

Opera Prima

System

Opera Prima (First) is the smallest model of the "Classic Series": it is a two-way diffuser in bass reflex of about 13 internal litres, constructed to be placed like a shelf or on a stand, and characterised by the extension of the frequency response towards the low frequencies. The diffuser is equipped with four golden connectors of large diameter and predisposed for the bi-amplification.

The furniture

The furniture of Opera Prima is realised in finely-shaped MDF with rounded edges, veneered in real wood finely polished. The front panel, the top and the rear panel are covered with synthetic hide that, beyond the aesthetic finish, also works as packing for the loudspeakers.

The size of the front panel, following Opera's tradition, is large enough to hold the loudspeakers. In this case, being this diffuser created to be placed like a shelf, the reflex duct is located on the front panel. Inside the furniture, there is a good quantity of acrylic sound absorbent material that controls the lowering of the frequency response and pulls down the internal reflections.

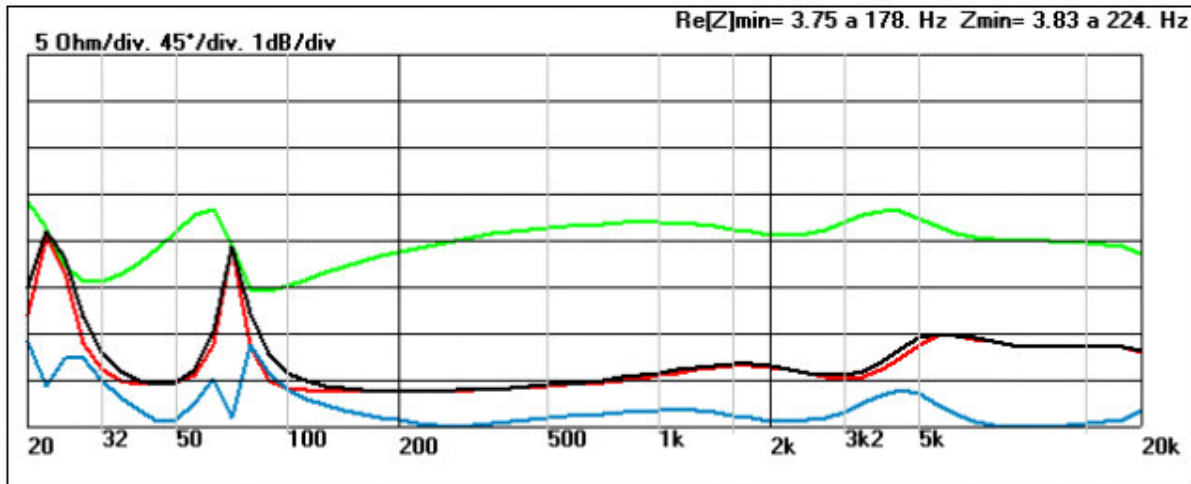
The Components

All the models of the Classic Series use the same drive units; the one inch tweeter (the same used in the Callas SP) is a silk dome unit, ferrofluid filled and having an ample rear decompression chamber. The qualities of this SEAS tweeter are well known and appreciated. The woofer, also made by SEAS, was developed specially for this line of loudspeakers. It is a 6.5 inch unit with 18cm chassis, 38mm voice coil, aluminium diaphragm and rubber outer suspension. It has a dynamic mass appreciably higher than the norm, and an impedance of 4 ohm. Two copper rings are fitted above and below the T-shaped pole piece, which both reduce distortion and stabilize the magnetic flux. Finally, the bullet-shaped phase plug in ABS helps to dissipate heat and overcomes compression effects associated with normal dust-caps. It also improves emission at the high-frequency end of the unit's range. The cast chassis, of aerodynamic design, is fully open even beneath the inner suspension.

The Cross-Over Filter

In designing this new "Classic Series", particular attention has been paid to the electric impedance. In particular, we wanted to guarantee a load condition compatible with any type of amplifier. In order to do so, the impedance minimums have been kept within the limits allowed by the DIN regulation that provides that, for the nominal 4 ohm diffusers, the impedance does not go below 3.2 ohm.

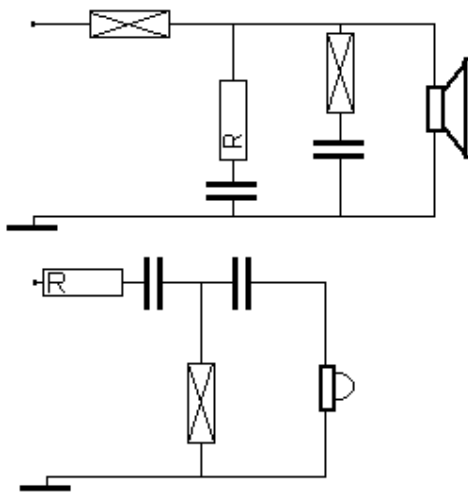
The electrical impedance modulus of Opera Prima is always over 3.8 ohm (3.75 for the real part of the impedance) and the progression is regular with contained phase rotations.



Electrical Impedance of the Opera Prima model
 Electrical Impedance : Black = Z module, Green = Phase, Red = Real[Z], Cyan Imag[Z]

We believe that the cost of a diffuser has to be assessed together with the cost of the amplifier more suited to guide it. Opera Prima is a nominal 4 ohm diffuser that can be easily driven by a wide range of amplifiers, either with valves or solid.

The cross-over of Opera Prima uses a classic network with asymmetrical slopes. The cross-over frequency is at about 2300 Hz and the sensitivity is 89 dB (2.83 V at one metre).

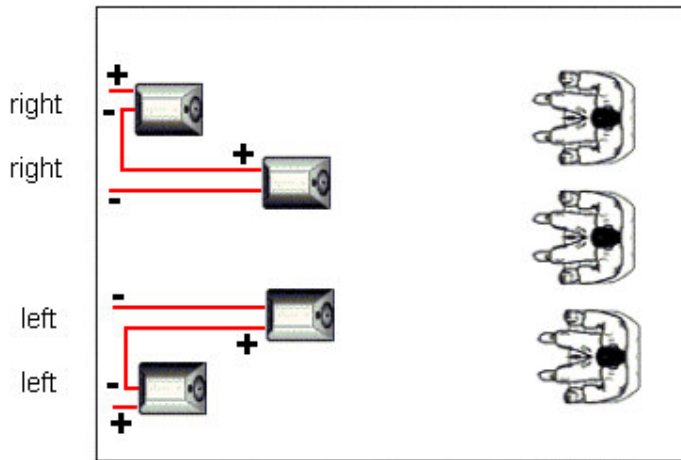


Opera Prima Filter Scheme

Position within surroundings

Opera Prima has been designed to be placed like a shelf but can also be used with a stand (available upon request). In any case, we advise against placing the diffuser in a corner and one needs to keep a minimum distance of at least 30 cm from the side walls. If the diffusers are put on stands, the best position within the surroundings has to be found experimentally.

In case two pairs of Opera Prima diffusers are used, these have to be connected in series as illustrated in the figure below.



Positioning of two pairs of diffusers, suggested by Righini

Technical Specifications: Opera Prima

System	Shelf – Bass Reflex , rear pipe Finishing: wood and hide
Loudspeakers	1 woofer 6.5" with alluminium cone 1 tweeter with a 1" dome – silk dome, ingot iron and decompression chamber
Number of Way	Two ways
Frequency response	40 -20000 Hz
Cross-over	Printed circuit 12 dB/octave for the woofer 18 dB/octave for the il tweeter Cross-over frequency around 2300 Hz
Maximum power	70 watt RMS
Suggested amplifier	From 10-15 Watt RMS
Sensibility	89 dB/2.83 Volt/1 metre
Nominal impedance	4 ohm (Zmin >3.8 ohm)
Position within surroundings	Shelf At least 30 cm from side walls
Dimensions	Xxxxxx
Net Weight	Xxxxx
Packed weight	Xxxxx