

The A2 is the second floorstanding speaker of the ACT line. It keeps the elegance of its little sister, the A1, in a cabinet that is not much bigger in size.

It delivers a very dense and lively sound with a beautiful sound stage so characteristic of the ACT line.

This 3 ways, 3 drivers loudspeaker offers excellent sensitivity. It is not too demanding and can adapt to just about any kind of amplifier with high musicality.

The ACT line

With the ACT line, BC Acoustique wanted to create speakers with a pure and sharp design using advanced technology.

The ACT speakers are the result of several years of research and development. Looking at their fine design, it is hard to realize the efforts that went in the making of the speakers and the level of technology that can be found inside. The result is quite an achievement.

Three specific technical aspects were particularly studied:

- **Internal resonance modes**
- **Phasing**
- **Distortion level**

These three aspects are often weak points on speakers found on the market, and this for a simple reason: the measuring devices used in the world of electroacoustic do not offer the necessary precision to clearly show some important phenomenon for which the human hear is highly receptive.

With this in mind, BC Acoustique decided to develop its own set of measurement devices and to adapt its manufacturing process and testing facilities to these innovative techniques. These devices give our engineers a higher precision in their work, making this a significant progress in the field of electroacoustic.

These technical evolutions make the ACT line an accomplishment with remarkable sound qualities. No place was left for luck.

But we always kept in mind that the final goal of all these evolutions was to make sure that the listener would forget all the technical aspects and enjoy the best of what music and sound can offer. This is BC Acoustique's philosophy.



The Tweeter

The A2 uses 3 drivers. For the treble BC Acoustique chose a BC100 horn tweeter. A common model to all ACT speakers, this tweeter is the result of an important collaboration with Fostex, one of the most prestigious high end drivers' manufacturer.

Compared to a classic dome tweeter, the BC100 brings a remarkable definition of higher frequencies, an incredible clarity, efficiency and good transiency.

Its frequency response chart is regular up to 50 kHz for an ideal transcription of high definition sources (SACD or DVD-Audio) without the inconveniences that can be found with super tweeters.

The BC100 can also reproduce all the dynamic that you can find in music or movies without any loss or distortion.



Titanium **Dome**, rigid and light for a fast step response

Aluminium **horn** with a profile developed to improve frequency response linearity, ease the phase coherency and limit directivity

A Ferrofluidated **moving coil** lowers the resonance frequency and increases power handling

A large **double magnet** gives the motor power and speed

The **compression chamber** optimises the acoustic impedance of the sound wave




The Bass-Midrange

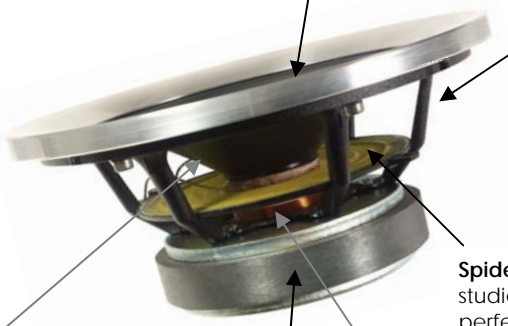
The A2 uses 2 18cm drivers for the midrange and the bass. Both were conceived in cooperation by BC Acoustique and the renown Norwegian drivers manufacturer SEAS.

Each of the 2 driver is used differently. One is in charge of the bass down to 300Hz, the other one is in charge of the medium range.

This allows the A2 to have deep bass that is steady but never covers the openness and clarity of the midrange. Voices are warm and precise while the tones are reproduced with a seducing richness.



The use of a **Polypropylene diaphragm** with variable thickness makes an excellent compromise between lightness and rigidity. Damping has been particularly studied to guarantee the neutrality of sound



Rigid **basket** with a very open rear side to reduce the disturbing primary reflections

Spider was specifically studied to offer a perfectly symmetrical movement

Cone profile and suspension specifically designed for a steady frequency response with no accidents. This allows the use of slow slope crossover for higher phase coherence

Moving coil naturally ventilated and cooled. It can reach high acoustic pressure with very low distortion rate

Large magnet for more power handling and high efficiency

The Crossover

The crossover of the A2 was designed with components selected for their top quality. The state of the art connectors come from WBT renown for their mechanical and electrical performances. The terminal allows bi-wiring. Internal cables all come from Tara Labs, a leader in cable technology.

Even if its architecture is complex, the crossover is using only a fairly slow first order slope of 6dB/Octave. This solution preserves the phase of the drivers and the coherence of sound.

To make the ACT line easy to adapt to a room, the use of a number of specific resistors allow the auditor to change the level of the tweeter. 5 positions are available to increase or reduce the tweeter level by up to 3dB. It will be simpler to adapt the speakers to the listening conditions of the room and to the other components of the Hifi/AV system.



WBT Bi Wired terminals

Those small details...

The front grilles are made with removable fabric that can be changed. A magnetic system of fixing uses powerful neodymes magnets inserted inside the cabinet and the grille. Thus the fitting is always perfect. The use of magnets has absolutely no effect on sound.

On the contrary this solution does not use the usual plastic pins that create problems of reflections and disturbances on the frequency response.

If you do not want to use the front grille, you can also easily put it on the back of the speaker where other magnets have been inserted. This way it will be easy to put away. There will be no mark of plastic pins on the front panel to taint the design of the speaker.

The A2 are delivered with specific feet to obtain a perfect stability and a mechanical decoupling to isolate the speaker from the floor and eliminate

Unsaturated Inductors coils

Polypropylene Capacitors



Wide tracks circuits

High power ceramic resistors

Non inductive resistors



The Woodwork

The woodwork for the A2 is made out of high density 30mm thick MDF. All wood panels are veneered on both sides to avoid any risk of bending of the wood on the long term.

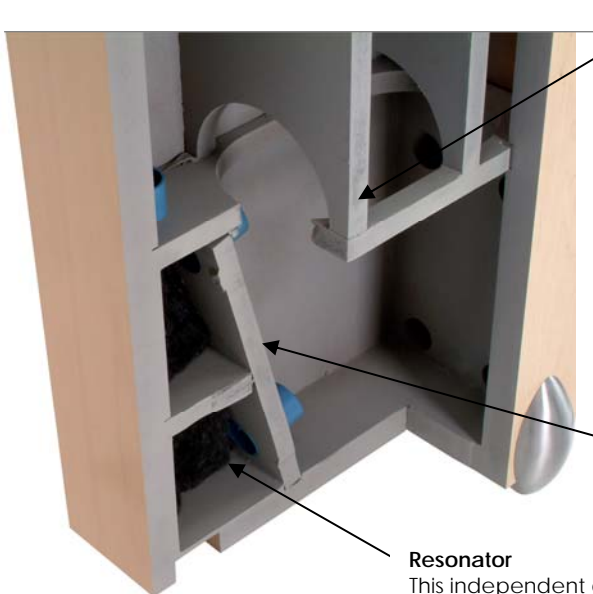
The internal architecture is quite complex, using diffusors and resonators, inclined panels and stiffening pieces for the cabinet. These solutions eliminate all sound coloration and resonances. The speaker gains in neutrality and clarity.

The A2 uses a bass reflex solution. The tuned vent, whose position in the cabinet was carefully studied, is used to increase the energy level but also to get rid of one of the resonating frequency inside the cabinet.

Damping material has been carefully chosen and is used in strategic places to cancel unnecessary internal frequency waves, this without affecting micro information.

The drivers are mounted in a very specific way to conciliate acoustic and mechanical benefits while giving the speaker a unique design.

No screw is seen from the outside on the front panel, as the drivers are held from the inside. The outer aluminium ring allows a very tight and homogenous fixing of the basket. It facilitates the flow of unwanted vibrations and its curved profile limits the creation of reflections on the outer rim of the basket.



Stiffening pieces
Bring more rigidity to the cabinet and suppress stationary waves. Thorough studies were done to find the best setting in the speaker for these elements

Diffusors
They break the sound waves to avoid any echoing inside the cabinet. These do not affect all micro information.

Inclined panels
Limit the stationary waves.

Resonator
This independent compartment was designed to absorb unwanted frequencies. The A2 includes 3 resonators





Quality Control

The A2s are carefully hand made in BC Acoustique's factory. All drivers are tested, selected, ran in and paired..

Crossover is set precisely to compensate potential variations in one or more components. Each speaker is thoroughly tested and measured. It is then compared to the standard measurements.

All these information are recorded and stored in our data base to guarantee the quality of technical service for each speaker that we produce.

Finish and Accessories

The A2 are available with 4 different finish :
Wengé, Amarante, Maple, Cherry (from left to right).

They are delivered with a box of accessories including handling gloves, a soft rag, a bottle of cleaning lotion, a test CD that will allow you to set your installation and improve the run in of your speakers.

The A2 as well as all BC Acoustique's speakers have a lifetime warranty (see conditions).

Drivers

Tweeter	Horn BC100
Midrange	18 cm polypropylene
Woofers	18 cm polypropylene
Terminals	WBT - Bi-wiring
Crossover	6/18 dB at 3,5kHz 12/6 dB at 300Hz

Performances

Frequency Range (+/-3dB)	44Hz - 50kHz
Distorsion	<0,8%
Maximum long term power	120 Watts
Maximum short term power	250 Watts
Sensitivity (2,83v/1m)	91,0 dB
Nominal Impedance	4 Ohms
Minimum Impedance	3,6 Ohms

Specifications

Type	Bass-Reflex Floor Standing
Dimensions (HxWxD)	100 x 22 x 36 cm
Weight	38 Kg
Cabinet	MDF HD 30mm
Diffusors	YES
Resonators	YES - 3

