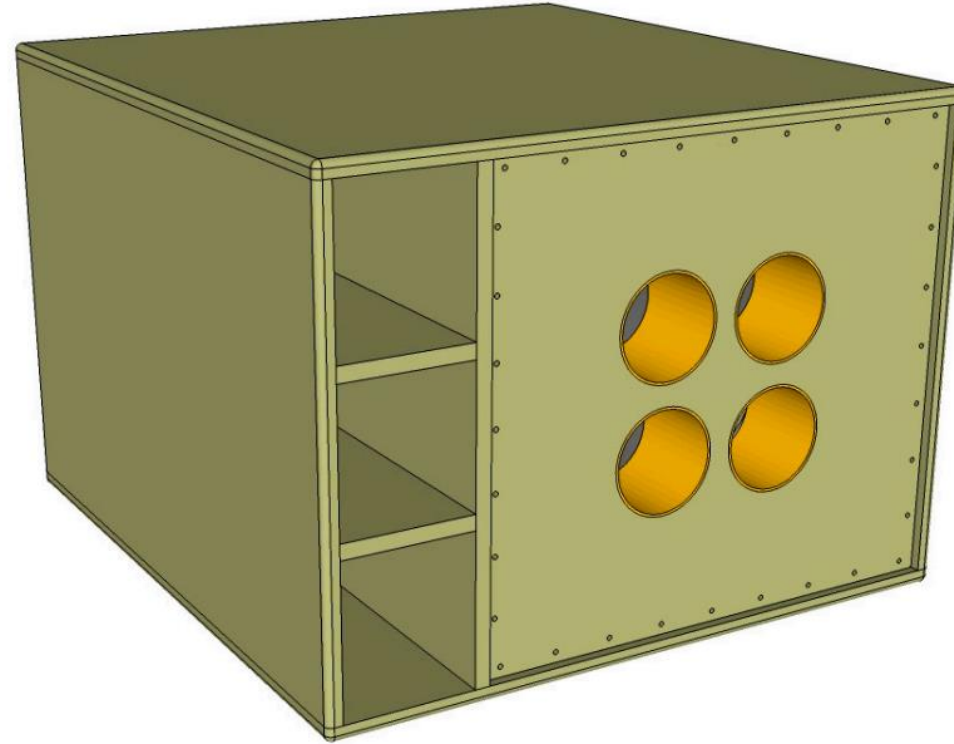




PROFESSIONAL  
LOUDSPEAKERS

## APPLICATION NOTE



SINGLE 21" BAND-PASS SUBWOOFER KIT

## KEY FEATURES

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

### **21LW1400** woofer key features:

1000 W AES power handling  
100 mm (4 In) Interleaved voice coil (ISV)  
Carbon fiber reinforced straight ribbed cone  
Double silicon spider



### **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



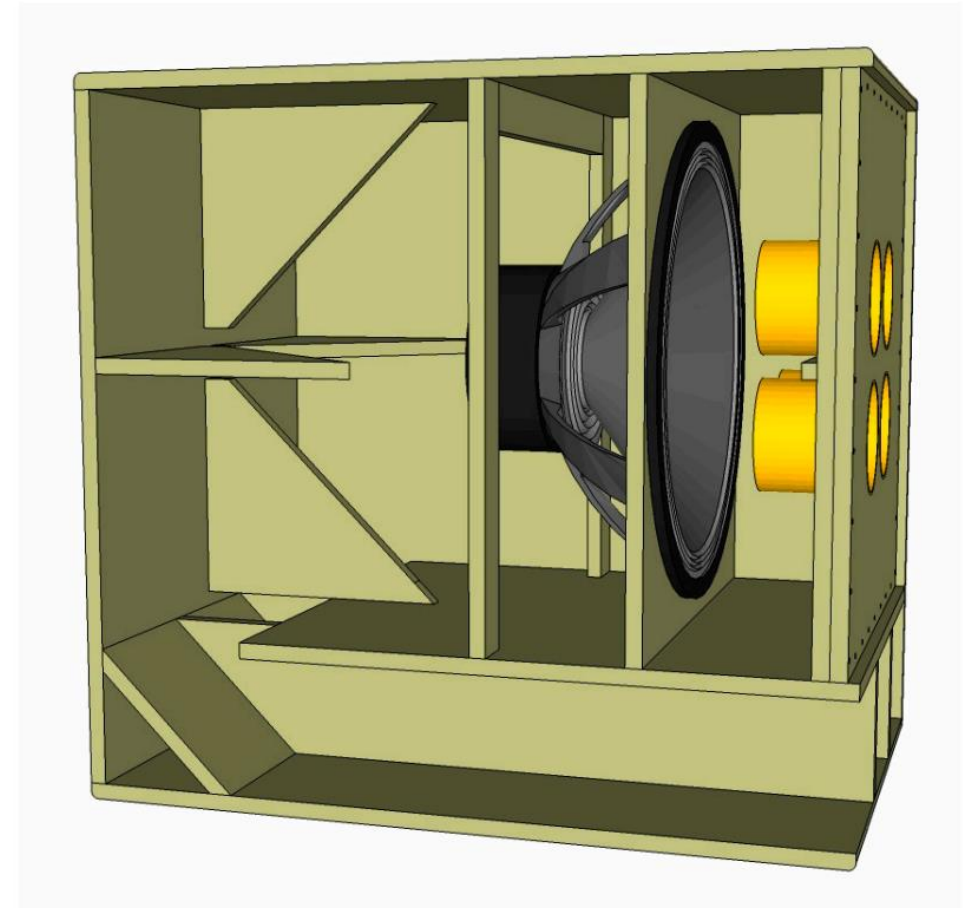
### **21LW2600** woofer key features:

1600 W AES power handling  
100 mm (4 In) Interleaved voice coil  
Optimized ferrite magnet  
Composite reinforced straight ribbed cone



## KEY FEATURES

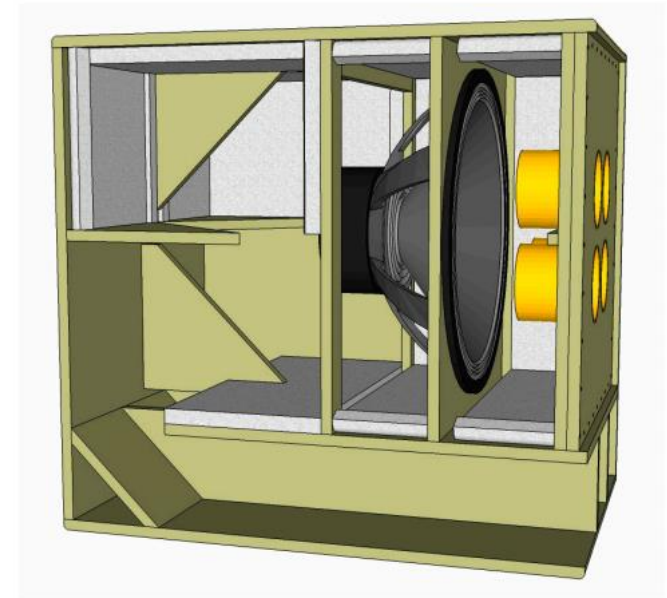
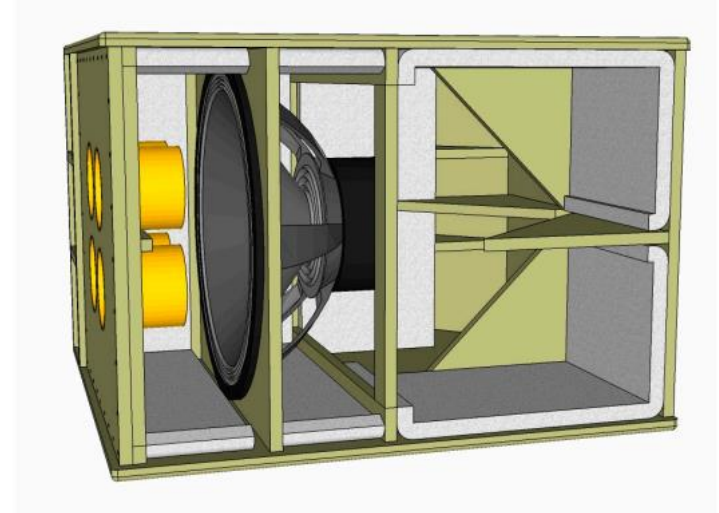
- The enclosure should be made of Baltic birch plywood (18mm thickness)
- Bolts are M6 and M4, proper length must be chosen: M6 is appropriate for speaker and M4 is suitable for frontal cover
- Handling, rigging and connectors are user's choice



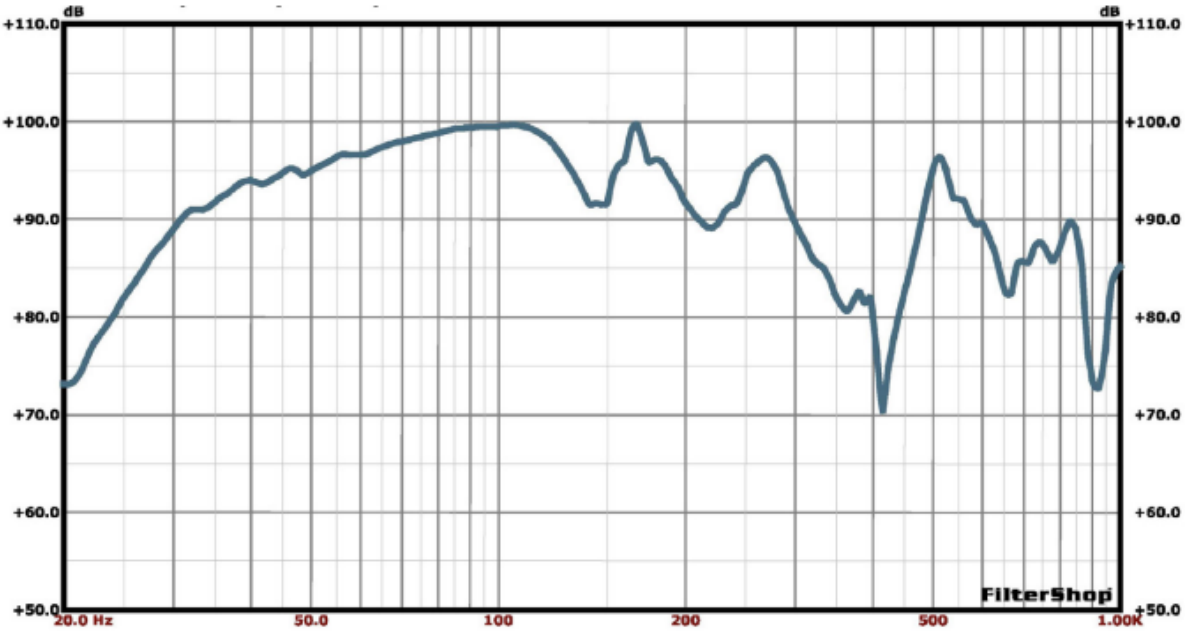
INTERNAL VIEW

## KEY FEATURES

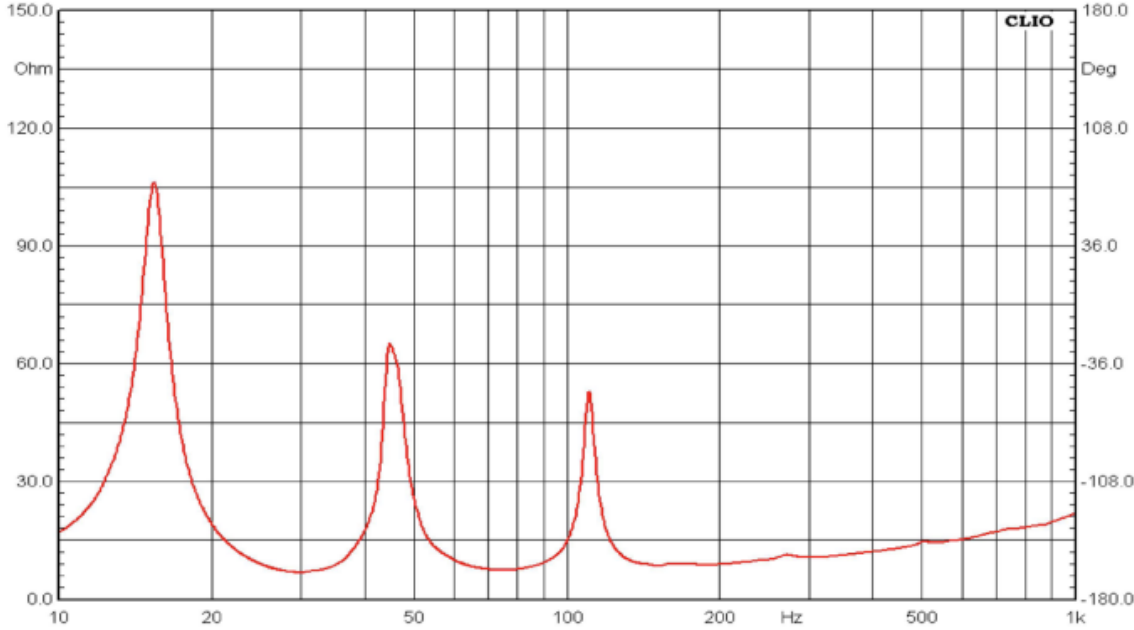
- > It's recommended to well damp the cabinet interior (an high density dampening material, such as Dacron or other synthetic fibers, is required for better performance)
- You should use the image as an example



# UNFILTERED MAGNITUDE RESPONSE, 2.83V/1m AND RELATIVE PHASE WITH 21LW1400

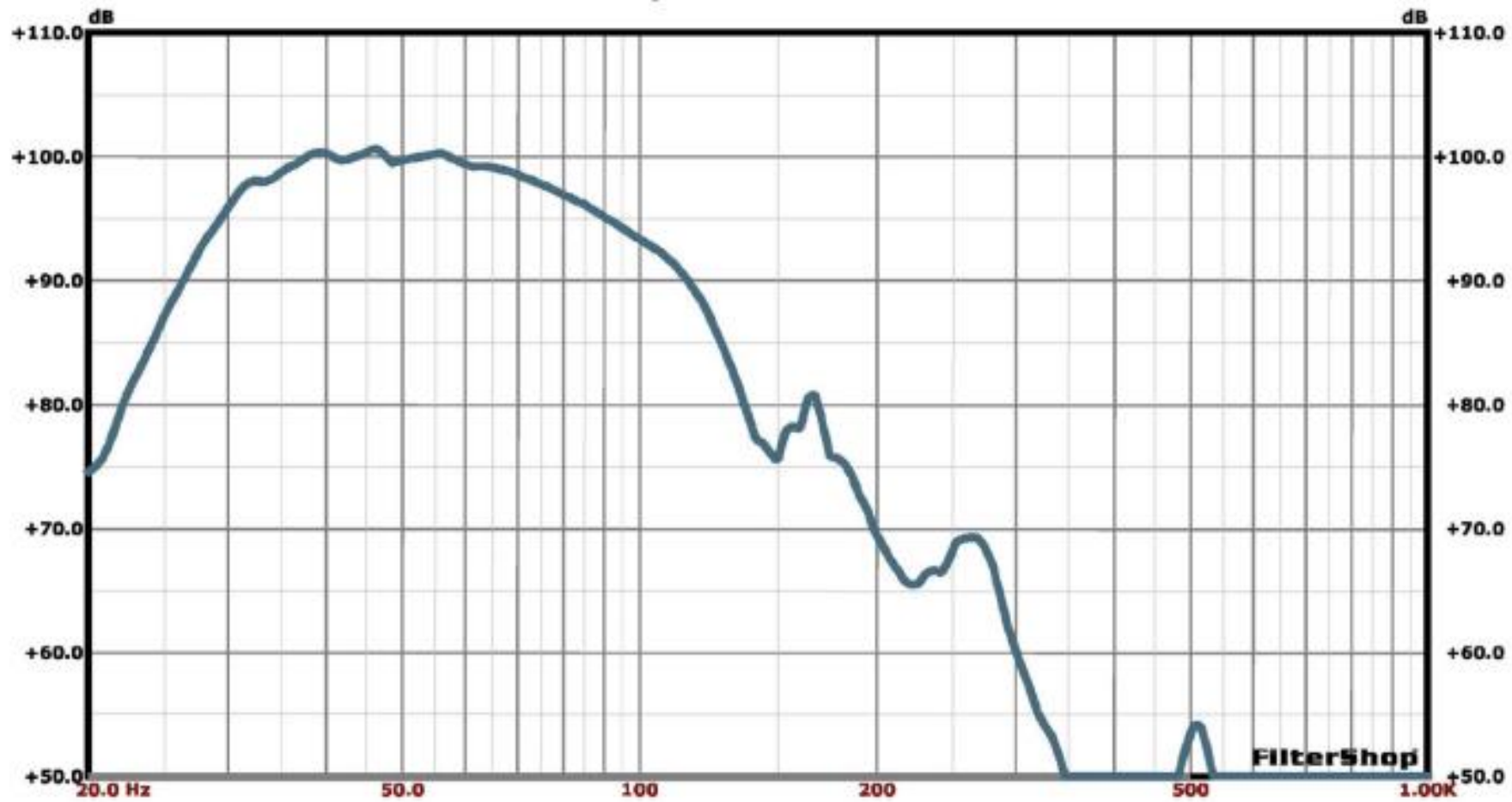


MAGNITUDE RESPONSE



IMPEDANCE CURVE

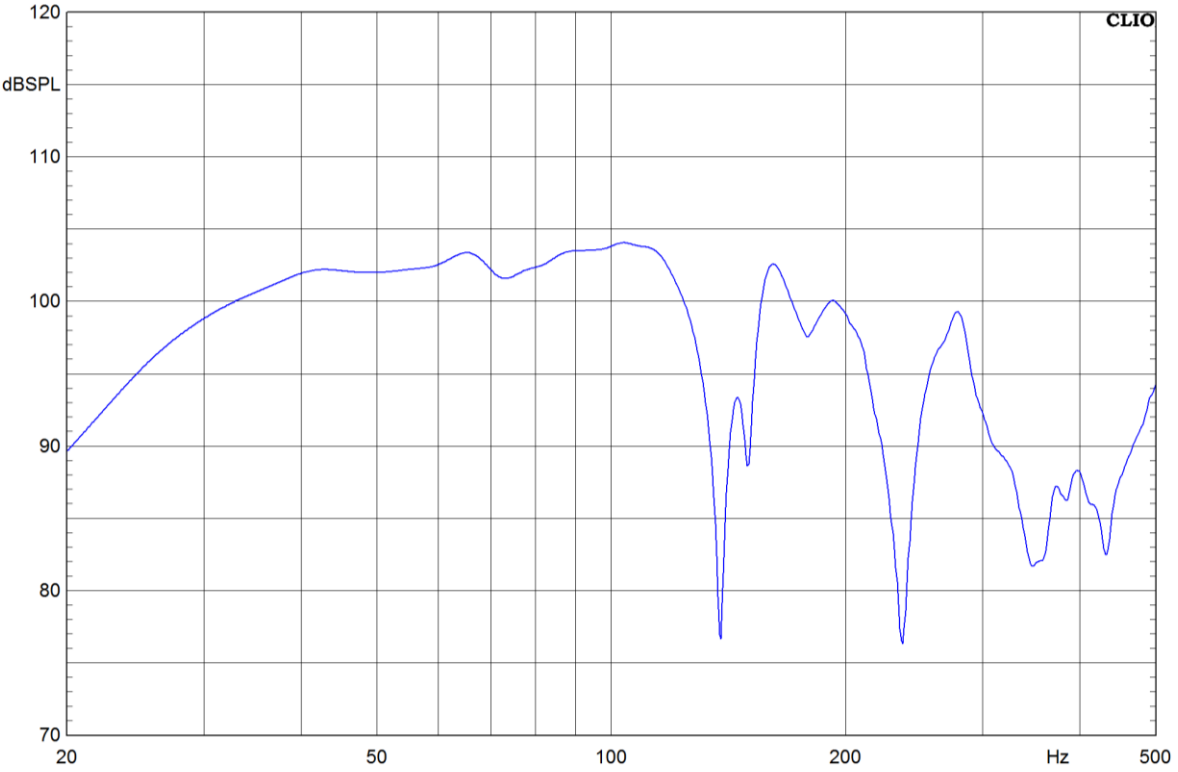
# FILTERED MAGNITUDE RESPONSE, 2.83V/1M WITH 21LW1400



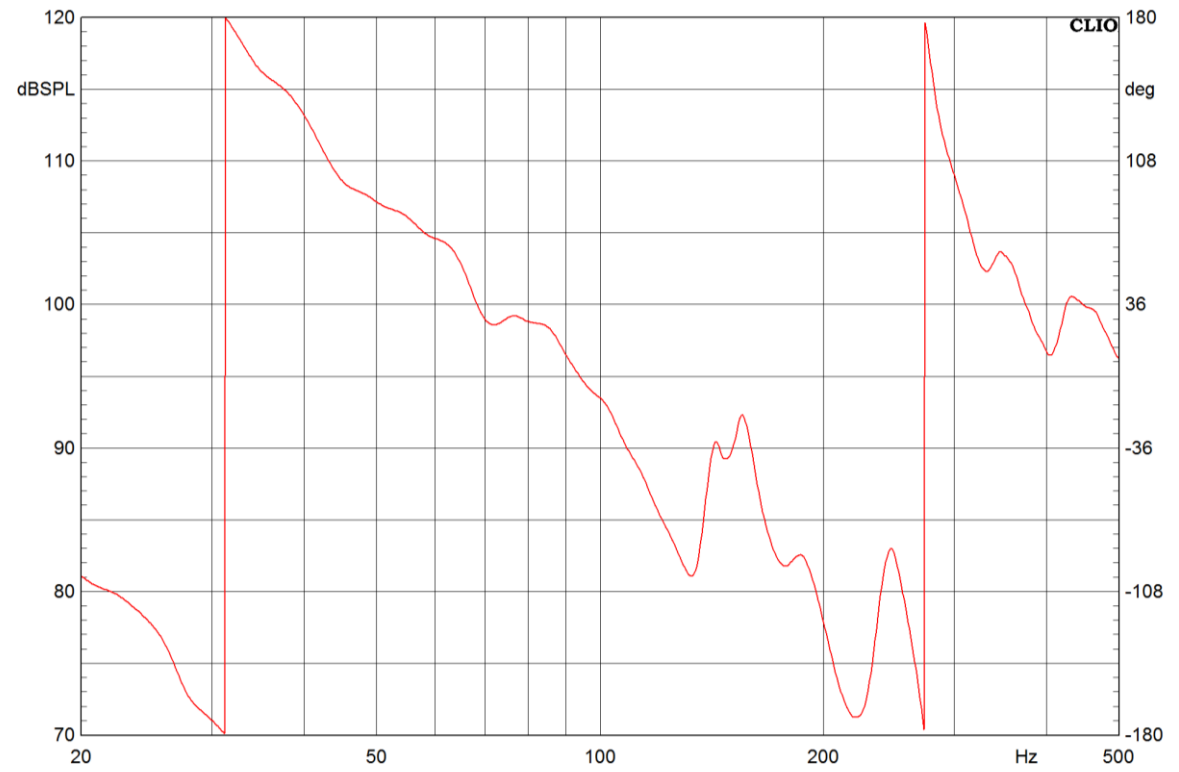
## EQUALIZATION SETTINGS SUGGESTION

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

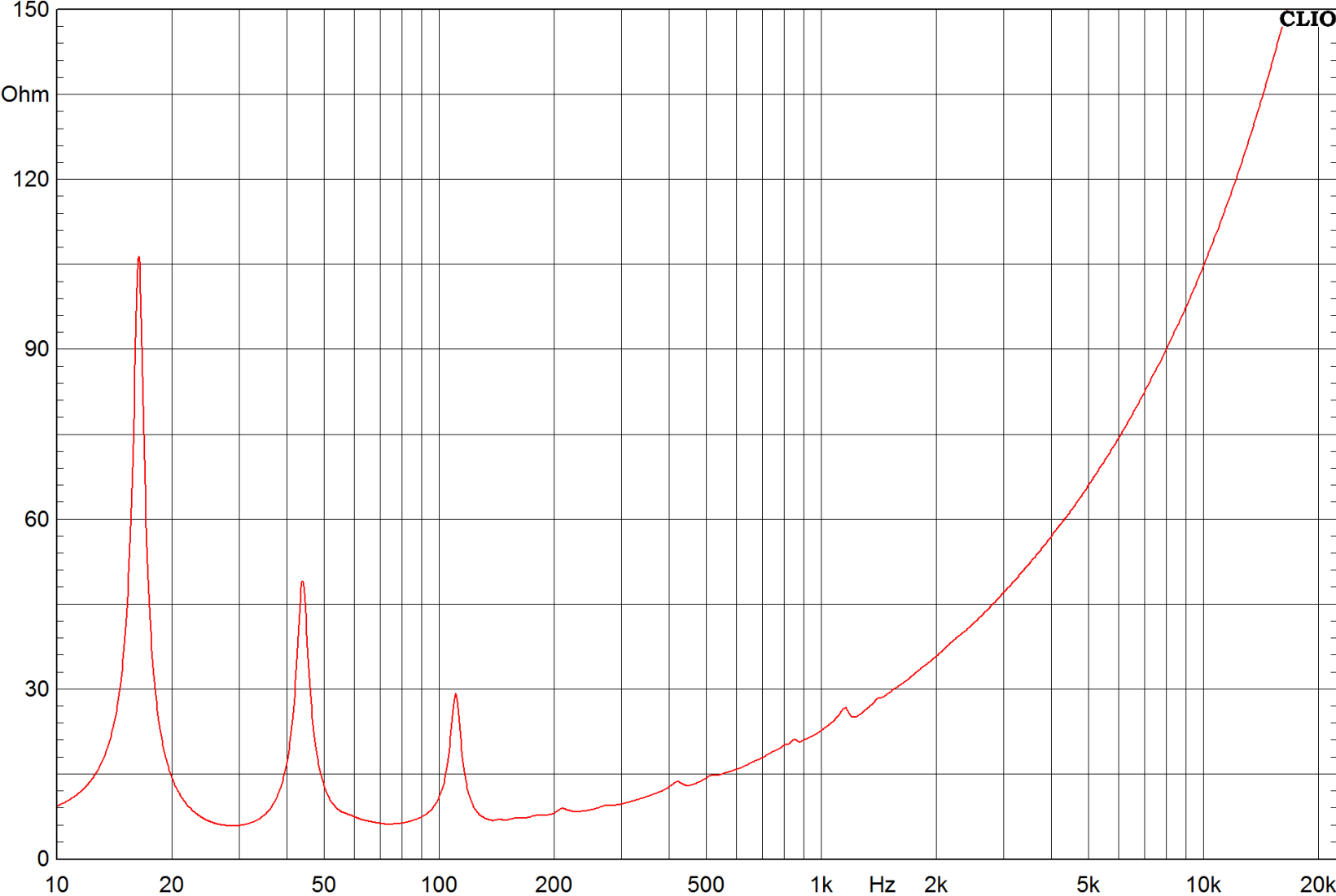


MAGNITUDE RESPONSE



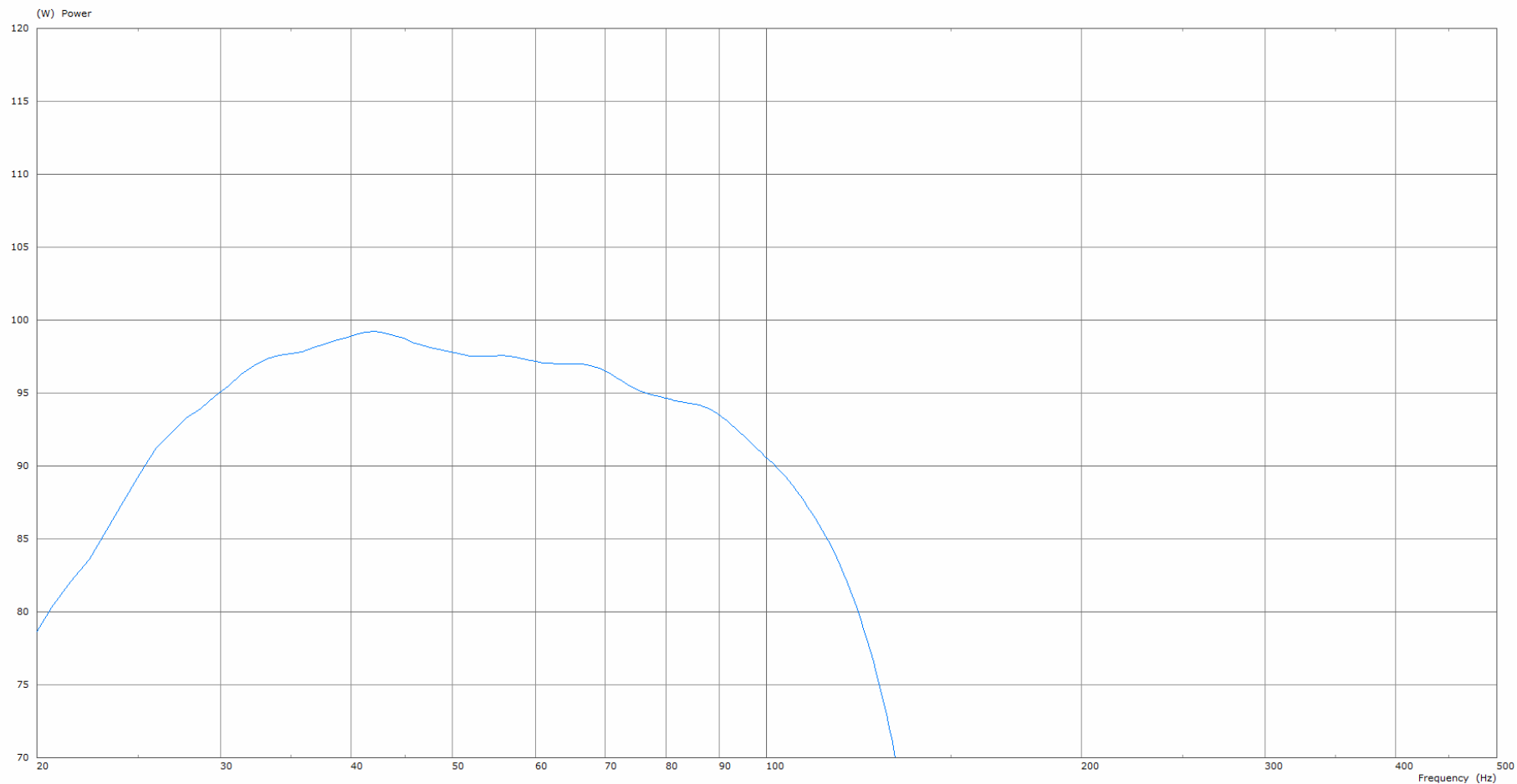
PHASE RESPONSE

# IMPEDANCE WITH 21NLW4100





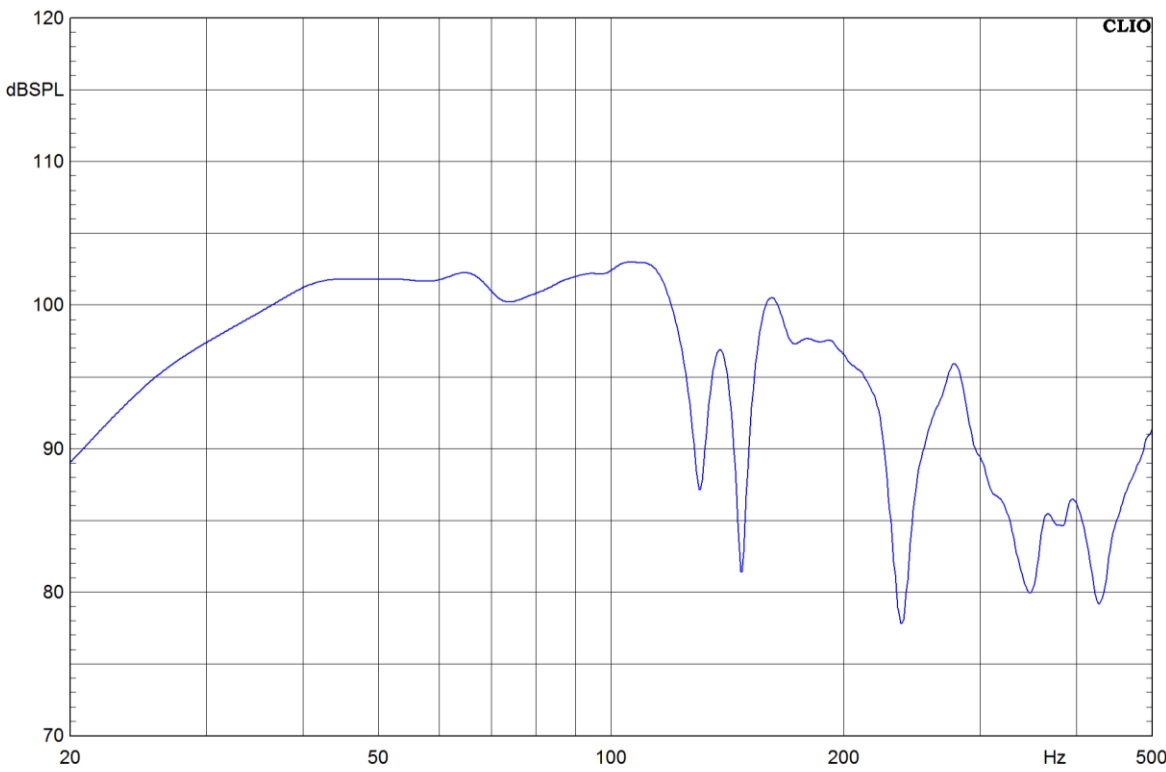
# FILTERED MAGNITUDE RESPONSE, 2.83V/1M WITH 21NLW4100



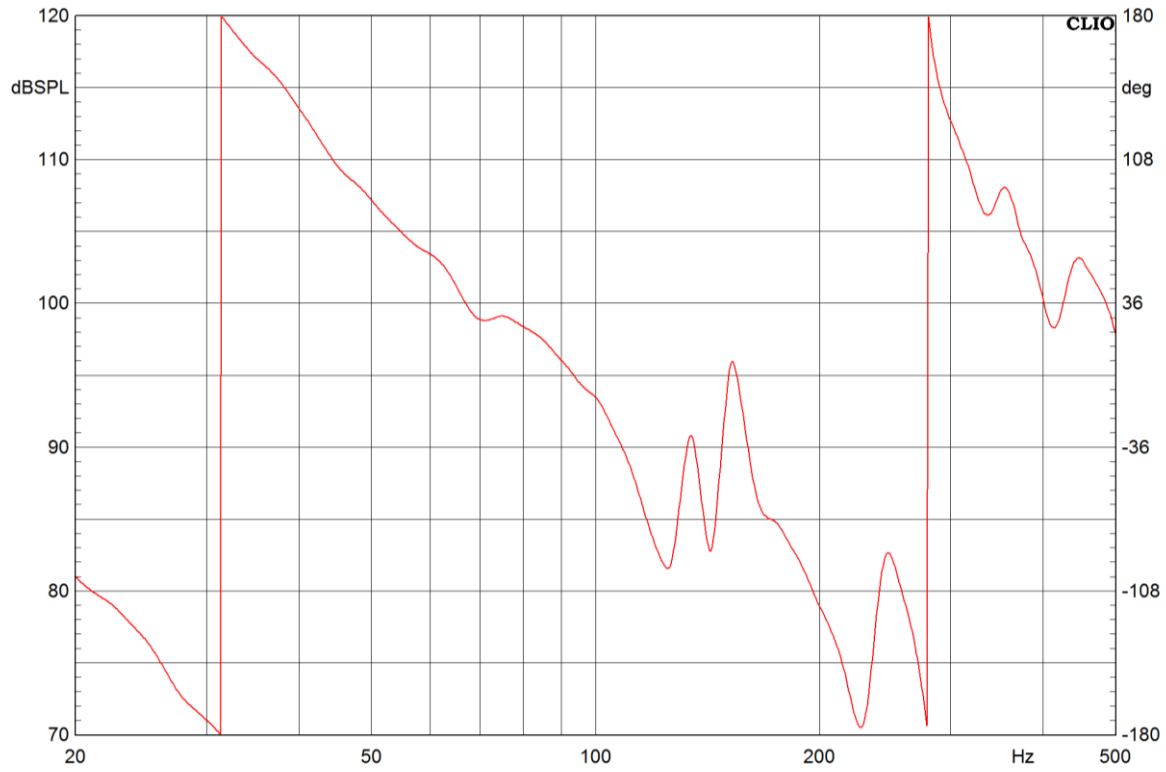
## EQUALIZATION SETTINGS SUGGESTION

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

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

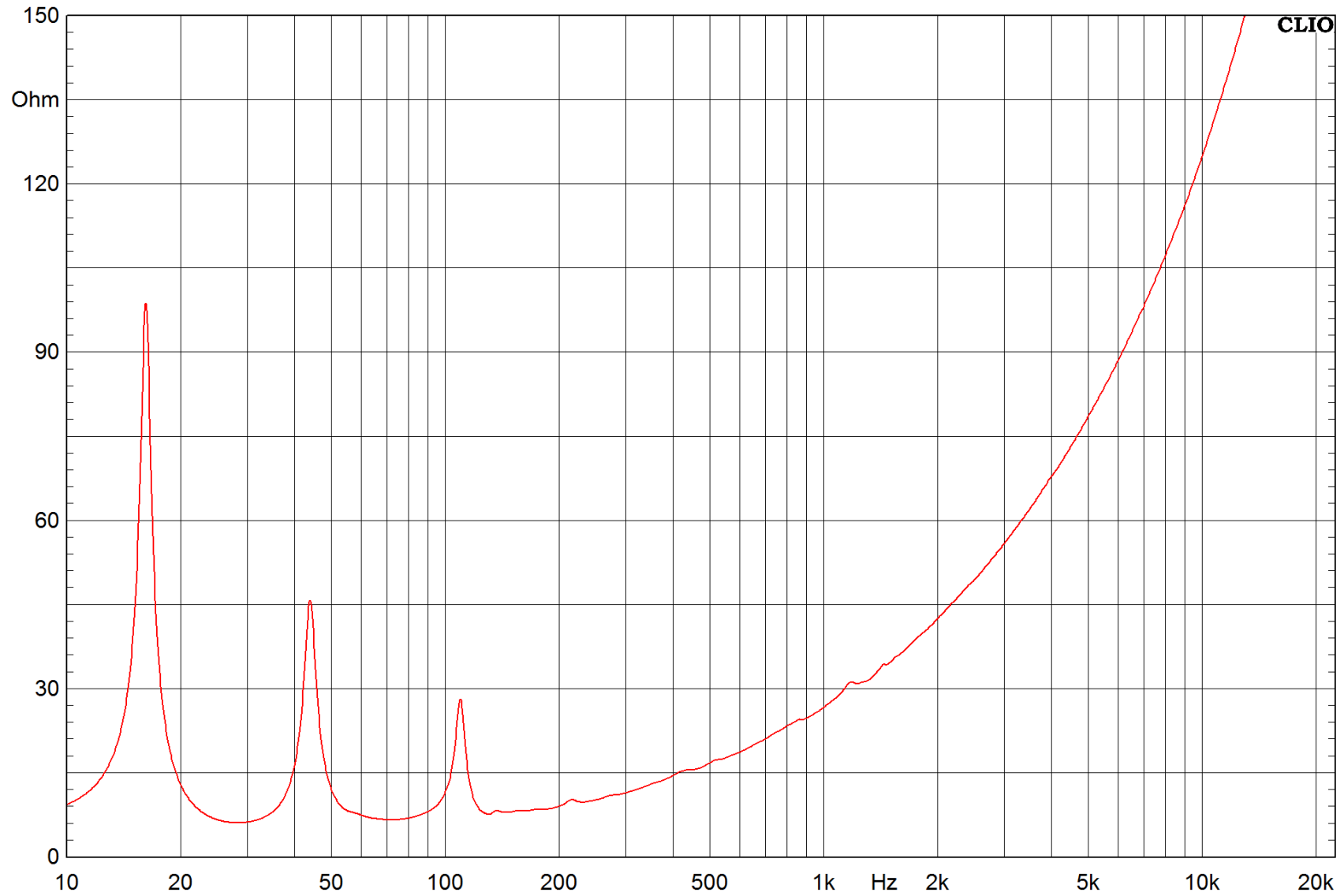


MAGNITUDE RESPONSE

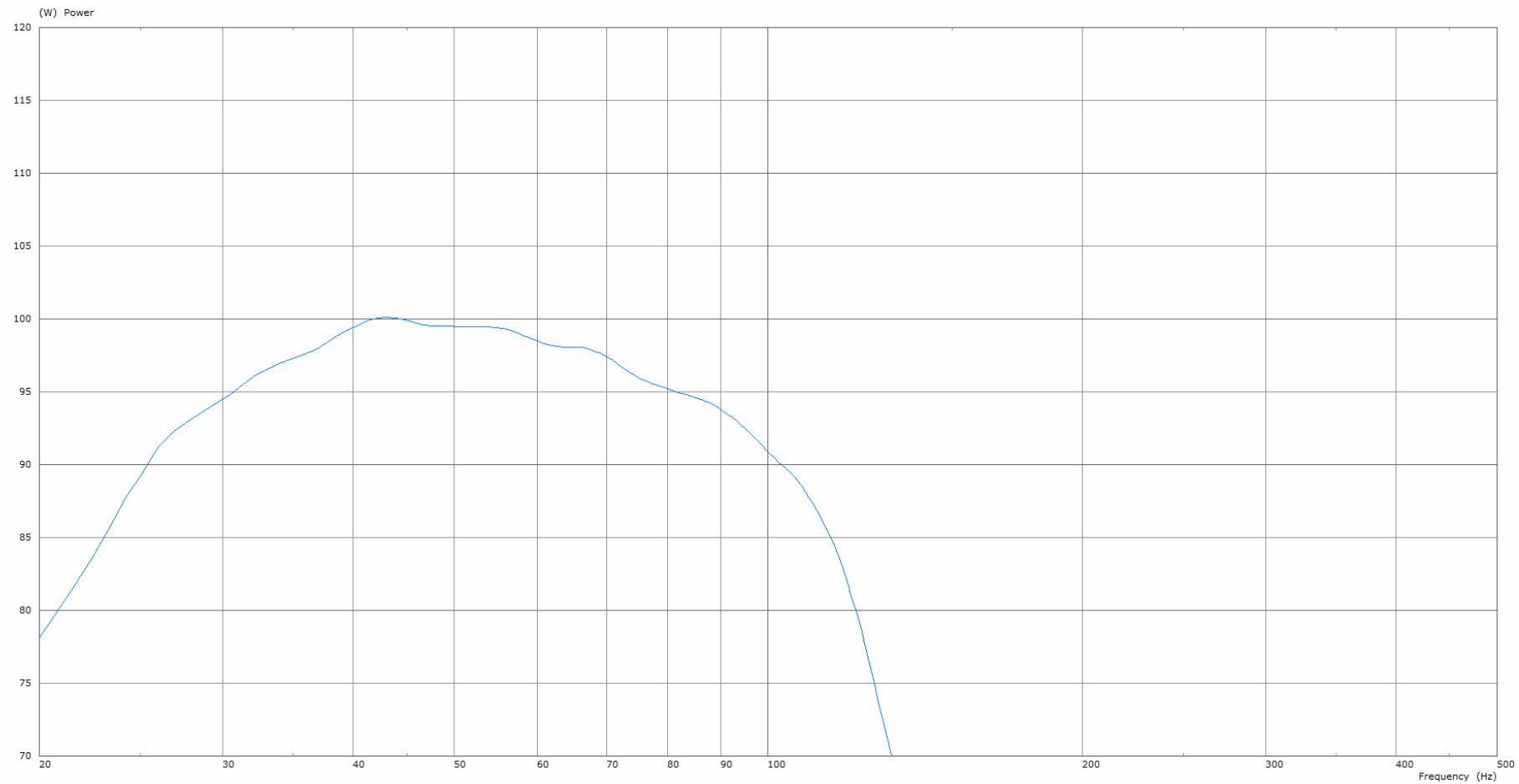


PHASE RESPONSE

# IMPEDANCE WITH 21LW2600



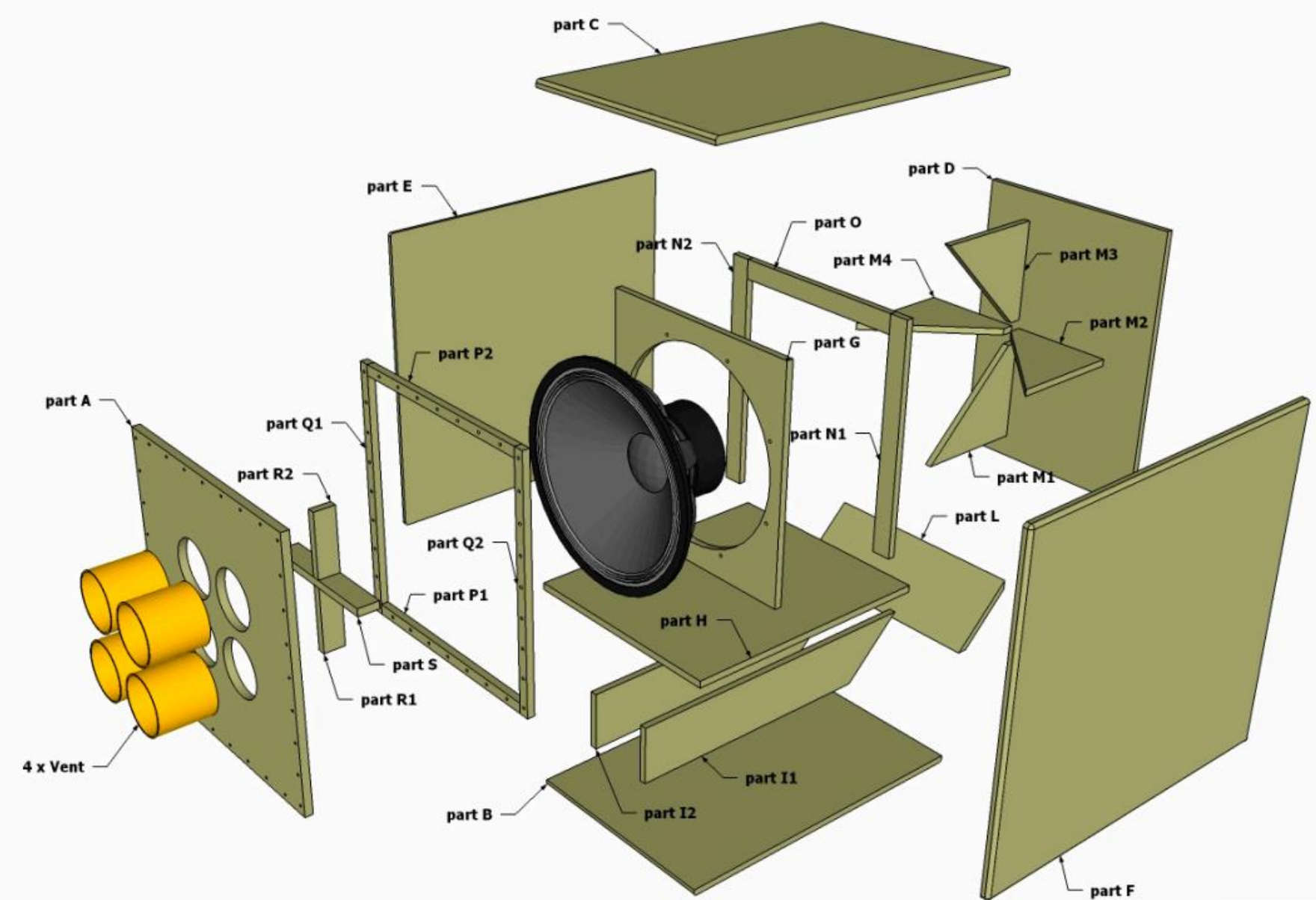
# FILTERED MAGNITUDE RESPONSE, 2.83V/1M WITH 21LW2600



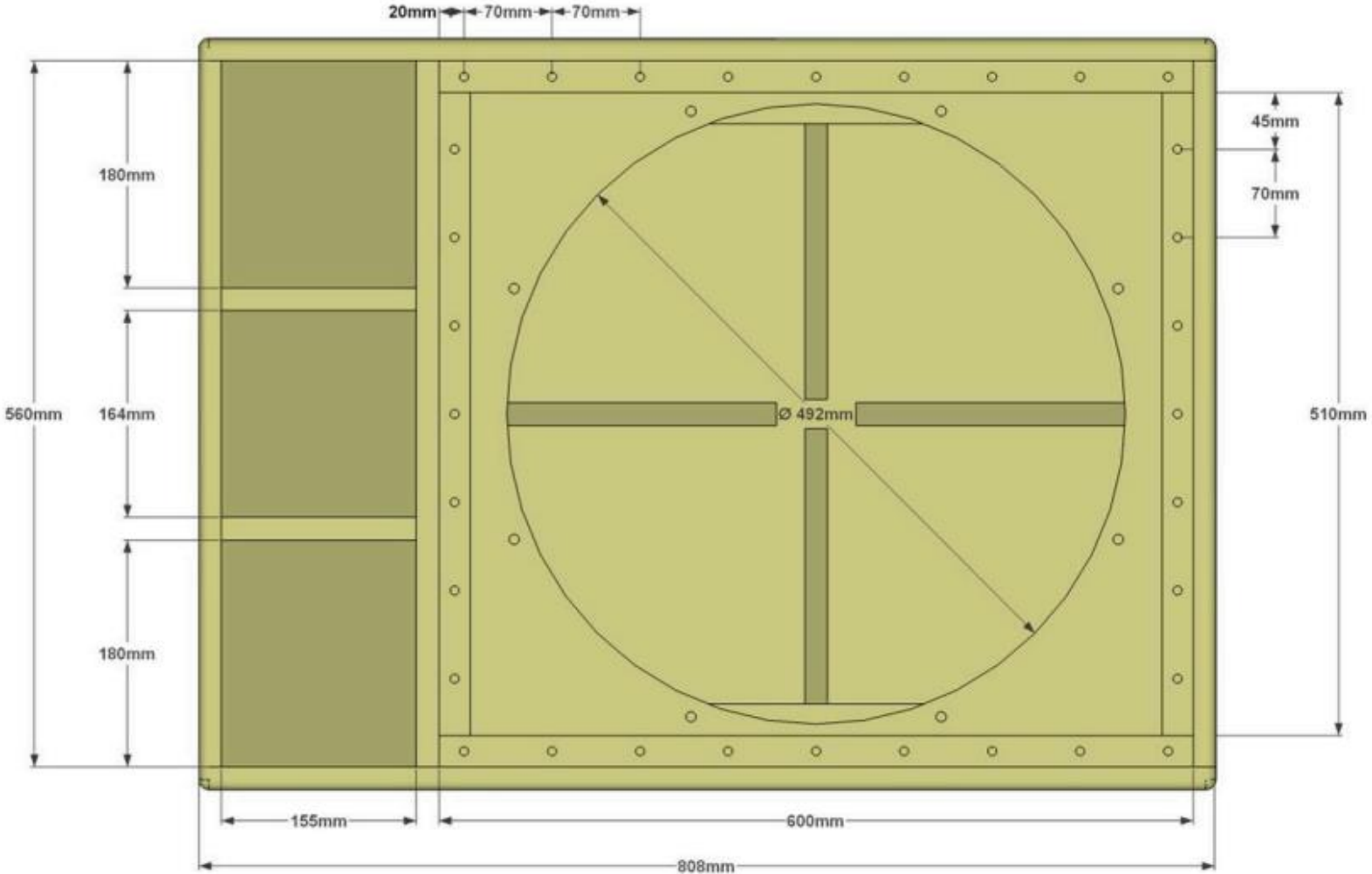
## EQUALIZATION SETTINGS SUGGESTION

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

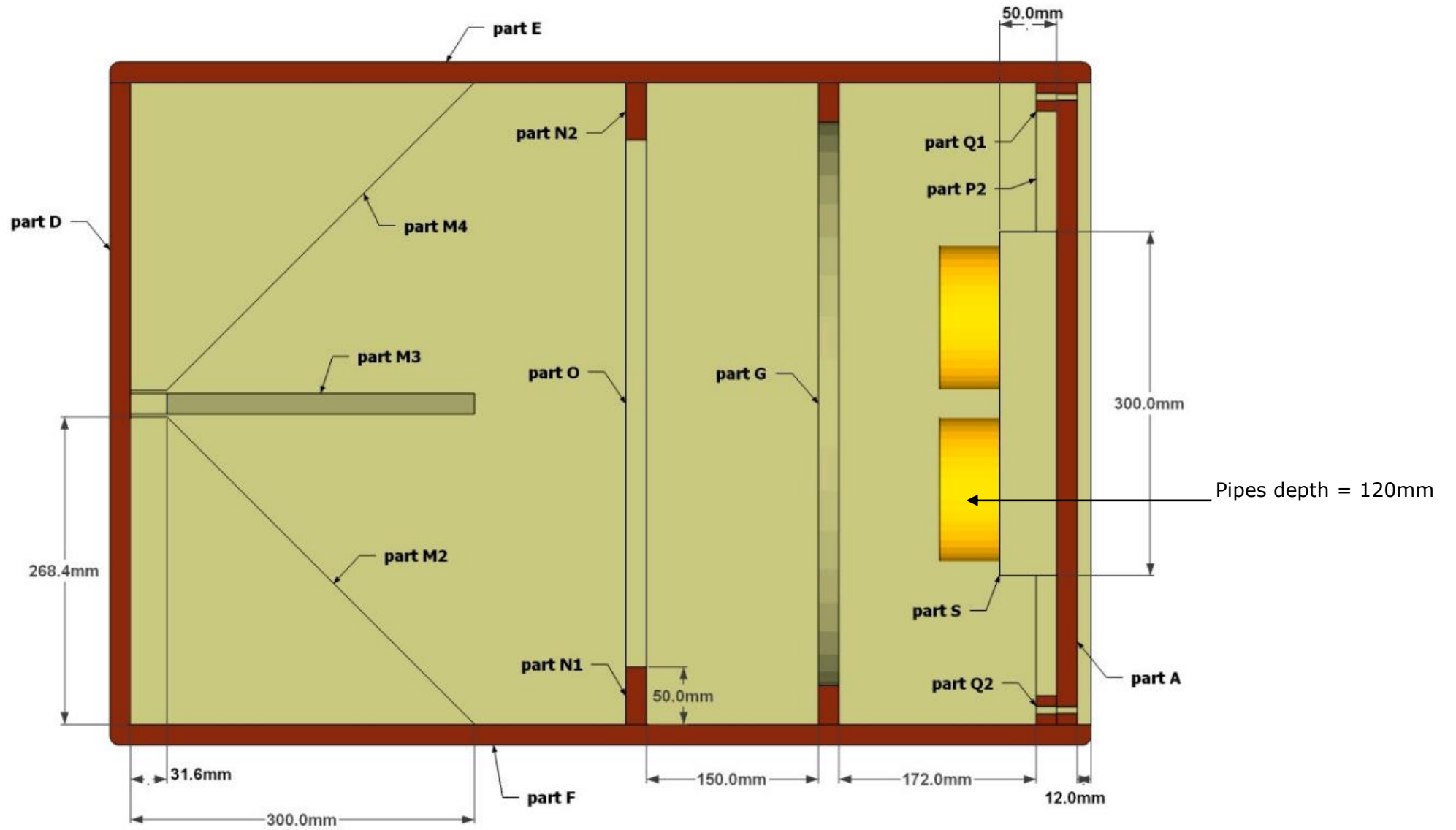
# EXPLODED VIEW



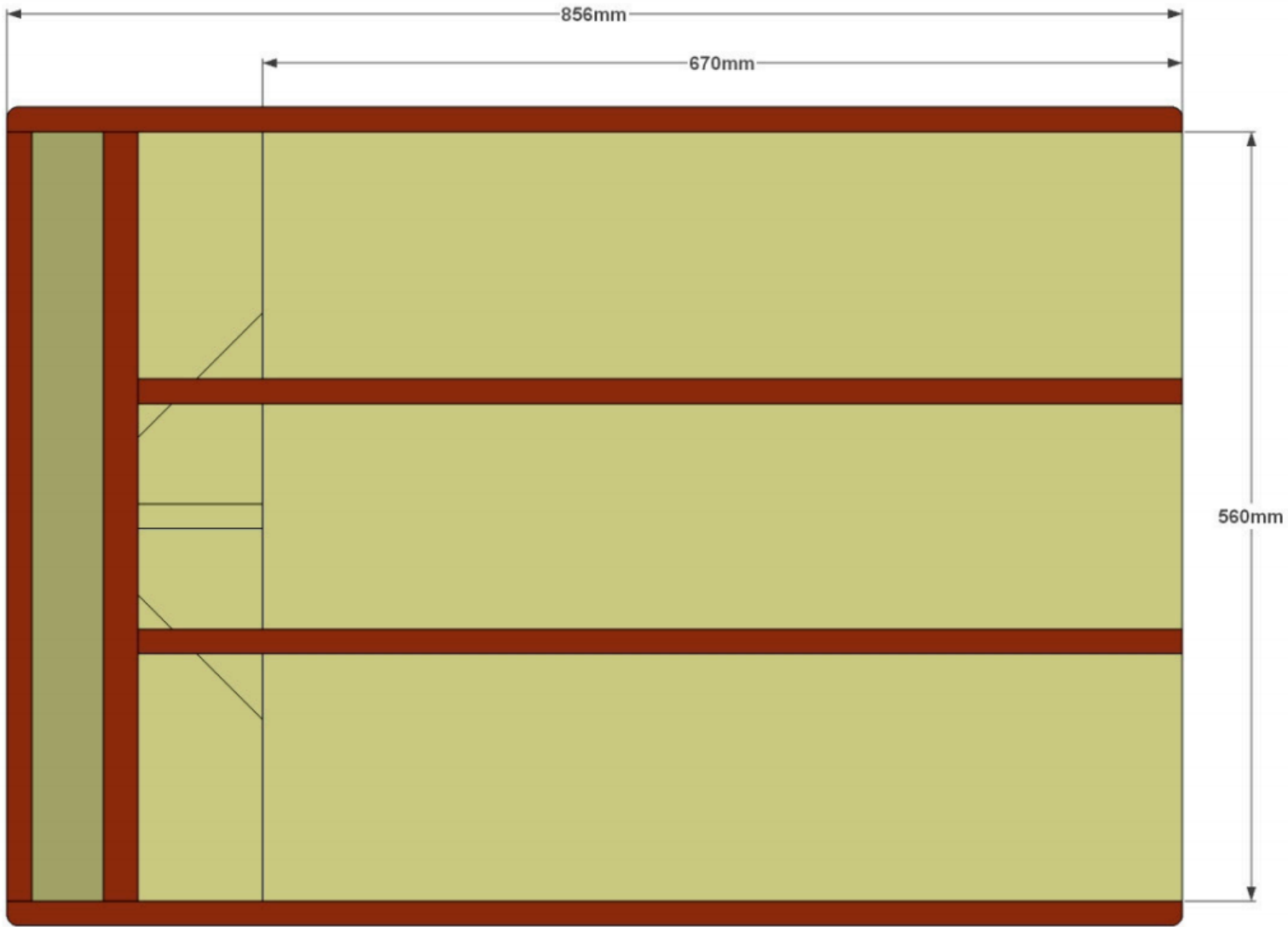
# FRONT VIEW



# TOP SECTION

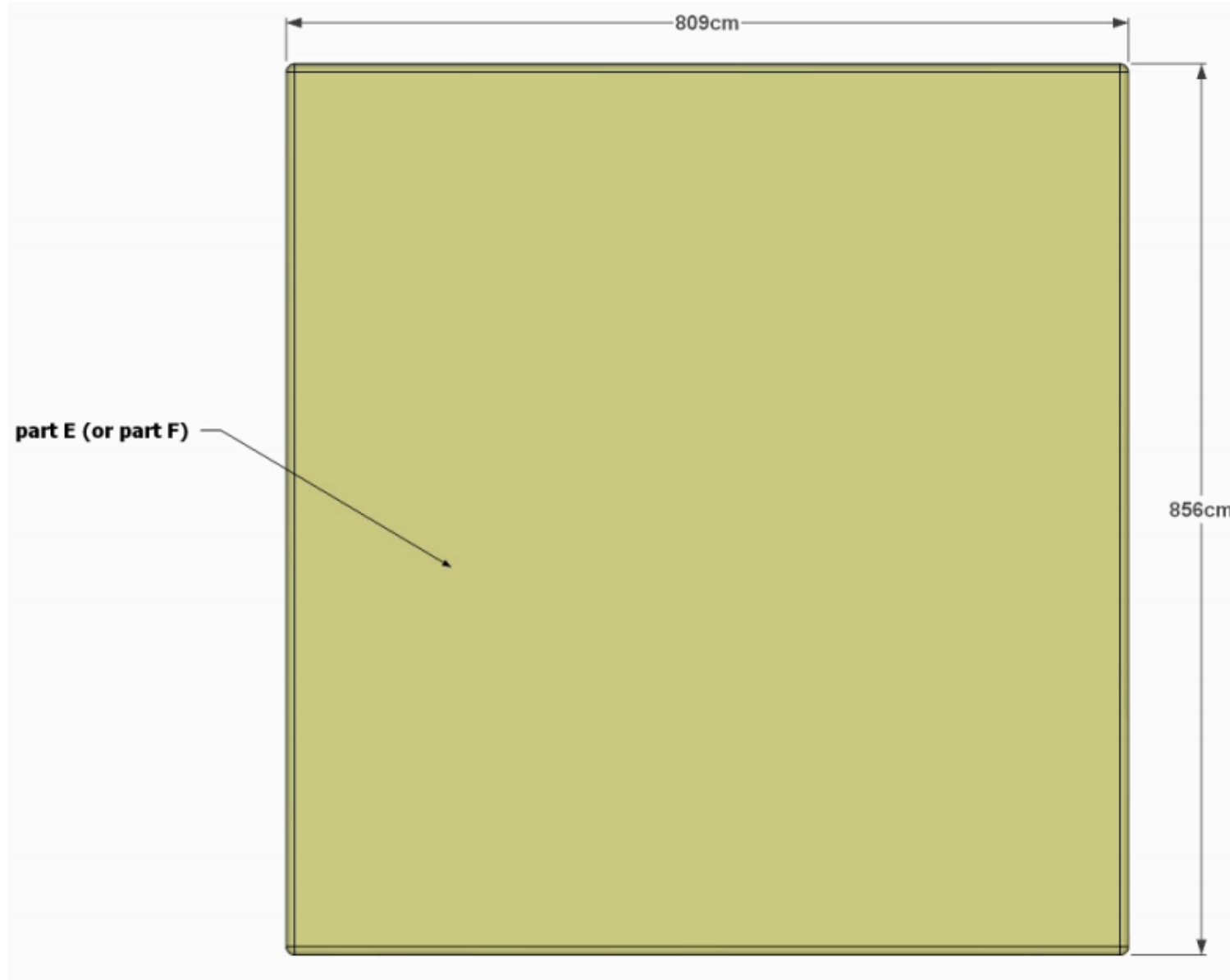


# BOTTOM SECTION

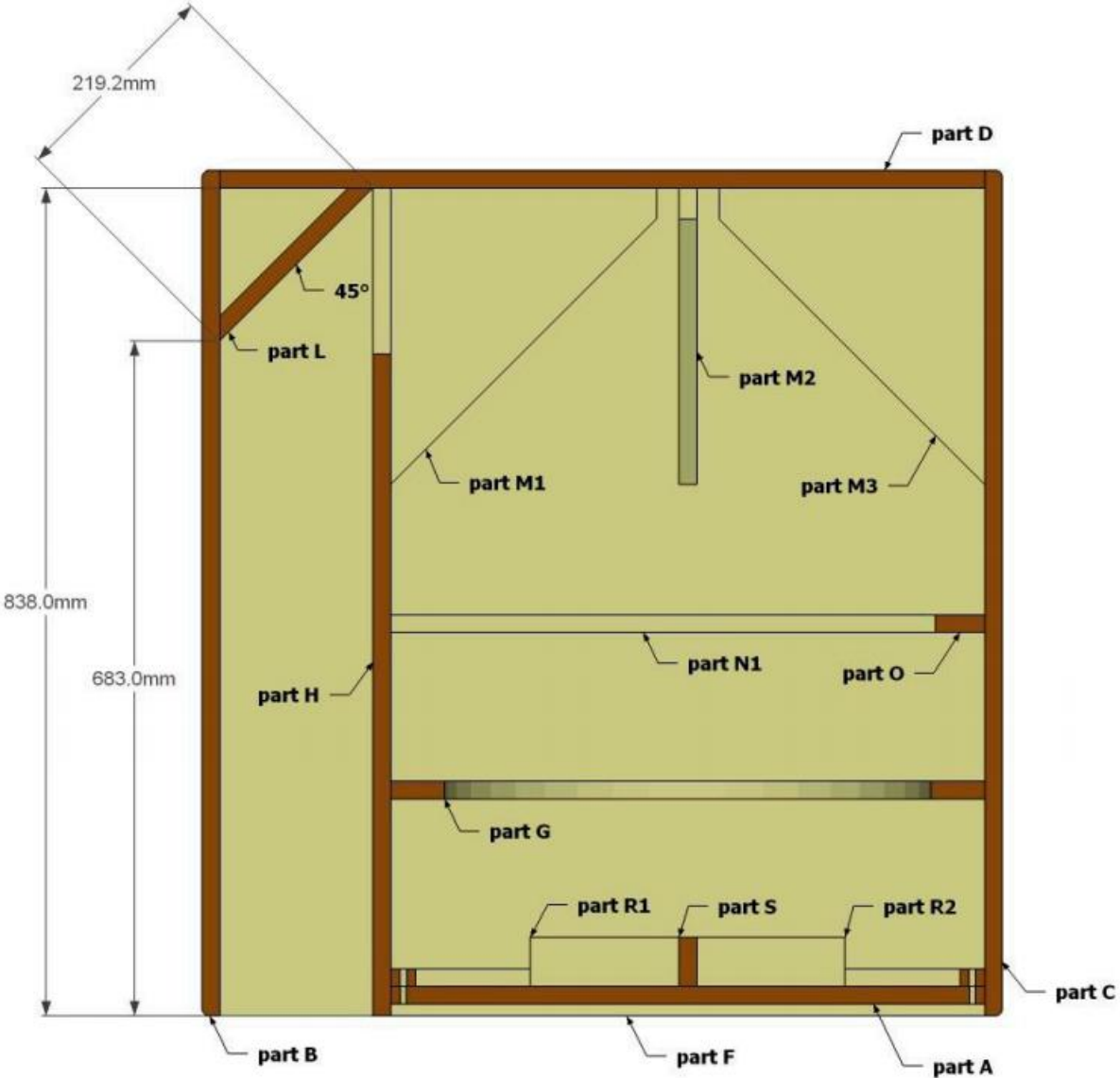




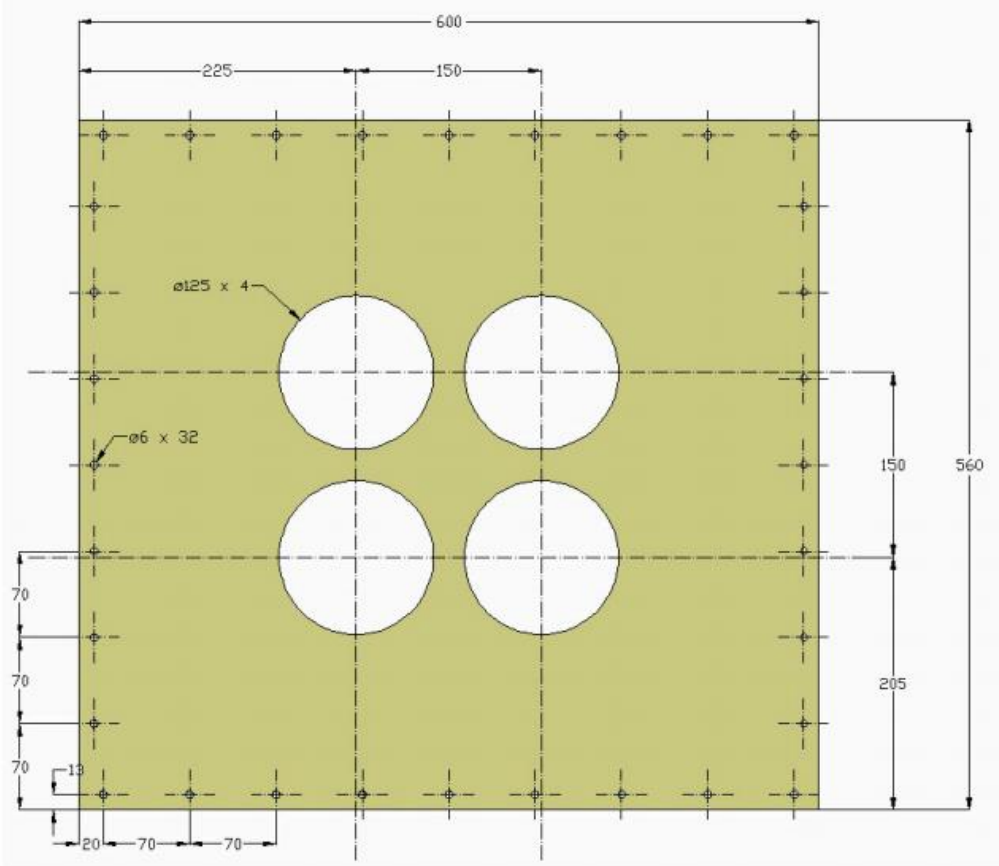
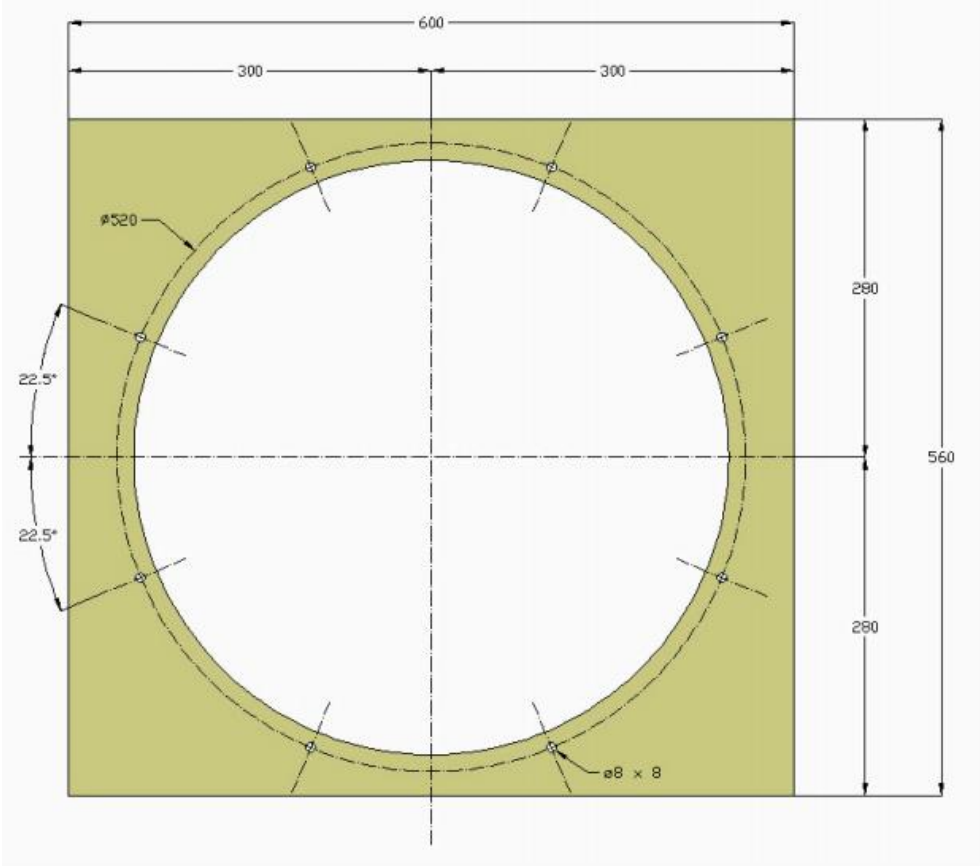
# TOP-BOTTOM VIEW



# 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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