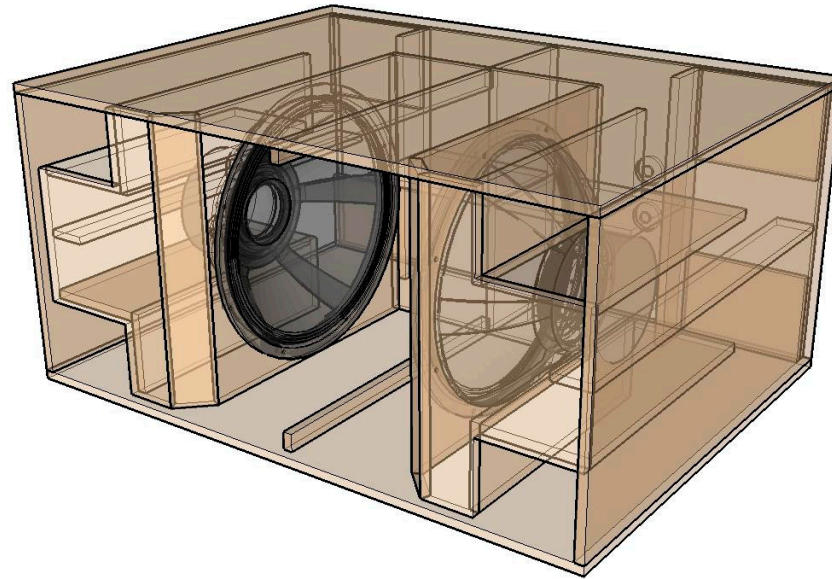




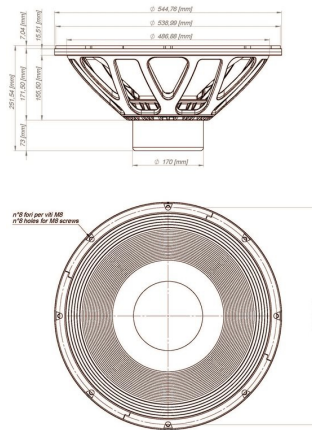
PROFESSIONAL
LOUDSPEAKERS

MD21S

APPLICATION NOTE



KEY FEATURES



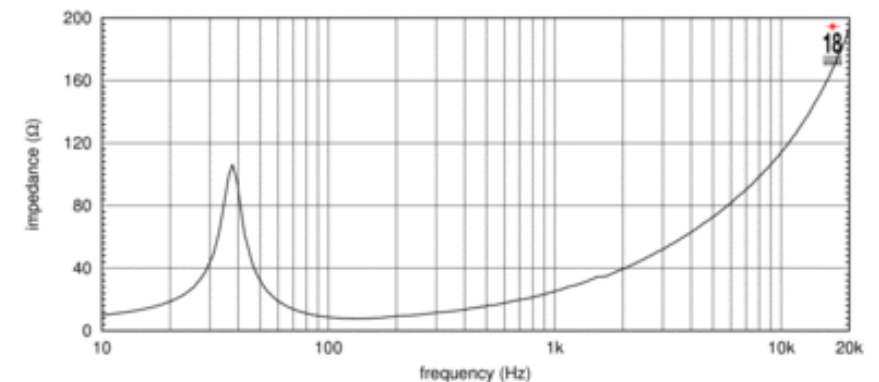
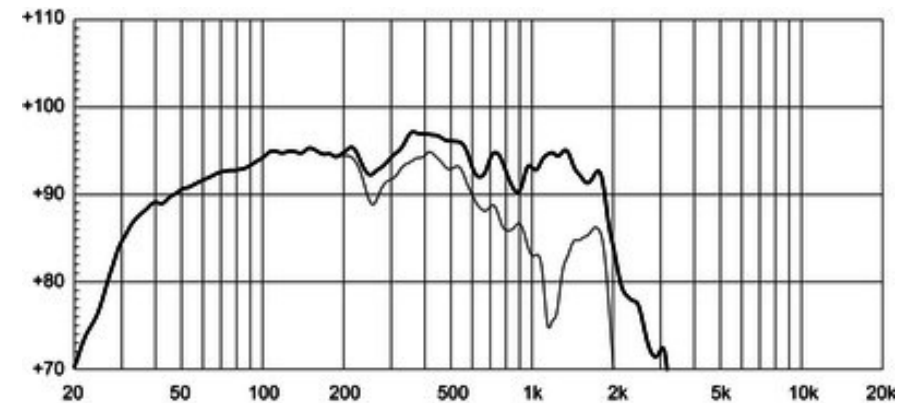
- 98 dB SPL 1W / 1m average sensitivity
- 135 mm (5.3 in) split winding four layers ISV copper coil
- 3600 W program power handling
- Carbon fiber reinforced treated cellulose cone
- Triple Silicon Spider (TSS) improves excursion control and linearity even in extreme loading and SPL conditions
- Single Demodulating Ring (SDR) for lower distortion
- Low noise cooling design for very low power compression
- Suitable for bandpass and horn loaded subwoofer designs

SPECIFICATIONS

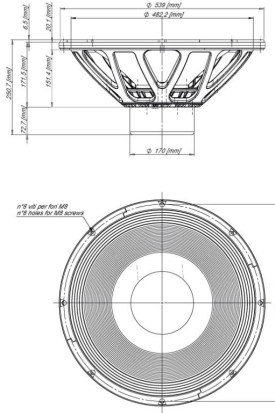
Nominal Diameter	533 mm (in)
Nominal Impedance	8 Ω
Minimum Impedance	7.9 Ω
Nominal Power Handling ¹	1800 W
Continuous Power Handling ²	3600 W
Sensitivity ³	98.0 dB
Frequency Range	25 - 2000 Hz
Voice Coil Diameter	135 mm (5.3 in)
Winding Material	copper

21NLW9601 8 Ω

LF drivers - 21.0 Inches



KEY FEATURES



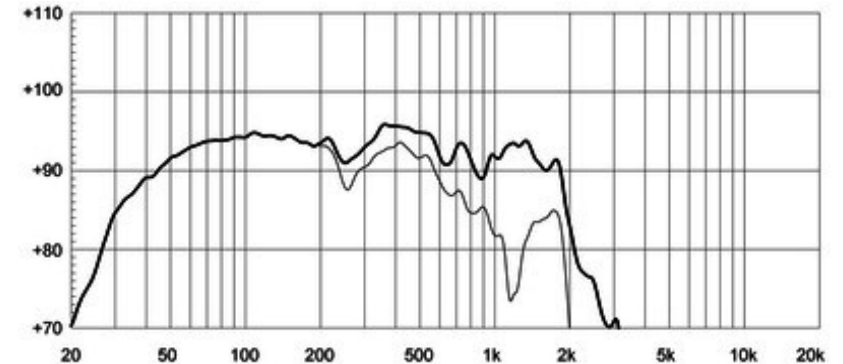
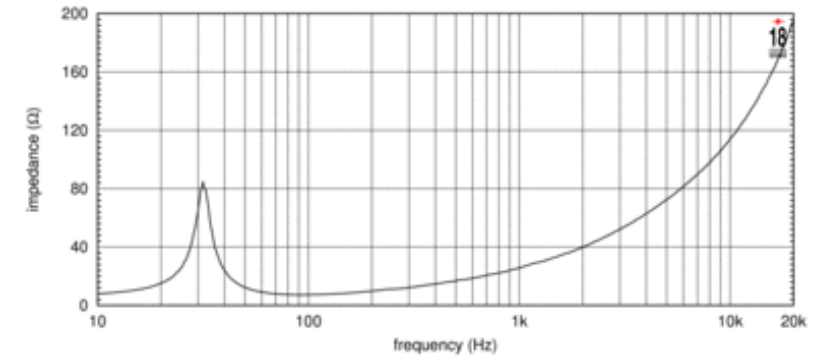
- 98 dB SPL 1W/ 1m average sensitivity
- 135 mm (5.3 in) Interleaved Sandwich Voice coil (ISV)
- 3600W program power handling
- 60mm peak to peak excursion
- Ultra linear dual magnet motor design
- Single Demodulating Ring (SDR) for lower distortion
- Composite reinforced straight ribbed cone
- Optimized high grade ferrite magnet assembly
- Recommended for subwoofer usage in compact vented enclosures

SPECIFICATIONS

Nominal Diameter	533 mm (in)
Nominal Impedance	8 Ω
Minimum Impedance	7.6 Ω
Nominal Power Handling ¹	1800 W
Continuous Power Handling ²	3600 W
Sensitivity ³	98.0 dB
Frequency Range	25 - 1500 Hz
Voice Coil Diameter	135 mm (5.3 in)

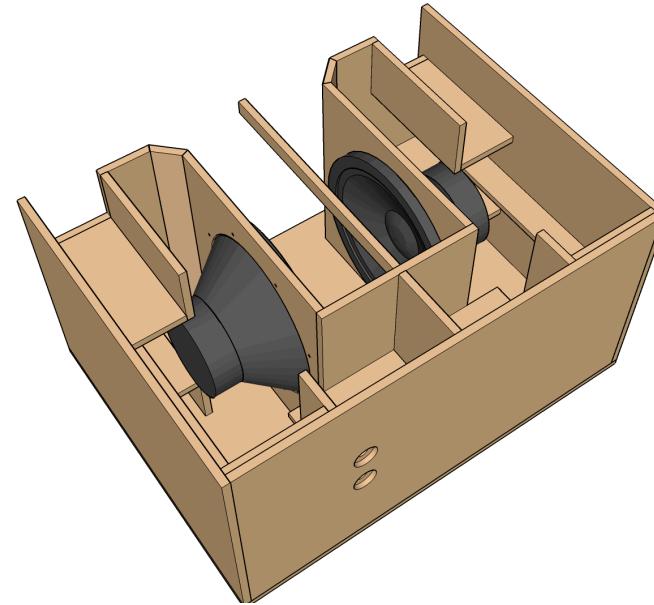
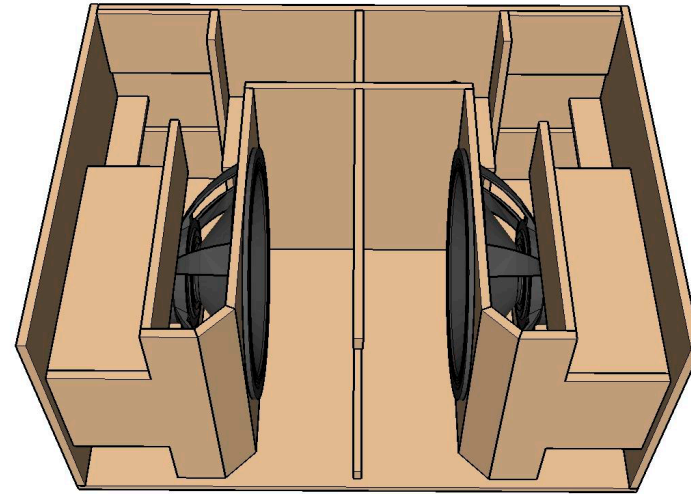
21NLW9001 8 Ω

LF drivers - 21.0 Inches



KEY FEATURES

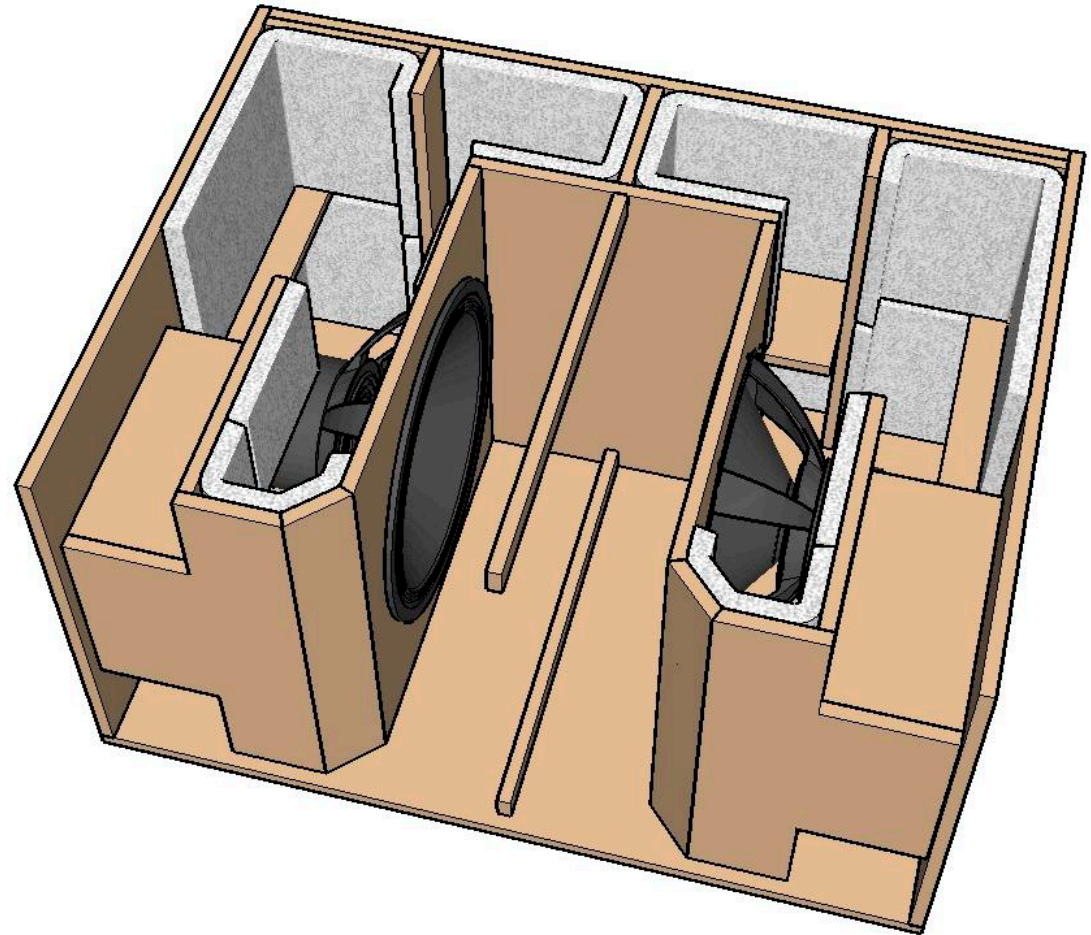
- > The enclosure should be made of baltic birch plywood (18mm thickness)
- > Bolts are M6x35mm
- > M6 T-Nuts are recommended
- > Handling, rigging and connectors are user's choice



INTERNAL VIEW

KEY FEATURES

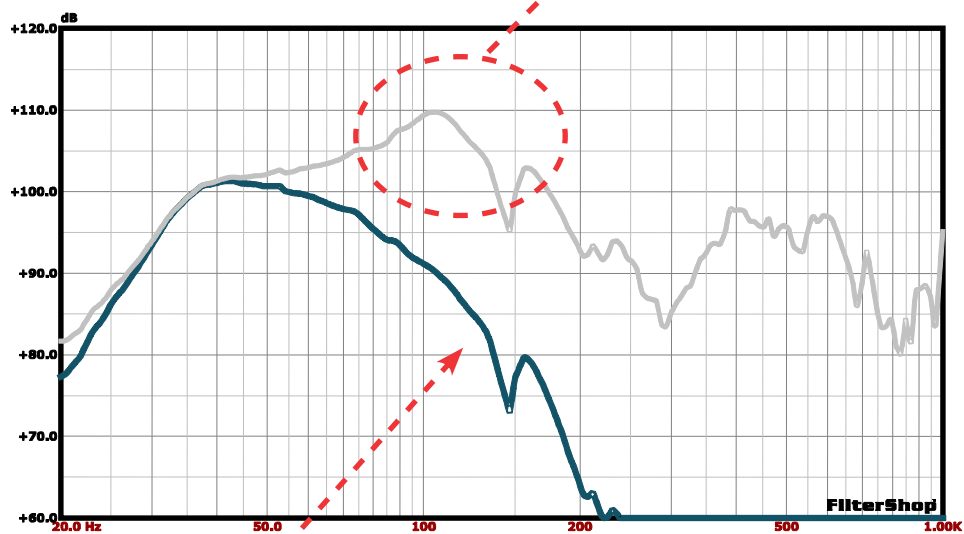
- > It's recommended to well dampen the cabinet interior
- > You should see an example of the required dampening on the image on the next page
- > An high density dampening material, such as Dacron or other synthetic fibers, is required for better performance



INTERNAL VIEW AND DAMPING

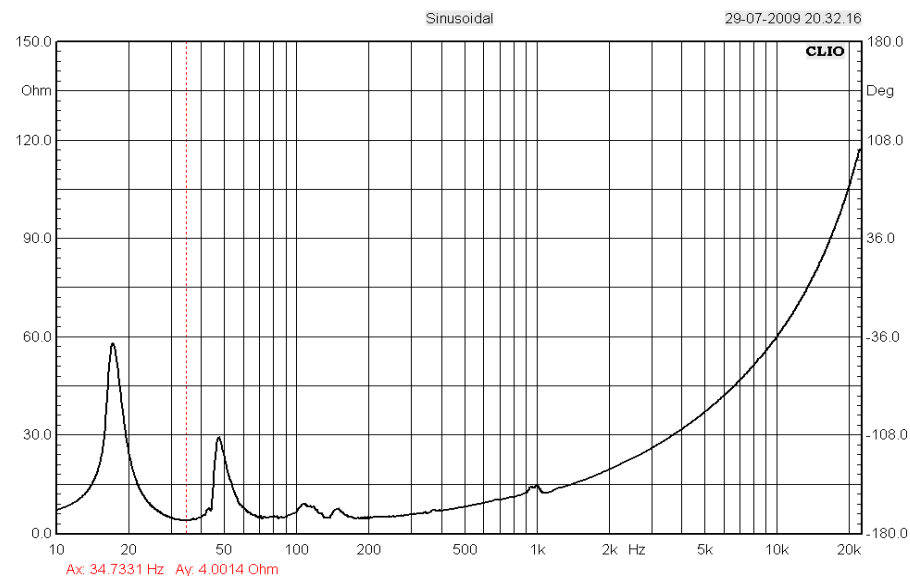
MEASUREMENTS: UNFILTERED FREQUENCY RESPONSE, 2.83V/1M AND RELATIVE INPUT IMPEDANCE CURVE WITH 21NLW9001

Excess of efficiency that needs
to be carefully equalized



Processed response

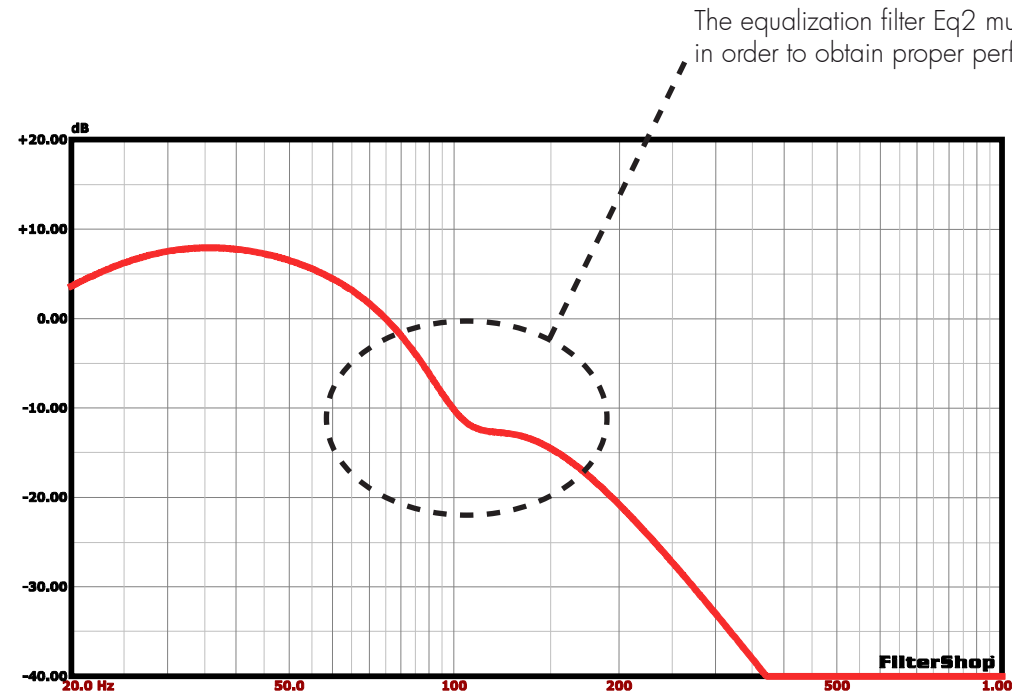
FREQUENCY RESPONSE



CH A Ohm Resolution 1/48 Octave Unsmoothed 48kHz Delay [ms] 0.000 Dist Rise [dB] 30.00
File: impedance direct 18 9600 rodaggio piu damp2.sini

IMPEDANCE CURVE

PROCESSING GUIDELINES AND PROCESSOR RESPONSE WITH 21NLW9001



PROCESSOR SETTING RESPONSE

NECESSARY PROCESSOR SETTINGS WITH 21NLW9001 LOUDSPEAKER

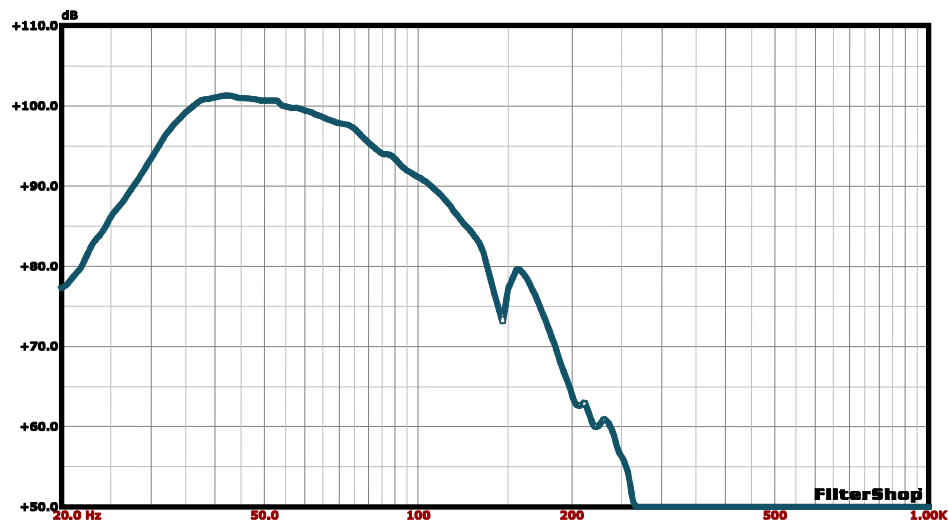
- > High pass: Butterworth 2nd order, 12dB/Oct @ 25 Hz
- > Parametric EQ Eq1: F= 33 Hz - Gain= 2dB - Q= 0.8
Eq2: F= 105 Hz - Gain= -12 dB - Q= 3
- > Low pass: Linkwitz-Riley 4th order, 24dB/Oct @ 95 Hz
- > Polarity: Positive (+)
- > Limiter: @ +13dBu, 100ms Atk. Time, X4 Release Time
- > Output Gain: + 8dB

Processing Parameters Referred to XTA DP224/DP226/DP448 Processors

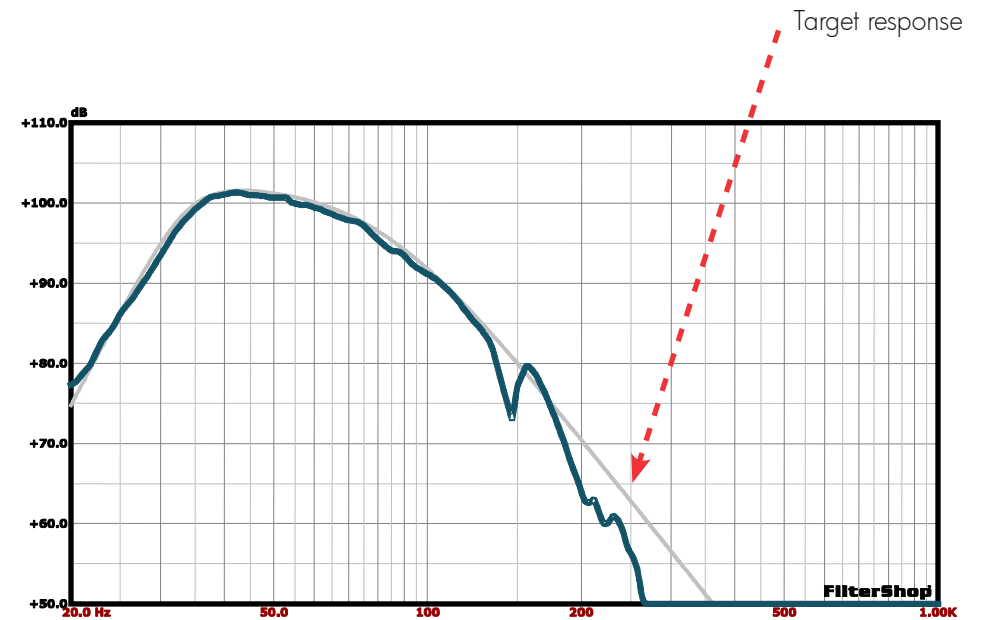
Required Amplifier for proper driving, approx.: 2500W @ 8 Ohm, 5000W @ 4 Ohm with Gain 32dB

Gain and Limiter Values need to be properly adjusted if different gain amplifier is being used

PROCESSED FREQUENCY RESPONSE WITH 21NLW9001

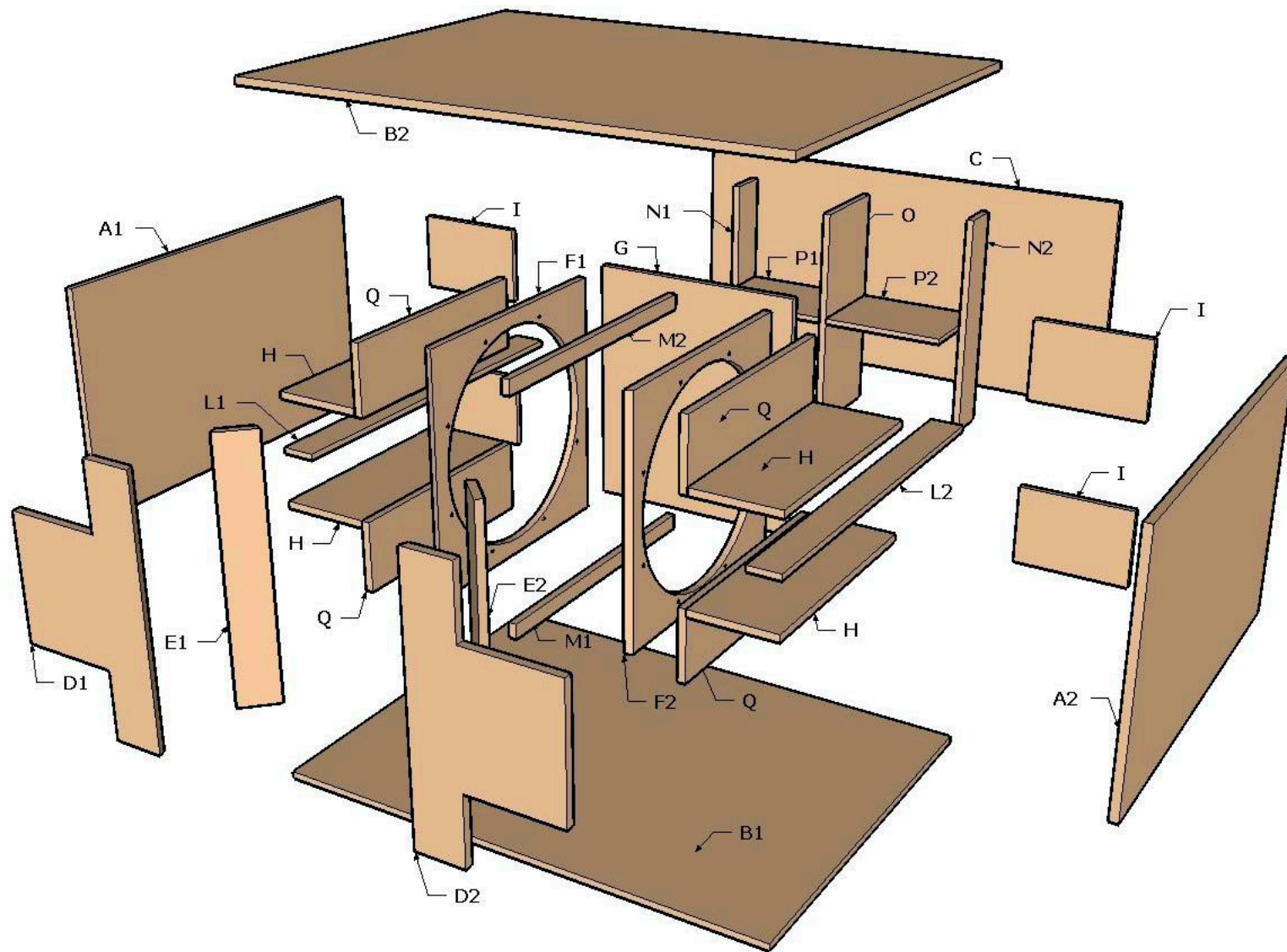


PROCESSED SUBWOOFER RESPONSE

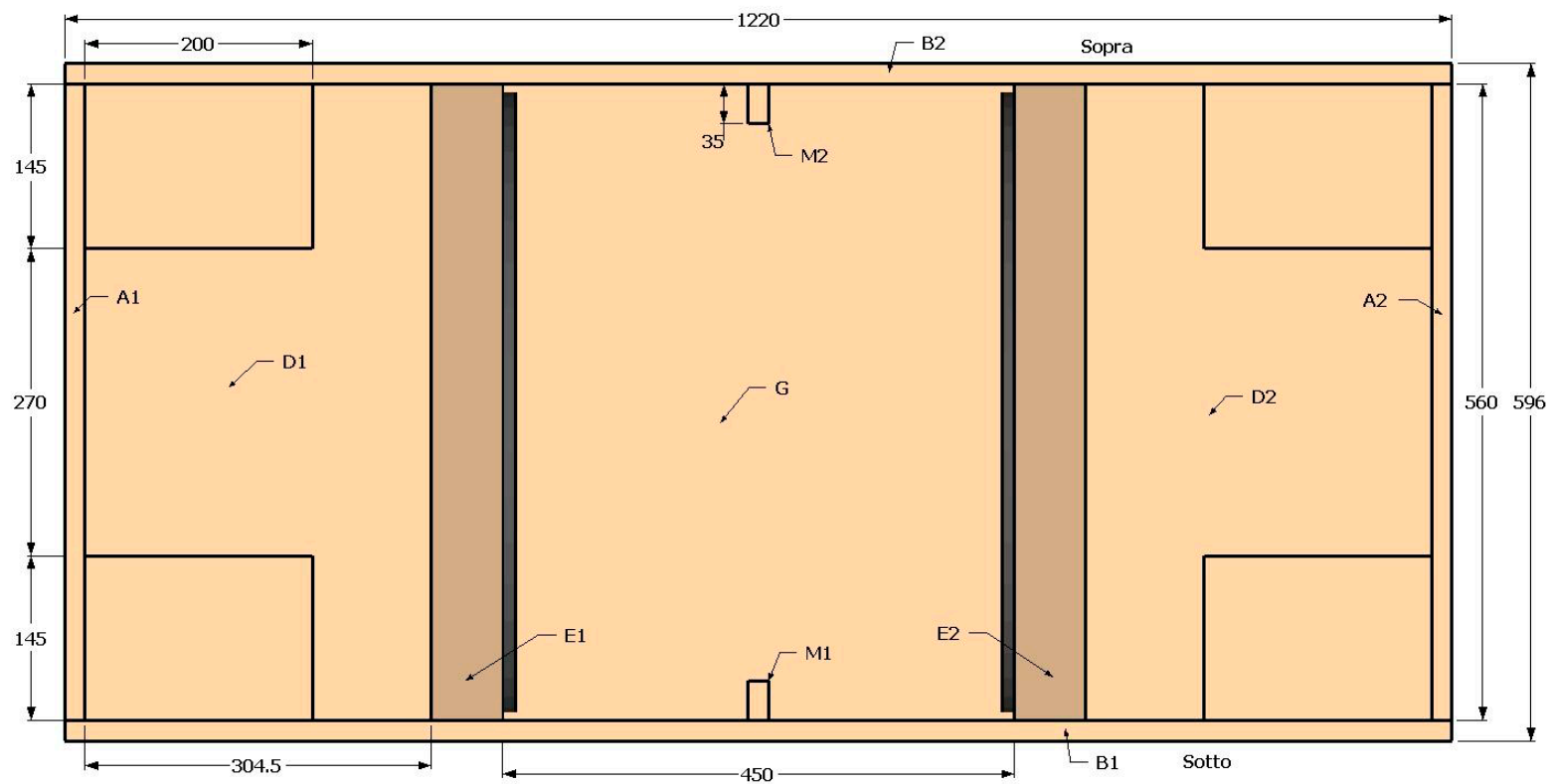


PROCESSED SUBWOOFER RESPONSE WITH TARGET RESPONSE MATCHING

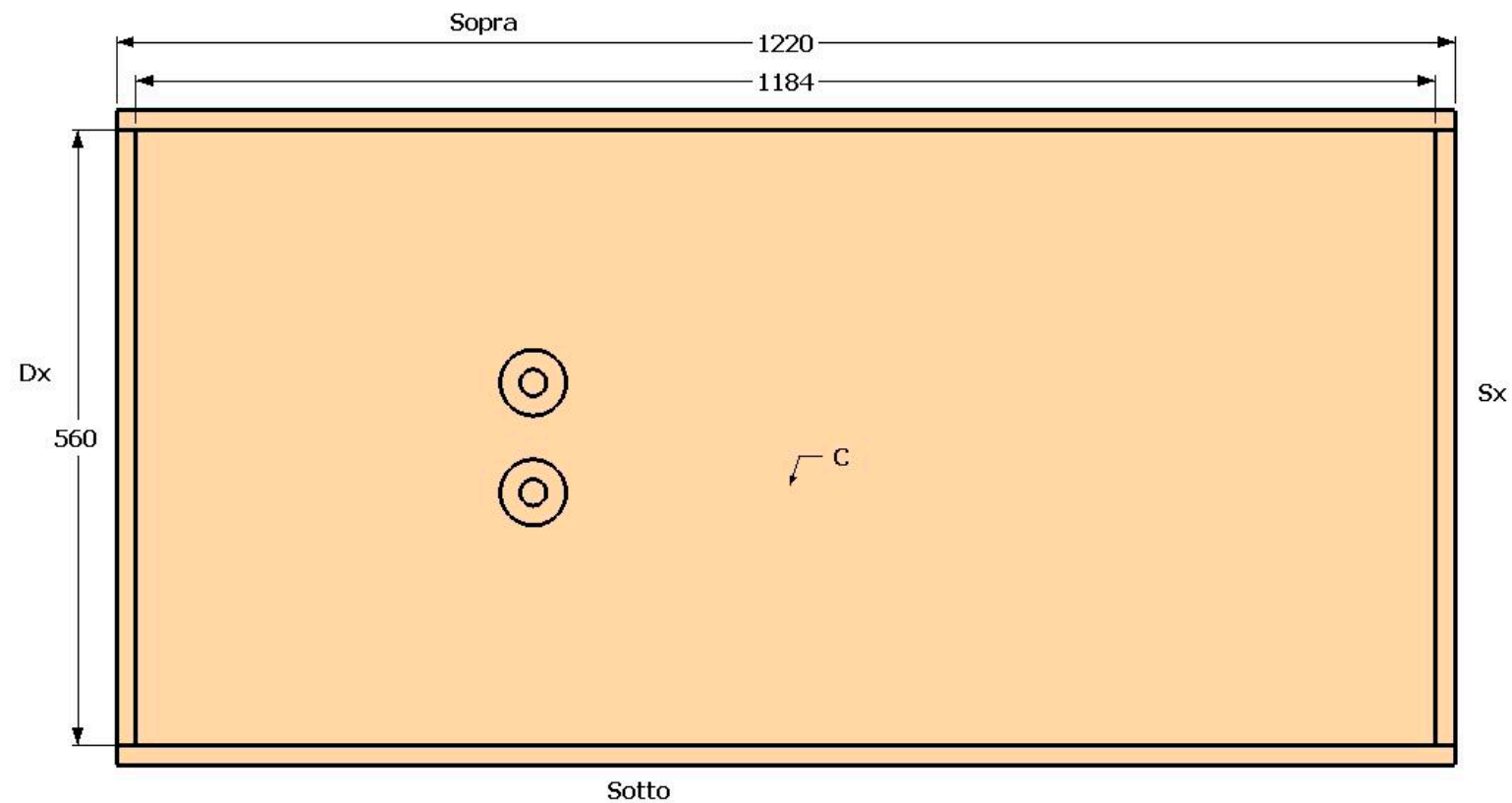
EXPLODED VIEW



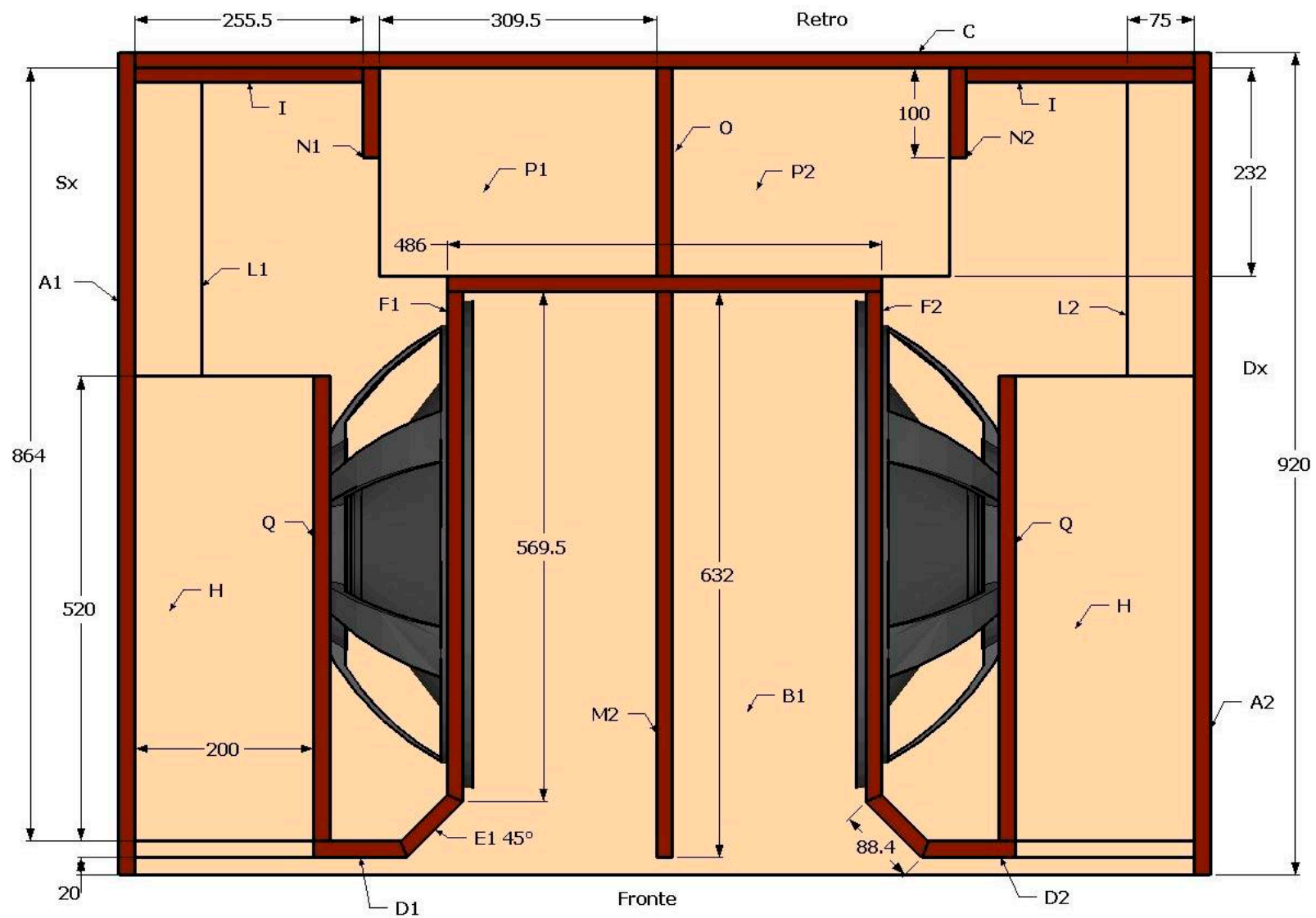
FRONT VIEW



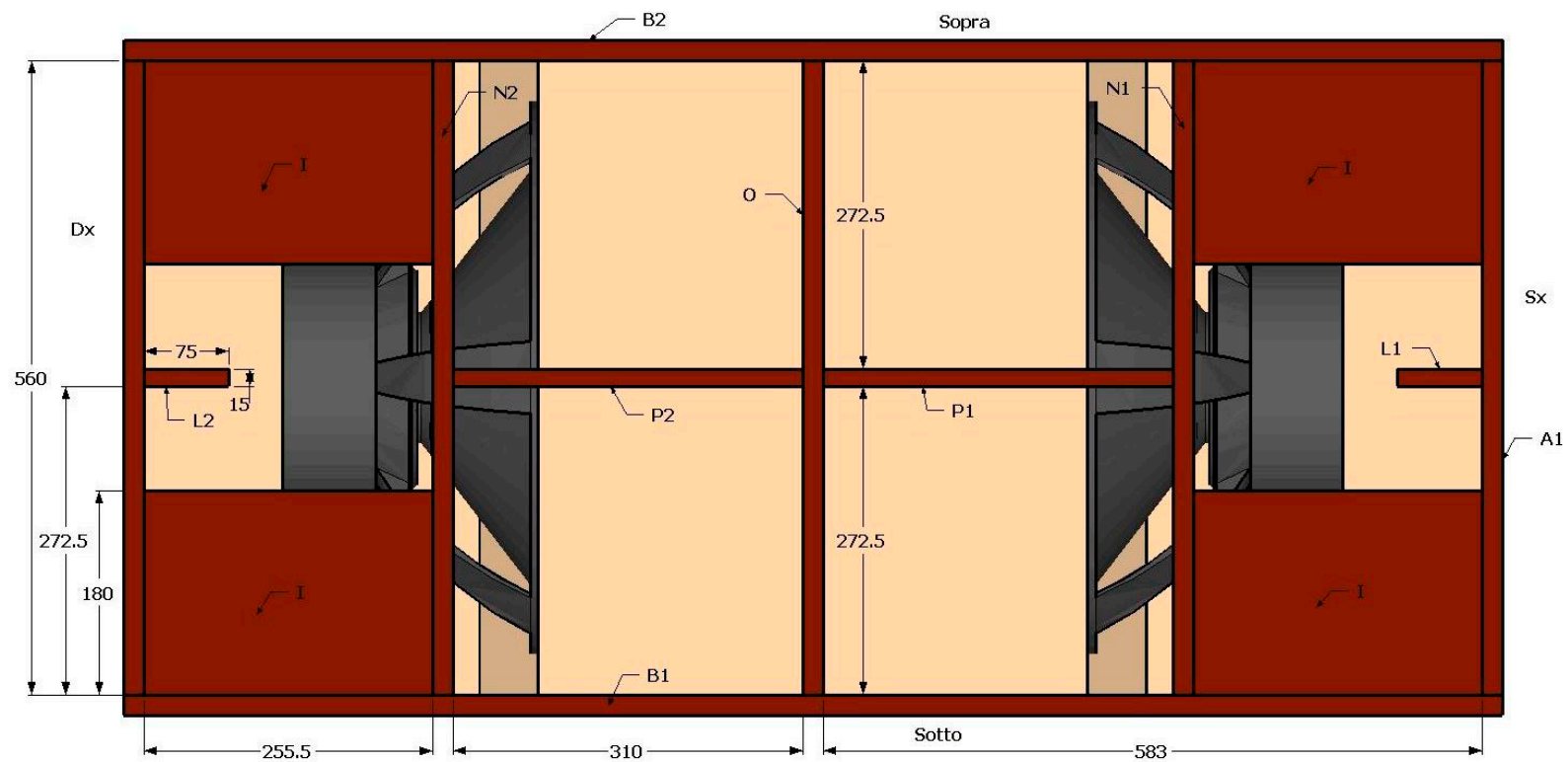
REAR VIEW



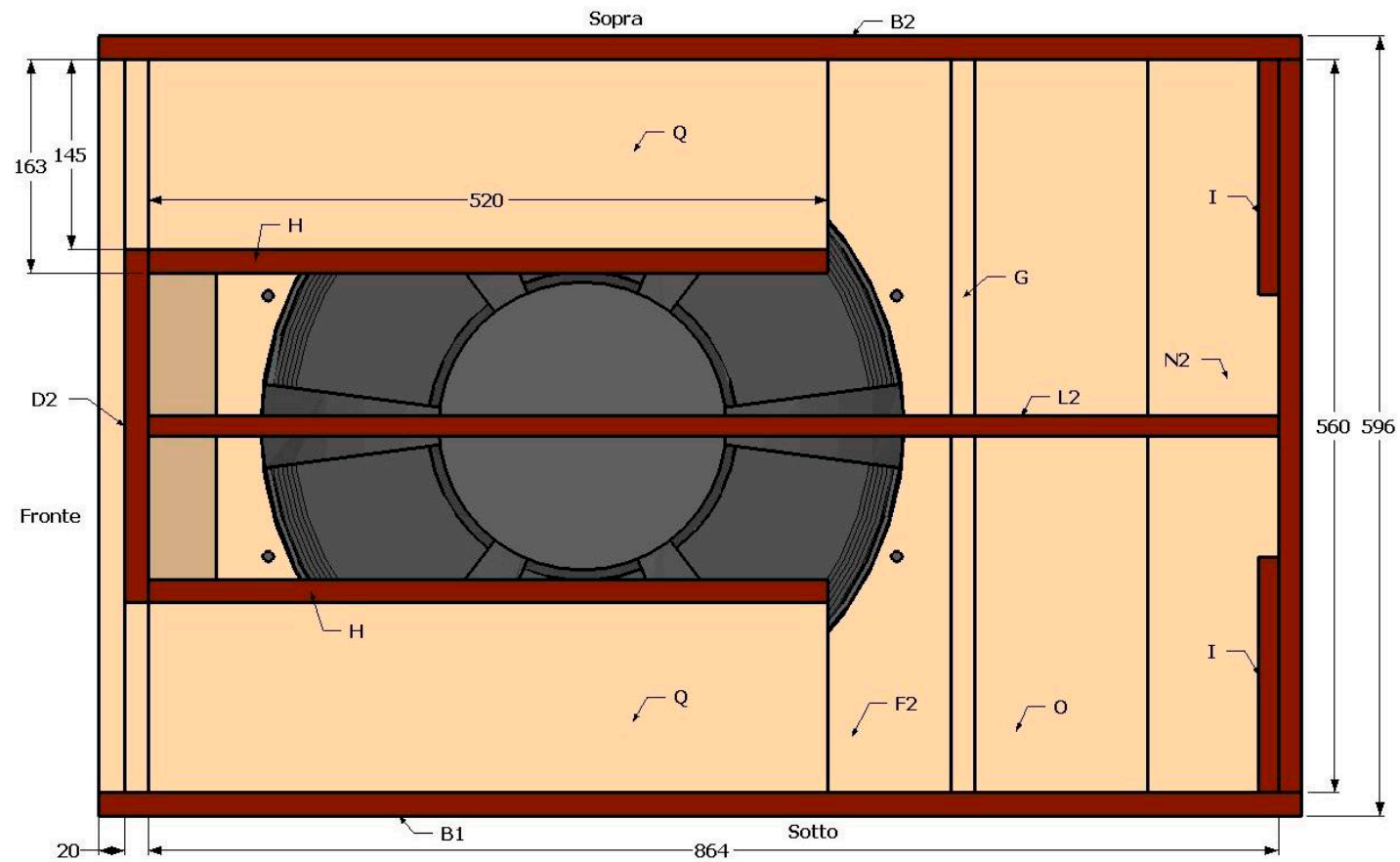
TOP SECTION



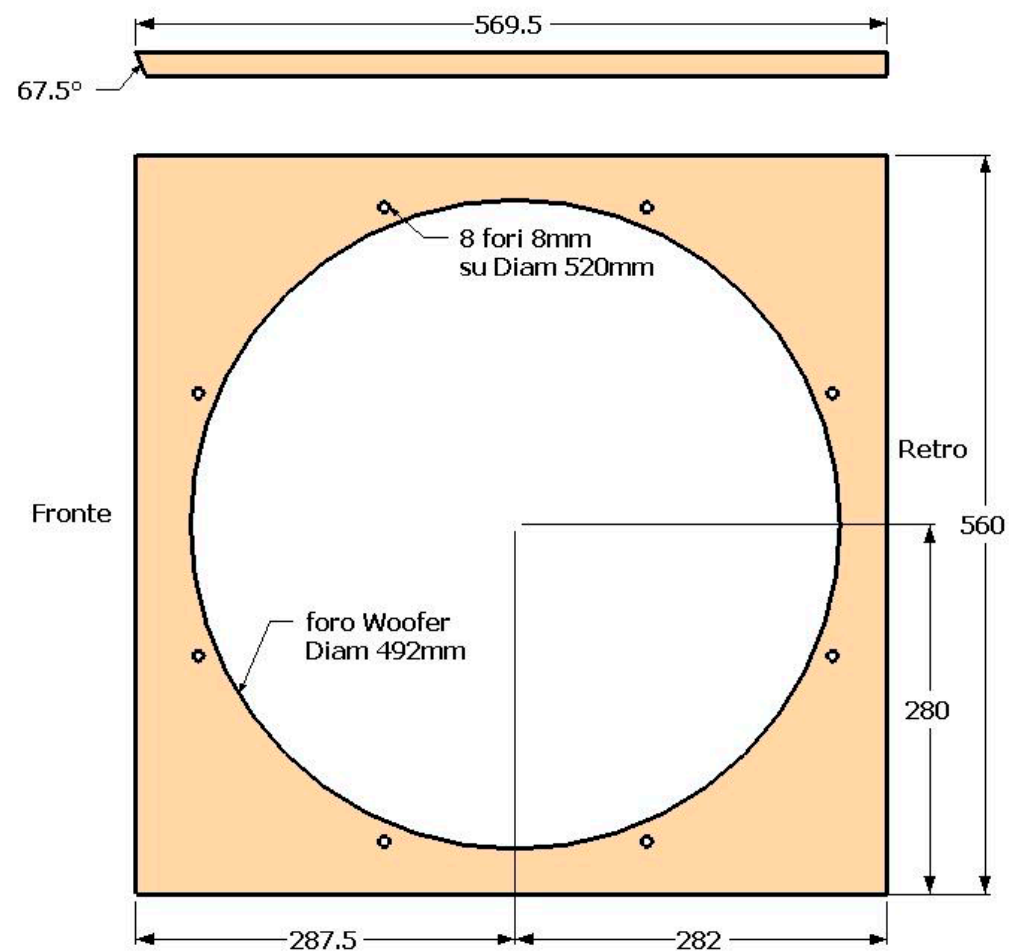
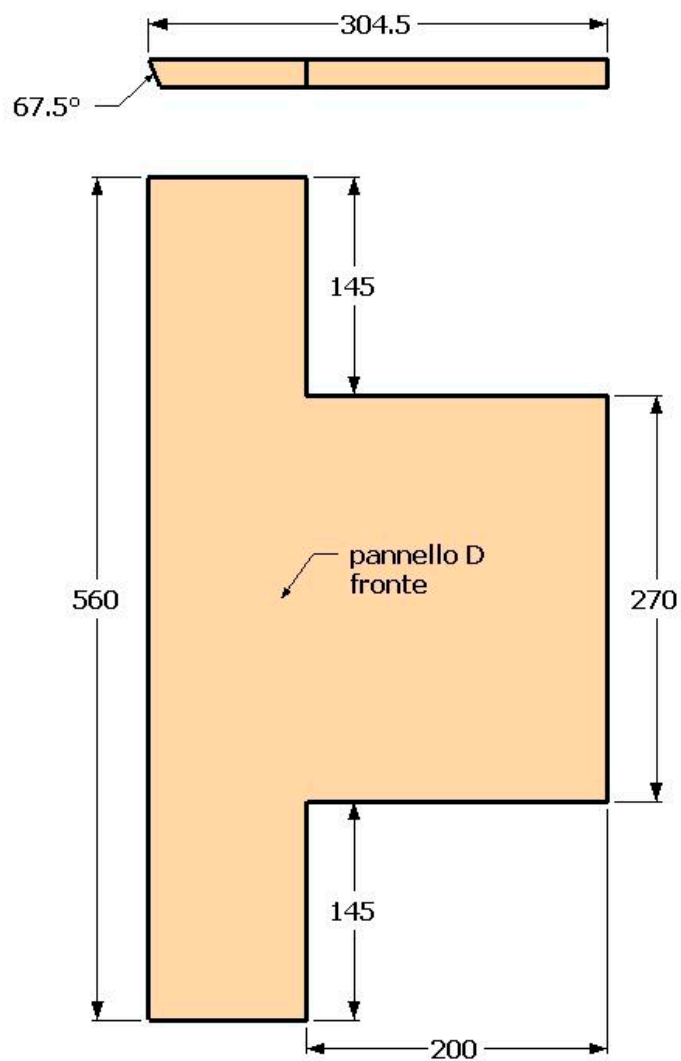
REAR SECTION



SIDE SECTION



DETAILS: PART D AND F





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