as needed. The audio feed from the press box can be split as needed.

System Options

Wireless microphone (headset or handheld)
CD player
Touchdown™ player
ADA system

Soccer / Practice Field, Score Board / Light Pole Installation



Small Field, small coverage area:
PowerChiton1 and 1-2 Vienna speakers
Wall or Yoke Mount Brackets
BreakoutBox, BreakoutBox XL or
FieldBox
TwistedPair™ or wireless audio link

Option 2:
PowerChiton2 and 1-2 Noho speakers
Wall or Yoke Mount Brackets
BreakoutBox, BreakoutBox XL or
FieldBox
TwistedPair™ or wireless audio link

Overview

Often soccer fields and practice football fields are built without press box or other structures. For these sites, a combination of PowerChiton amp, Technomad Noho or Vienna speakers and a BreakoutBox or FieldBox is a great solution.

One or two speakers are driven by the appropriate PowerChiton. The audio source is a BreakoutBox or FieldBox. The source can be linked to the PowerChiton via direct balanced audio cabling connection, CAT5 TwistedPair connection or wireless link. This allows the audio source location to be located at the scoreboard or lighting pole or right at the announcer's location. For the BreakoutBox installed at distance over 100' from the PowerChiton, it is necessary to supply AC power for the unit and order the AC power option.

Mounting Options

Depending on the specifics of the scoreboard, either the standard Technomad wall mount or yoke mount bracket can be used.

Equipment List

Small fields / installations close to listeners

- 1-2 Vienna loudspeakers
- 1-2 25' speaker cables
- 1-2 wall mounts or yoke mounts
- 1x FieldBox, BreakoutBox or BreakoutBox XL

Large fields / installations farther from listeners

- 1-2 Noho loudspeakers
- 1-2 25' speaker cables
- 1-2 wall mounts or yoke mounts
- 1x FieldBox, BreakoutBox or BreakoutBox XL

System Expansions

Additional PowerChitons can be added to power extra speakers and subwoofers as needed. The audio feed from the source location can be split as needed.

System Options

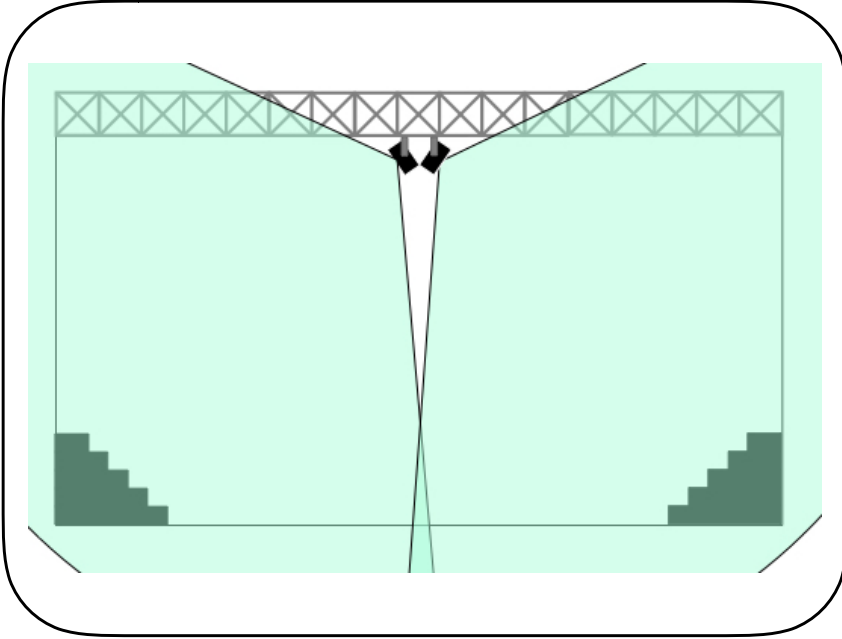
FieldBox Only:

- CD player
- Touchdown™ player
- ADA system
- Battery power

FieldBox/BreakoutBox XL:

- Wireless microphone (handheld or headset)

Gymnasium / Natatorium, Ceiling Installation



Option 1:
PowerChiton3
2x install Noho loudspeakers
2x Noho yoke mount brackets
BreakoutBox XL
Wireless audio or Twisted Pair link

Option 2:
IPA2 system
70V upgrade for speakers and amp
Yoke mount bracket upgrade
200' cable upgrade

Overview

A pair of Noho loudspeakers mounted centrally on the ceiling of a gymnasium or swimming pool area is a great solution. Typically one speaker each will be pointed towards each set of bleachers. The speakers will provide both excellent, articulate voice reproduction but have sufficient low frequency output to provide deep, powerful music playback as well.

Mounting Options

The Noho speakers can be suspended from the appropriate ceiling structure with Noho yoke mount brackets. A rigging professional should be consulted for any installation where the speakers will be mounted directly above people.

Cabling / Electronics

There are two options which can be used to drive the speakers. One, a PowerChiton3 can be installed adjacent to the speakers and then linked back to a BreakoutBox or DesktopBox at the source location with a twisted pair or wireless link. Alternately, an IPA2 system can be used with the 70V and cable length upgrade. The longer cable and 70V upgrade is typically needed due to the long cable distances needed to connect the rack to the speakers.

Equipment List

Option 1:
2 Noho loudspeakers
2 10' speaker cables
2 Noho yoke mounts
1x FieldBox, BreakoutBox or BreakoutBox XL
1x PowerChiton 3
Wireless or Twisted Pair link set

Option 2
IPA2 system
70V upgrade
200' cable upgrade
Yoke mount upgrade

System Expansions

Additional extra speakers and subwoofers can be as needed. Additional amplifiers will be needed.

System Options

CD player
Touchdown™ player
ADA system
Wireless microphone (handheld or headset)