

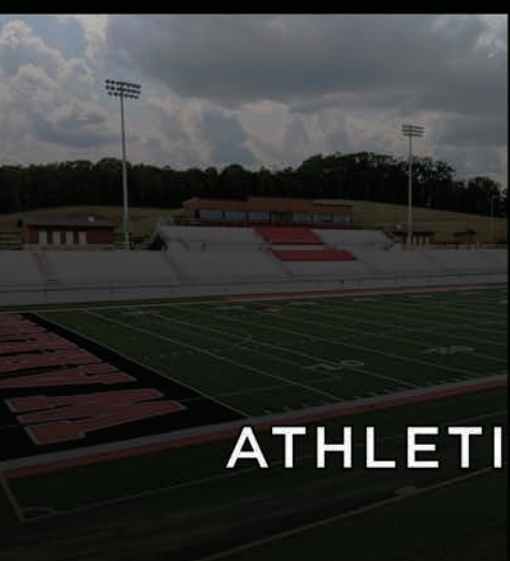
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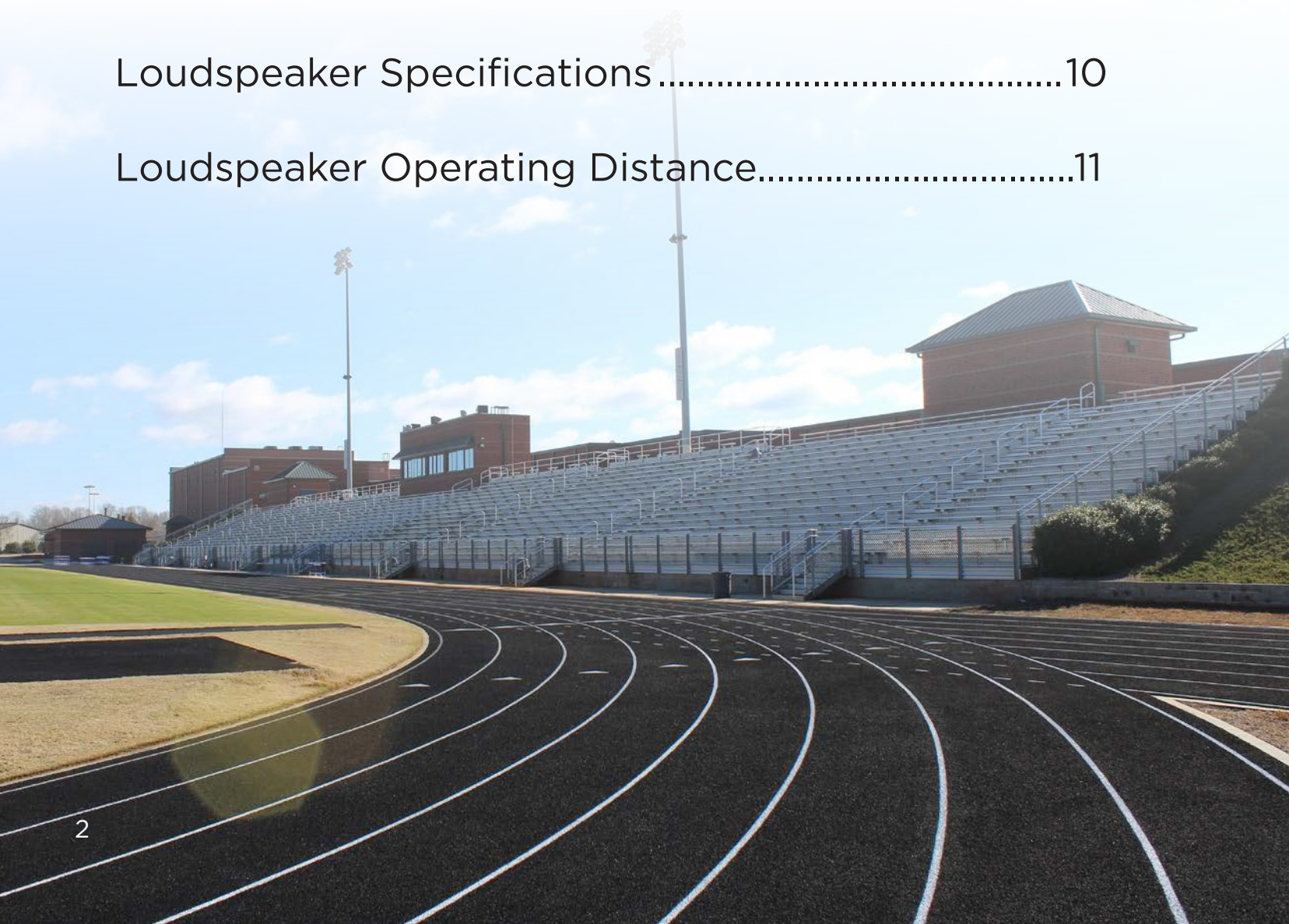
DANLEY
SOUND LABS



ATHLETIC FACILITY DESIGN GUIDE

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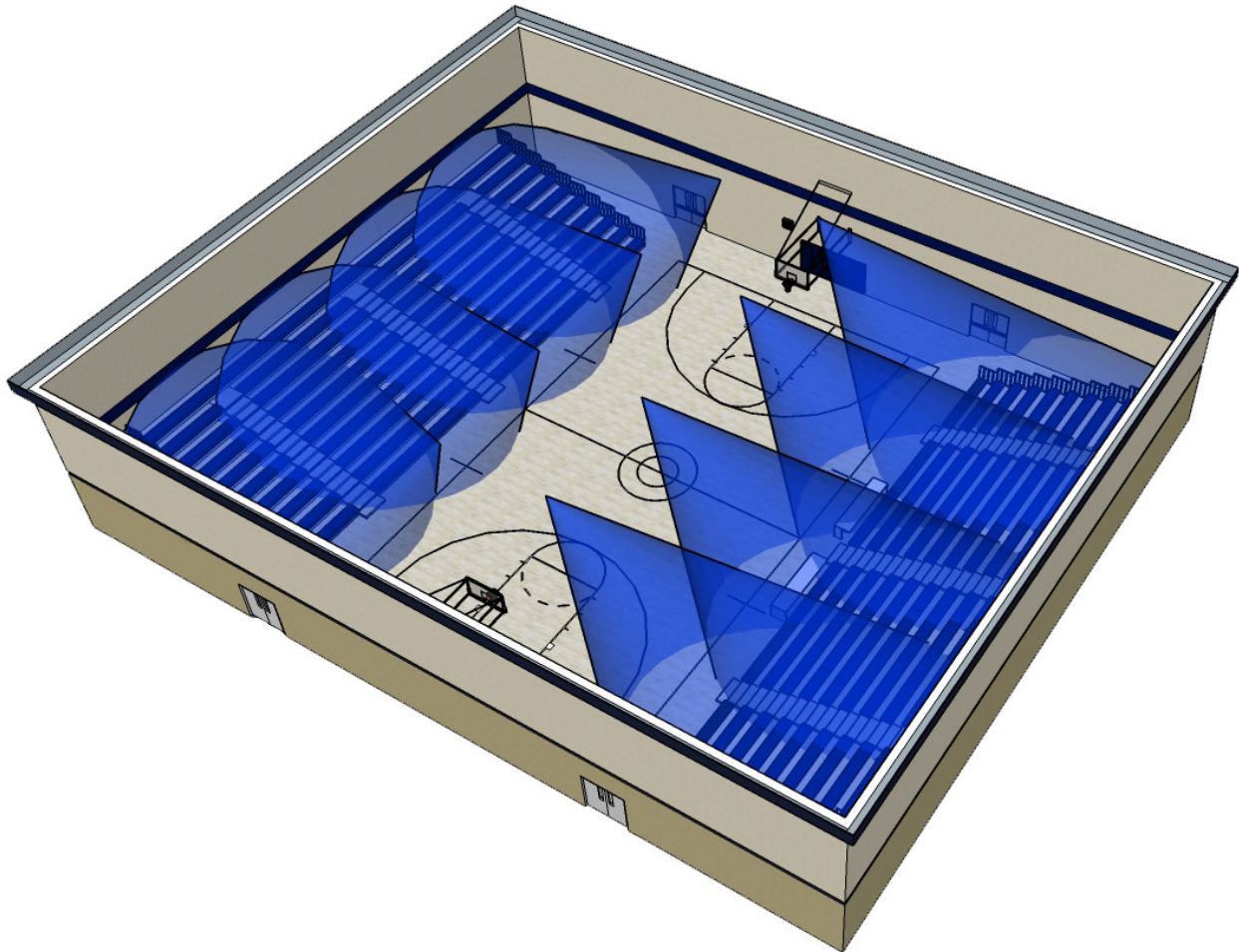
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BASKETBALL COURT

Design Overview:

A very common Basketball court design utilizes distributed speakers. Six to cover the bleachers and two to cover the court. Here are a few examples of different product solutions.



Option 1 - (8) OS12CX - (2) DNA5K4c shown above

The most economical solution with great clarity and wide coverage. Add a THmini15 hung above center court to supplement lower frequency information.

Option 2 - (8) OS12CX or OS80 - (2) DNA5K4c

Provides more output and tighter pattern control than Option 1 when needed. Add (2) TH118 hung above center court to supplement lower frequency information.

Option 3 - (8) SH69 - (2) DNA10K4 Pro

This option is used in larger facilities. It increases output levels and adds the benefit of lower frequency pattern control offered in option 2. Add (2) TH118 hung above center court to supplement lower frequency information.

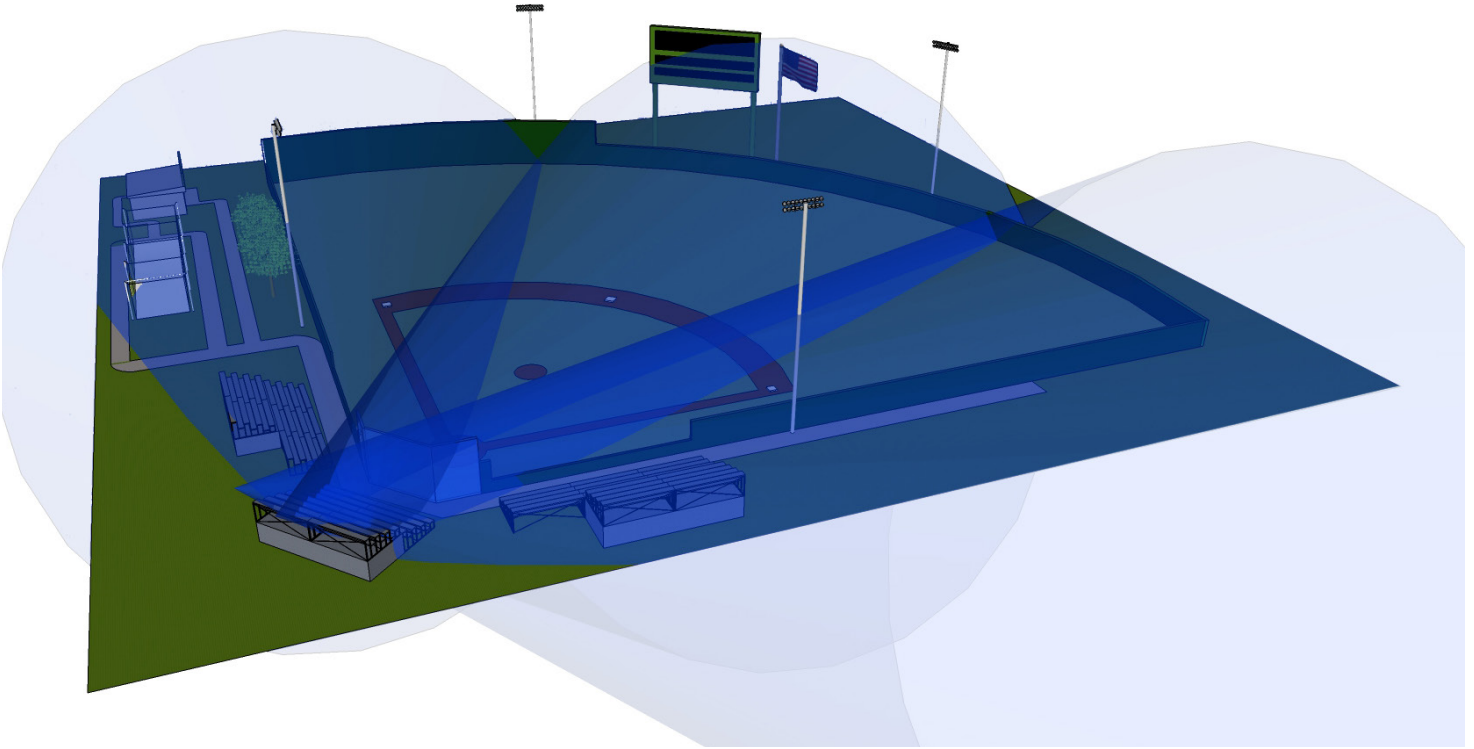
Option 4 - (8) SH96 or SH96HO - (2 or 3) DNA20K4 Pro

This option is also used in larger facilities but with even more output than option 3. Add (1) BC415 hung above center court to supplement lower frequency information.

BASEBALL FIELD

Design Overview:

There are many different approaches for these field designs. Designs will vary based on location of power, press box (if present), coverage, voice/music requirements and SPL levels needed.



Option 1 - (3) Go2 8CX - (1) OS80 or OS12CX - (1) DNA5K4c

This common set-up utilizes (1) OS product, mounted on top of the press box to cover the field. (3) Go2 8CX are mounted under the press box eaves to cover the center, left and right side bleacher sections. Add an OS115 or THmini15AT for additional low-end.

Option 2 - (2) OS80 - (1) DNA5K4c

When neither power nor a press box are available near home plate, (2) OS80 are mounted high on poles behind left/right fields, aimed to cover the field and bleachers.

Option 3 - (1) OS12CX - (1) DNA5K4c

This option is used in small fields where lower output is needed. Typically (1) OS100 is mounted on a pole behind center field facing in, towards home plate, or off of the press box.

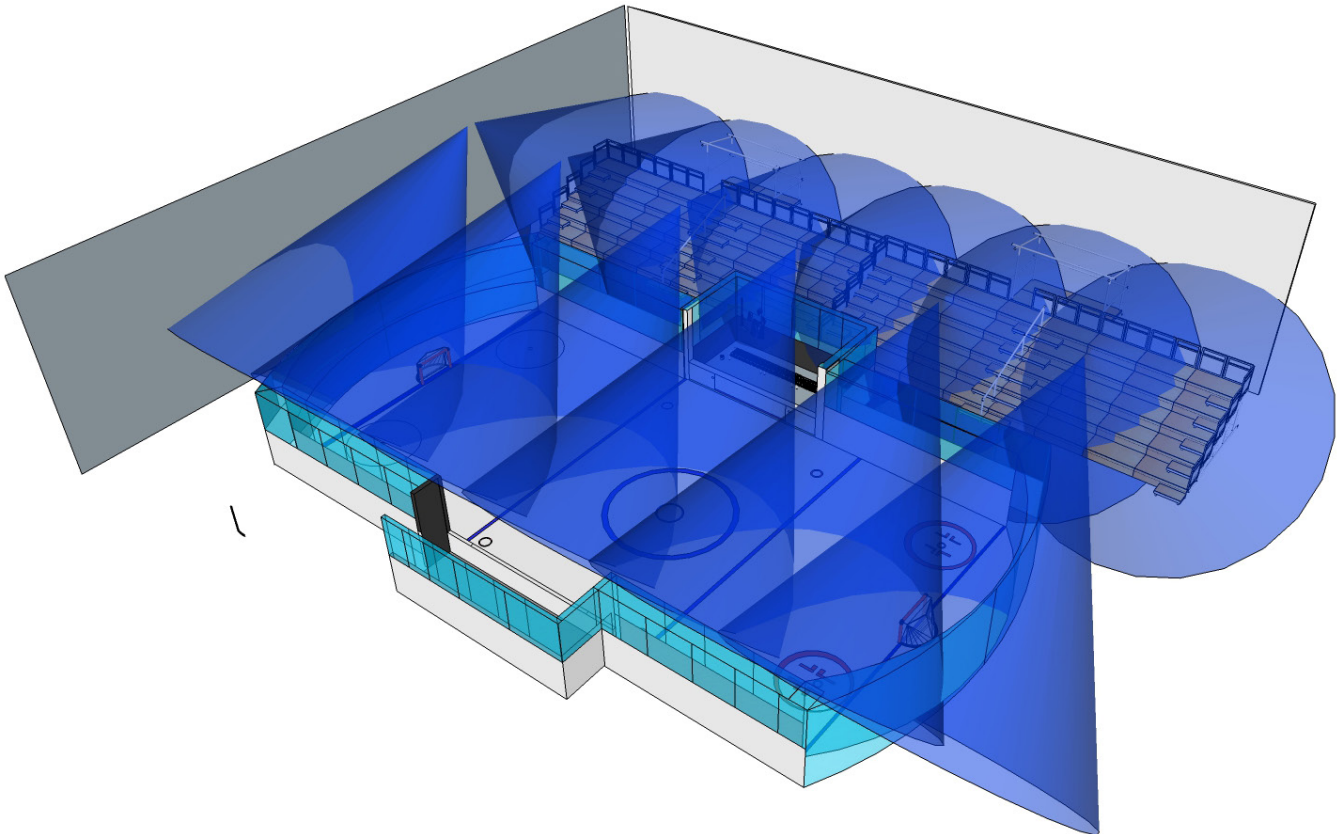
Option 4 (shown above) - (3) OS80 - (1) DNA5K4c

When higher SPL is required, (3) OS80 are mounted on the press box to cover L, R and Center. An OS115, TH118AT or THmini15AT is recommended for low frequency extension.

HOCKEY ARENA

Design Overview:

A very common hockey rink design utilizes an exploded central cluster. (6) OS80 to cover the seating/viewing areas and ice surface. Another common design places a row of loudspeakers over the glass and others covering the ice in a distributed manner. This design is best utilized when there is seating on only one side. A fully distributed system is yet another common approach.



Option 1 - (6) OS80 - (1) DNA10K4 Pro

The exploded central cluster approach offers a centralized point of source. Add (2) TH118 hung above center ice to supplement lower frequency information.

Option 2 (shown above)

(6) OS12CX or Go2 8CX (seating) & (6) OS12CX or Go2 8CX (ice surface) - (2) DNA5K4c

Provides a distributed style system with a row of speakers above the glass. Add a THMini15 or OS115 to supplement lower frequency information.

Option 3 - OS12CX or Go2 8CX - (1) DNA5K4c

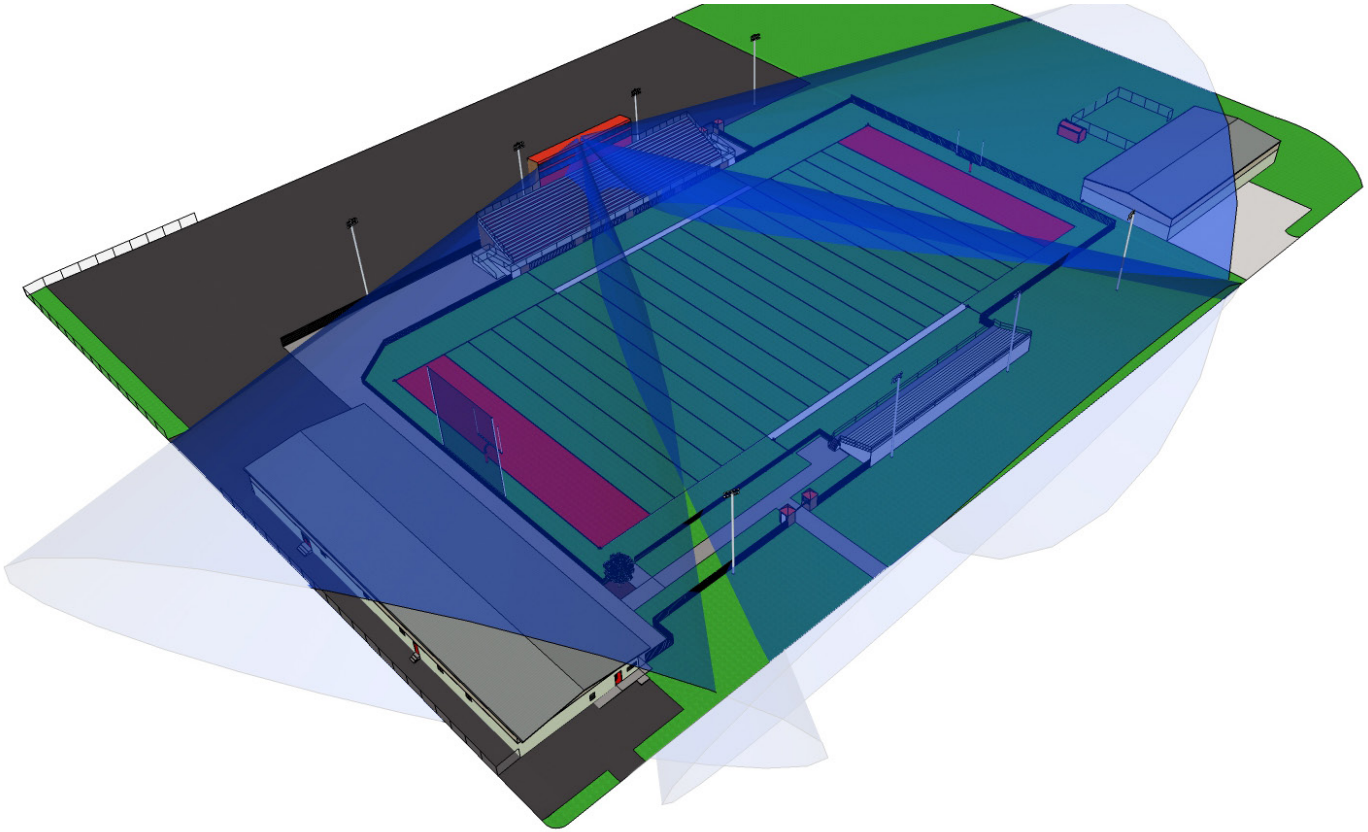
This option is used in facilities with a lower ceiling and easy access to evenly mount a fully distributed system. Evenly spaced loudspeakers located close to the audience can operate at lower levels, and provide uniform coverage while keeping the overall room reverberation at a minimum.

*Designs shown are common examples, but actual solutions for your facility may vary. Danley Sound Labs can assist in designing a system that is perfect for your facility!

FOOTBALL FIELD

Design Overview:

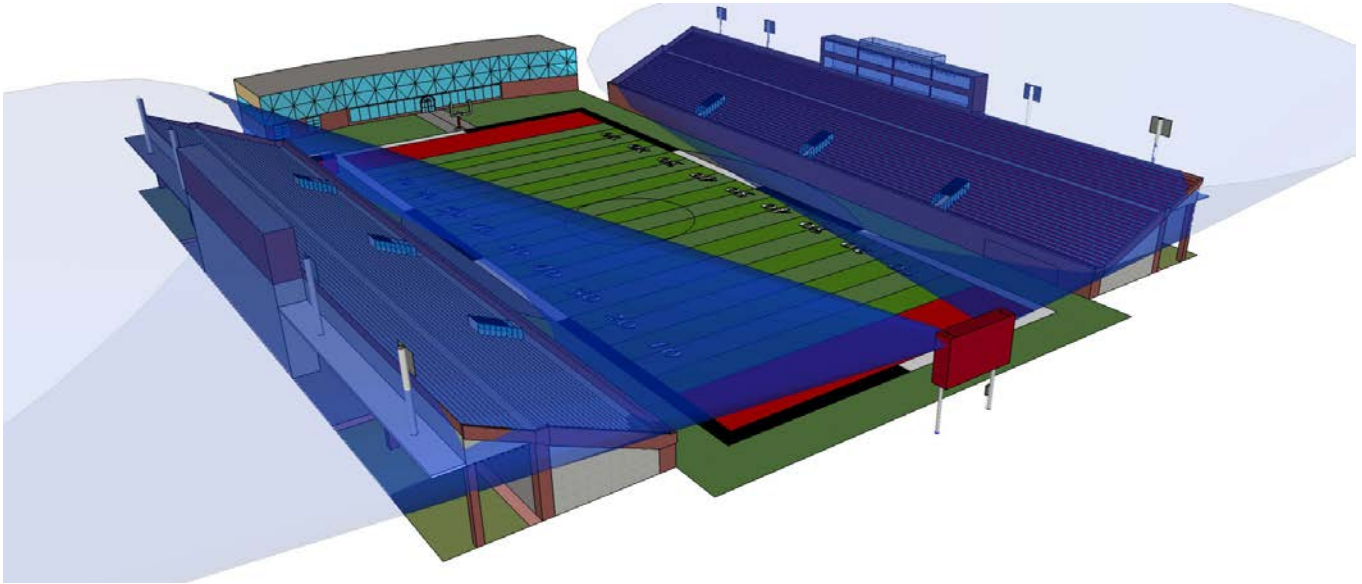
Football field designs run the gamut from small high school fields with a minimum budget to the Pro League facilities usually requiring much higher performance. Both single source (Scoreboard) and distributed systems are commonly used.



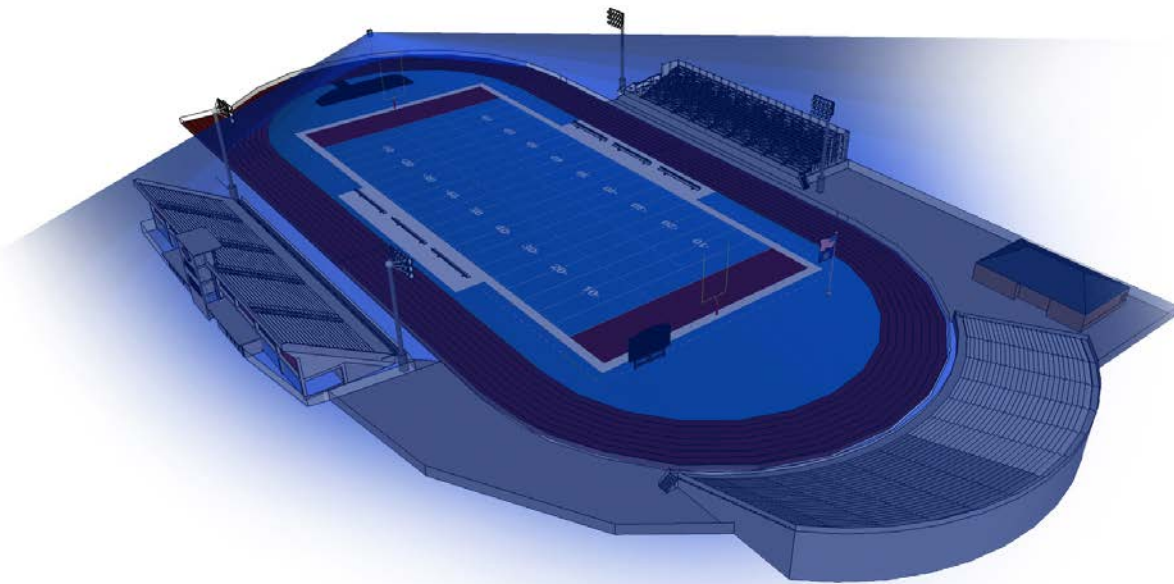
Option 1 (shown above) - (3) OS80/OS12CX - (1) DNA5K4c

This popular High School set-up utilizes (3) OS products mounted on top of the press box to cover center, left and right side bleacher sections. The center speaker is aimed to cover the visitors side as well as the home central seating area. Additional OS115 or TH118AT subs can be added to help reinforce low-end frequency response.





Option 2 (shown above) - (2) SH62AT or (2) J3-62 - (1 or 2) DNA20K4 Pro
Two SH62AT placed at the scoreboard evenly cover both the home and away seating areas with full range audio. Both will also cover the playing field. Upgrade to a pair of J3-64 to increase SPL levels. Add a BC series subwoofer to maximize low end performance.



Option 3 (shown above) - (1) J1-94AT - (1) DNA20K4 Pro
A single J1-94AT placed at the scoreboard can deliver high output and even coverage on both the field and seating areas. A variety of J Series products are available to extend coverage, frequency response and SPL levels to whatever size venue is required*.

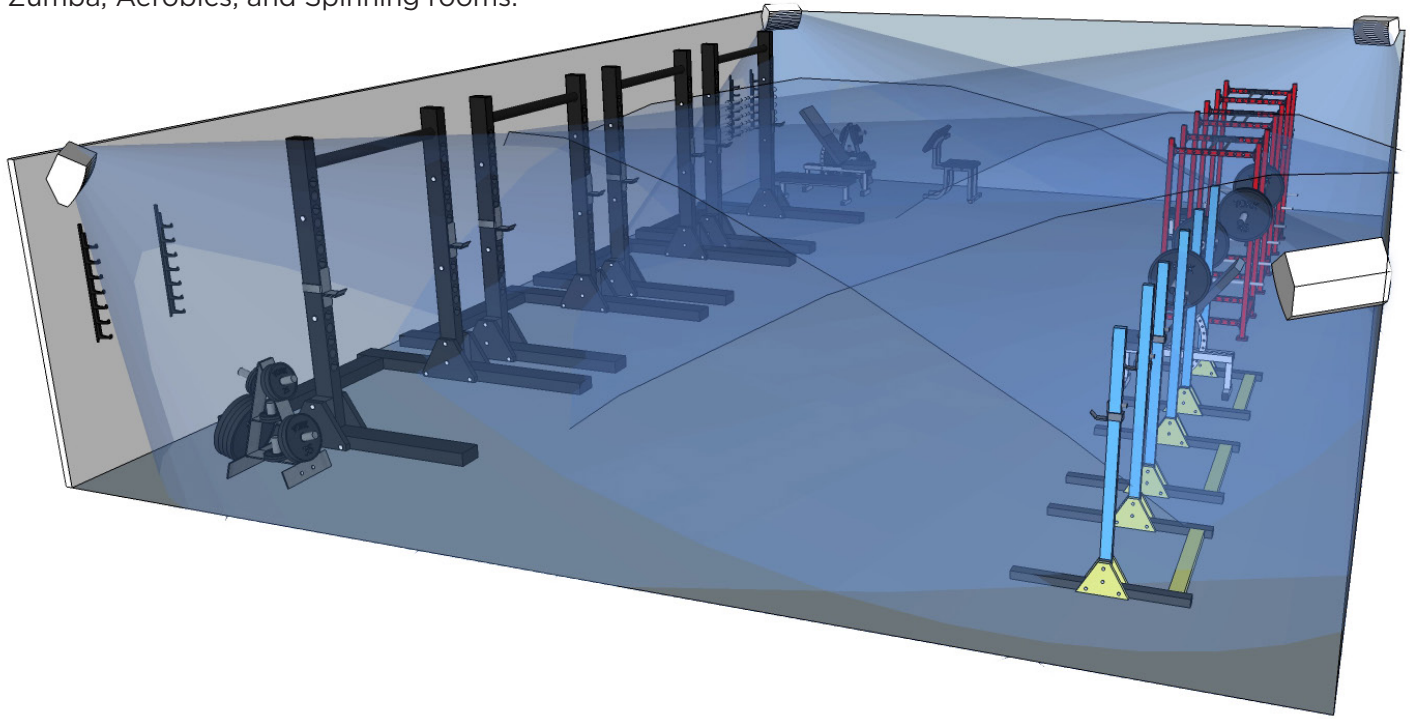
*Danley dominates the share of 100,000+ seat facilities in the USA because of performance, intelligibility and value!



FITNESS ROOM

Design Overview:

These rooms vary in size and volume requirements, but typically need sound spread evenly around all the weight equipment and exercise areas as background music. In some instances however, having more of a typical PA system is useful when an instructor is involved, facing a group of participants such as in Yoga, Zumba, Aerobics, and Spinning rooms.

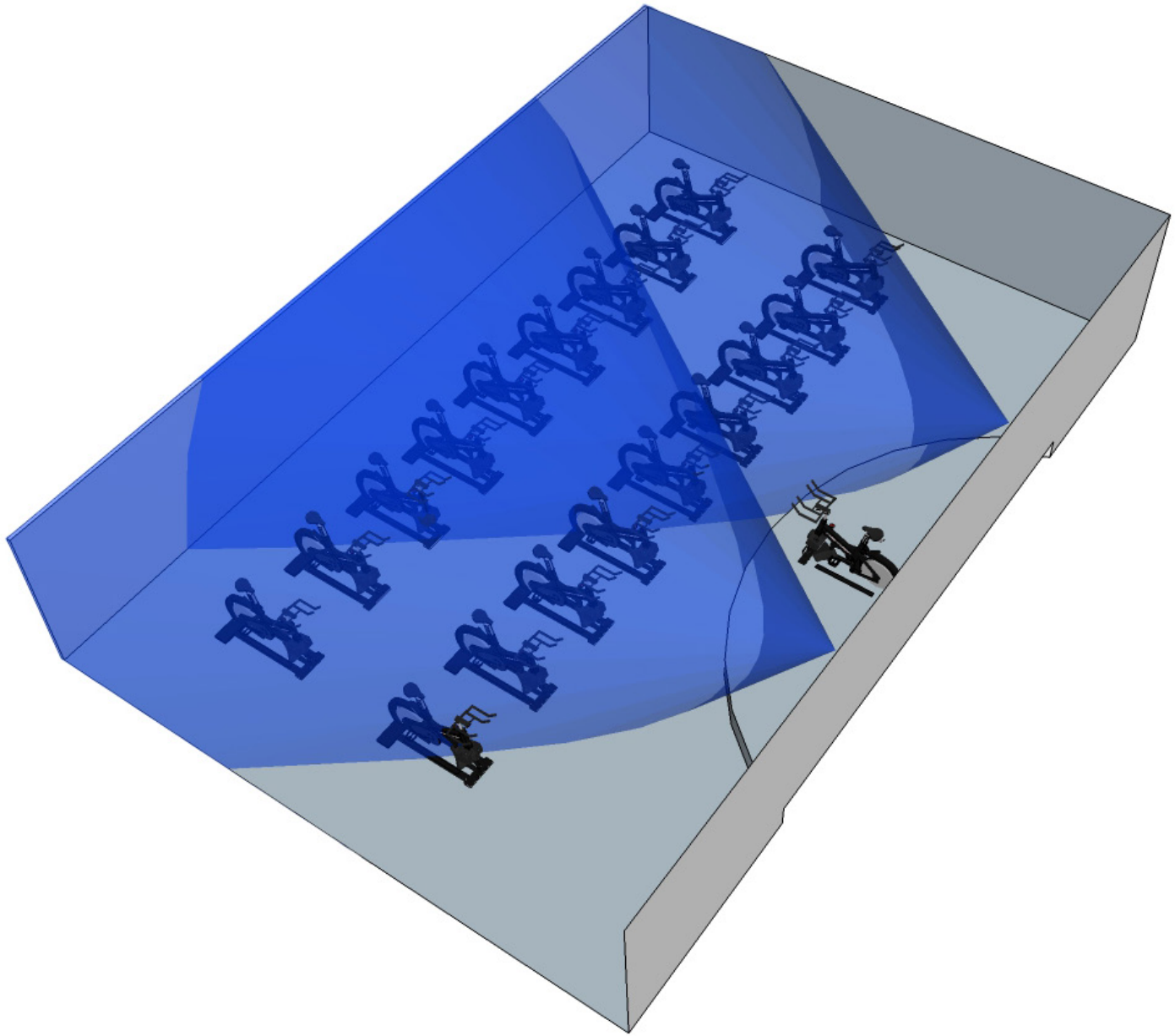


Option 1 - (4) Go2 8CX - (1) DNA5K4c

Where background music is needed, Go2 8CX speakers can be used to each cover a 20-30 square foot radius. In the example shown above, (1) Go2 8CX is mounted in each of the room corners aimed towards the center of the room. In larger and or longer rooms, the speakers could be mounted on the walls and spread out for even coverage. Even though the Go2 8CX has a great low frequency response, additional subwoofers like the THmini, THmini15, etc. can be used to enhance the low end frequencies.



SPINNING ROOM



Option 2 - (2) Go2 8CX - (1) DNA5K4c

Where trainers are involved leading a class, sound is typically projected from front to back of the space. One or two Go2 8CX speakers would be mounted left and right (or centered if one) on the front wall facing the class. In larger, deeper or wider rooms, additional Go2s could be used to cover the additional area requirements. Even though the Go2 8CX have a great low frequency response, additional subwoofers like the THmini, THmini15, etc. can be used to enhance the low end frequencies.

*Designs shown are common examples, but actual solutions for your facility may vary. Danley Sound Labs can assist in designing a system that is perfect for your facility!

Product Specifications



OS12CX

Frequency Response 57Hz-24KHz
SPL 121dB Cont. 127dB Peak @ 1m
Sensitivity @ 1m (2.83V) 95dB SPL
Power Handling 800 W Prog.
Impedance 8 Ohm
Coverage 100° Conical
Size H/W/D 32.25"x27"x10.7"
Weight 40 lbs / 18.14 Kg



OS80

Frequency Response 70Hz-19KHz
SPL 127dB Cont. 133dB Peak @ 1m
Sensitivity @ 1m (2.83V) 101dB SPL
Power Handling 800 W Prog.
Impedance 8 Ohm
Coverage 80° Conical
Size H/W/D 32.25"x26"x14.5"
Weight 51 lbs / 23 Kg



OS115

Frequency Response 45Hz-800Hz
SPL 129dB Cont. 135dB Peak @ 1m
Sensitivity @ 1m (2.83V) 99dB SPL
Power Handling 2000 W Prog.
Impedance 8 Ohm
Size H/W/D 32.25"x26"x14.5"
Weight 80 lbs / 36 Kg



GO2 8CX

Frequency Response 51Hz-21KHz
SPL 115dB Cont. 121dB Peak @ 1m
Sensitivity @ 1m (2.83V) 90dB SPL
Power Handling 640 W Prog.
Impedance 8 Ohm
Coverage 100°H x 100°V
Size H/W/D 12.75"x22"x9"
Weight 23 lbs / 10.5 Kg



SH62

Frequency Response 70Hz-18KHz
SPL LOW 133dB Cont. 139dB Peak @ 1m
HIGH 142dB Cont. 149dB Peak @ 1m
Sensitivity @ 1m (2.83V) LOW 103dB SPL
HIGH 109dB SPL
Power Handling 4000 W Prog.
Impedance 4 Ohm
Coverage 60°H x 40°V
Size H/W/D 23"x36"x30"
Weight 235 lbs / 106.5 Kg



J1-94

Frequency Response 37Hz-24KHz
SPL 148dB Cont. 151dB Peak @ 1m
Power Handling L-21.6K, M-2.4K, H-1.6K
Impedance L-6x 4, M-2x 2, H-1x 4
Coverage 90°H x 40°V
Size H/W/D 60"x45"x30"
Weight 720 lbs / 327 Kg



TH118

Frequency Response 28Hz-300Hz
SPL 137dB Cont. 143dB Peak @ 1m
Sensitivity @ 1m (2.83V) 108dB SPL
Power Handling 3600 W Prog
Impedance 4 Ohms
Size H/W/D 40"x22.5"x28.5"
Weight 160lbs / 72.6 Kg



Given distance is the point where inverse square law reduces the output to 90 dB SPL

Results are formulated using continuous power ratings.



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