Chorus 800 V

FOCAL®
the Spirit of Sound

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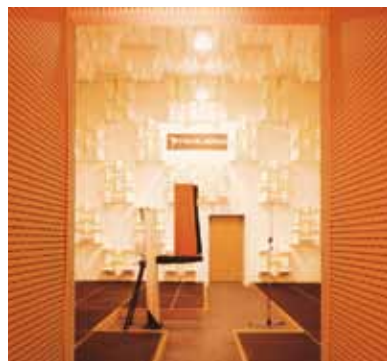
In 2006 we have moved from manufacturing loudspeakers to luxury products

For Focal, Chorus symbolizes one of the most stimulating challenges for the loudspeaker and refined product manufacturer that we are: to allow the greatest number of consumers to access our technological innovations. For the first two generations Chorus (2000) and Chorus S (2003), the objective was to keep high-end sound and maintain sophisticated Focal technologies by adapting our industrial machine to the highest standards. While outsourcing had become a key economic strategy for the majority of manufacturers, we chose on the contrary to heavily invest in our manufacturing process in order to achieve an exceptional sound quality while at the same time remaining competitive. It is the only possible way in this path of permanent innovation: development and manufacturing of loudspeakers "Made in France", design by cabinet-makers, mastery of quality, total autonomy in the design and development of our products. This strategy has been key to the success of the preceding Chorus lines.

This third generation known as Chorus 800 V will go even further in this strategy. Technological innovation does not only solely touch strategic components of the speaker, but the actual whole of the design. Thanks to the use of advanced and exclusive materials, elaborate manufacturing techniques of the cabinets, the Chorus 800 V line of today shines with a unique, high-end esthetic. Chorus V isn't only a performing product line, ideal for entering the Focal universe, but objects that will inhabit living spaces, with an innovative esthetic, quality of manufacture and a finish worthy of a higher segment. This is indeed a new esthetic dimension, a new era for the "Spirit of Sound".



> *The proximity of our research and development laboratories, our cone manufacturing and loudspeaker assembly workshops ensures a unique advantage: unlimited creativity.*

> *Chorus 826 V, Ebony*

> *Chorus 807 V, Black Lacquer*

> *This fixing key can be reserved for future use in a small housing behind the grille after installation and optimization.*

V design

We have moved to Paris

So far, the Focal approach has consisted in introducing the maximum of technologies to offer the best performance possible starting with our entry-level products. If Chorus 800 V continues in this logic with novel technical solutions, the Chorus V design benefits from new, high-end esthetic lines usually reserved for our upper segment products. With the conventional line of thinking, entry-level speakers are very limited by cost, which produces extremely simplified designs, and a dry, boring and mediocre appearance. Chorus V shakes up this tendency by having a high-end look with a strong, modern and fashionable esthetic. To achieve this goal, we gave the design to the Parisian design house Pineau & Le Porcher. The "V" symbol being the principle concept (shape of the cabinet, the "neckline" of the grille…) that is presently popular (automobile industry, high-tech…), Chorus 800 V stands apart with its very tight lines, totally divorced from the usual conservatism that has stagnated in this segment. It has true personality, with its own shape and expression taken directly from high-end, with a sophisticated form and above all exclusive materials. For the first time, these speakers employ a covering in acrylic, which the mirror luster gives a depth in the black finish never seen before on a speaker, not even with a true piano black lacquer. To create that which had never been attempted before, value-add to our speakers thanks to new, perfectly realized solutions; this is another facet of Focal innovation.

Cabinets

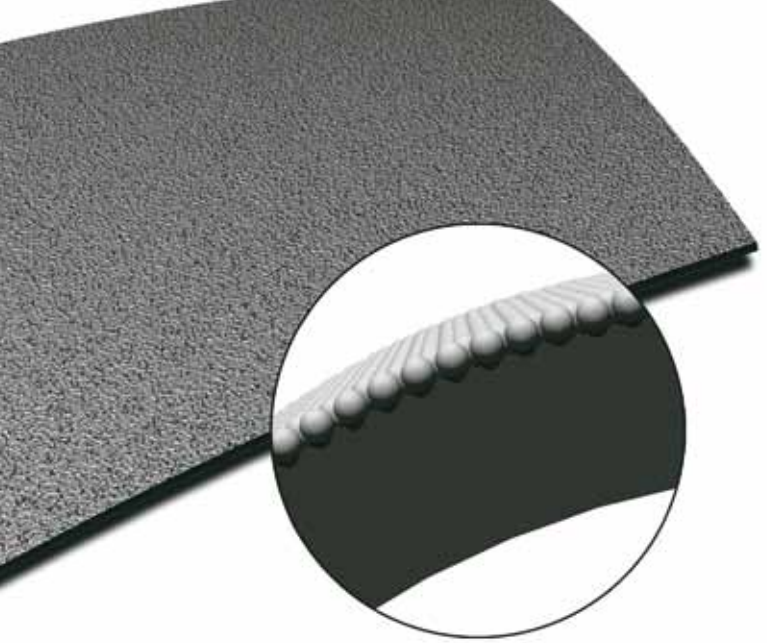
Affordable luxury

The construction and the finish are the other essential elements of the design. For Chorus 800 V, we didn't wish to limit ourselves to notions of esthetics and perceived quality, therefore we introduced novel technical solutions for the category. All the panels, in MDF, have a minimum thickness of 20mm, and 25mm on the sides. Considerable bracing, complicated pieces cut in MDF and integrated cable management optimize this rigidity to create a barrier which is particularly efficient against vibration. Finally, exclusive construction solutions allowed us to maintain nonparallel inner walls on these speakers to break up standing waves, which is a technological refinement until now impossible on generations of Focal speakers prior to Chorus 800 V.
All these specific qualities work together to eliminate parasitic interactions in cabinet design, especially in the lower octaves. This is where all the technical points come together to demonstrate the innovative power and creativity of Focal: to clear the way with new processes and technologies to make the impossible come true!

> *Sides CNC machined from 1"(25mm) MDF.*

> *View of a Chorus 836 V floorstander: MDF construction up to 1"(25mm) on the sides, massive internal bracing, integrated cable management, nonparallel inner wall structure. Notwithstanding an exceptional level of finish where each detail is integrated to design, all is put into motion whereby the speaker looks and performs exceptionally in its price range.*

> *Chorus 806 V, Ebony*



> *Our assisted build woofer production line allows us to retain the values of a traditional hand built driver.*

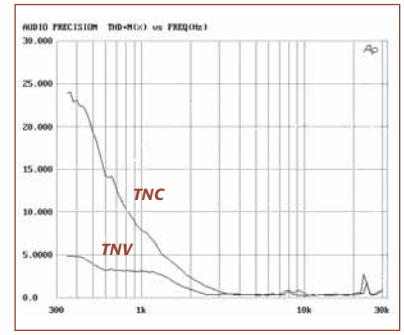
The Polyglass cone has been a Focal tradition for the last 15 years. Incessantly improving, it has matured today to a very high level of performance. The cellulose fiber cone offers renowned lightness and damping characteristics. But our special surface treatment of silicone micro-balls gives the cone a huge increase in rigidity for a negligible increase in mass. The definition and dynamic capacity of this cone, when combined with a very powerful magnet, generate a very fine reproduction, with an exceptionally rich midrange.

Made in Saint-Etienne

The loudspeaker drive unit, too important a part to trust to others

Loudspeakers remain at the heart of Focal's experience. From the reference line Utopia Be to Chorus V, from the woofer to the tweeter, all our loudspeakers are designed, developed and manufactured on our single production site in Saint-Etienne. This method is for us a powerful engagement, one particularly of quality, thanks to the mastery of all steps of manufacturing and quality control of this strategic component. It's also an extraordinary tool so that each loudspeaker can be considered as a unique element, carefully optimized thanks to the concentration of all the means needed for development on one site. Each Focal loudspeaker is developed internally according to a precise application, which gives us a creative power without equivalent as we are not limited whatsoever to a supplier. The manufacturing of our loudspeakers has been kept internal thanks to the investment on our manufacturing line PMMC, a formidable industrial tool of which the daily capacity can rise to 1500 loudspeakers. From design up to final production, each loudspeaker of the Chorus 800 V line is a 100% internal Focal product. This approach enhances the value of Focal loudspeakers: inverted-dome tweeter in aluminum-magnesium alloy, Polyglass woofers… these technologies will not be found elsewhere than Focal. And so doing, we developed them exclusively for our own use.

> *The recent manufacturing line for the 6$^{1/2}$" (16.5cm) drivers and that of the tweeters, the latter entirely new, are a major asset to combine elevated production capacity and the highest quality of manufacturing. This unique technology results in a sound without equal.*



> *Comparative distortion curves between TNC tweeter of 2003 Chorus S and the TNV of Chorus V: the decrease in levels is spectacular.*

Tweeter TNV

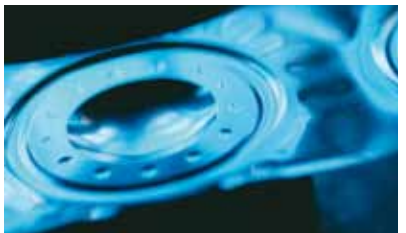
When we improve our tweeter, the distortion is divided by six

After the experience we gained in the creation of the famous tweeter in pure Beryllium, we invented the TNC tweeter, the first tweeter with the aluminum-magnesium alloy. This alloy proved to have excellent damping qualities too and resulted in the entirely new TNV of Chorus 800 V. A new foam for surround suspension with reinforced mechanical properties, new configuration of the neodymium motor, entirely reconceived design, this new tweeter benefits from all the latest Focal research. Harmonic distortion is divided by three at 1000Hz, by 6 at 500Hz: the smoothness of the reproduction in the midrange is transformed. Also, we entirely ceased the use of ferro-fluid in the tweeter, as the new motor design improves power handling: the dynamics of the tweeter is improved with a higher-quality rendering of details.

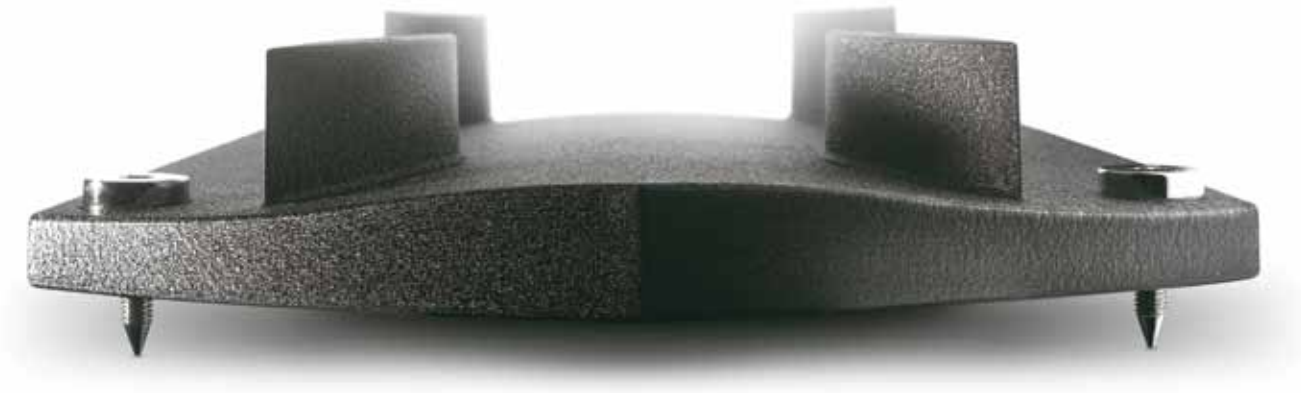
The TNC tweeter had capitalized on the immense experience and knowledge acquired with the pure Beryllium tweeter of the Grande Utopia Be concerning the reproduction of higher frequencies: importance of damping, elimination of the phase piece for standing distortion, emergence of the concept of optimization of performance at the source, which consists of obtaining the characteristics of ideal loudspeakers without having to return to mechanical or electrical corrections at the crossover, a very risky and dangerous approach.

Sweetness and dynamics in the treble, this is another quality that is traditionally reserved for the high-end.

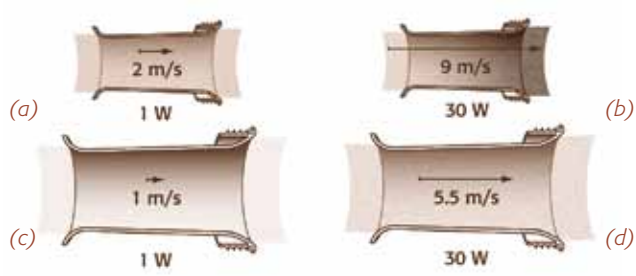
> *Tweeter production line.*



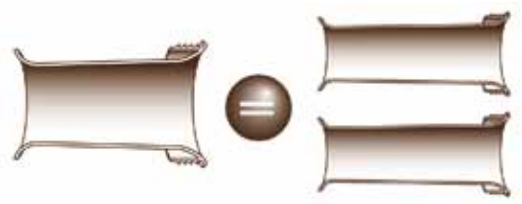
> *Aluminum TNV tweeter support.*



> *Cast aluminum base of the Powerflow™ bass reflex system.*



> *At 1W the airflow is laminar with a single 3$^{1/2}$" (90mm) port (a). At 30W, the airflow becomes turbulent because the velocity is too high; the port is saturated (b) and deep bass becomes compressed. The only solution for reducing the velocity of the air is to increase the surface of the port. If we double the surface of the port, the velocity is halved (c). As power increases, the velocity of air in the port remains low and the air flow laminar, without compression (d). Aesthetically, a 5" (13cm) huge port on the front baffle would not be acceptable. For this reason we have developed the solution of twin Powerflow™ ports.*

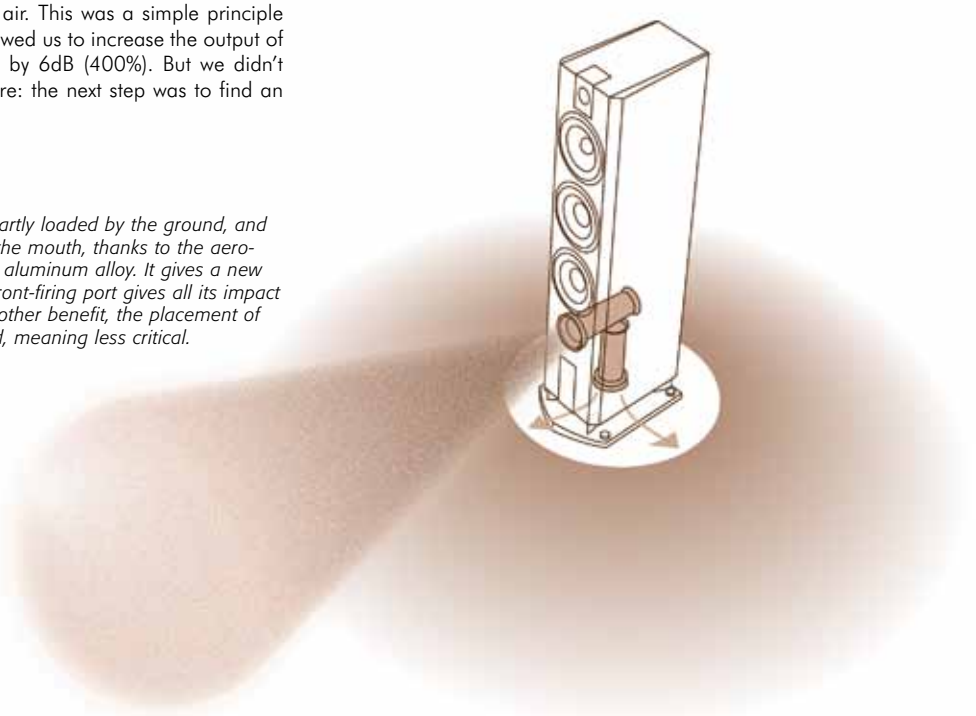


> *The Chorus 800 V floorstanders and the subwoofer rest on a base made of pressure-formed aluminum alloy, which also permits adjustment of the spikes. Despite its strong looks, it actively participates in bass performance thanks to its aerodynamic profile, extending the bass-reflex port situated at the bottom of the speaker.*

Destination: Bass!

To increase the bass, we've reduced the speed of sound

A well-designed speaker is… compact! And yet it cannot encroach on our lifestyle, and must the least amount of floor space. It must also be handsome and impressive, all which has become reality in the new Chorus 800 V. The speaker must at the same time create deep and quick bass, which poses considerable difficulty. Controlling bass congestion necessitates smaller woofer diameters, which, when loaded into internal volumes which are reduced as much as possible, creates a situation where solid bass is improbable. The only answer is to increase the excursion of the cone, to compensate for the reduced active surface of the $6^{1/2}$" (16.5cm) woofers. And yet, another technical issue arises: with less internal volume and increased excursion, internal pressure sky-rockets within the speaker and above all, a very high speed passage of air through the vent. Dynamic compression in the low bass appears at modest volumes, but with distortion that climbs greatly and rapidly. There is only one solution: increase the surface of the bass reflex port to limit the speed of the passing air. This was a simple principle that allowed us to increase the output of the vent by 6dB (400%). But we didn't stop there: the next step was to find an intelligent configuration of the two ports. A front port has its advocates: the power of the impact is at its maximum, as well as firmness, articulation and pace. A port placed at the bottom of the speaker and which is pointed at the ground has the advantage of deeper bass response, but at the detriment of the speed of impact. The relationship of the two ports quickly came to an impasse: the output abundance of the lower port versus the strength of the front port.



> *The down-firing port is partly loaded by the ground, and it radiates 360° around the mouth, thanks to the aerodynamic profile made of aluminum alloy. It gives a new depth to low bass. The front-firing port gives all its impact to bass performance. Another benefit, the placement of the speakers is simplified, meaning less critical.*

Home Theatre

Natural, precise, rich . . . at any level

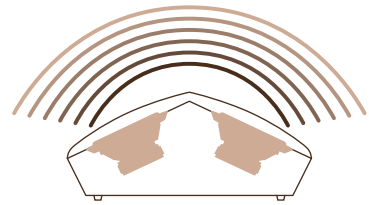
The dynamics in film and multichannel music soundtracks push us to surpass ourselves. All the models of the Chorus 800 V line have exceptional power handling and output, giving them a seismic dynamic range, maintained down into deep bass thanks to the new optimization of the ports and the cabinets. The new subwoofer SW 800 V follows this logic. It inherits much from the famous SW 700 S from the last generation, renowned for the quality of its impact and its dynamic range. The increased rigidity of the cabinet, the double port, the powerful BASH® amplifier, which exceeds 350 Watts, new, accessible settings make for many important improvements and a bass even deeper and more powerful despite a limited cabinet displacement.

The Chorus CC 800 V center channel speaker benefits from optimal settings in order to marry to the other loudspeakers in the Chorus 800 V series. Despite its simple configuration, we managed to achieve directionality curves to combat the typical limitations of a center channel speaker (an instable 3D image, "boxy" dialogue sound, inconsistent transition between the three front speakers).

The naturalness and precision of the dialogue constitute a major strength for this perfectly designed loudspeaker.

A totally new design, the surround speaker SR 800 V adopts a new elaborate bipolar design, quite rare at this price point. Compact, discrete, with an acrylic finish, this model suggests a high-end touch and an ease for integration and installation thanks to its Polyfix™ wall-mount system.

> *Chorus SR 800 V, black finish with Acrylic.*



The size of the surround environment is a first consideration for the SR 800 V. The dispersion, uniform over 180°, but above all exact analysis of all resonance which could undermine it, a "Wall Boost Control" module is integrated into the crossover.

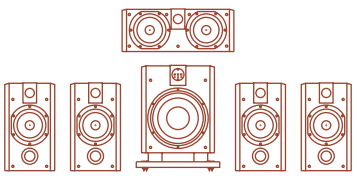
> *Chorus CC 800 V, 826 V and SW 800 V, Rosewood*


Night
Subsonic
Boost

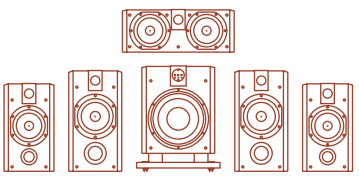
Equipped with a powerful 350 Watt RMS BASH® amplifier and a 11" (27cm) Polyglass® woofer, the SW 800 V benefits from a new, very accessible selection of settings to increase its usability. The "Night" setting acts as a dynamic compressor for night listening at lower volumes. The "Boost" setting is a veritable turbo setting for your film soundtracks. Finally, the "Subsonic" setting permits an optimal coupling between the sub and the listening room when acoustics are difficult (e.g. when rooms are smaller than 15m²).

> *The center speaker CC 800 V is not limited to the use of the aluminum/magnesium tweeter typical of the rest of the series as well as the 6½" (16.5cm) Polyglass® woofers to produce an excellent sonic coherence. The combination of the characteristics (response curve, directivity, handling…) was studied to make a very high-performing loudspeaker.*

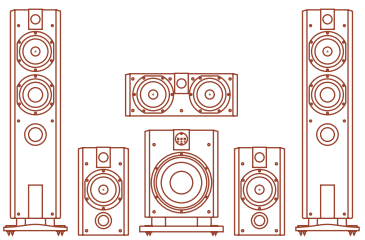
Home Theatre configurations



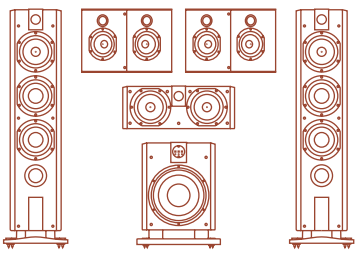
> *Front and surround speakers: 806 V (x4)*
> *Center speaker: CC 800 V*
> *Subwoofer: SW 800 V*



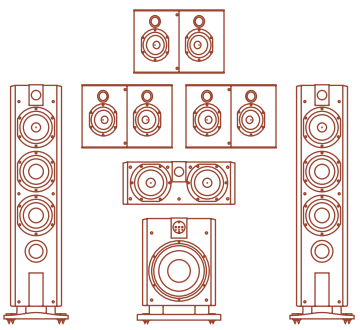
> *Front speaker: 807 V (x2)*
> *Center speaker: CC 800 V*
> *Surround: 806 V (x2)*
> *Subwoofer: SW 800 V*



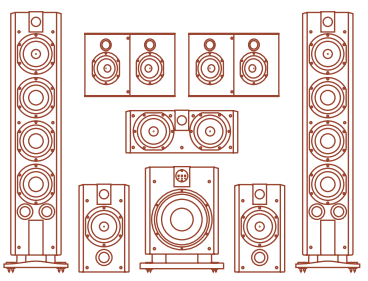
> *Front speaker: 816 V (x2)*
> *Center speaker: CC 800 V*
> *Surround: 806 V (x2)*
> *Subwoofer: SW 800 V*



> *Front speaker: 826 V (x2)*
> *Center speaker: CC 800 V*
> *Surround: SR 800 V (x2)*
> *Subwoofer: SW 800 V*



> *Front speaker: 826 V (x2)*
> *Center speaker: CC 800 V*
> *Surround: SR 800 V (x3)*
> *Subwoofer: SW 800 V*



> *Front speaker: 836 V (x2)*
> *Center speaker: CC 800 V*
> *Surround: SR 800 V (x2)*
> *Back surround: 806 V (x2)*
> *Subwoofer: SW 800 V*




> *The Chorus V range offers models suitable for custom installation, the IC 706 V, IC 706 VST, IW 706 V and outdoor speaker OD 706 V.*

Neutral and balanced, the Chorus 806 V seduces by the richness of its upper midrange and the speed of its bass. An entirely refined speaker, ideal to play in rooms under 20 m² without any limits. And easily larger spaces if it is combined with SW 800 V.

This good-looking, two-way speaker, the only equipped with a 7" (18cm) woofer, has the true spirit of the legendary dB19: powerful bass, a big speaker for a guaranteed rock 'n' roll sound.

Chorus 816 V makes the most of the 2 and a half-way configuration: elevated performance in lower octaves thanks to the combination of woofers working in unison. Up to 30m².

The star floor-stander of the series combines power from its two woofers, double ports and separate midrange. A very classy speaker, untiring even whilst copiously performing in rooms up to 40m².

	Chorus 806 V *Rosewood finish*	**Chorus 807 V** *Ebony finish*	**Chorus 816 V** *Black Lacquer finish*	**Chorus 826 V** *Ebony finish*
• Type	2-way bass-reflex bookshelf loudspeaker	2-way bass-reflex bookshelf loudspeaker	2 1/2-way bass-reflex floorstanding loudspeaker, Powerflow	3-way bass-reflex floorstanding loudspeaker, Powerflow
• Drivers	6 1/2" (165mm) Polyglass midbass	7" (180mm) Polyglass midbass	6 1/2" (165mm) Polyglass woofer	2x6 1/2" (165mm) Polyglass woofers
			6 1/2" (165mm) Polyglass midbass	6 1/2" (165mm) Polyglass midrange
	1" (25mm) TNV Al/Mg inverted dome tweeter	1" (25mm) TNV Al/Mg inverted dome tweeter	1" (25mm) TNV Al/Mg inverted dome tweeter	1" (25mm) TNV Al/Mg inverted dome tweeter
• Frequency response (+/- 3dB)	55Hz- 28kHz	50Hz - 28kHz	47Hz - 28kHz	45Hz - 28kHz
• Low frequency point (- 6dB)	47Hz	41Hz	39Hz	37Hz
• Sensitivity (2.83V/1m)	90dB	92dB	91.5dB	91.5dB
• Nominal impedance	8 ohms	8 ohms	8 ohms	8 ohms
• Minimum impedance (@25°C)	3.6 ohms @ 226Hz	4.2 ohms @ 160Hz	4.3 ohms @ 146Hz	2.9 ohms @ 118Hz
• Crossover frequency	3000Hz	3000Hz	300Hz / 3000Hz	300Hz / 3000Hz
• Recommended amplifier power	25 - 120W	40 - 160W	40 - 200W	40 - 250W
• Dimensions (HxWxD)	15 3/8"x8 3/4"x11 9/16" (390x222x293mm)	17 5/8"x9 1/3"x13 1/8" (448x237x333mm)	39 5/16"x11 1/8"x14 3/4" (998x282x375mm)	40 7/8"x11 1/8"x14 3/4" (1038x282x375mm)
• Net weight	18lbs (8.2kg)	22.2lb (10.1kg)	49.5lb (22.5kg)	56.8lb (25.8kg)

24" (60cm) optional Chorus S 800 V stand.

> *All the Chorus 800 V loudspeakers are supplied with a high quality, micro-fiber cloth for easy, risk-free cleaning.*

Three-way, 3 woofers, 5 drivers in all… the Chorus 836 V has no fear of (very) large spaces. High-end in sound and shape, the power of the bass will surprise you. 836 V is nothing short of a grande dame, generous, powerful but refined and subtle as well.

The CC 800 V enjoys the developments from the Profile 900 and the Electra 1000 Be lines: a perfectly mastered directionality, linearity, neutrality, gentleness and dynamics, its timbre is calibrated to match that of all of its Chorus 800 V loudspeakers.

Its capacity to fill surround space with precision is spectacular. Its behavior is optimized thanks to the integrated "Wall Boost Control" and with exacting directivity. Compact, discrete, but Chorus in its spirit with an acrylic finish.

The power of the SW 800 V climbs to 350W RMS and the frequency response extends to 32Hz. Over-equipped and capable of generating bass with a substantial power output of 115dB, it stands arms and shoulders above others in its category.

	Chorus 836 V *Rosewood finish*	**Chorus CC 800 V** *Ebony finish*	**Chorus SR 800 V** *Black Satin finish*	**Chorus SW 800 V** *Rosewood finish*
• Type	3-way bass-reflex floorstanding loudspeaker, Powerflow	2-way bass-reflex shielded center channel	2-way sealed bipolar effects loudspeaker, Polyfix™ wall bracket	Bass-reflex active subwoofer
• Drivers	3x6 1/2" (165mm) Polyglass woofers 6 1/2" (165mm) Polyglass midrange 1" (25mm) TNV Al/Mg inverted dome tweeter	2x6 1/2" (165mm) Polyglass midbass 1" (25mm) TNV Al/Mg inverted dome tweeter	2x5" (130mm) Polyglass midbass 2x1" (25mm) TNV Al/Mg inverted dome tweeters	11" (270mm) Polyglass woofer
• Frequency response (+/- 3dB)	40Hz - 28kHz	57Hz - 28kHz	75Hz - 28kHz	32Hz - 160Hz
• Low frequency point (- 6dB)	33Hz	50Hz	65Hz	27Hz
• Sensitivity (2.83V/1m)	92dB	91dB	90dB	**Subwoofer features** Adjustable LPF: 40Hz to 160Hz Night mode Subsonic mode (35Hz, 24dB/oct.) Phase inverter Boost mode (+ 3dB @ 40Hz) Autopower Lfe, Stereo and High Level input
• Nominal impedance	8 ohms	8 ohms	8 ohms	
• Minimum impedance (@25°C)	3 ohms @ 110Hz	4 ohms @ 210Hz	3.7 ohms @ 210Hz	
• Crossover frequency	250Hz / 3000Hz	3000Hz	3000Hz	
• Recommended amplifier power	50 - 300W	40 - 200W	40 - 150W	350W (500W max.) BASH® amplifier
• Dimensions (HxWxD)	45 3/16" x 11 1/8" x 14 3/4" (1148x282x375mm)	7 7/16" x 19 7/16" x 11 9/16" (189x493x294mm)	11 7/16" x 15 3/4" x 6 7/8" (290x400x175mm)	17 15/16" x 12 3/4" x 16 3/4" (456x324x426mm)
• Net weight	66lb (30kg)	24.2lb(11kg)	12.3lb (5.6kg)	41.4lb (18.8 kg)

Chorus 800 V finishes

Not all the standard finishes of Chorus 800 V line are available in all countries and/or commercial distribution networks.

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