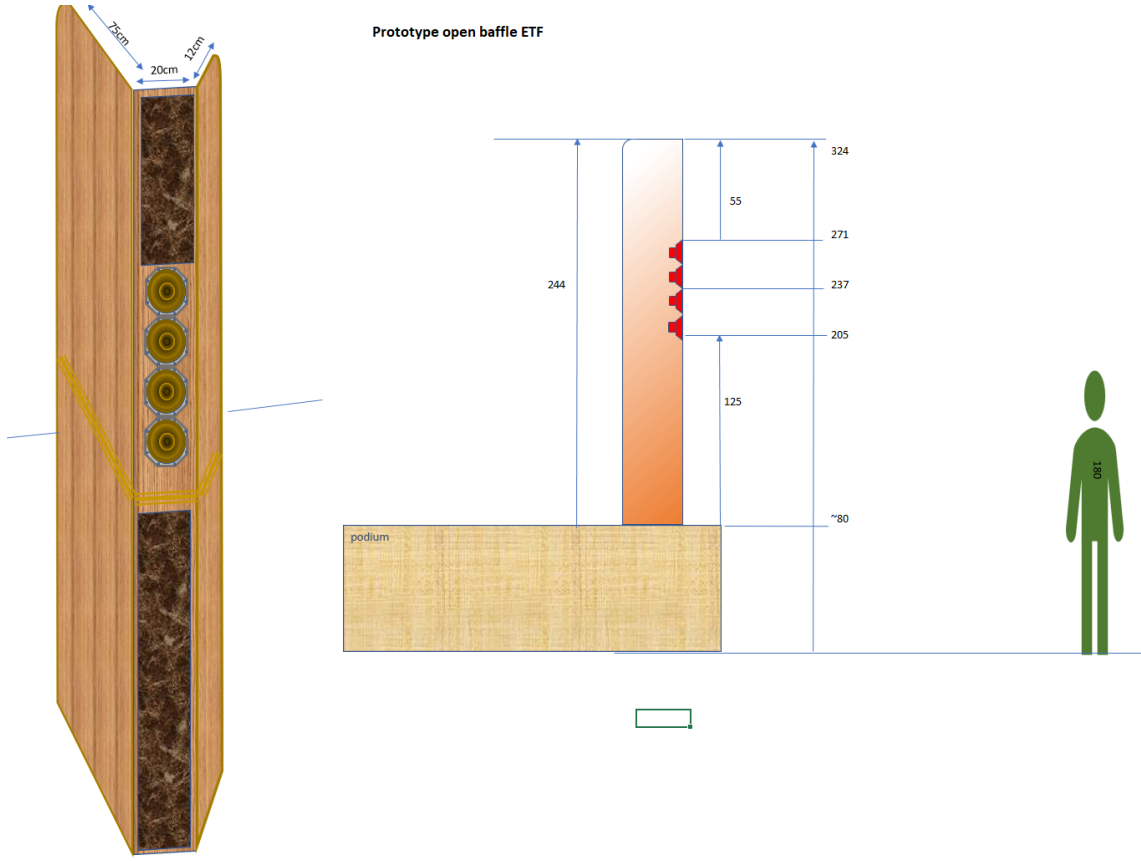


The open baffle what are we dealing with?

- 4 x 800 Ohm speaker, to be placed in vertical array
- Series-parallel connected
- Baffle parts, cleverly linked together.
- Ground is part of baffle
- The setup room is an old chapel that reverberates strongly.
- No damping is applied in the space other than the audience which consists of about 80 people
- The center of the driver array is expected to be between 1.5 and 2 meters in height.

Prototype open baffle ETF



Baffle Edge Diffraction Simulator

By Jeff Bagby Version 1.30

Baffle Dimensions

Width (in)

Height (in)

Speaker Location (From Left Bottom Corner)

X (in)

Y (in)

Baffle Edge Radius

Radius (in)

Speaker Piston Diameter Directivity

Diameter (in)

Observation Point Settings

Mic Distance

Vertical Axial Control

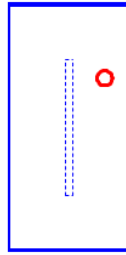
Deg. Off-Axis

Horizontal Axial Control

Deg. Off-Axis

Include Off-Axis Roll-off

Front Baffle View with Driver and Edge Radius



Closed or Open Baffle with Driver Placement



Acknowledgement to Yavuz Aksan for the graphics above

Selected Baffle Mode:

Dipole Open Baffle

Baffle Diffraction Modeled As:

Gain

Save Baffle Diffraction Response to FRD File

Save Chart

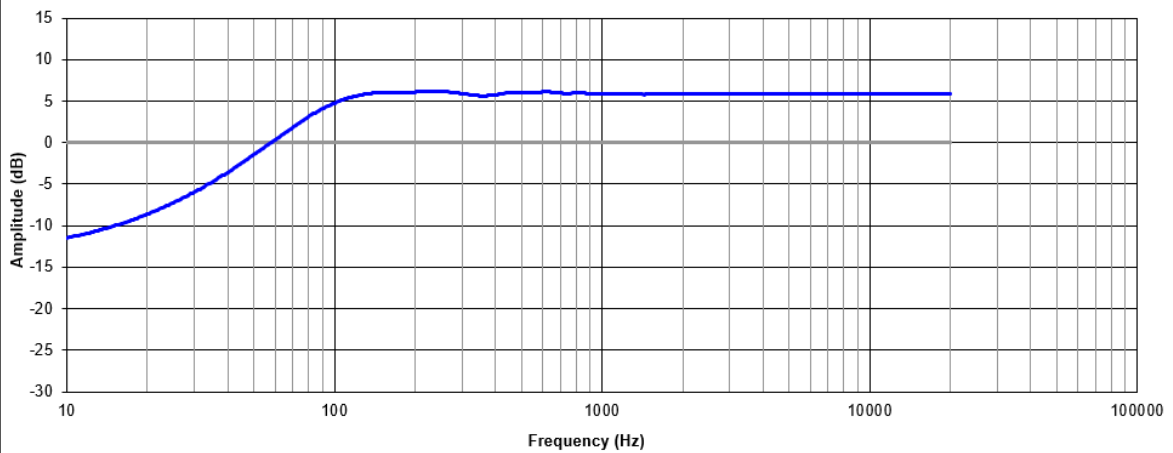
Save Overlay ON

Clear Line

Modeled Baffle Diffraction Response

dB Scale

F Scale



Room Boundary Reinforcement

Boundary Reinforcement Calculation

Height Above Floor (in)

Distance from Rear Wall (in)

Distance from Side Wall (in)

Save Room Boundary Reinforcement to FRD File

Save Room Pressurization Gain to FRD File

Save Combined Boundary and Room Gain to FRD File

Save Combined Baffle and Room Response to FRD File

Room Pressurization Gain Calculation

On/Off

Longest Room Dimension (ft)

No Pressurization in Dipole Mode

Percent Pressurization Leakage

Room Boundary Reinforcement

Boundary Reinforcement Calculation

Height Above Floor (in)	93,31 in	7,78 ft
Distance from Rear Wall (in)	157,00 in	13,08 ft
Distance from Side Wall (in)	157,00 in	13,08 ft

Save Room Boundary Reinforcement to FRD File

Save Room Pressurization Gain to FRD File

Save Combined Boundary and Room Gain to FRD File

Save Combined Baffle and Room Response to FRD File

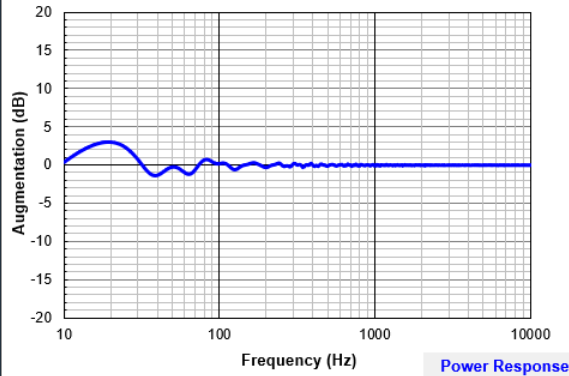
Room Pressurization Gain Calculation

On/Off

Longest Room Dimension (ft)	91,86 ft
No Pressurization in Dipole Mode	<input type="checkbox"/>
Percent Pressurization Leakage	0%

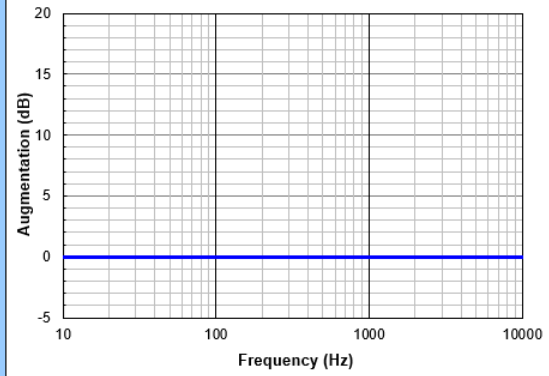
Save Chart

Room Boundary Reinforcement



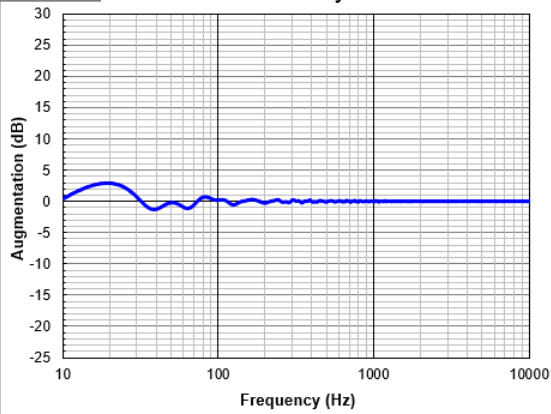
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Room Pressurization Gain Approximation



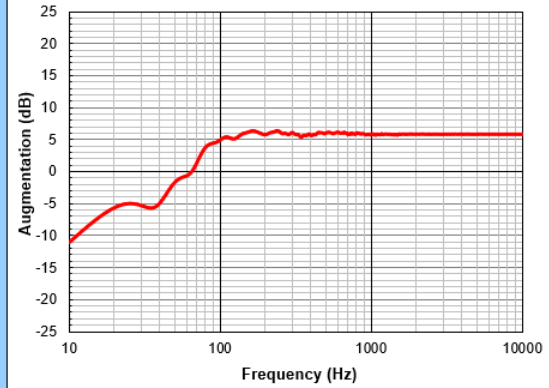
Save Chart

Combined Boundary / Room Gain

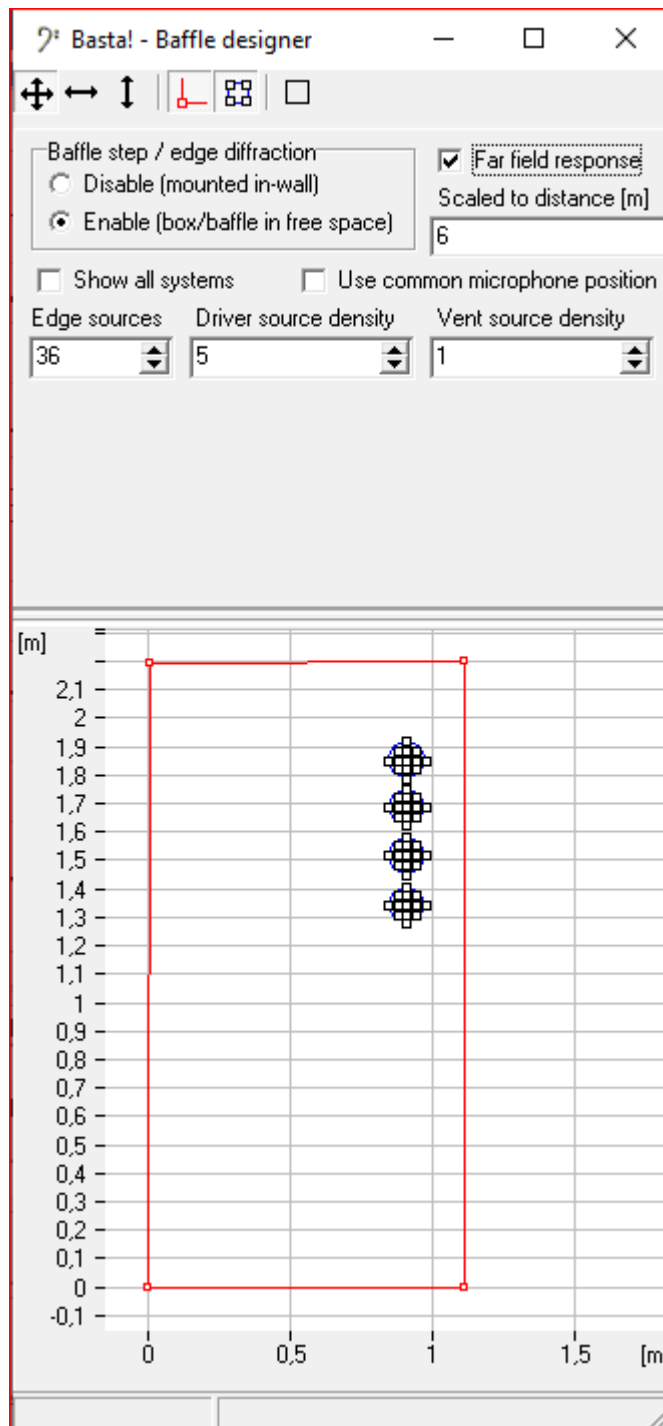


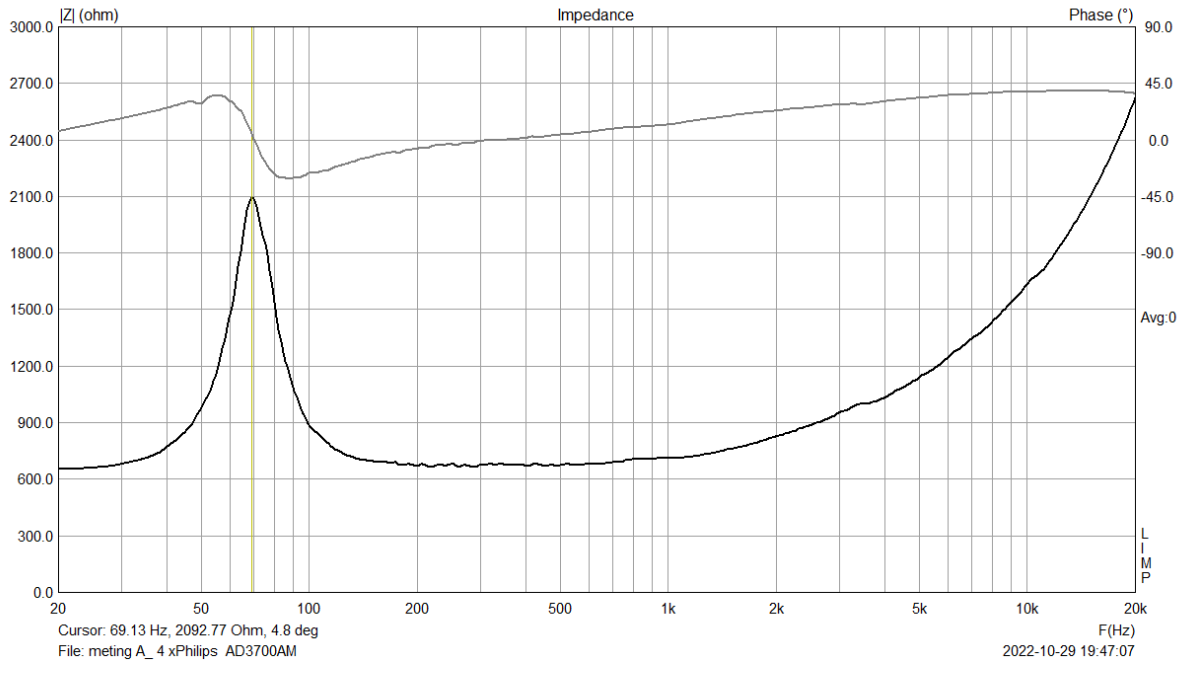
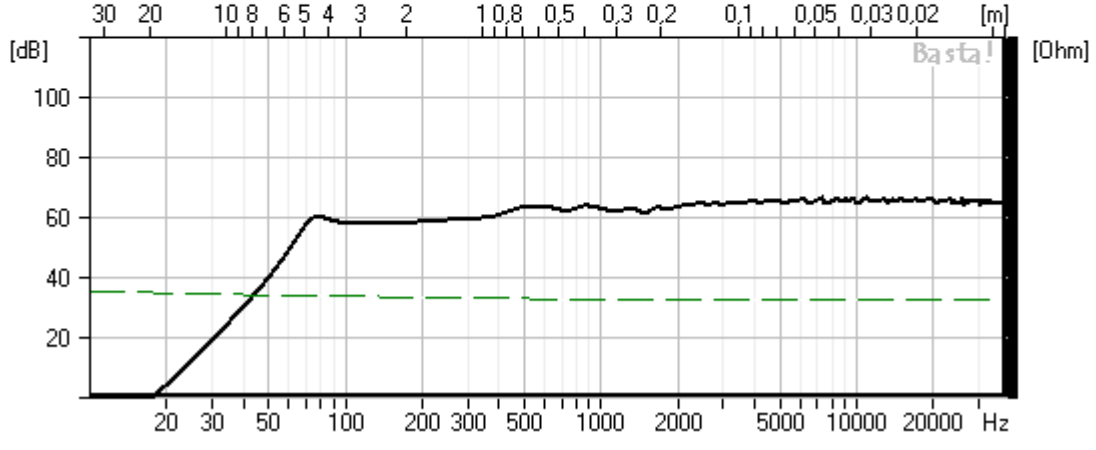
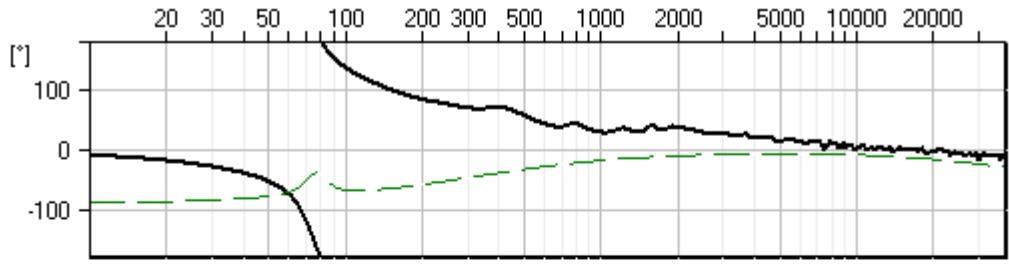
Save Chart

Combined Baffle Diffraction / Room Augmentation Summation

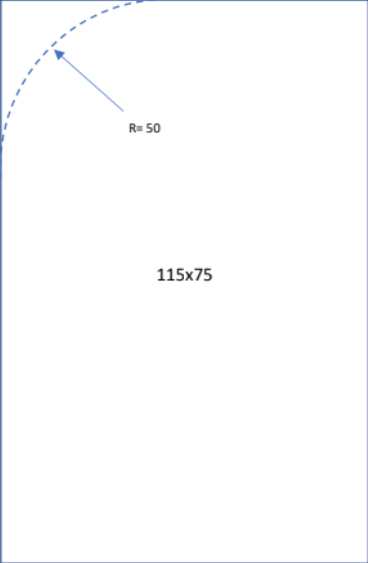
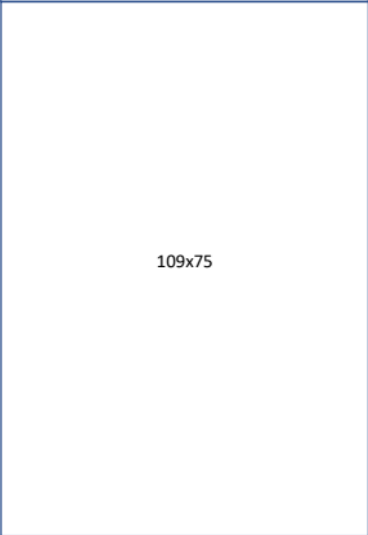


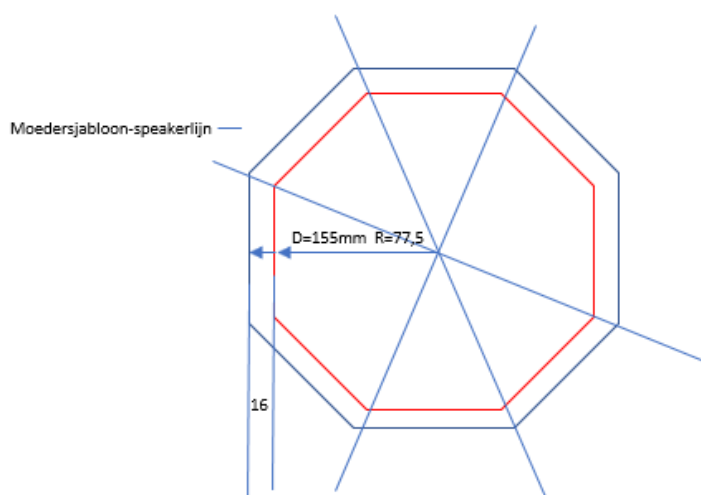
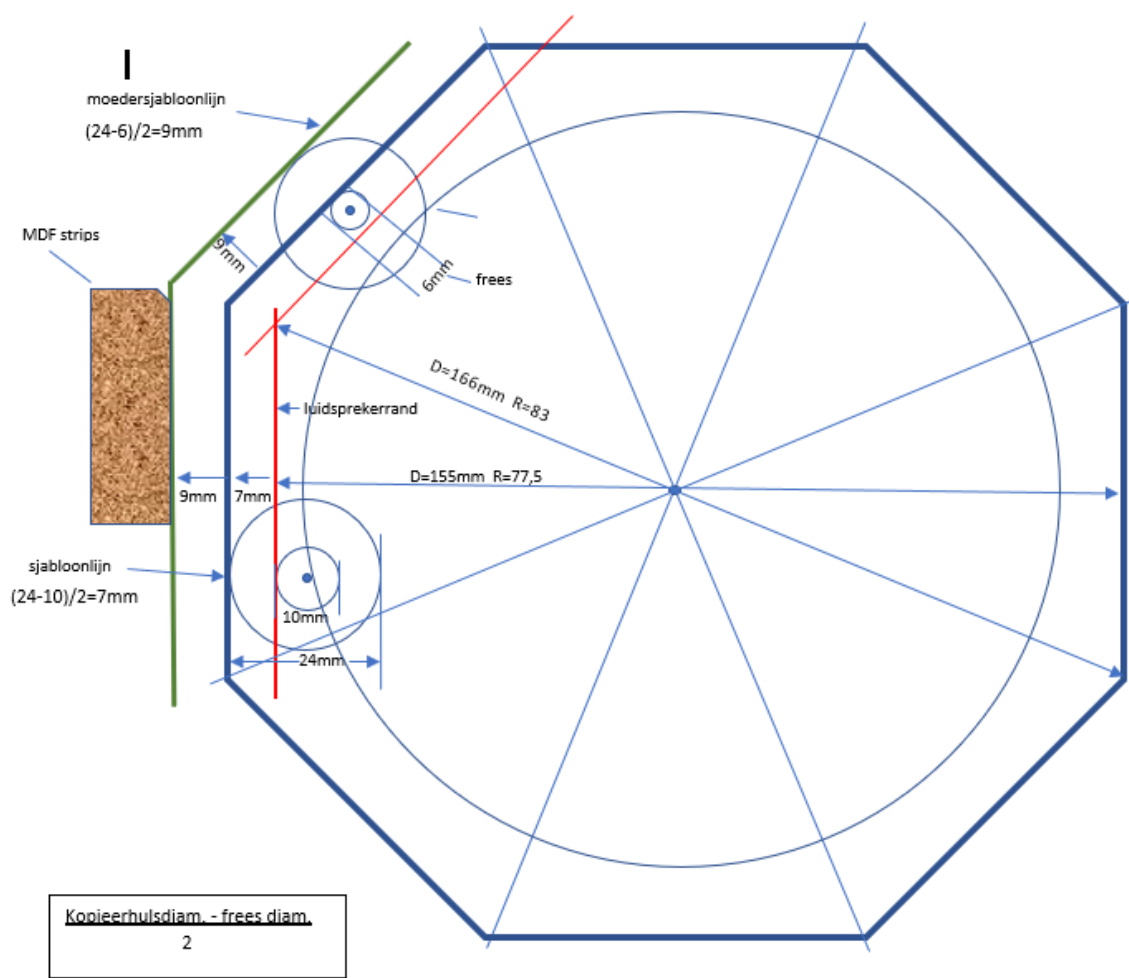
"The Diffraction and Boundary Simulator" 1.30 spreadsheet and it's VBA modules
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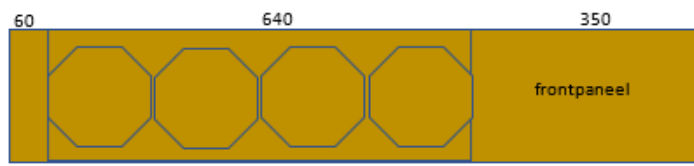




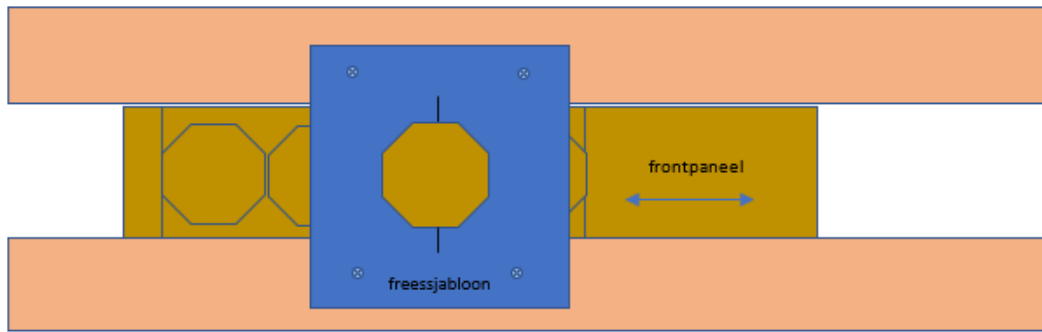


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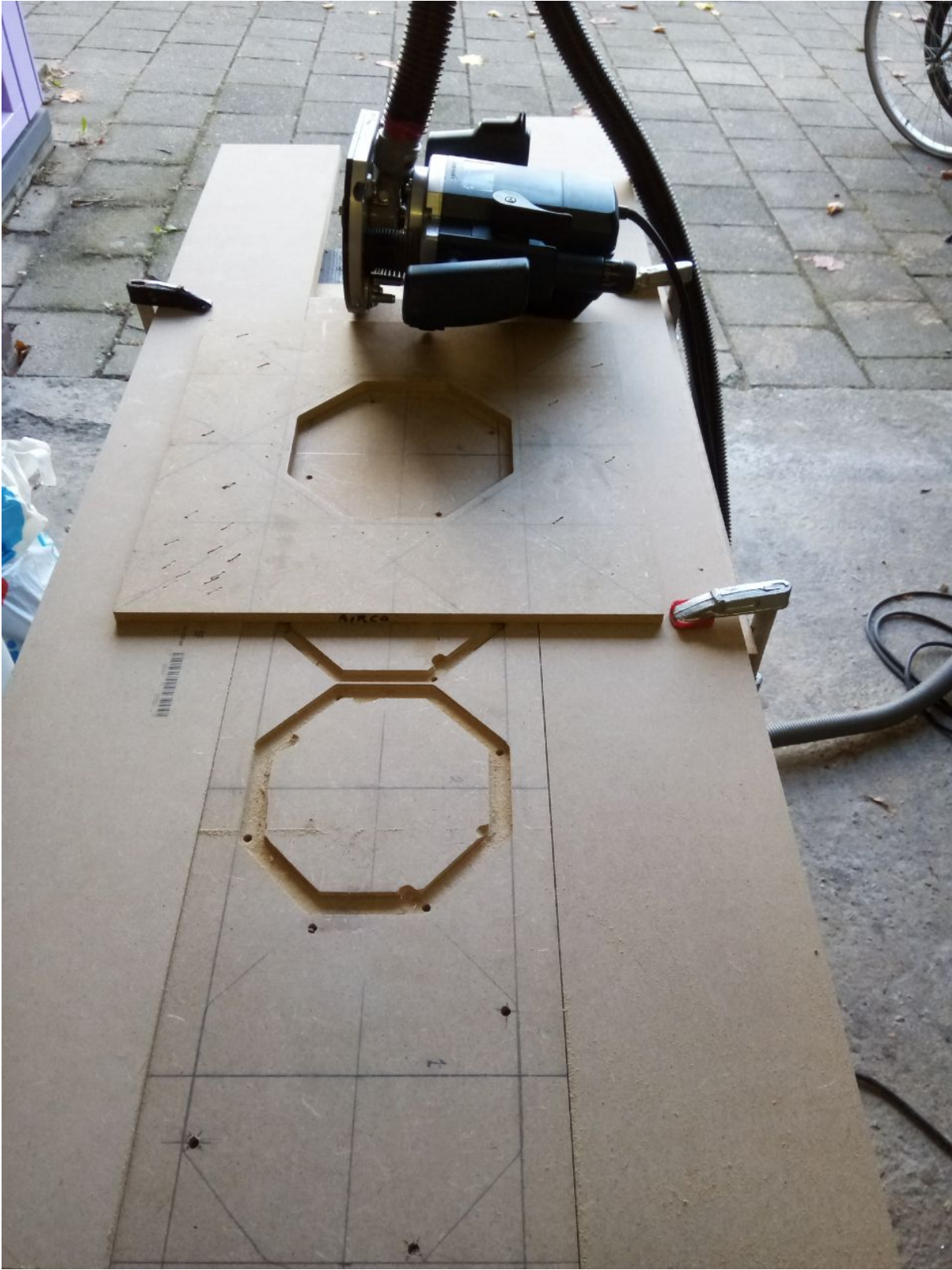


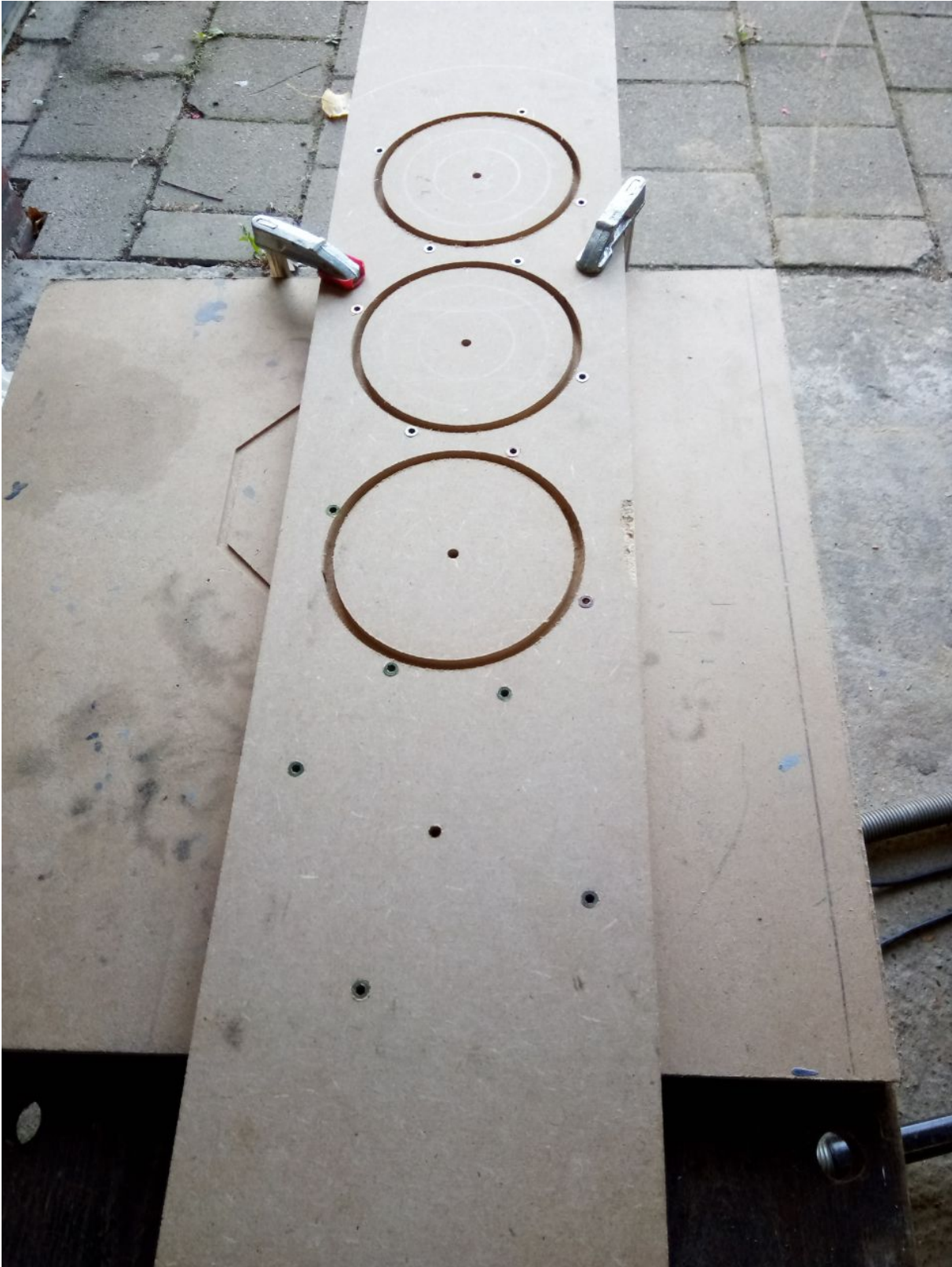


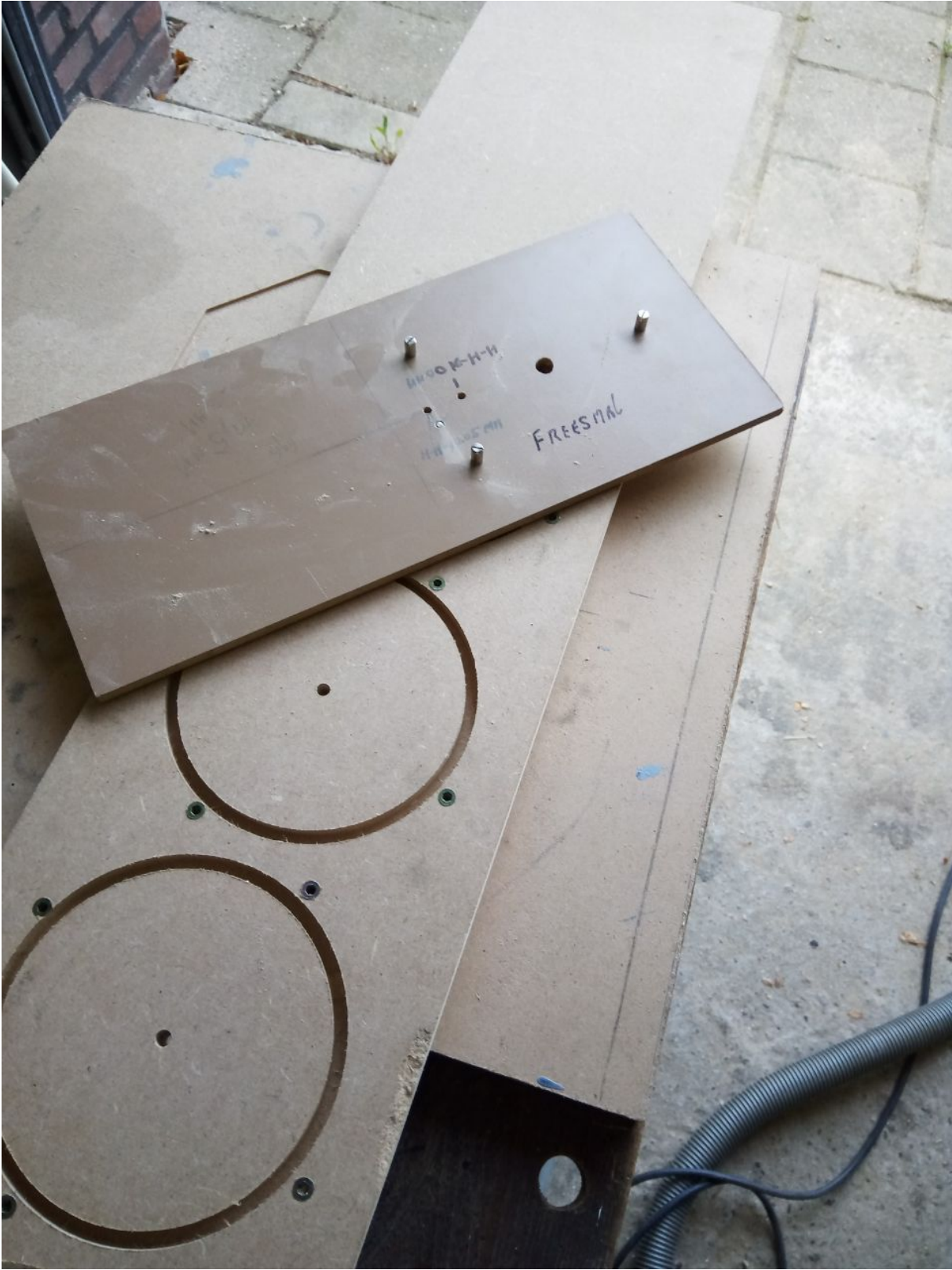
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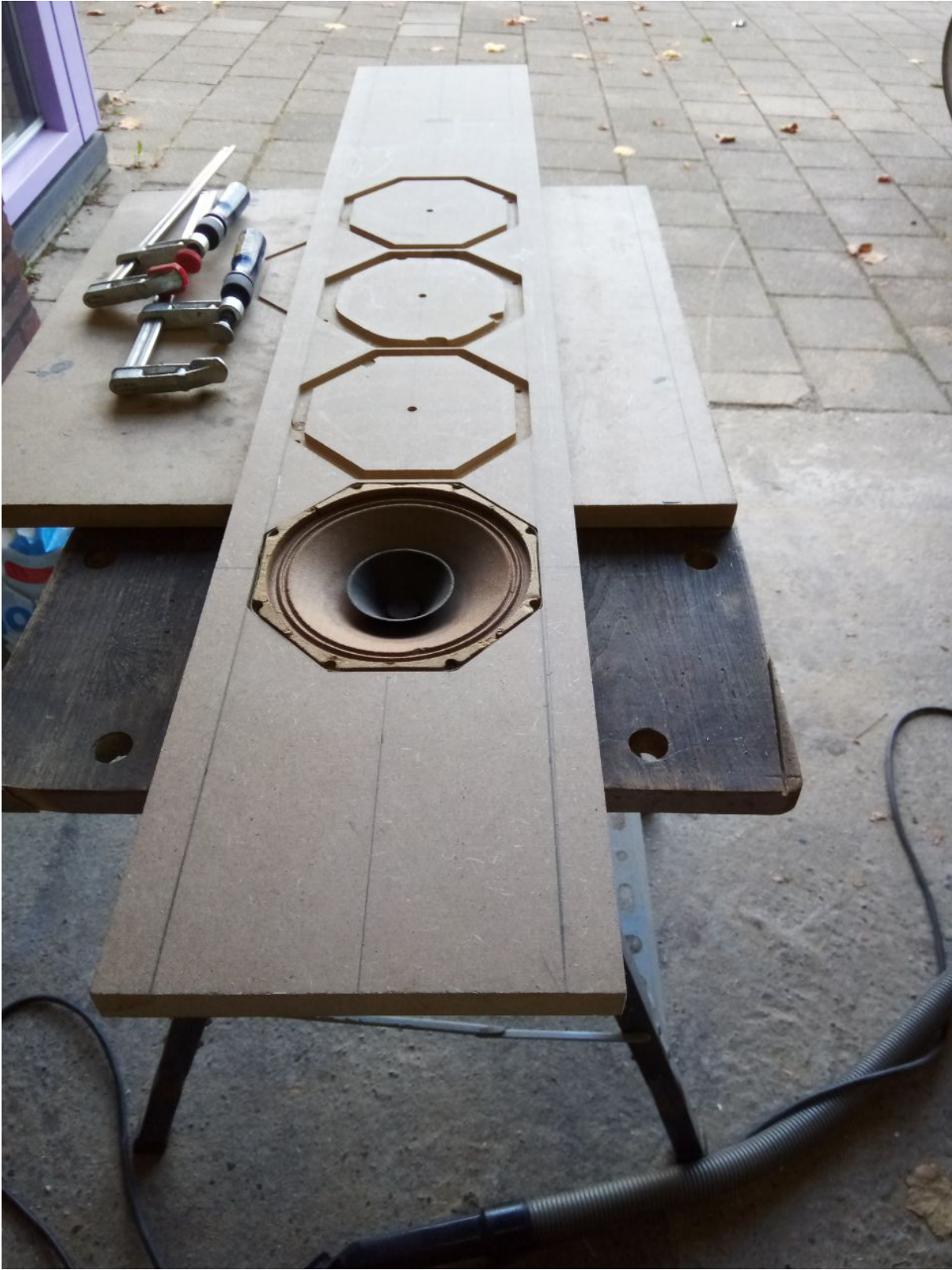




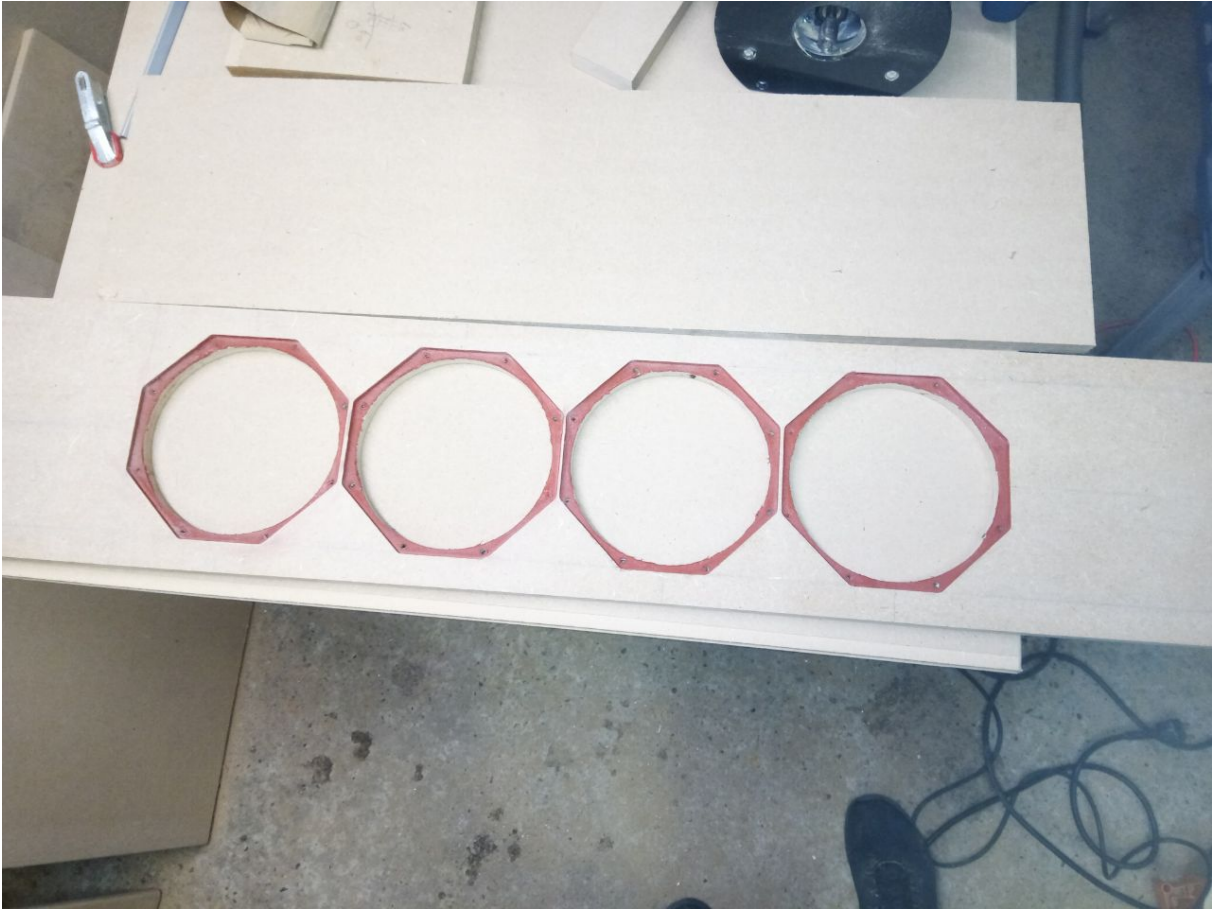
















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