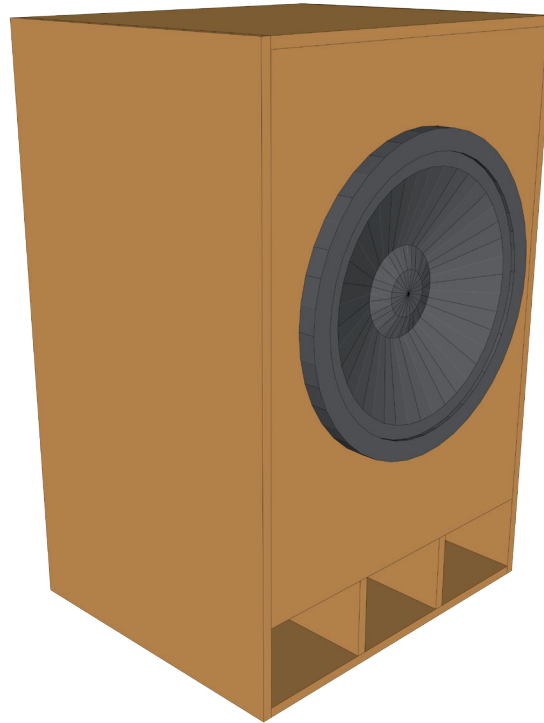




PROFESSIONAL
LOUDSPEAKERS

APPLICATION NOTE



18" SUBWOOFER KIT

KEY FEATURES

> High performance 1 x 18" subwoofer system

> Double driver choice is possible

18LW2400 subwoofer key features:
4" interleaved sandwich voice coil (ISV)
Triple silicon spider (TSS)
Double Demodulating Ring (DDR)
2400W AES power handling

18LW1400 subwoofer key features:
4" interleaved sandwich voice coil (ISV)
Double silicon spider (DSS)
Double Demodulating Ring (DDR)
1000W AES power handling



1 8LW2400

GENERAL SPECIFICATIONS

NOMINAL DIAMETER	460 mm (18 in)
RATED IMPEDANCE	8 Ohm
AES POWER	1200W
PROGRAM POWER	2400W
PEAK POWER	7000W
SENSITIVITY	98 dB
FREQUENCY RANGE	31 ÷ 2500 Hz
POWER COMPRESSION @-10dB	0.7 dB
POWER COMPRESSION @-3dB	1.5 dB
POWER COMPRESSION @0dB	2.2 dB
MAX RECOMM. FREQUENCY	500 Hz
RECOMM. ENCLOSURE VOLUME	130 ÷ 350 lt (4.59÷12.36cuft)
MINIMUM IMPEDANCE	6.3 Ohm at 25°C
MAX PEAK TO PEAK EXCURSION	50 mm (1.97 in)
VOICE COIL DIAMETER	100 mm (4 in)
VOICE COIL WINDING MATERIAL	Copper
SUSPENSION	Triple roll, Polycotton
CONE	Straight ribbed, fiberglass reinforced cellulose

THIELE SMALL PARAMETERS

Fs	35 Hz
Re	5 Ohm
Sd	0,1225 sq. mt. (189,88 sq. in.)
Qms	7.2
Qes	0.32
Qts	0.31
Vas	230 lt. (8.12 cuft)
Mms	192 gr. (0,42 lb)
BL	25,6 Tm
Linear mathematical Xmax	± 9,5 mm (± 0,38 in)
Le (1kHz)	1.35 mH
Ref. Efficiency 1W@1m (half space)	96.7 dB

KEY FEATURES

> High performance 1 x 18" subwoofer system

> Double driver choice is possible

18LW2400 subwoofer key features:
4" interleaved sandwich voice coil (ISV)
Triple silicon spider (TSS)
Double Demodulating Ring (DDR)
2400W AES power handling

18LW1400 subwoofer key features:
4" interleaved sandwich voice coil (ISV)
Double silicon spider (DSS)
Double Demodulating Ring (DDR)
1000W AES power handling



18LW1400

GENERAL SPECIFICATIONS

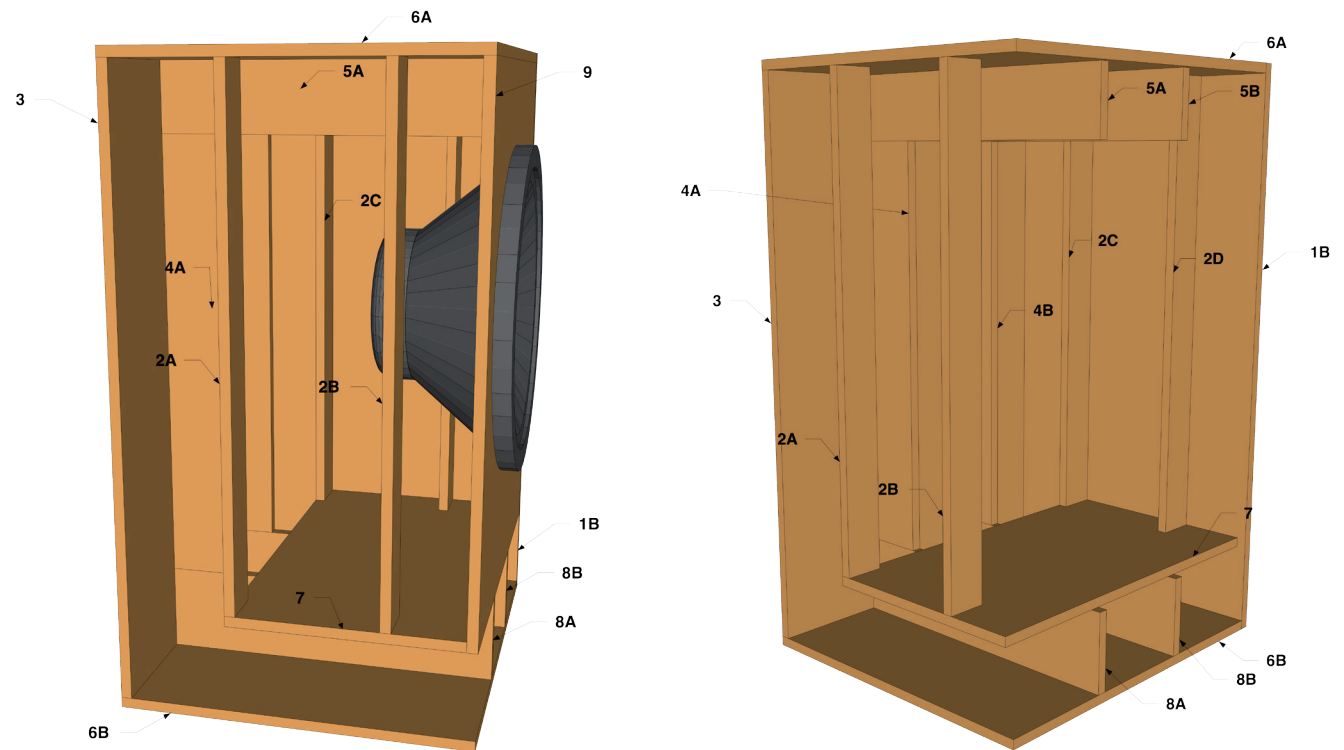
NOMINAL DIAMETER	460 mm (18 in)
RATED IMPEDANCE	8 Ohm
AES POWER	1000W
PROGRAM POWER	1400W
PEAK POWER	7000W
SENSITIVITY	98 dB
FREQUENCY RANGE	28 ÷ 2500 Hz
POWER COMPRESSION @-10dB	0.8 dB
POWER COMPRESSION @-3dB	2.1 dB
POWER COMPRESSION @0dB	3.0 dB
MAX RECOMM. FREQUENCY	500 Hz
RECOMM. ENCLOSURE VOLUME	130 ÷ 350 lt (4.59÷12.36cuft)
MINIMUM IMPEDANCE	6.4 Ohm at 25°C
MAX PEAK TO PEAK EXCURSION	50 mm (1.97 in)
VOICE COIL DIAMETER	100 mm (4 in)
VOICE COIL WINDING MATERIAL	Copper
SUSPENSION	Triple roll, Polycotton
CONE	Straight ribbed, fiberglass reinforced cellulose

THIELE SMALL PARAMETERS

Fs	31 Hz
Re	5 Ohm
Sd	0,1225 sq. mt. (189,88 sq. in.)
Qms	7.2
Qes	0.31
Qts	0.29
Vas	297 lt. (10.49 cuft)
Mms	190 gr. (0,42 lb)
BL	24.7 Tm
Linear mathematical Xmax	± 9 mm (± 0,35 in)
Le (1kHz)	2.3 mH
Ref. Efficiency 1W@1m (half space)	96.5 dB

KEY FEATURES

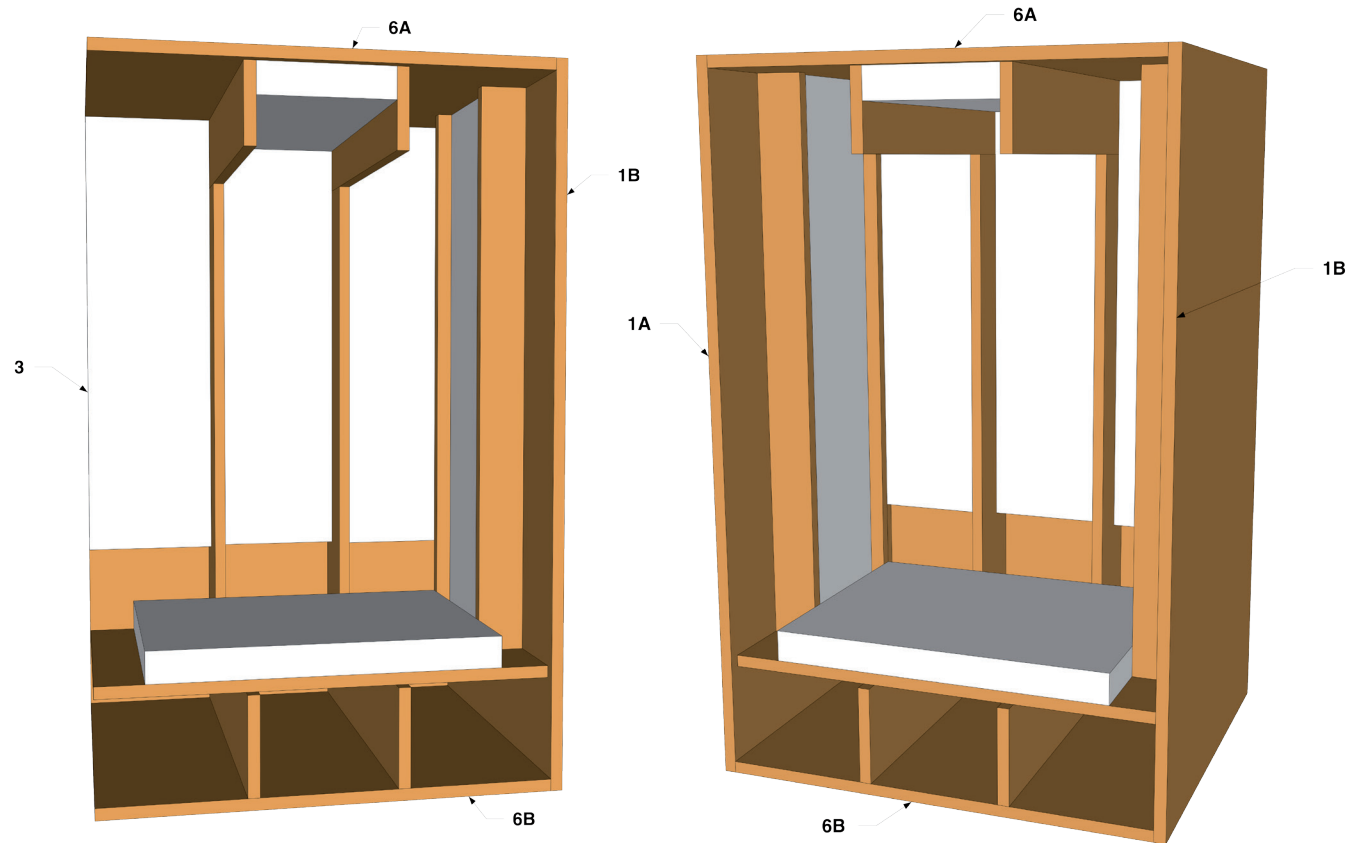
- > The enclosure should be made of Baltic birch plywood (15mm thickness)
- > Bolts are M6x35mm
- > M6 T-Nuts are recommended
- > Handling, rigging and connectors are user's choice



INTERNAL VIEW

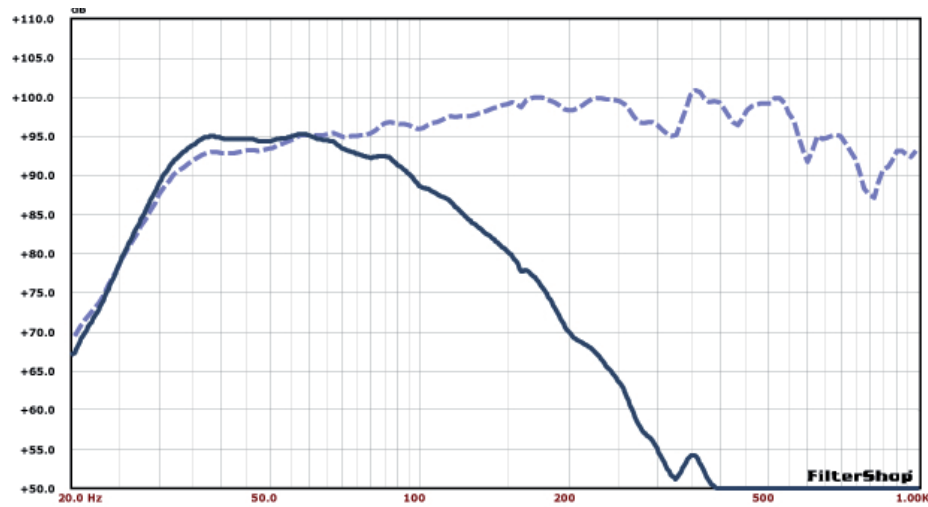
KEY FEATURES

- > 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



DAMPING MATERIAL

MEASUREMENTS: UNFILTERED MAGNITUDE RESPONSE, 2.83V/1M AND RELATIVE PHASE RESPONSE WITH 18LW2400

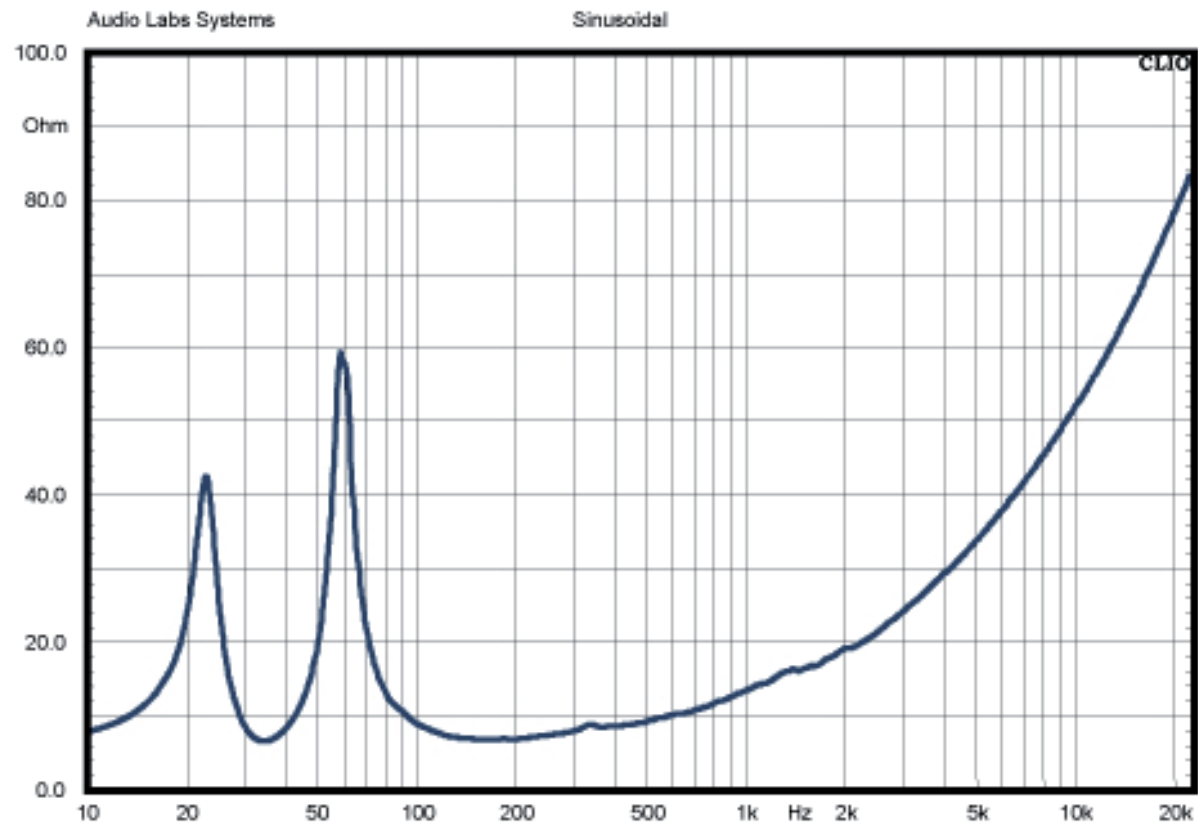


MAGNITUDE RESPONSE

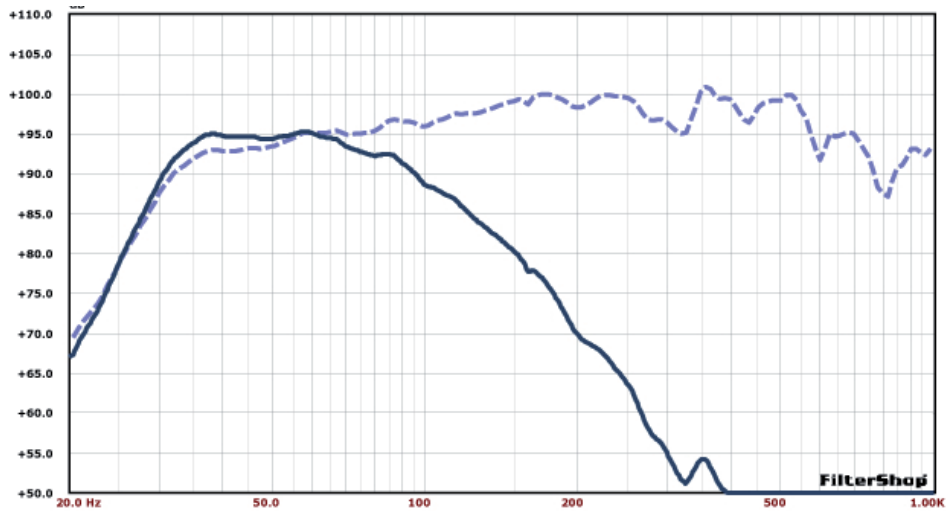


PHASE RESPONSE

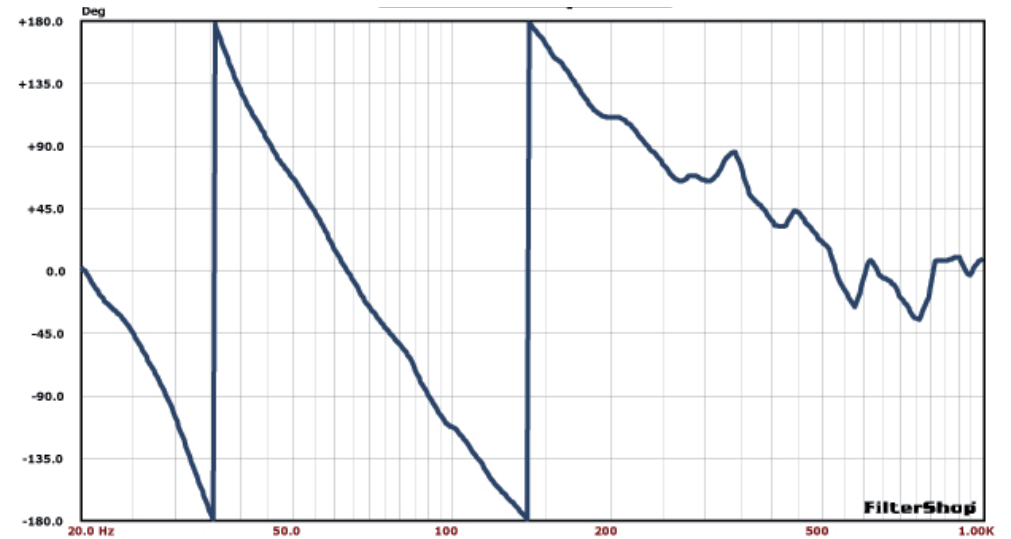
MEASUREMENTS: IMPEDANCE WITH 18LW2400



MEASUREMENTS: UNFILTERED MAGNITUDE RESPONSE, 2.83V/1M AND RELATIVE PHASE RESPONSE WITH 18LW1400

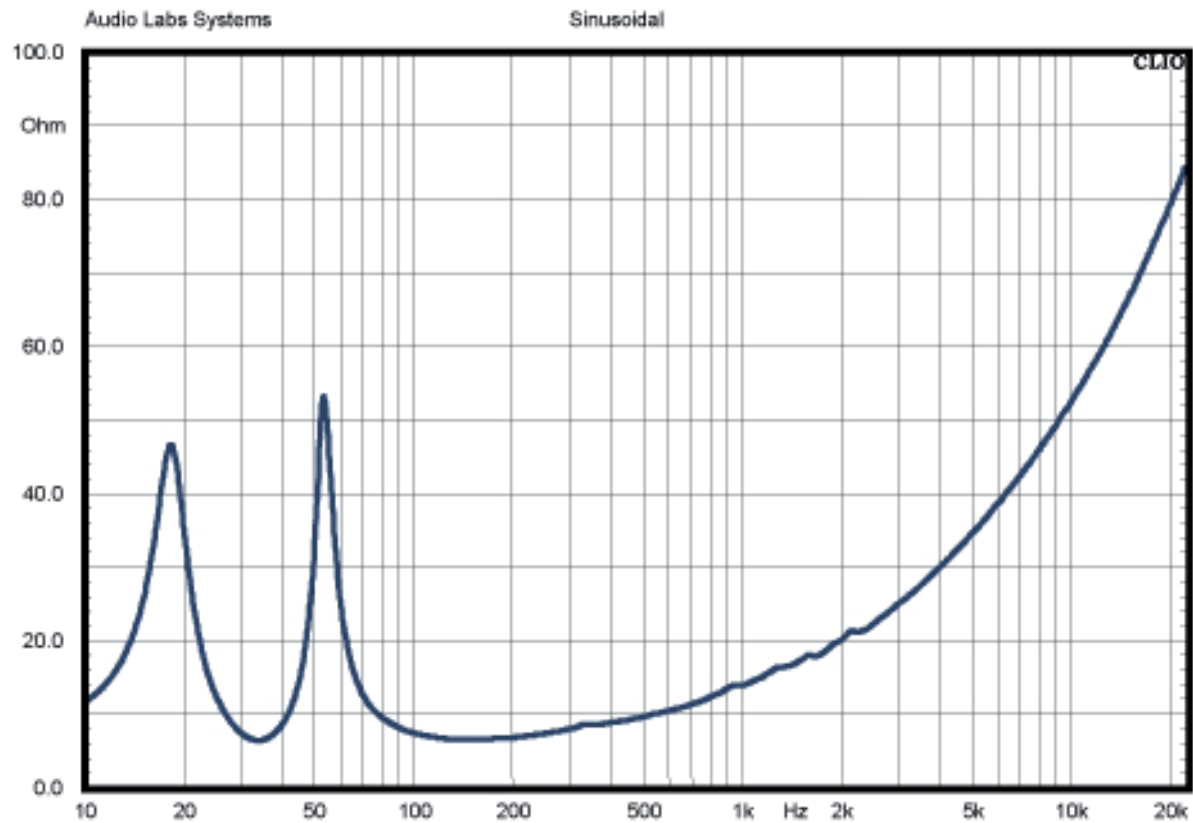


MAGNITUDE RESPONSE

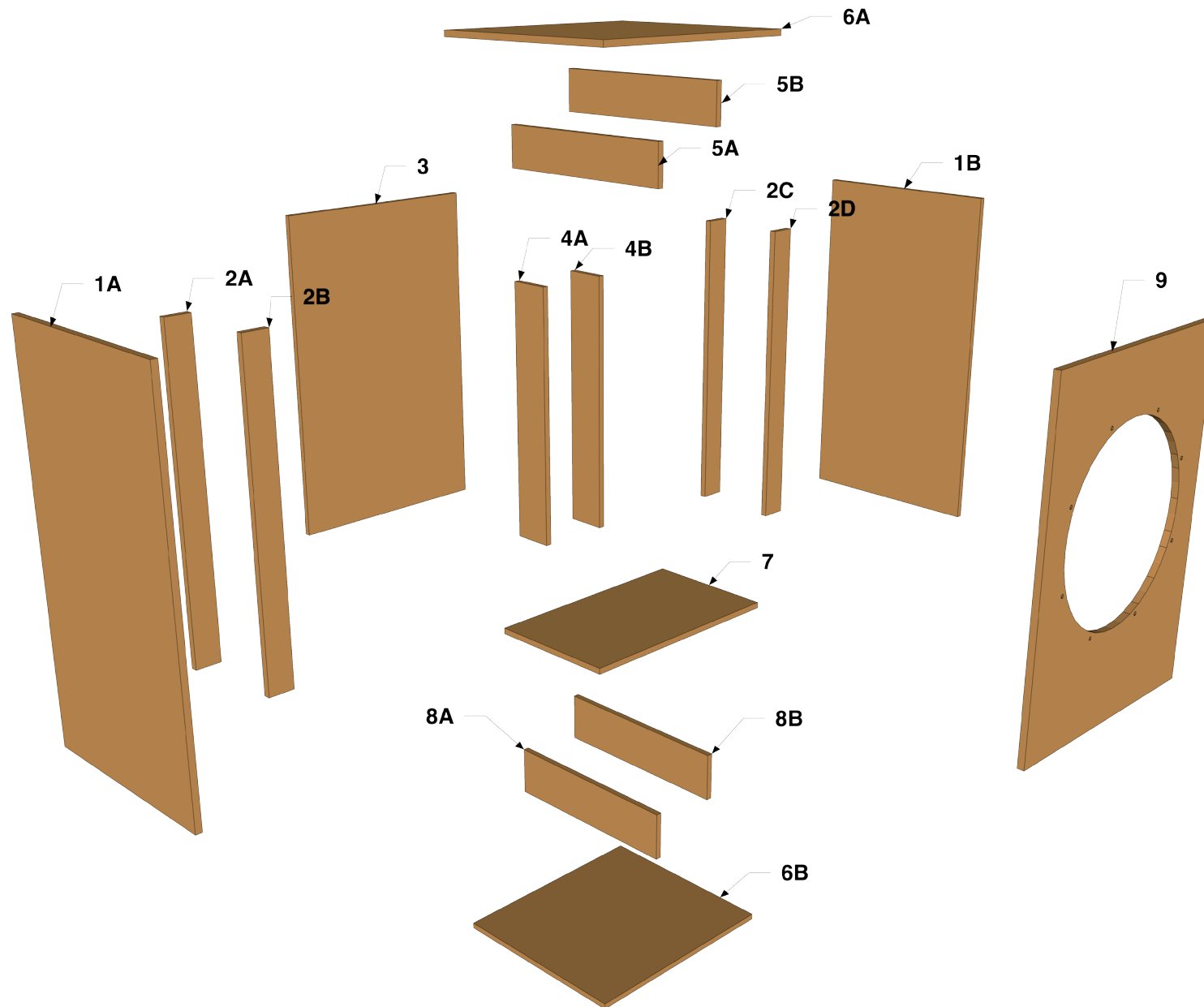


PHASE RESPONSE

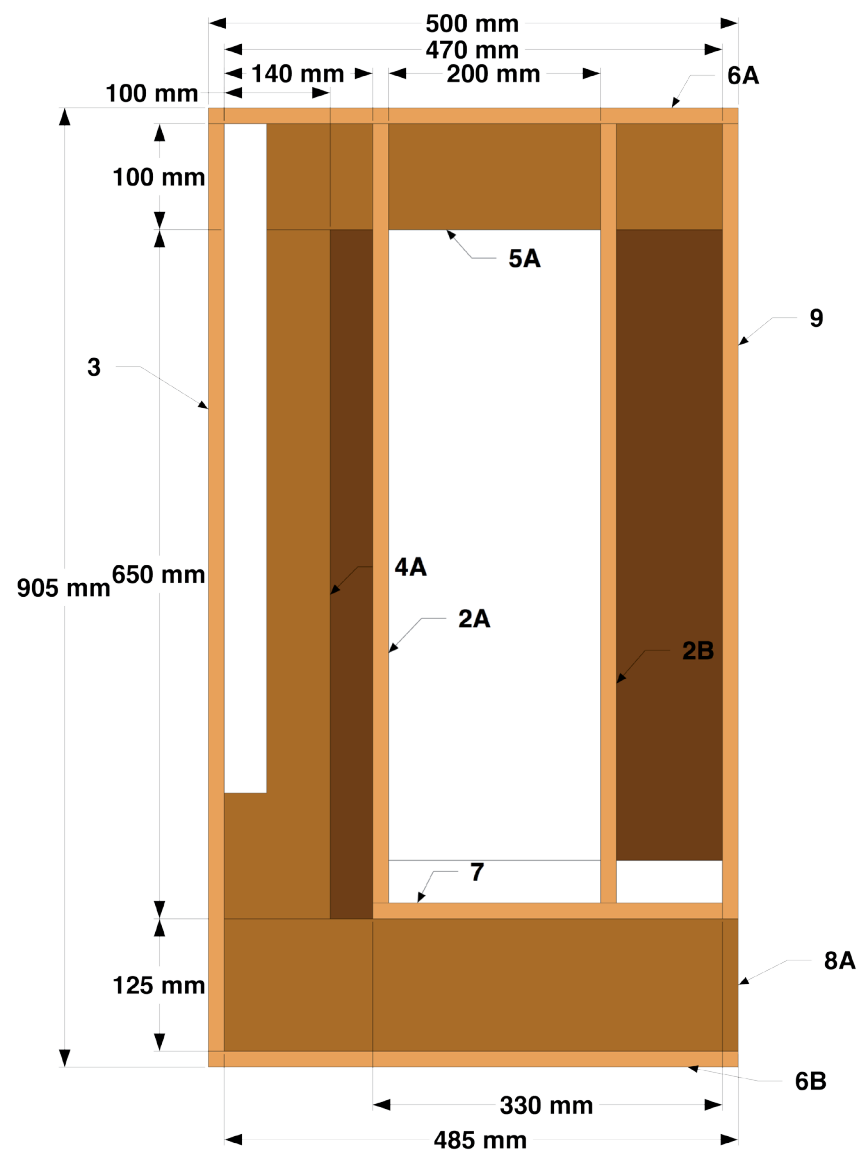
MEASUREMENTS: IMPEDANCE WITH 18LW2400



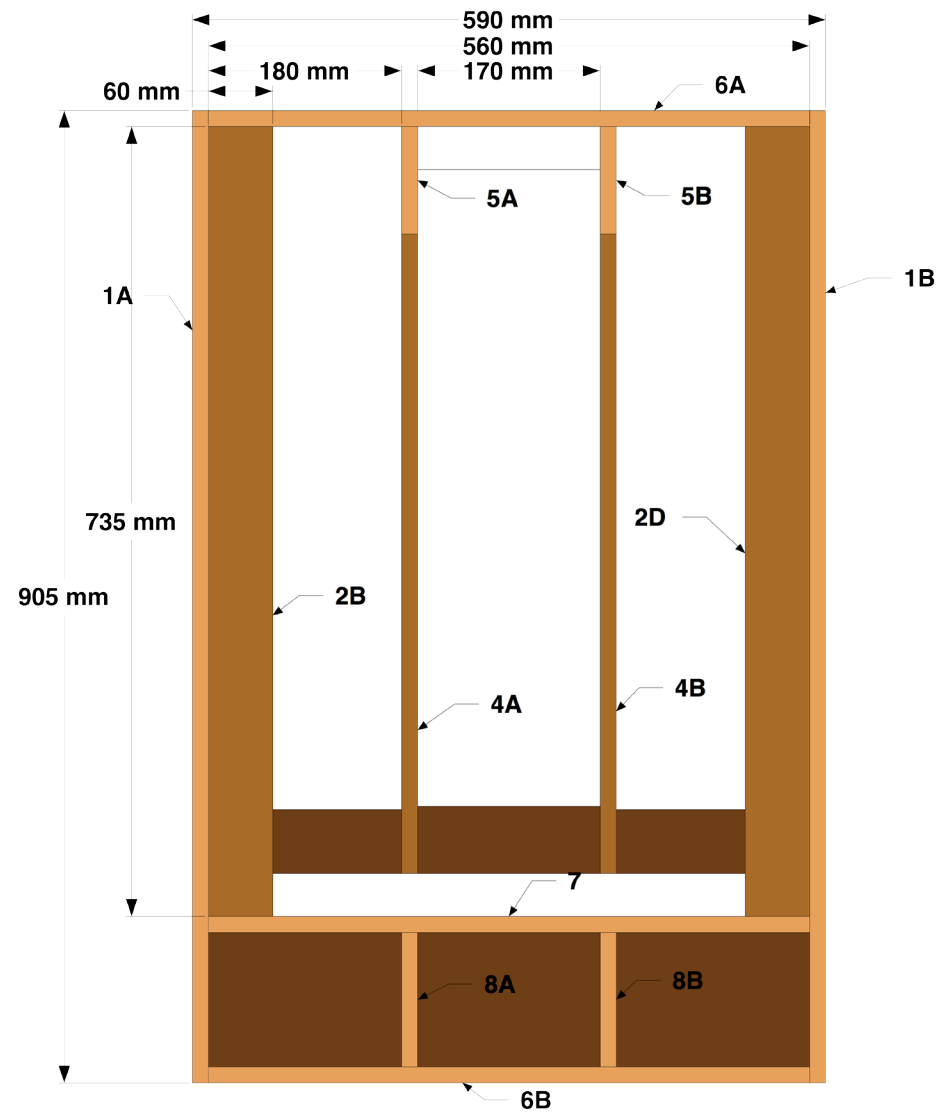
EXPLODED VIEW



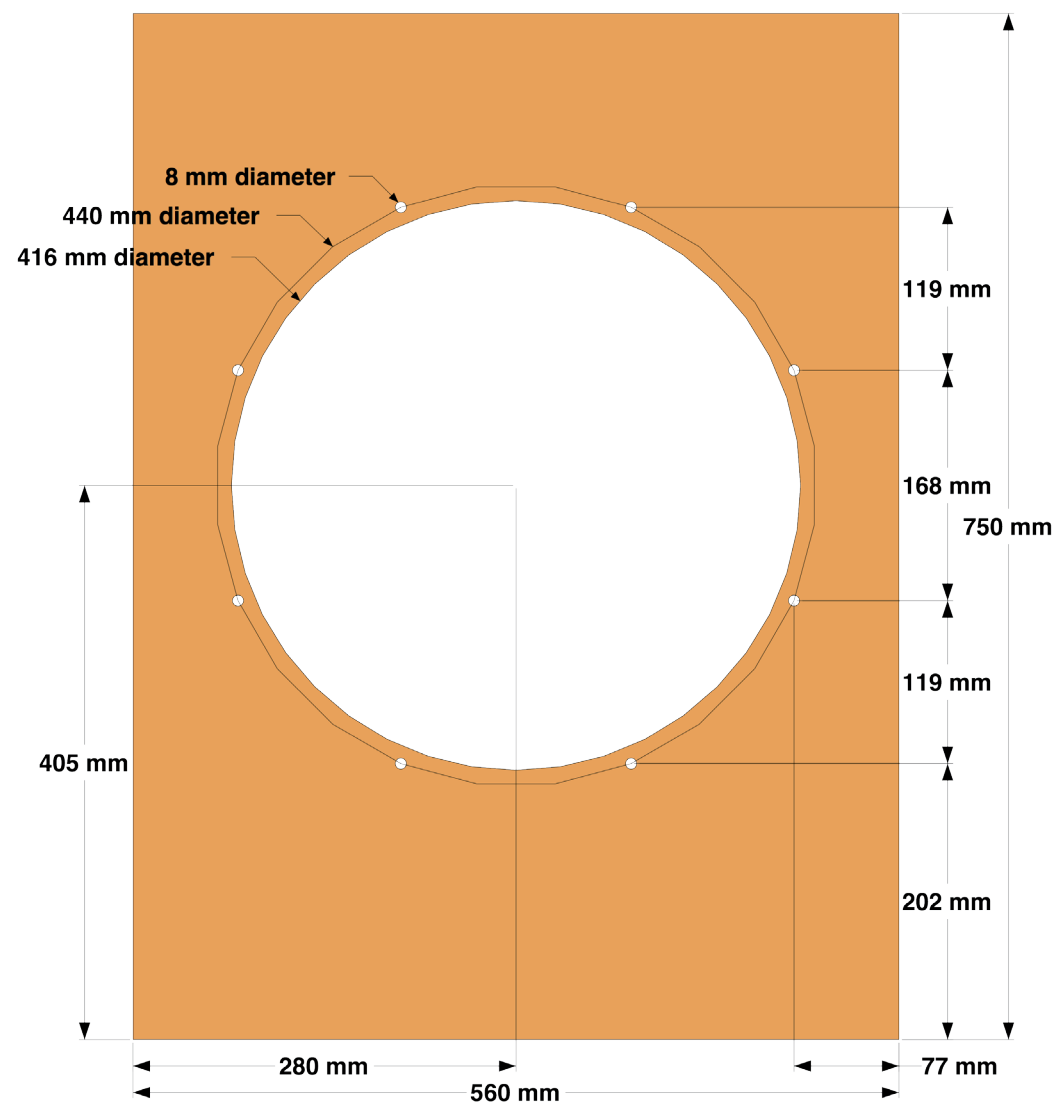
SIDE VIEW



FRONT VIEW



WOOFER DETAILS



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