



**description**

- Mini Speaker with the cheap but excellent 9cm Breitbandtreiber 9 BN 119/8 Peerless / Vifa.

- Simple design with superior technical-specific data
- Small box for the desktop or small speaker for AV systems

**areas**

- Round and homogeneous, with amazing resolution assets. As PC speakers used is erklanglich far above the quality that one finds gewöhnlich bei commercial PC speakers.

**Technical specifications**

Rated impedance:	8 Ohm
Rated power:	20 Watt
Maximum power:	30 Watt
Frequency response:	100 Hz - 18,000 Hz
Sound pressure:	81 dB (1W; 1m)

**BOM (amount for a Box)**

description	grade	amount	Item No.
BB Speaker	Peerless / Vifa 9 BN 119/8		1 St.
reflex tube	BRT30 (D = 30 mm; L = 110 mm)	1 St.	
Connection	2-pin terminal with Druckklemmen (or 2 binding posts)	1 St.	
Dämpfungsmat.	Polyester fiber (40 mm thick)	0.025 m <sup>2</sup>	
internal wiring	Wire 2 x 1.0	00:40 m	
screw	Holzschr. Lins.Kopf 4.0 x 25	12	
Wood:			
carcass	12 mm MDF black (o. Ä.)	gem. Sign.	
baffle	12 mm MDF red (o. Ä.)	gem. Sign.	

**BOM crossover (amount for a Box)**

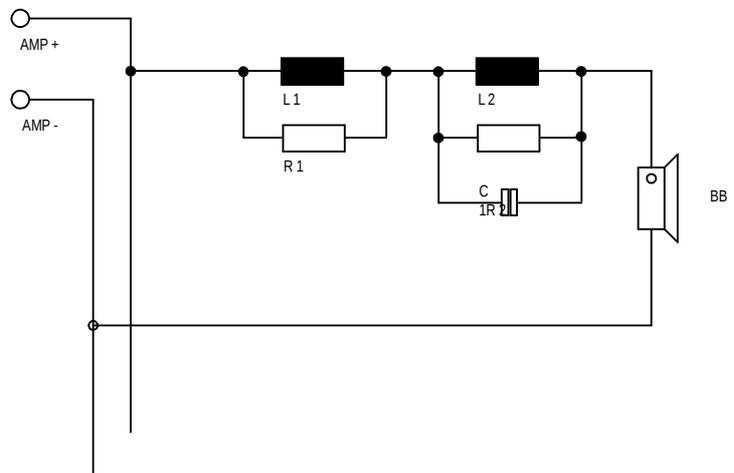
component	Type (Description)
LP =	PCB SAK dimensions: 86mm x 62.5 mm
L1 =	0.22 mH air core coil Cu 0.71 mm R about 0:50 Ohm
L2 =	0.47 mH pen core coil Cu 0.71 mm R about 0:25 Ohm
C1 =	10.0 uF MKT 100 Vdc
R1 =	10.0 Ohm wirewound, 10 Watt
R2 =	6.80 Ohm wirewound, 10 Watt

strand IN Wire 2 x 1.0 mm<sup>2</sup> 200 mm ws / rt (labeled ladder + Pol)  
Strand BBLitze 2 x 1.0 mm<sup>2</sup> 200 mm ws / sw (labeled ladder + Pol)

Component tolerance <5%

Remarks: Due to the low-input circuit of crossover dieBauteile 10 cm plywood strips can be verblebt and free wired to a 4cm x.

**Circuit diagram**



## Housing (amount for a Box)

Material: 12 mm MDF

Bez.	Abm./mm amount
Side wall	214 x 1702
baffle	220 x 981
rear wall	196 x 741
cover	92 x 1701
ground	92 x 1701

!! - Dimensions valid if corpus Gehrunggearbeitet.

!! - Rückwandmaß valid for 3 mm Einfätzung

outbreaks	D./mm	Depth / mm
outbreak of wide belts	79.0	
reflex tube	48.5	
outbreak of terminal or holes for terminal	49.0 mm	
millings		
milling for woofer	D./mm	Depth / mm
	evt. to contour	

The flush milling of High-speaker is not necessary.

### Comments to build

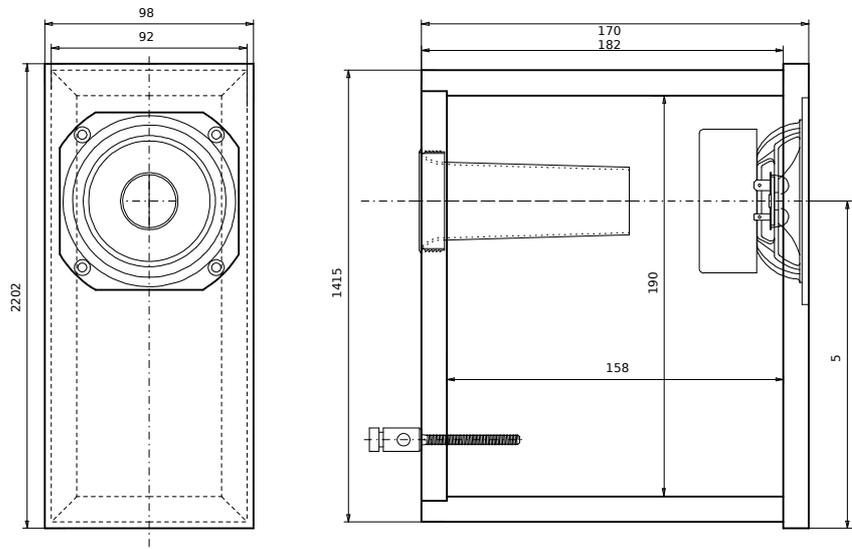
The housing is easy with polyester fleece filled. The area around the end desReflexrohres remains free.

The crossover is screwed to a carrier plate (eg MDF rest) and glued to the box denBoden.

### !! Important note! !

If this retail box with a DSP-ampli-ker (z. B. ASE DSP-A-S20), the passiveFrequenzweiche entfallen.Hinweise and proposals for setting desDSP filter on page 3.

The DSP-A-S20 is also available for the PC StartAirKit (SAK PC) available preconfigured



StartAirKit PC

### Features & Notes

If the box SAK-PC is used as desktop speakers, the use of one small DSP amplifier is recommended. The big advantage is the Equal derNutzung Ising opportunity to aufstellbedingte "bending" desFrequenzgangs (by reflection from tabletop, rear wall, screen) zukompensieren. (See suggestions on page 3)

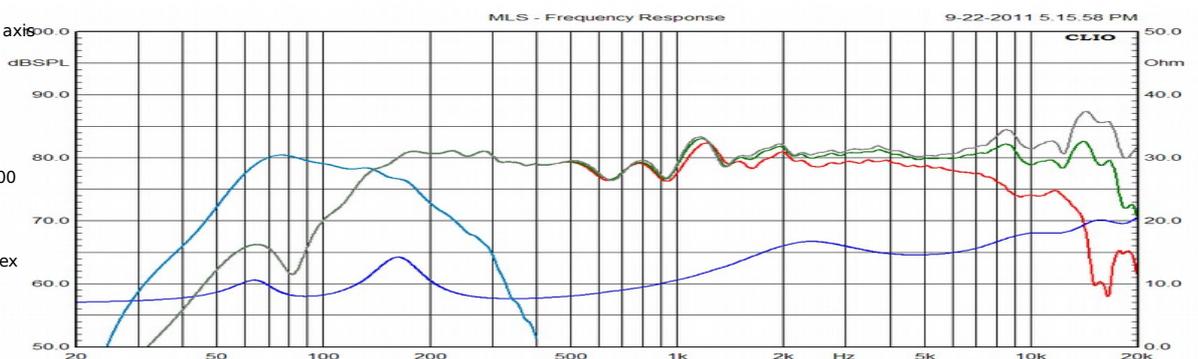
Schalldruckfrequenzgangauf axis  
0°, 15° and 30°

-Mikrofondistanz: 1 m

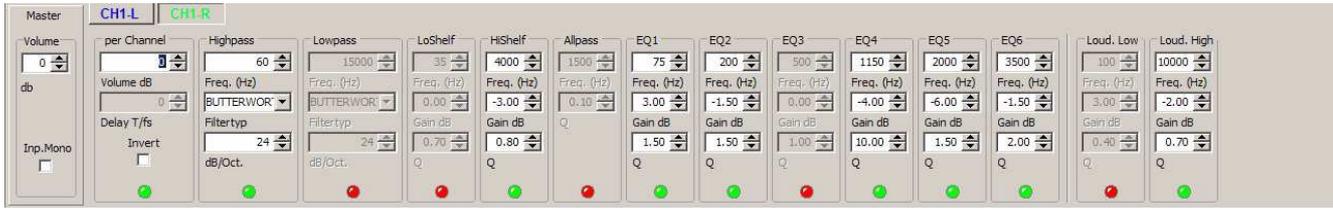
Measuring System: Clio  
- Above 200 Hz-fenestrated  
(time window 5ms), below 200  
Hz near field

- Curve light blue = bass reflex  
share

Impedance measurement  
mitSweepSignal - Constant I  
(right scale)



DSP filter settings for free-standing (correcting frequency response as a green line on the graph)



Master: CH1-L | CH1-R

Volume: 0 db

per Channel: Volume dB: 0

Inp.Mono:

Highpass: 60 Hz, BUTTERWORT, 24 dB/Oct.

Lowpass: 15000 Hz, BUTTERWORT, 24 dB/Oct.

LoShelf: 35 Hz, 0.00 Gain dB, 0.70 Q

HiShelf: 4000 Hz, -3.00 Gain dB, 0.80 Q

Allpass: 1500 Hz, 0.10 Q

EQ1: 75 Hz, 3.00 Gain dB, 1.50 Q

EQ2: 200 Hz, -1.50 Gain dB, 1.50 Q

EQ3: 900 Hz, 0.00 Gain dB, 1.00 Q

EQ4: 1150 Hz, -4.00 Gain dB, 10.00 Q

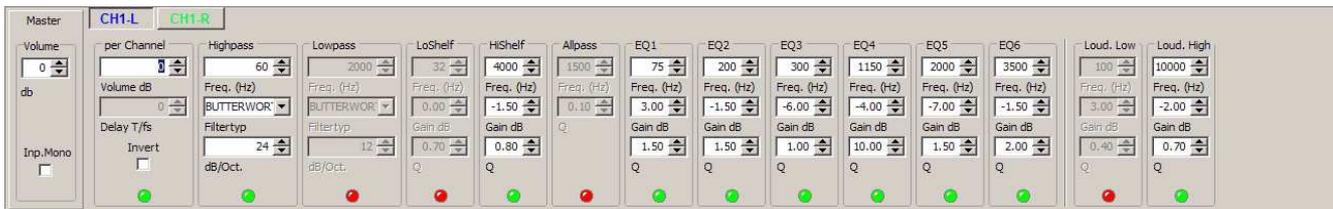
EQ5: 2000 Hz, -6.00 Gain dB, 1.50 Q

EQ6: 3500 Hz, -1.50 Gain dB, 2.00 Q

Loud. Low: 100 Hz, 3.00 Gain dB, 0.40 Q

Loud. High: 10000 Hz, -2.00 Gain dB, 0.70 Q

DSP filter settings for bench as PC speakers (frequency response correction as blue curve in the graph)



Master: CH1-L | CH1-R

Volume: 0 db

per Channel: Volume dB: 0

Inp.Mono:

Highpass: 60 Hz, BUTTERWORT, 24 dB/Oct.

Lowpass: 2000 Hz, BUTTERWORT, 12 dB/Oct.

LoShelf: 32 Hz, 0.00 Gain dB, 0.70 Q

HiShelf: 4000 Hz, -1.50 Gain dB, 0.80 Q

Allpass: 1500 Hz, 0.10 Q

EQ1: 75 Hz, 3.00 Gain dB, 1.50 Q

EQ2: 200 Hz, -1.50 Gain dB, 1.50 Q

EQ3: 300 Hz, -6.00 Gain dB, 10.00 Q

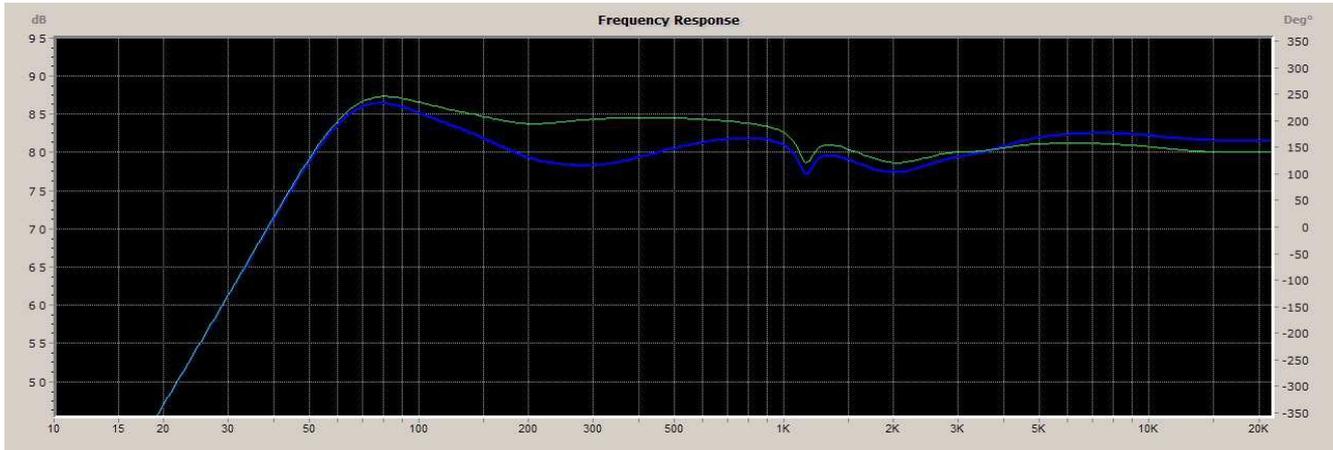
EQ4: 1150 Hz, -4.00 Gain dB, 10.00 Q

EQ5: 2000 Hz, -7.00 Gain dB, 1.50 Q

EQ6: 3500 Hz, -1.50 Gain dB, 2.00 Q

Loud. Low: 100 Hz, 3.00 Gain dB, 0.40 Q

Loud. High: 10000 Hz, -2.00 Gain dB, 0.70 Q



Typical frequency response correction for small speakers, when used as PC speaker in Table Stand

