Pickleball Sound

(and a couple other sports' sounds)

Considerations

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What does pickleball sound like and how does it compare to tennis?

An eight court recording

The Sound level?

The “Pitch”?

Other Sounds?

Comments on Human Hearing

Tolerable Levels of Pickleball Sound and Restrictions

Ordinances *All over but 55 dBA is common*

ANSI standards *55 dBA*

Ordinary Background Noise Levels *45 dBA*

Court Uses and Hours *Daytime*

Private courts vs public courts *Bluelist Paddles and Onix Balls*

How loud is it?

70 dBA LAFmax at 100 feet over hard ground or water or lower 98% of the time!

~ 60 dBA at 100 feet with a 10 ft high effective barrier

-If we subtract 6 dB when the distance doubles, we get 54 dBA at 200 ft.

Mitigation

Location

Hours

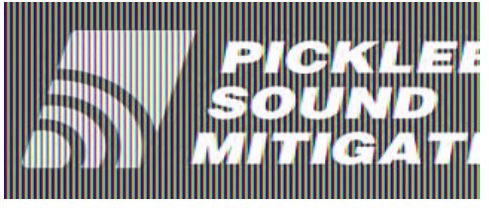
Vegetation

The Lake Effect

Blocking the Line-of-sight view Barriers: Reflecting and Absorbing

Quieter Paddles and Balls

Examples



Barriers

Walls

Mass-Loaded-Vinyl 1 oz to 24 oz/sq ft; 2 to 27 decibels of STC

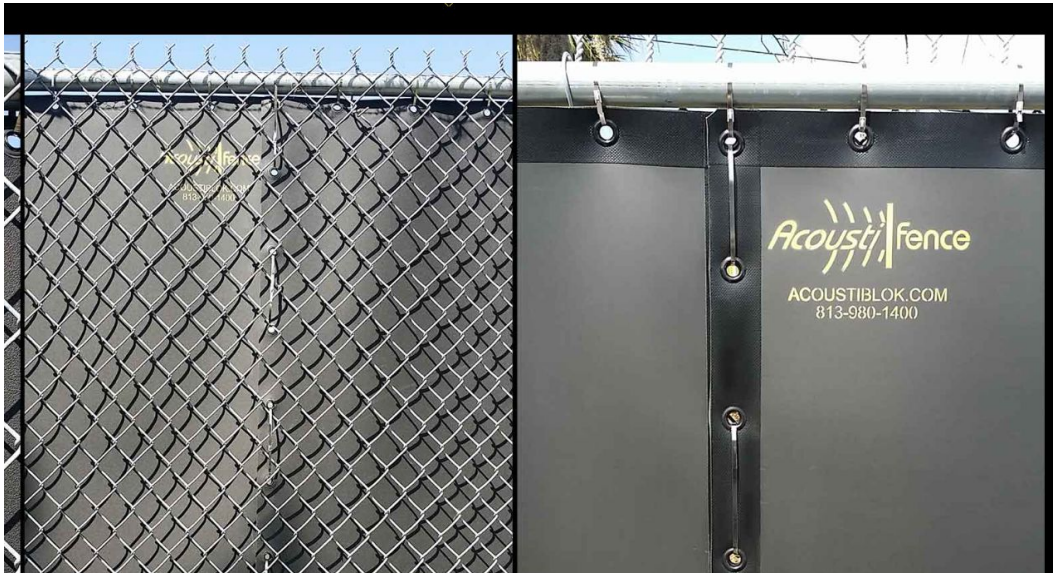
Ordinary Vinyl including Clear

Glass

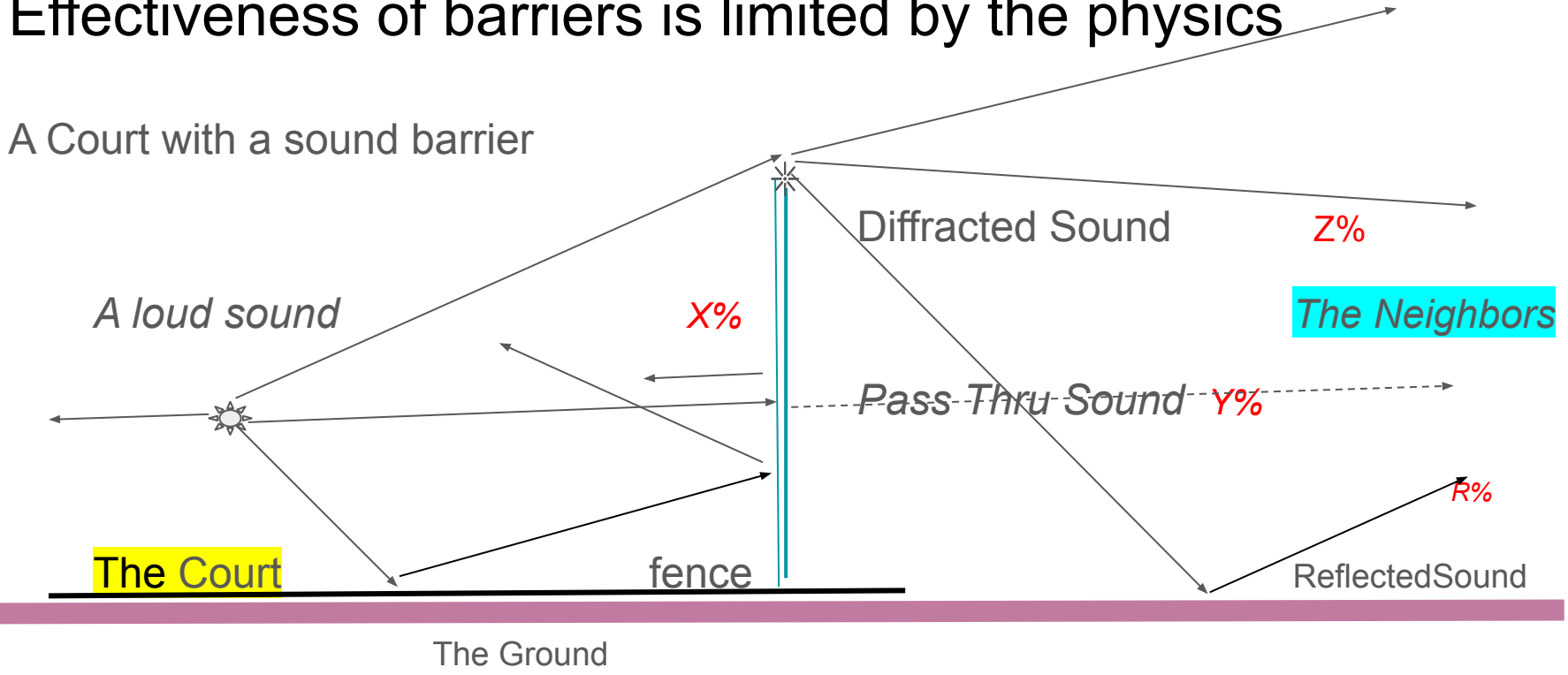
Earth

Shrubbery

Quilted Sound Barriers



Effectiveness of barriers is limited by the physics



Effectiveness of Barriers

We can measure this in percentages but decibels are easier

MLV: Thru loss (STC): ~0.5% to 10% or 27dB to 10 dB Weight Density Dependent

Windscreen: 0.5 dB

A Tree: 1 dB

A 2 ft thick hedge with no thru visibility: ~4 dB

A double pane window: ~ 20 dB

Doubling the distance: 6 dB 10X the distance: 20 dB in open space

Paddles and balls

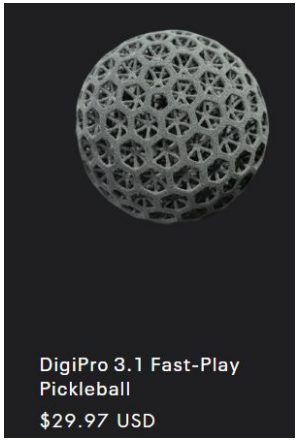
Softer is quieter

Felt Face paddles

Foam Balls

3D printed balls

Enforcement is the key



Pickleball Sound vs

Tennis

Baseball

Basketball

Padel

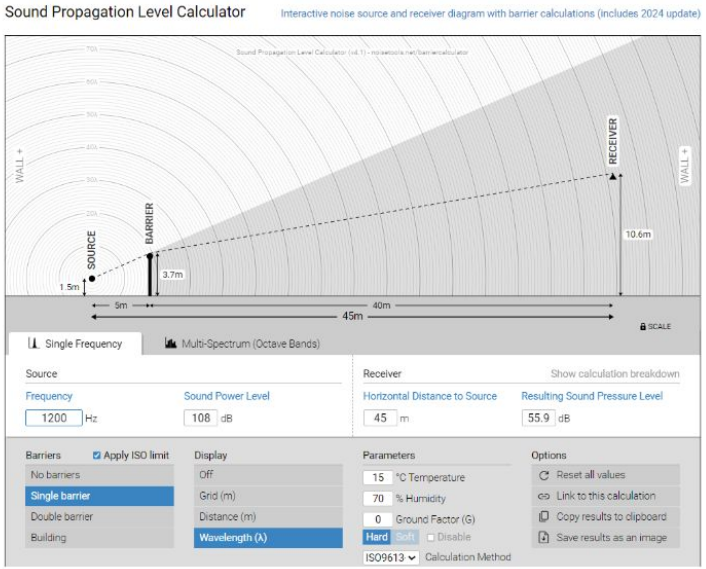
Site Photos

Bonita Bay in Bonita Springs, FL

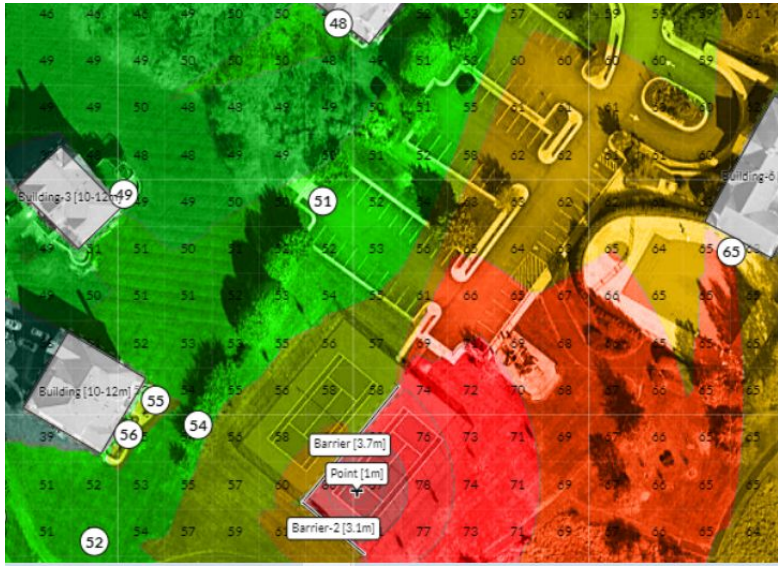
Carlsbad, CA

Soundscape digital mapping

2D barrier calculator



3D Google Earth overlay



Measuring SPL

Sound Level Meter

FRS-1 Recorder

A Phone App

Summary

If neighbors CAN SEE the players, sound could be a problem

Barriers are costly and require very strong fences

Private courts should consider requiring quieter gear

Hire an acoustics firm that has impulsive sound experience and which uses LAFmax readings