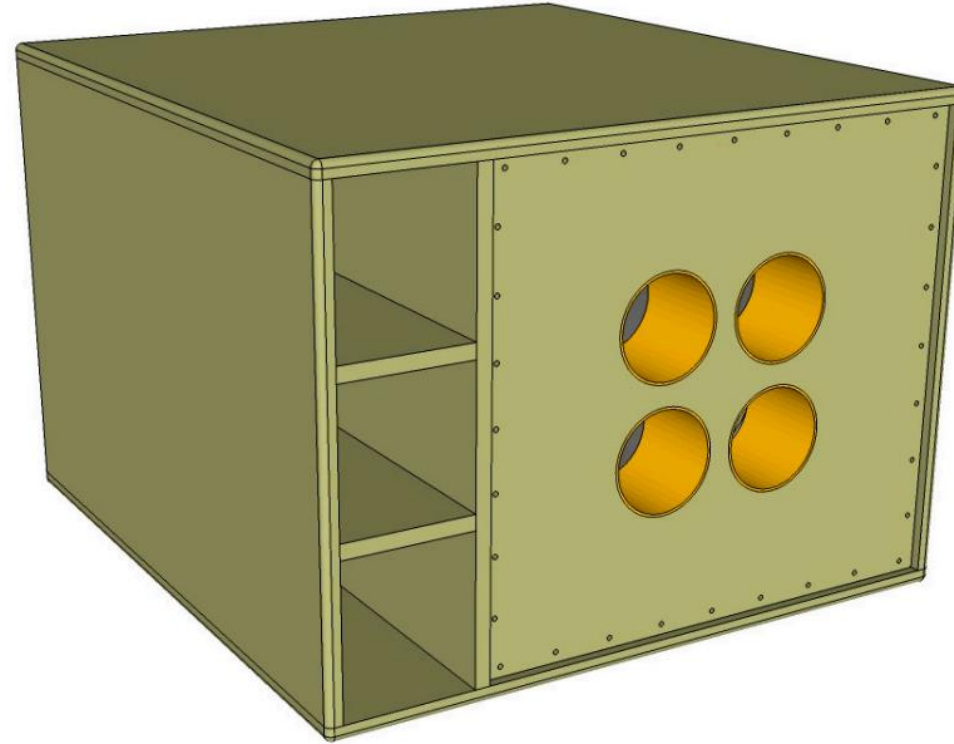




PROFESSIONAL
LOUDSPEAKERS

APPLICATION NOTE



SINGLE 21" BAND-PASS SUBWOOFER KIT

KEY FEATURES

- High performance 1 x 21" subwoofer system;
- Multiple driver choice is possible;

21NLW4100 woofer key features:

1500 W AES power handling

100 mm (4 In) Interleaved voice coil (ISV)

Composite reinforced straight ribbed cone

Optimized high grade neodymium magnet assembly



21LW2600 woofer key features:

1600 W AES power handling

100 mm (4 In) Interleaved voice coil

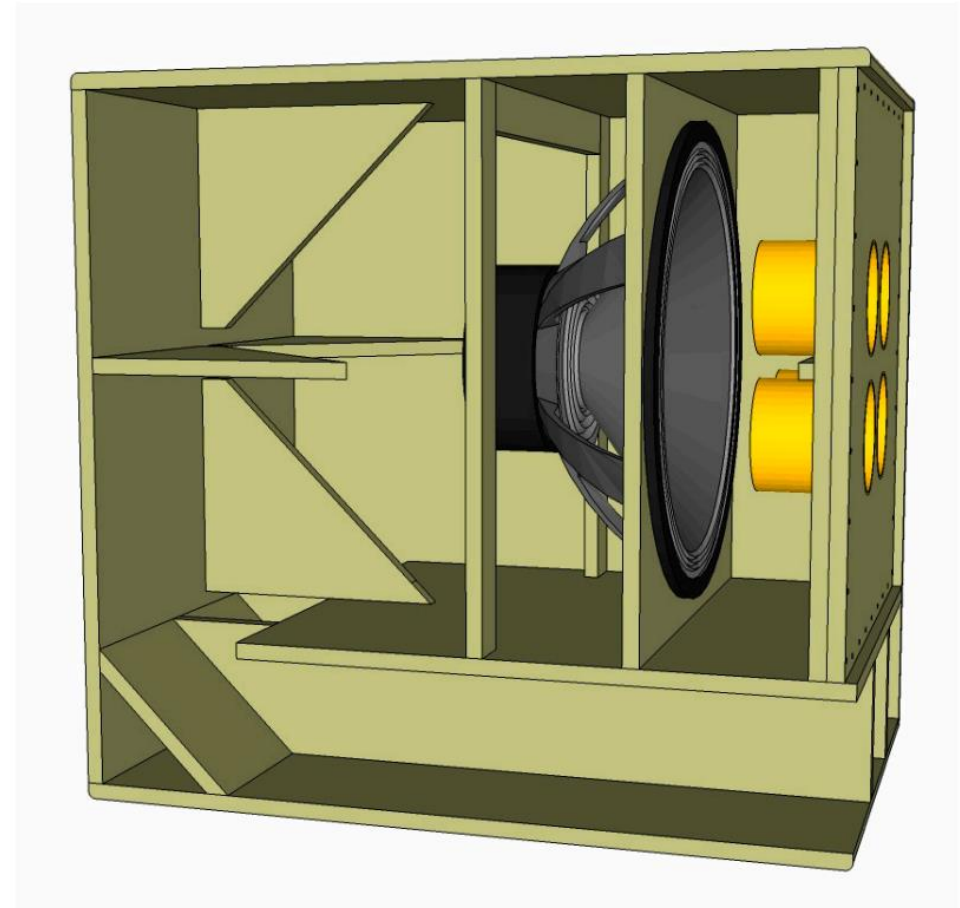
Optimized ferrite magnet

Composite reinforced straight ribbed cone



KEY FEATURES

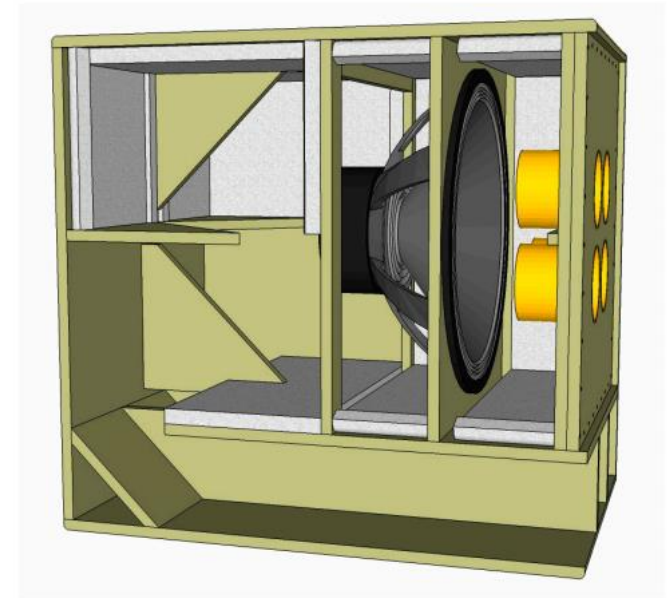
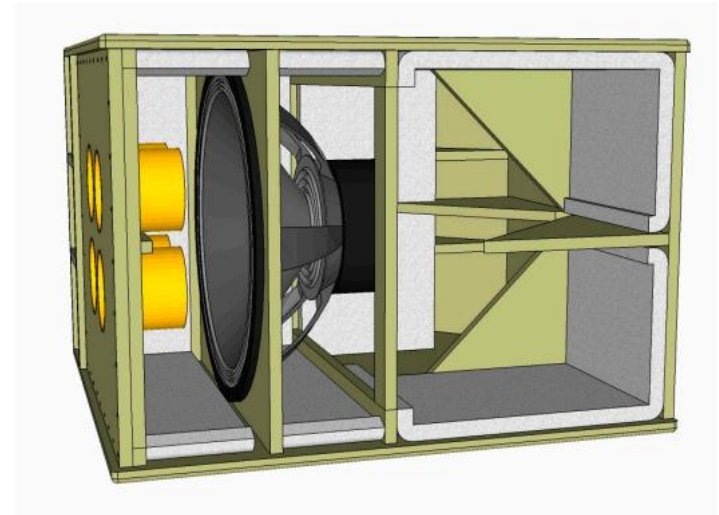
- The enclosure should be made of Baltic birch plywood (18mm thickness)
- Bolts are M6 and M4, proper length must be chosen: M6 is appropriate for speaker and M4 is suitable for frontal cover
- Handling, rigging and connectors are user's choice



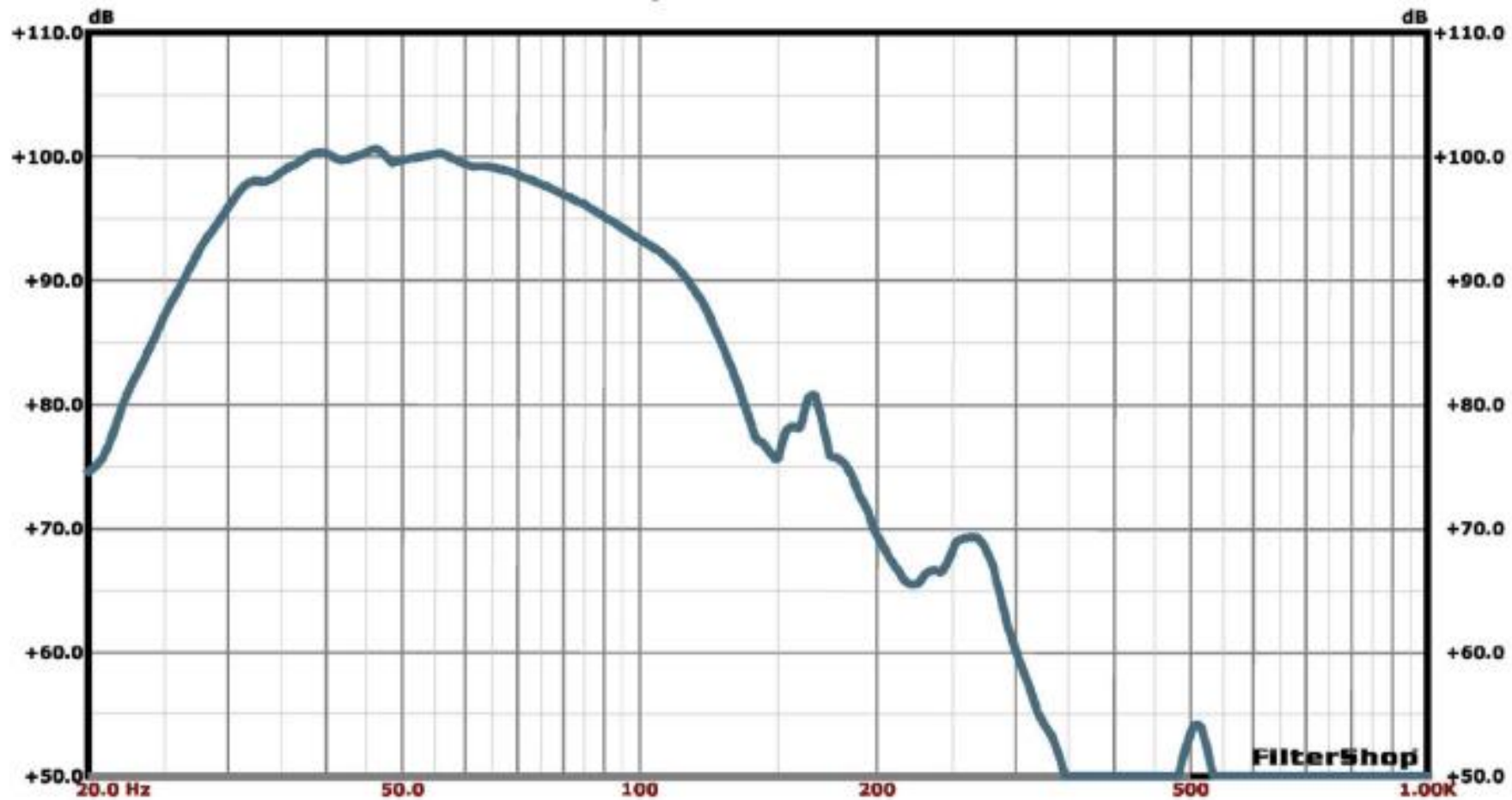
INTERNAL VIEW

KEY FEATURES

- > It's recommended to well damp the cabinet interior (an high density dampening material, such as Dacron or other synthetic fibers, is required for better performance)
- You should use the image as an example



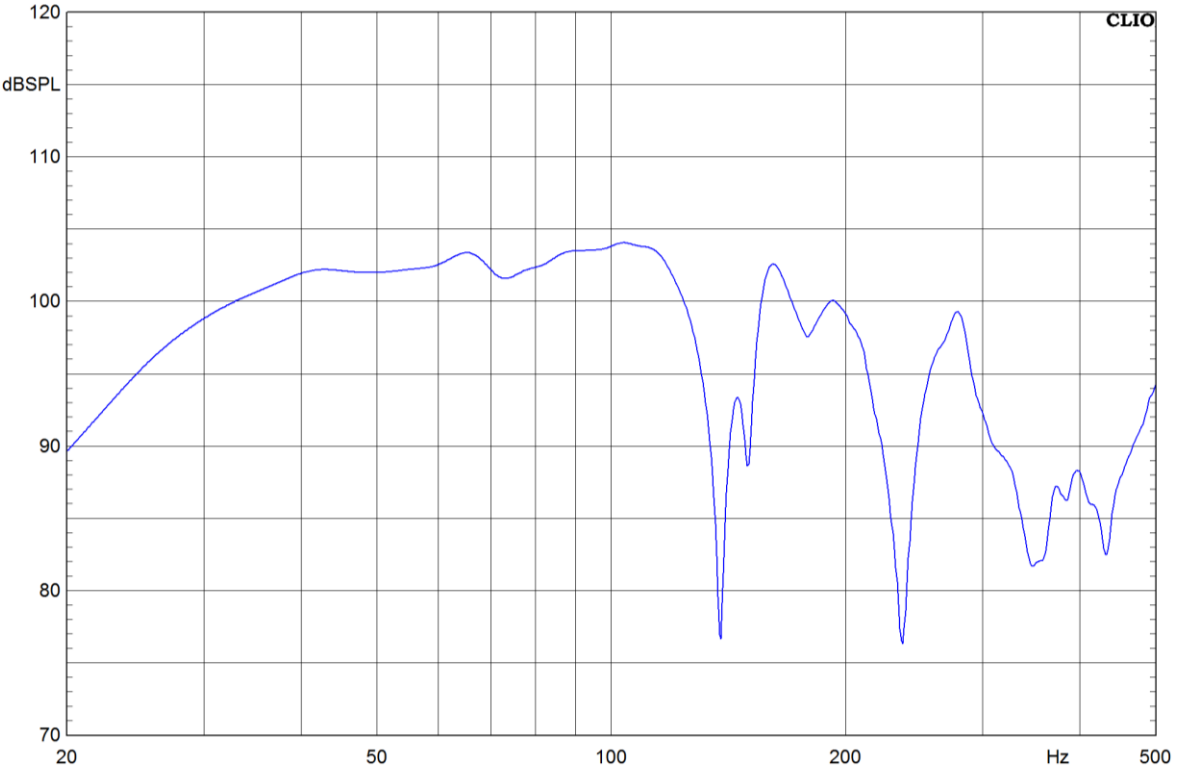
FILTERED MAGNITUDE RESPONSE, 2.83V/1M WITH 21LW1400



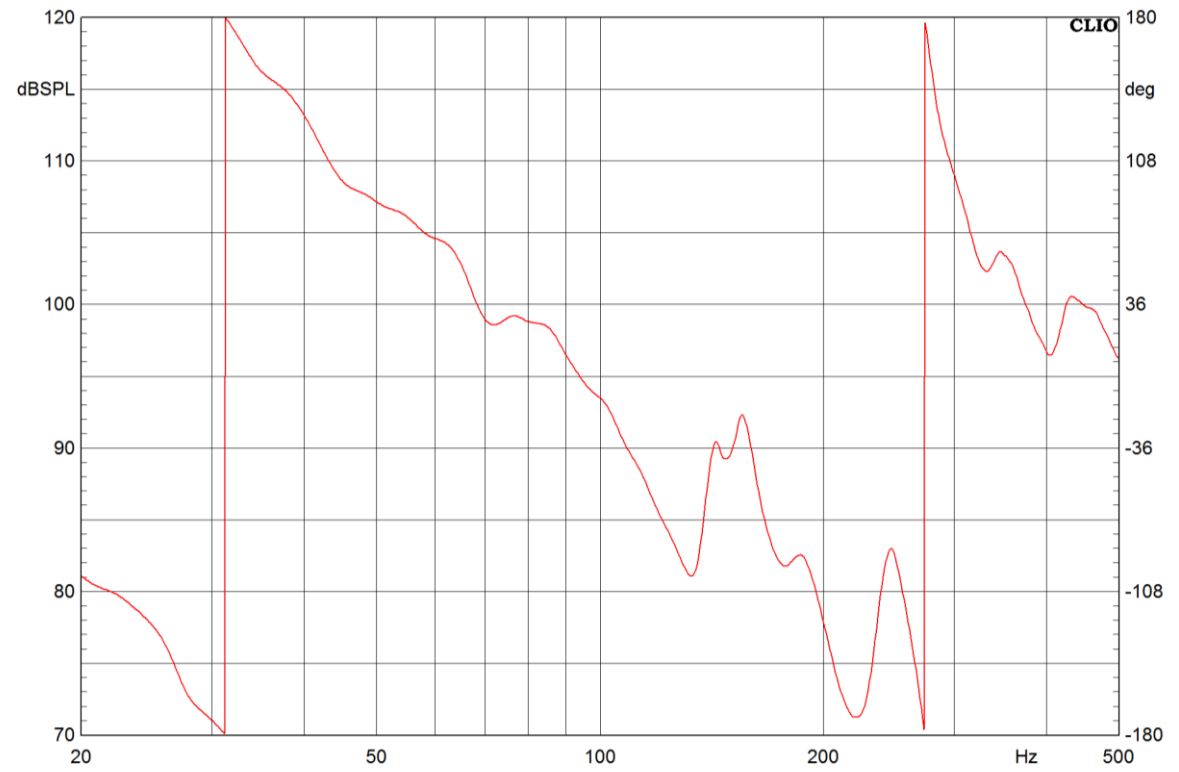
EQUALIZATION SETTINGS SUGGESTION

High Pass: Butterworth 12dB/Oct 25Hz
Parametric EQ: $f_0 = 28\text{Hz}$ / +5dB / $Q = 1.2$
Parametric EQ: $f_0 = 90\text{Hz}$ / +5dB / $Q = 1.5$
Low Pass: Butterworth 18dB/Oct 85Hz

UNFILTERED MAGNITUDE RESPONSE, 2.83V/1m AND RELATIVE PHASE WITH 21NLW4100

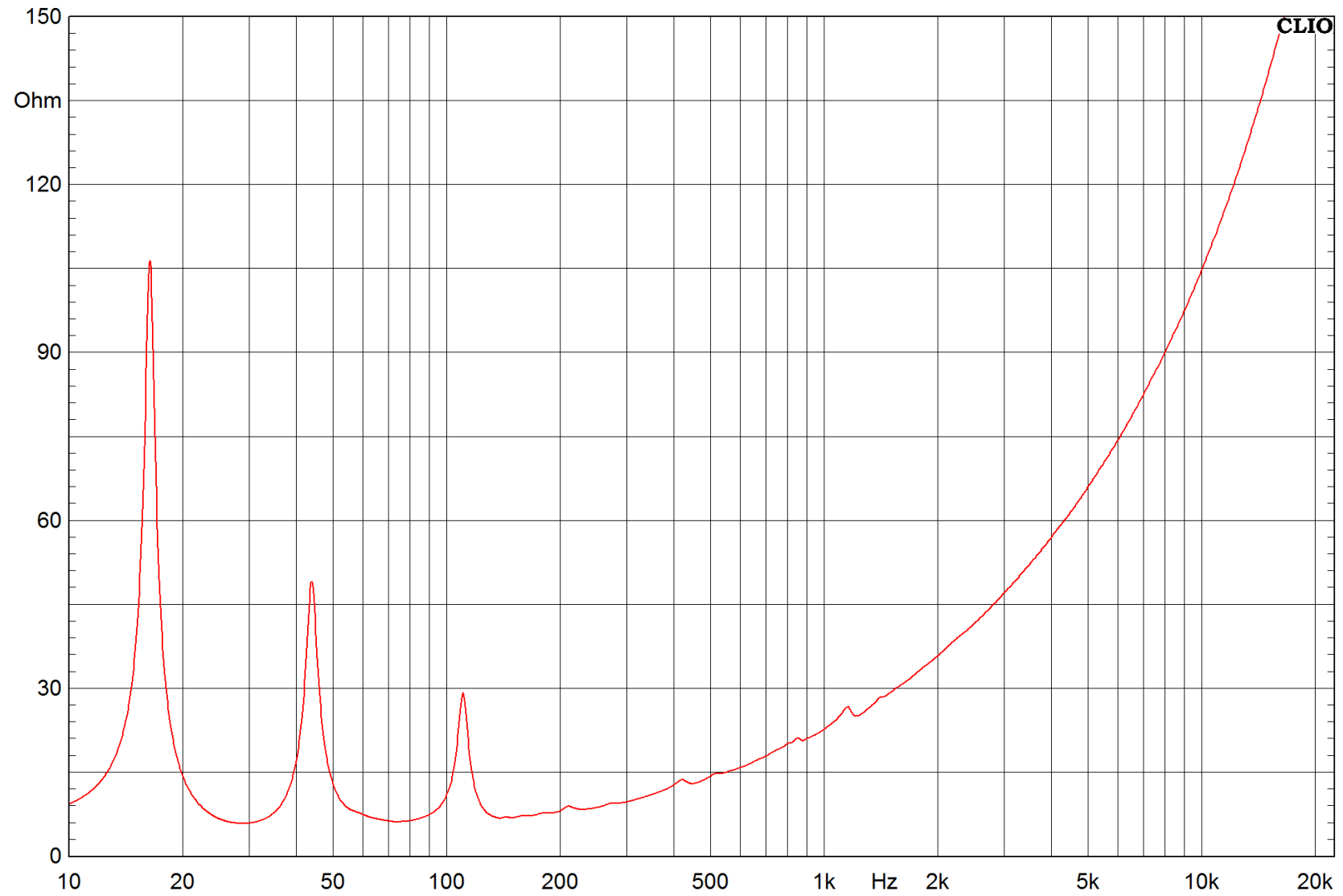


MAGNITUDE RESPONSE

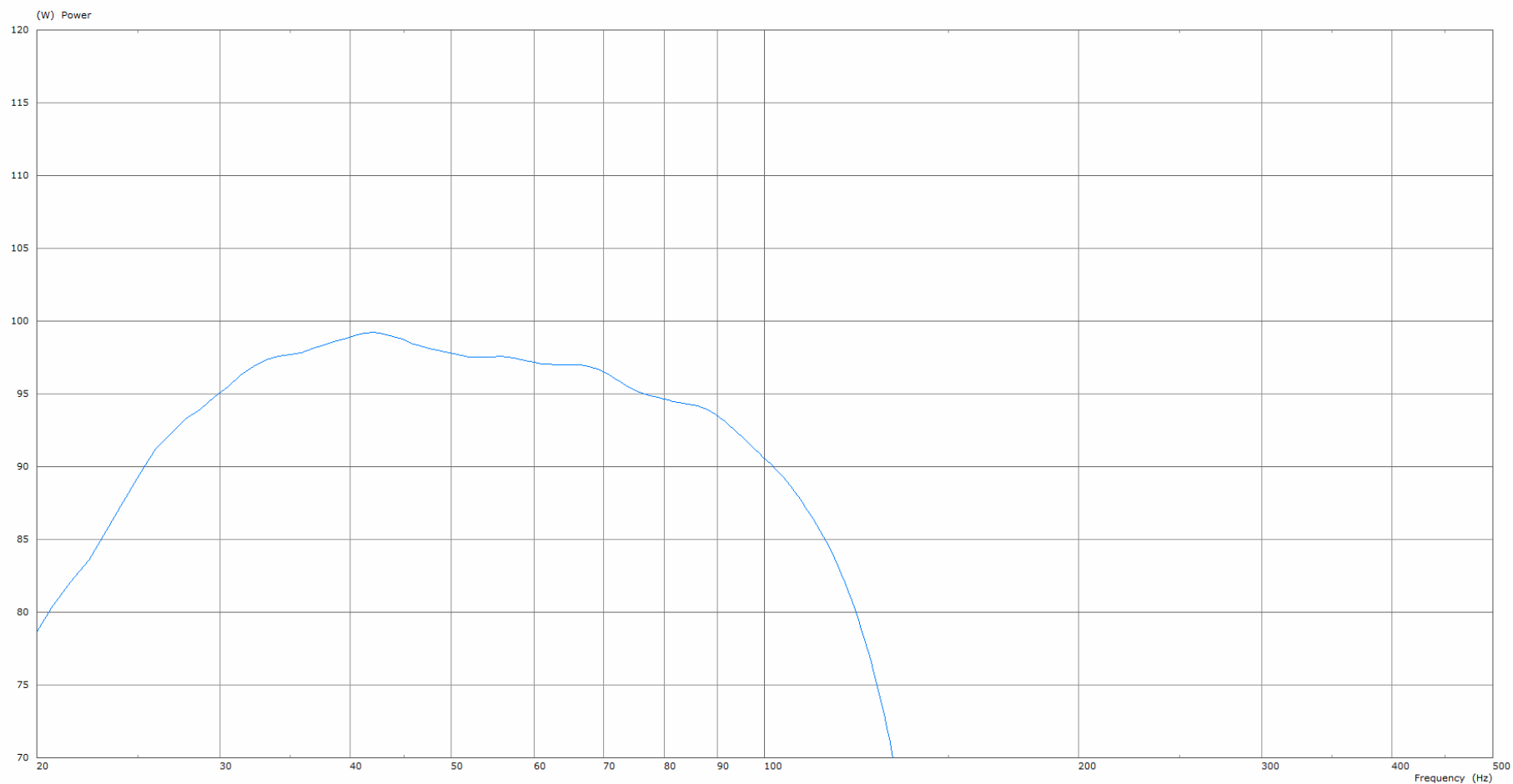


PHASE RESPONSE

IMPEDANCE WITH 21NLW4100



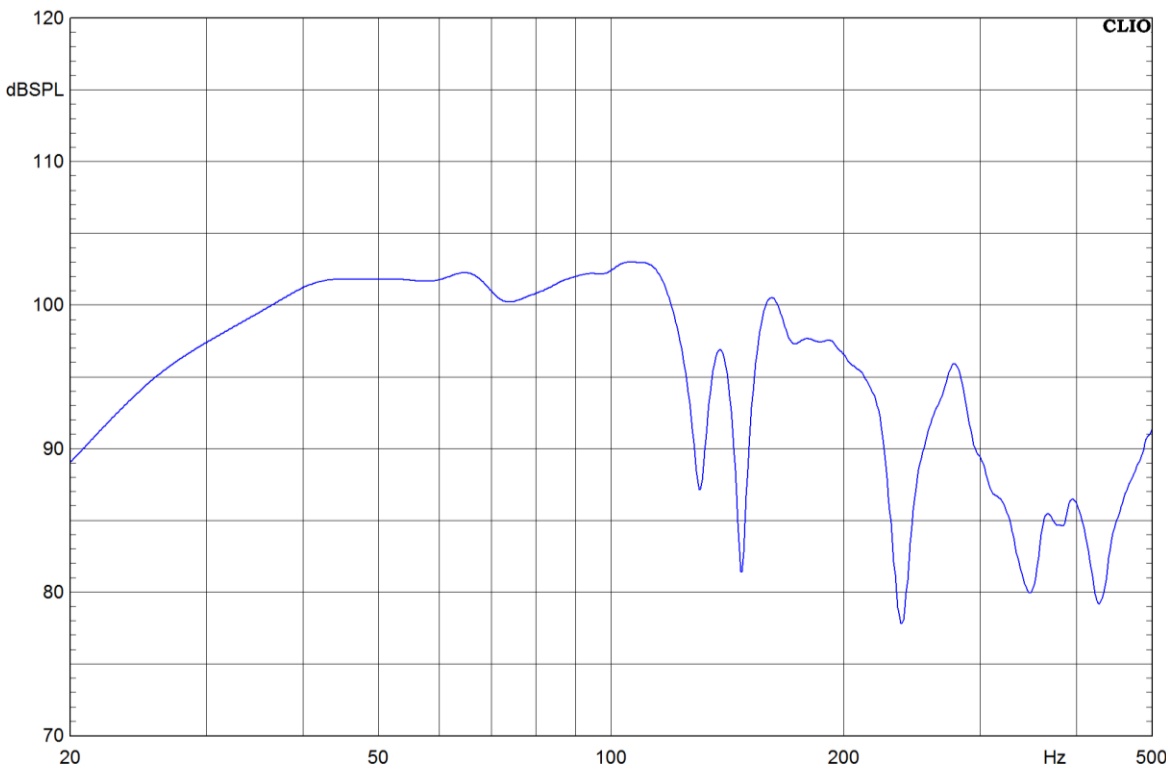
FILTERED MAGNITUDE RESPONSE, 2.83V/1M WITH 21NLW4100



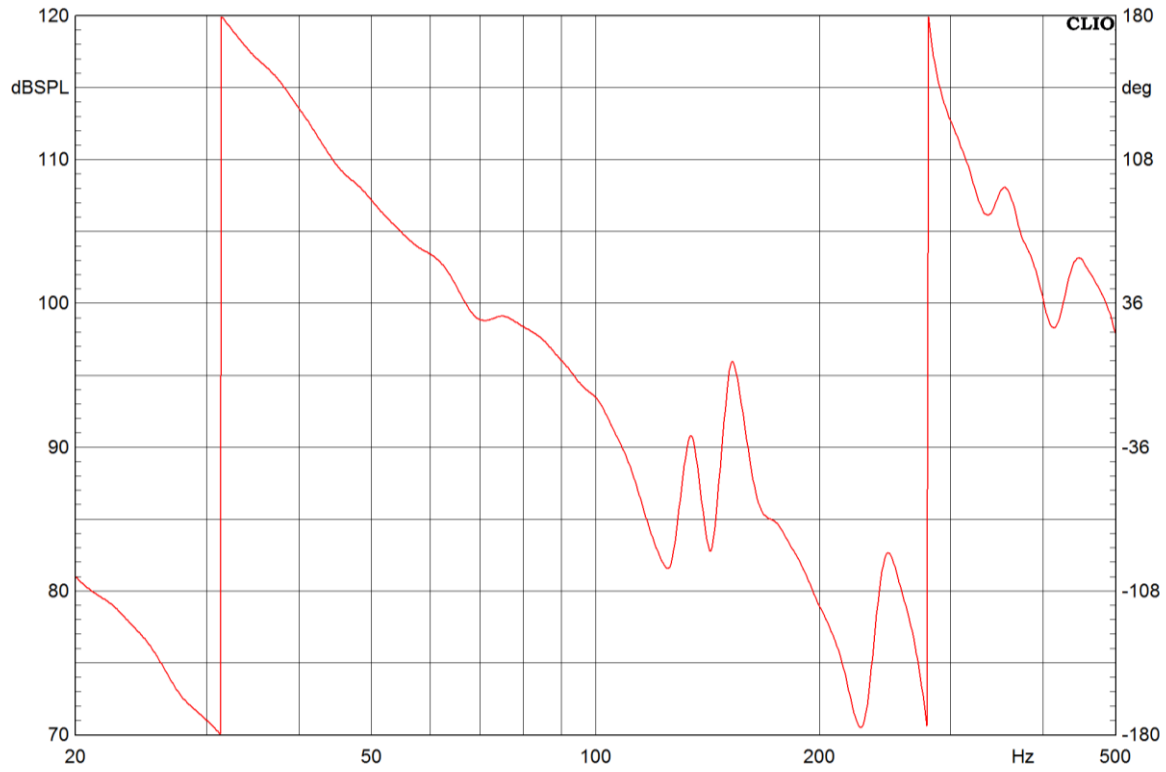
EQUALIZATION SETTINGS SUGGESTION

High Pass: Butterworth 24dB/Oct 28Hz
Parametric EQ: $f_0 = 102\text{Hz}$ / -3dB / $Q = 2$
Parametric EQ: $f_0 = 171\text{Hz}$ / -10dB / $Q = 2$
Parametric EQ: $f_0 = 32\text{Hz}$ / +2dB / $Q = 2$
Low Pass: Linkwitz-Riley 24dB/Oct 85Hz

UNFILTERED MAGNITUDE RESPONSE, 2.83V/1m AND RELATIVE PHASE WITH 21LW2600

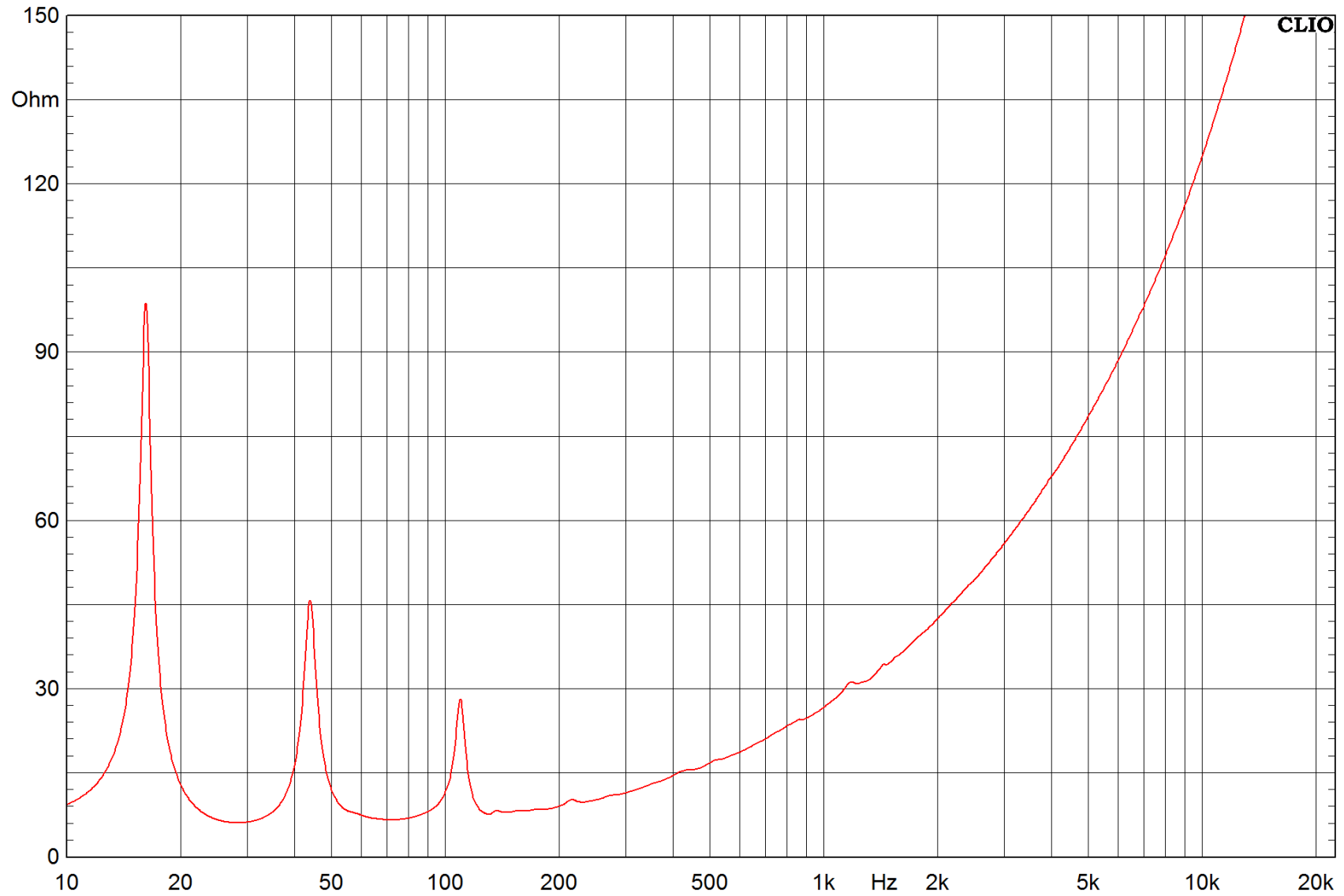


MAGNITUDE RESPONSE

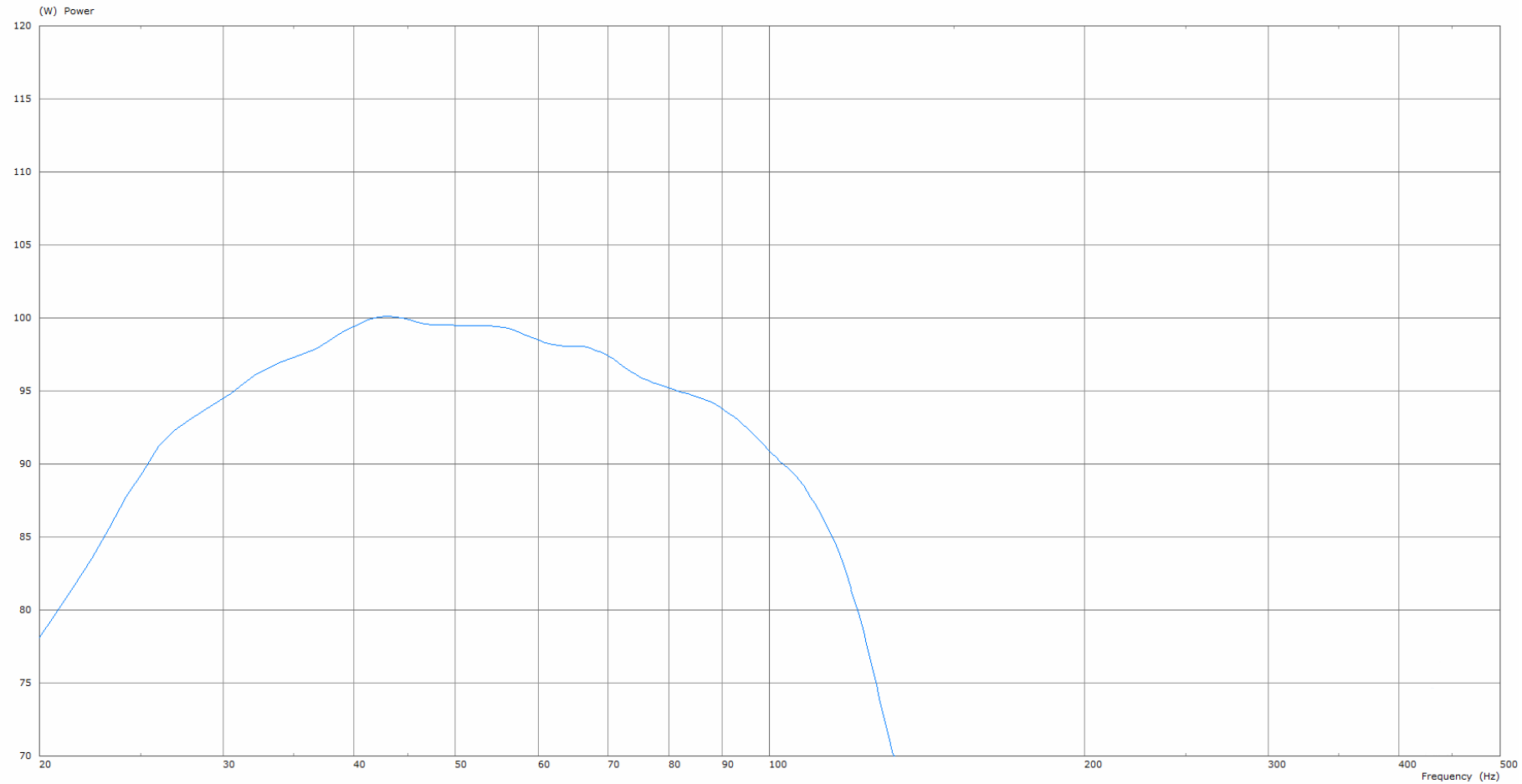


PHASE RESPONSE

IMPEDANCE WITH 21LW2600



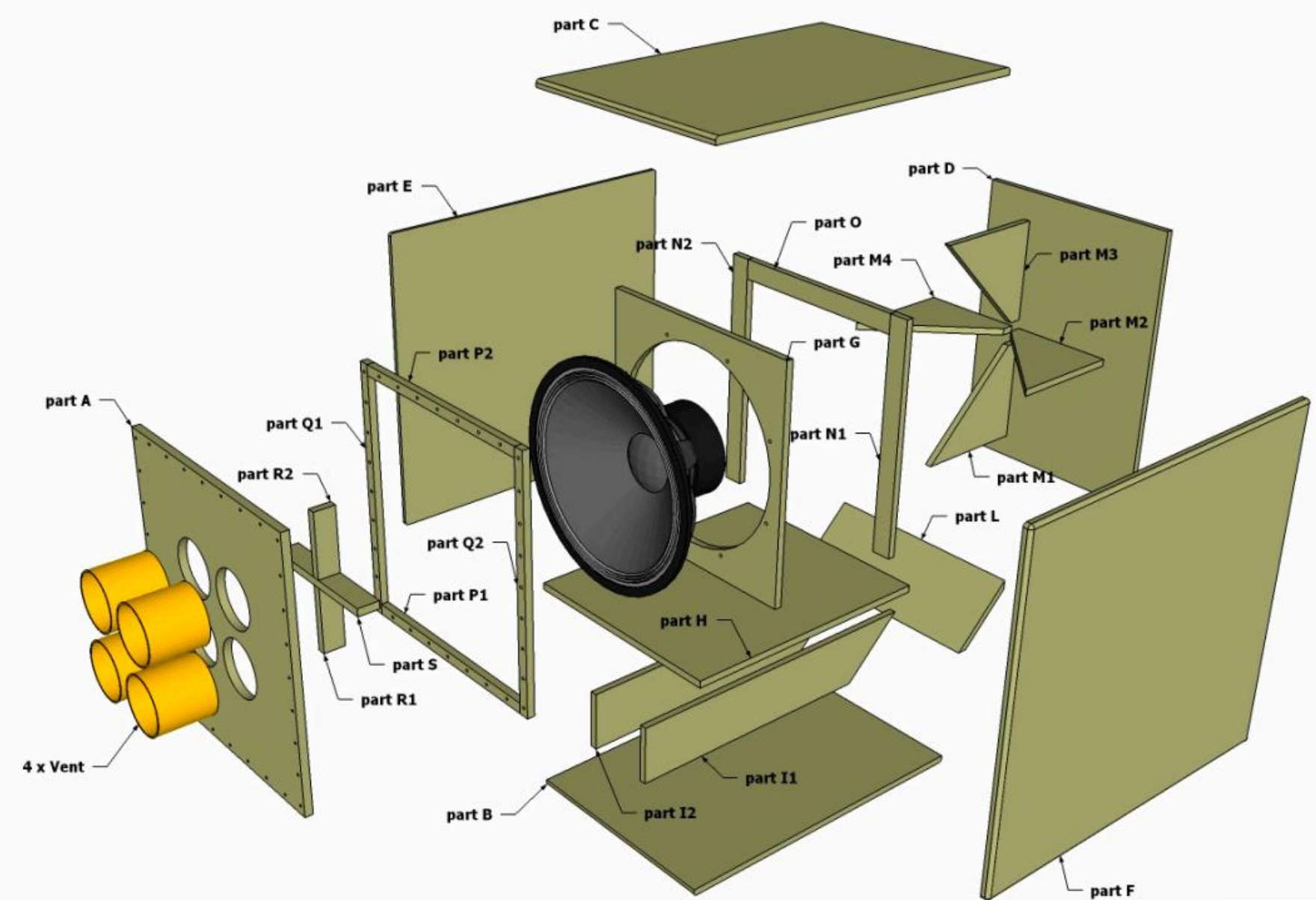
FILTERED MAGNITUDE RESPONSE, 2.83V/1M WITH 21LW2600



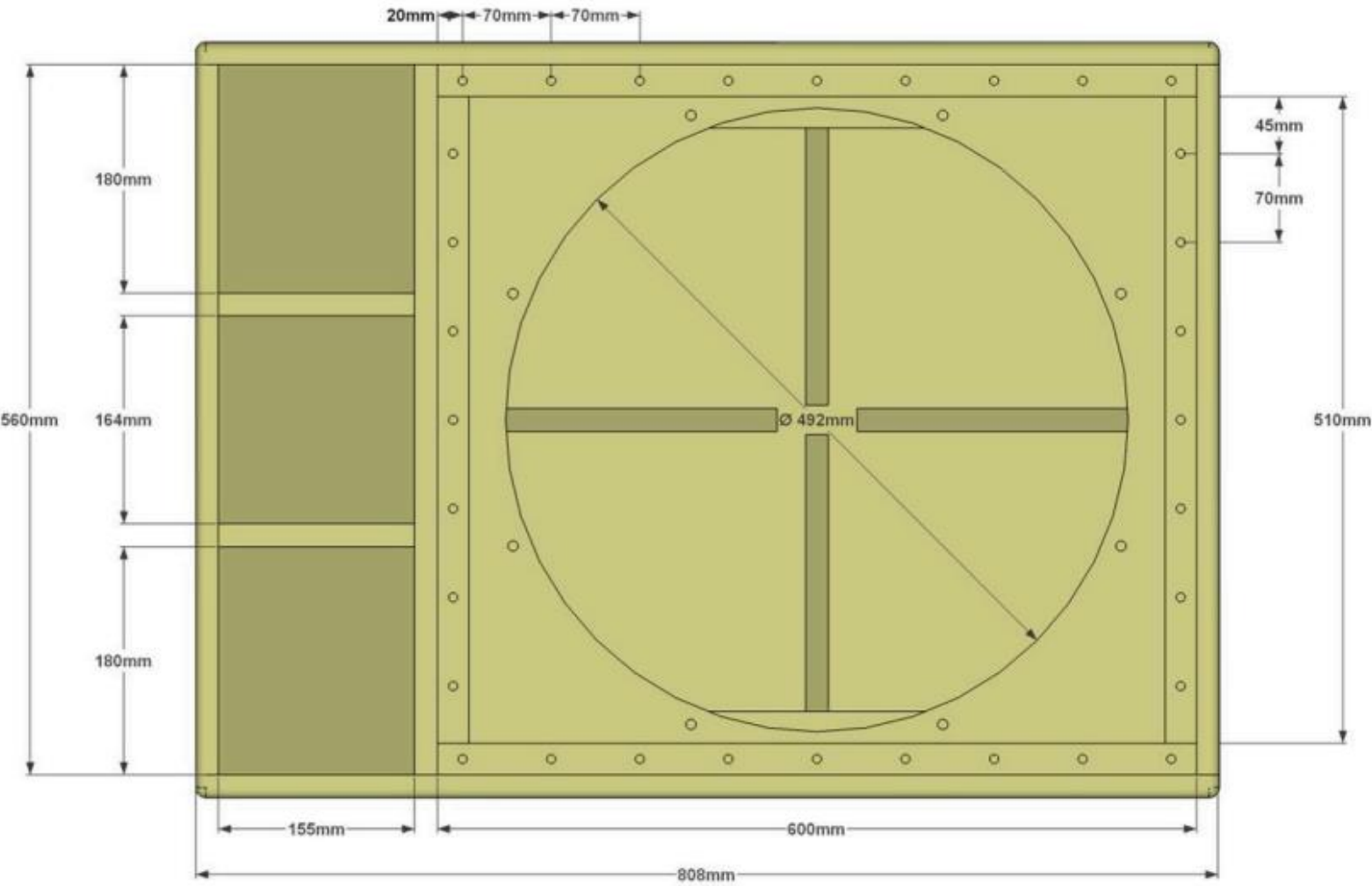
EQUALIZATION SETTINGS SUGGESTION

High Pass: Butterworth 24dB/Oct 28Hz
Parametric EQ: $f_0 = 111\text{Hz}$ / -15dB / $Q = 2$
Parametric EQ: $f_0 = 32\text{Hz}$ / +2dB / $Q = 1.5$
Low Pass: Linkwitz-Riley 24dB/Oct 85Hz

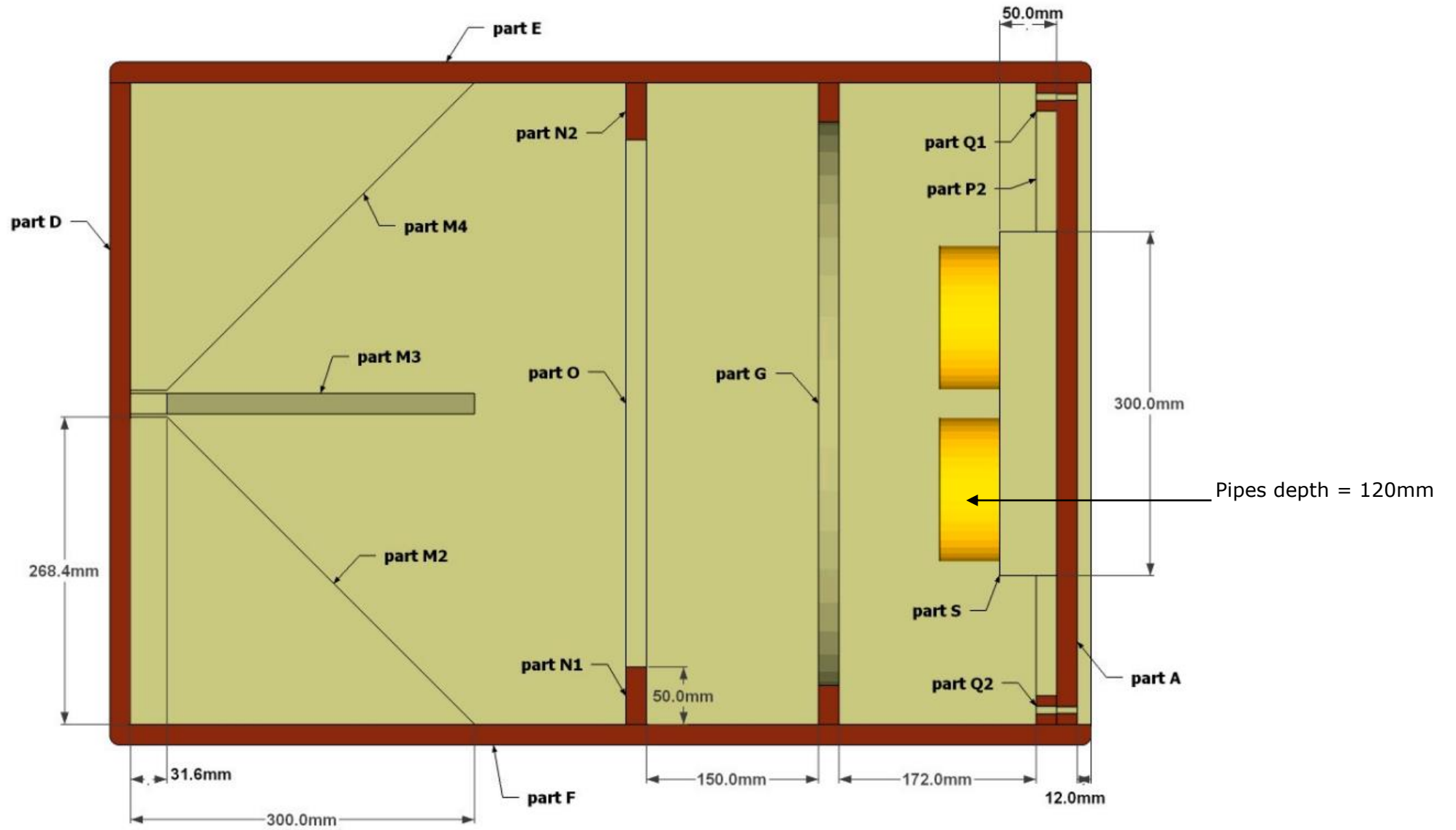
EXPLODED VIEW



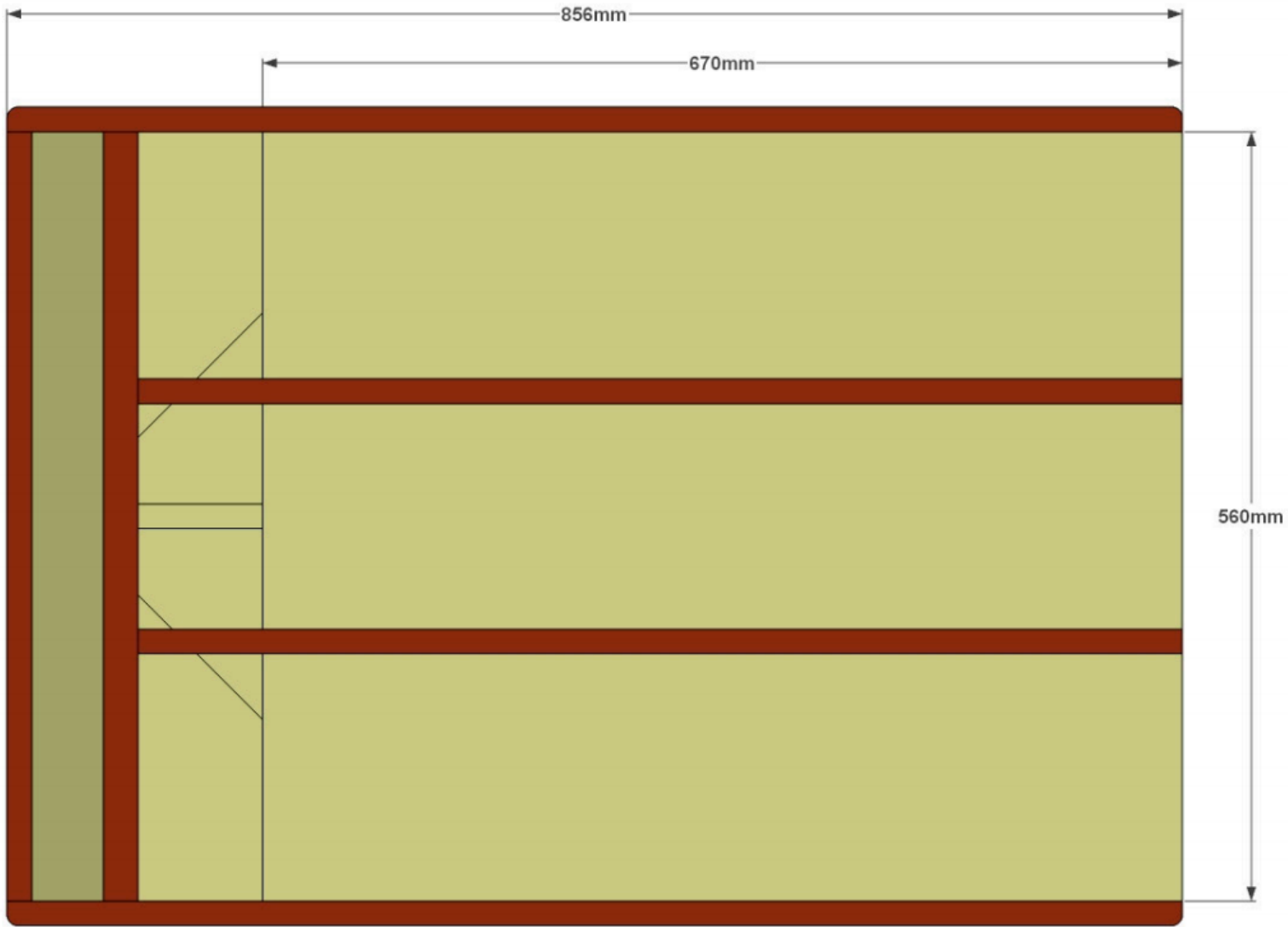
FRONT VIEW



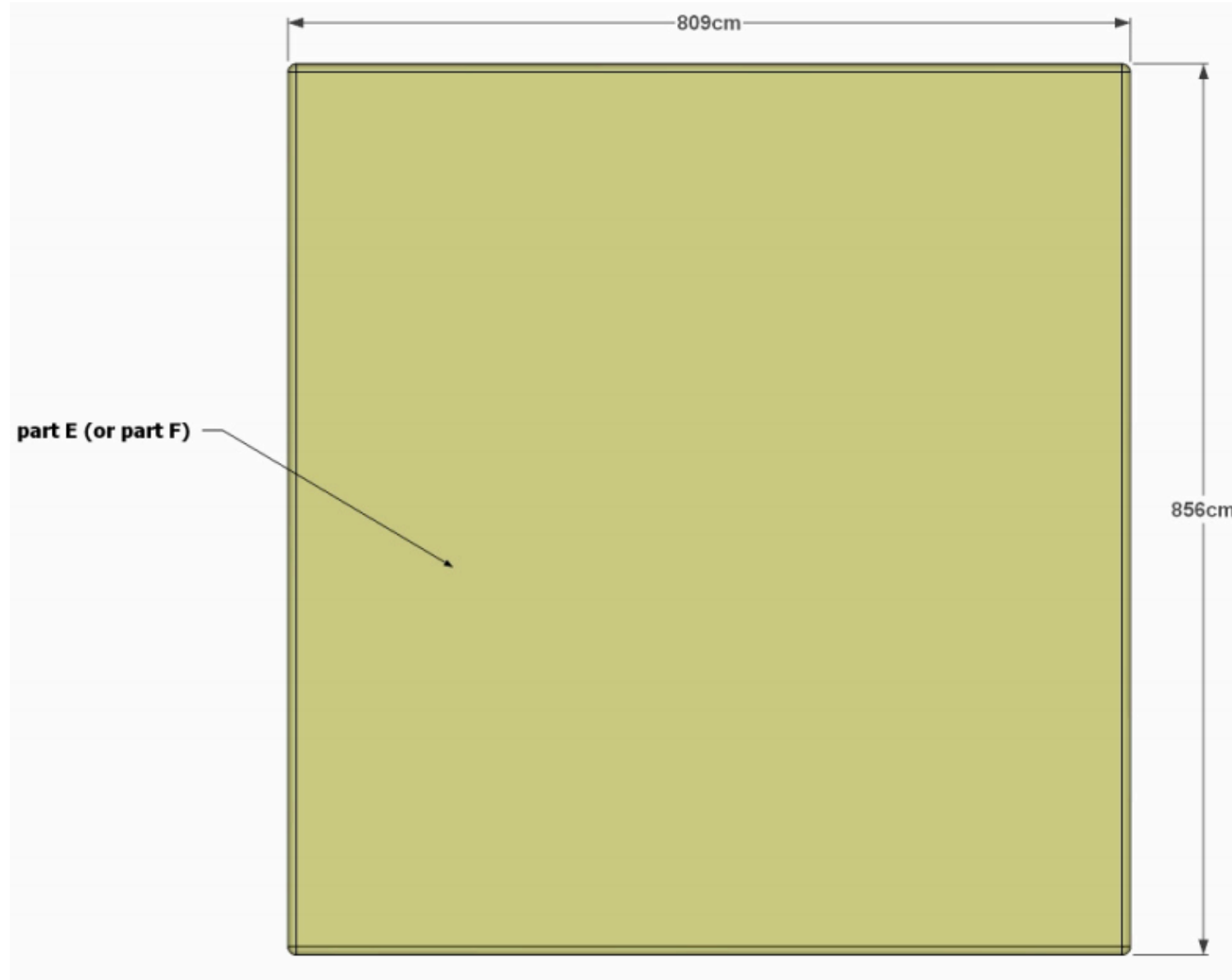
TOP SECTION



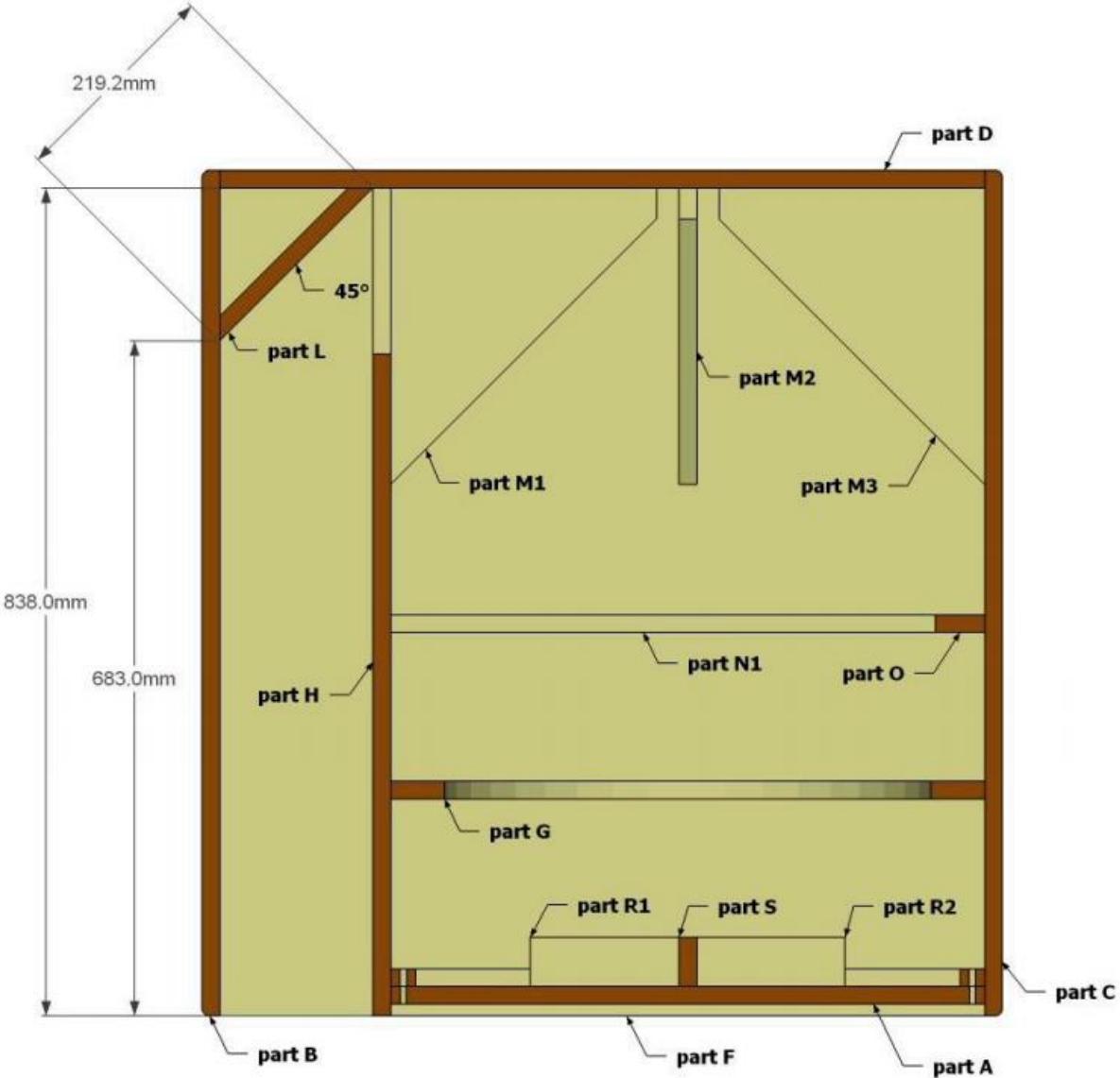
BOTTOM SECTION



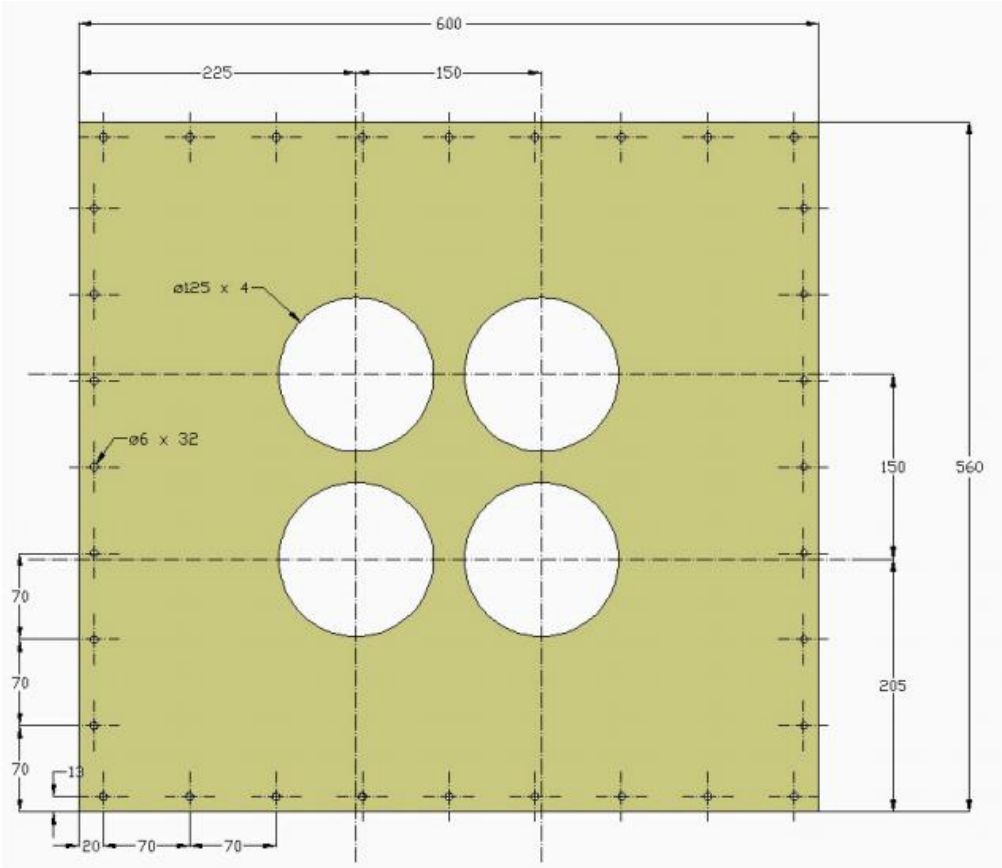
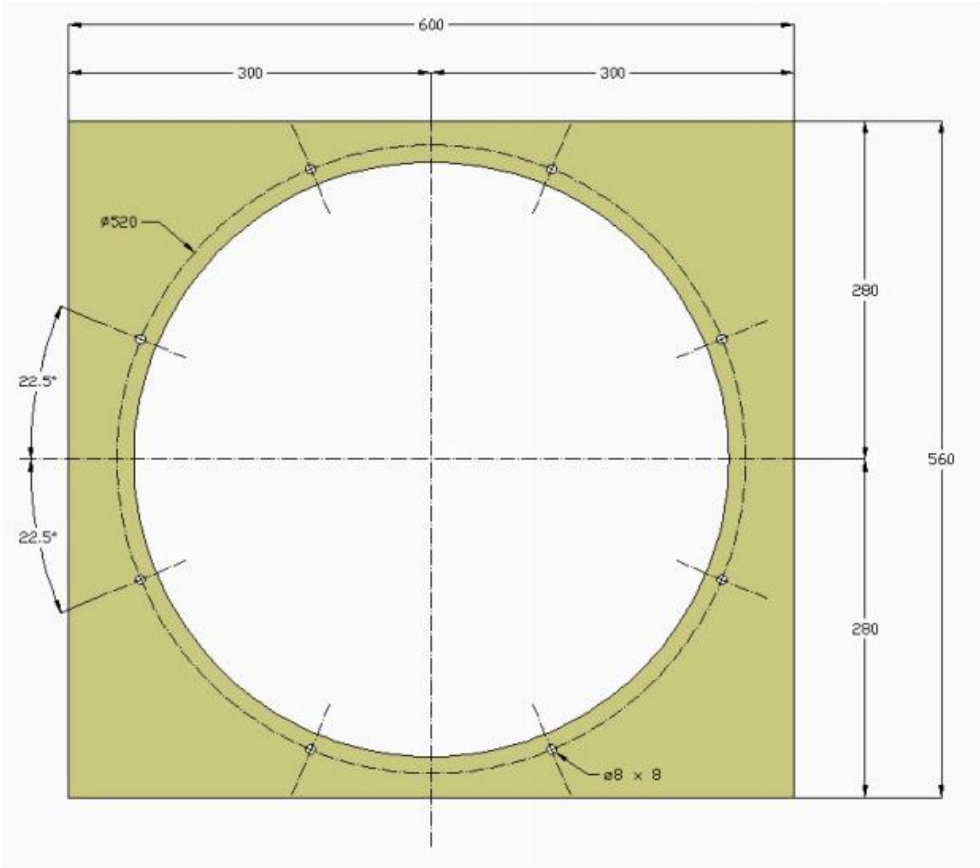
TOP-BOTTOM VIEW



SIDE SECTION



DETAILS: BAFFLE AND FRONT PANEL



NOTE: The Vent can also be made with 5" Standard PVC Pipes (127mm). In this case, the 4 holes should be augmented to 127mm and the length should be increased of about 6mm



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