



*Signature*  
by TRIANGLE

New Speakers  
**Made In France**



TRIANGLE

MANUFACTURE ELECTROACOUSTIQUE

# Manufactured in France

## TRIANGLE's bet on quality

French electro-acoustic manufacturer TRIANGLE has been designing, making and assembling high-quality speakers for over 30 years from its headquarters in Soissons, the cradle of the French monarchy.

30 years of passion: TRIANGLE continues to strive for the highest possible level to provide music lovers with perfection in terms of no compromise sound reproduction, faithfully conveying the emotion and beauty of music.

TRIANGLE has decided to relocate part of its manufacturing process to France, with the view of producing top quality speakers utilizing the expertise and the experience of its local teams. . "The entire process, from conception to production, has been revisited, so as to combine technology with French know how in terms of sound reproduction." (Marc Le Bihan , CEO)



“Made in France, the success of the Magellan range has reinforced our objective of manufacturing top quality products in Soissons.”

MARC LE BIHAN ; TRIANGLE CEO

TRIANGLE is concentrating on its expertise: electro-acoustic manufacturing. The company's goal has remained the same over the past 30 years :

the development of loudspeakers and cabinets, reproducing the core emotion of music with increasing precision and vitality.



## Olivier Decelle

Shareholder and TRIANGLE's most committed enthusiast

### 1980: TRIANGLE'S FIRST CLIENT

An avid hi-fi fan, at the age of 23 years old, Olivier Decelle decided to open an Hi-Fi store on rue Saint Jacques, Paris. In 1980 he became one of TRIANGLE's very first retailers by selling the first TRIANGLE 'model 1180' speaker .

### 1995: FINANCIAL AND ORGANISATIONAL SUPPORT

Reaffirming his dedication to the brand, Olivier Decelle decided to become a minority shareholder of TRIANGLE. At the same time, the company went through a complete reorganization period and securing its position on the French market. As a result, the TRIANGLE brand quickly became one of the top three French hi-fi manufacturers.

### 2006 : UN NOUVEAU DEPART

TRIANGLE's original founder Renaud de Vergnettes decided to leave the company and Olivier Decelle completed the control of the business. With the help of Marc Le Bihan, they proceeded to modernize the company, whilst making a concerted effort to retain the company's core values, sound and status.

# Luxury woodwork

## Lacquer pianos and rare wood

The Signature cabinets are made from 7 high-density fiberboards of 3mm bent with a press so as to obtain an overall thickness of 21mm. This high-density cabinet helps to considerably reduce the speaker's vibratory behavior.

After three weeks of intense work, the wood becomes both supple and very resistant. The front panel is reinforced to attain a thickness of 25mm.

The top of the cabinet is beveled at an angle of 5° to round off the edges and to better reflect light. This level of attention to the finest detail is the key of to a high quality product

In view of embellishing this woodwork and of achieving a special luster, either seven or ten coats of paint are added during production in order to reach the "piano lacquer" finish. The cabinets are carefully polished to remove any flaws before adding a new layer of paint.

Every product from the Signature range is available in 3 finishes: A mahogany varnish finish, a black lacquered piano finish or a white lacquered piano finish.



SIGNATURE - ALPHA

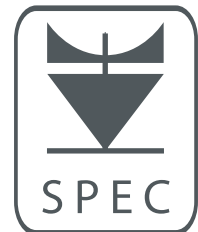
## 30 years of R&D and acoustic expertise

30 years  
of research

For many years now, TRIANGLE has been investing in the latest technology to constantly innovate and improve its acoustic expertise. A Klippel system is used to conceive and simulate loudspeakers. Modern prototyping tools such as 3D printers, the latest CAD software, as well as MLSSA and CLIO measuring systems, enable the company to put theory into practice. Many different types of tests help to define the best-adapted shapes and most suitable material to use.

30 years  
of innovations

Over the years, TRIANGLE has developed and patented innovations, improving upon the mechanics and vibrations of loud speakers. For example, it was the first company in the history of hi-fi to use a pod-mounted tweeter when it designed the CX2 back in 1981 – this is now commonplace in loudspeaker design. This positioning feature guarantees balanced control of resonance from the front of the cabinet and diffraction caused by changes in the cabinet's shape. Other unique technology such as the twin vent and the SPEC system play their part in making TRIANGLE's speakers unique.



Spec (Single point energy conductor) is a brushed steel point. Similar to the design of a cello, it evacuates part of the mechanical energy towards the floor, thus improving sound quality. Cabinet vibration is kept to the minimum and has little effect on sound reproduction. Again, TRIANGLE's attention to seemingly small details such as this gives it a distinct and unique advantage.

# *Signature* by TRIANGLE



SIGNATURE - DELTA



## Live Music

Triangle's goal is to share the emotion of live performance, to realistically reproduce the sensation and realism of every instrument or voice. You don't just listen to a Triangle loudspeaker, you feel it.

  
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## Luxury craftsmanship the art of sound, with a French touch

Delivering pure listening pleasure, the Signature range has been created thanks to the efforts of craftsmen whose experience in the domain of acoustics and aesthetic design speaks for itself. The range's conception, and design was 100% implemented in France at TRIANGLE's workshop in Soissons.

Thanks to the experience gained from the Magellan range, TRIANGLE is currently offering a form of luxury craftsmanship with SIGNATURE, born from the passion and the work of its teams. Each item is made and assembled with uncompromised precision to strive for manufacturing perfection and irreproachable sound.

This form of luxury craftsmanship combines the finest woodwork with TRIANGLE's acoustic expertise. Each cabinet benefits from many hours of work and inspection to obtain the impeccable design and finishing that is essential to any TRIANGLE product.



“ This luxury craftsmanship combines the highest level cabinetwork with TRIANGLE's acoustic expertise. ”



Anechoic chamber developed for high end products

### High precision assembly

The Signature range is made entirely in Soissons. TRIANGLE has completely reviewed its manufacturing process, and the company's development engineers work closely together to deliver a high quality product.

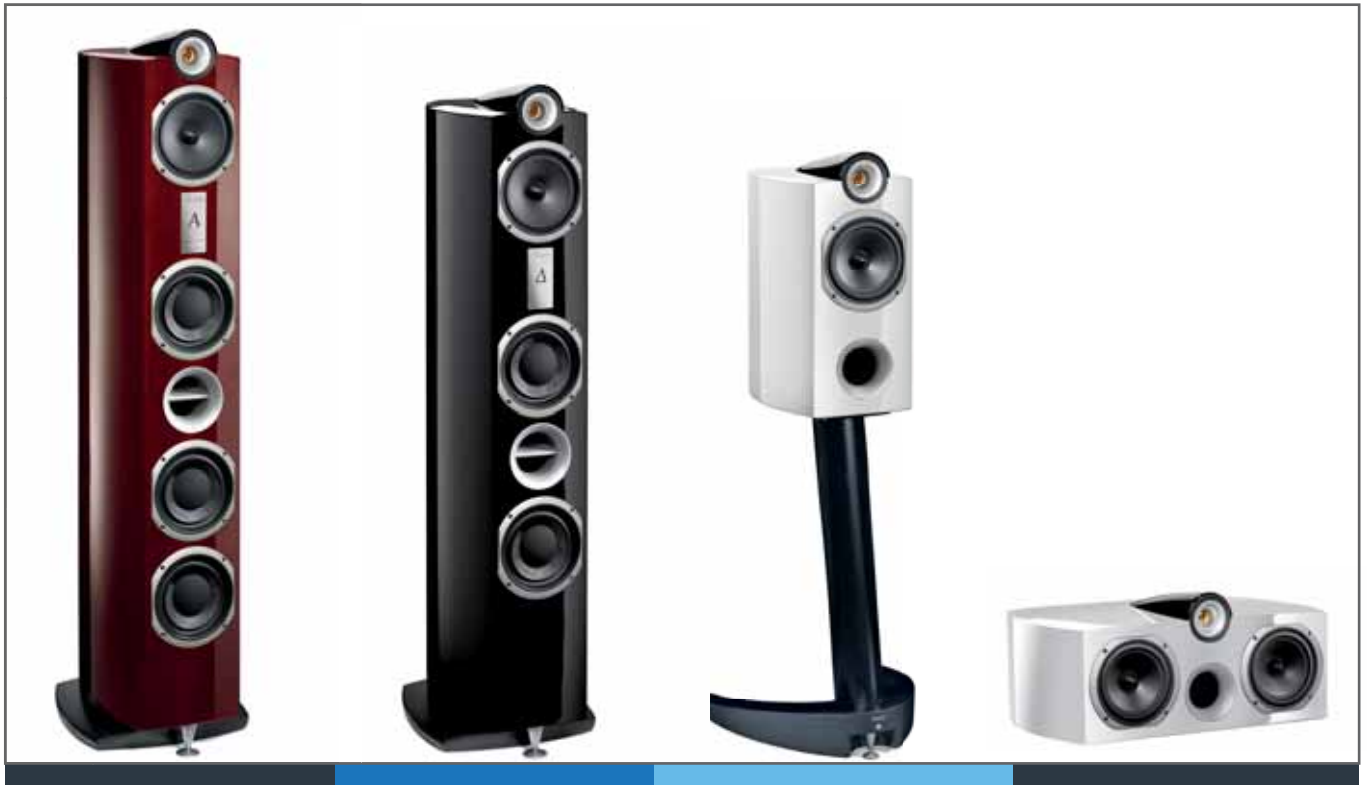
Numerous acoustic tests are carried out throughout the whole process to ensure that each element of design adheres to the company's high standard. Each driver is measure to be as identical as possible and the speaker is tested in an anechoic chamber. Afterwards a sample is taken and listened to a specialist listening environment.

Real wood finishes are carefully selected to ensure a homogenous and attractive pairing.



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## A ALPHA

The flagship of the Signature range, this 1.3 meter high column includes three bass drivers specifically designed for this product. The performance level is extremely high, offering deep and fast bass. Recommended for larger rooms and spaces.

## Δ DELTA

The leading model of the Signature range, Delta was the company's starting point in terms of research. This 3 bass reflex speaker is a well-designed technological jewel. Assembled in the company's workshop in Soissons, it is a symbol of TRIANGLE's acoustic expertise.

## Θ THETA

THETA is a compact bookshelf speaker, mounted on feet. The midrange clarity and the depth of the lower end register are impressive for a speaker of this size. Equipped by a 16-cm driver with a half roll suspension, the THETA offers amazing musical quality, as well as surprising power and speed for a bookshelf model.

## Γ GAMMA

Exclusively developed for the company's range, GAMMA is a center channel loudspeaker for home cinema installation. It provides a smooth tonal balance, perfectly adapted to all types of movies. Stemming from the same technologies than bookshelf and floor standing models it offers a great tonal balance.

## HOME CINEMA SYSTEM

with METEOR0.5

In view of creating a powerful home cinema package, SIGNATURE has designed a speaker to bring movies to life. This subwoofer, the METEOR 0.5 is the ideal complement to an audio-video system that will transport you straight to the heart of a film's action.





# Technological Innovations



## **Tweeter TZ2500 – a driver in die-cast aluminum**

A new phase plug has been designed to go with the 2mm titanium dome. The tweeter horn is 100% injected aluminum developed originally for the Magellan project. At present, Tweeter's larger surface offers a greater dispersion of high frequencies. The volume of compression of the tweeter's back chamber has also been increased to offer better shock absorbance, thereby preventing the return of sound waves on the dome. These enhancements have improved upon the quality of high frequencies in terms of detail, finesse and transparency, as well as minimal sound distortion.



## **Medium Range – Paper cone driver offering clear sound**

The 185cm aluminum basket has been entirely redesigned to provide better ventilation to its double-layered coil. It is equipped with a small pleat, peripheral short travel suspension. The new version of its cone in treated paper offers increased clarity at this very important frequency section of sound reproduction. The phase plug has been replaced by a dust cap of identical shape and size to prevent air from escaping, as it would normally do so in an enclosed volume.



## **Woofer - Double ferrites for deep low performance**

This driver benefits from numerous enhancements producing a faster and deeper bass. It is equipped with a double magnet motor, a double-layered coil and an inverted half-roll rubber suspension, all of which ensure a faster speaker response. Its fiberglass cone has been improved upon to offer extra speed. The entire central part is closed with an aluminum cover.



## **Bookshelf and Center Woofer: Versatility**

The bookshelf and center channel woofer is specially designed for these speakers. The main difficulty lay in the technical prowess to develop a bass unit able to reproduce low frequencies without requiring a large volume load and also maintain linearity in the high frequencies. As other SIGNATURE's models it uses the same aluminum basket and treated paper cone in order to get a perfect tonal balance. Its dust cap shaped as a phase plug reduces surges and prevents any sonic aggression without adding more of electronic components



## of SIGNATURE range



### Terminal : High Quality copper Alloy

Each model is equipped with a terminal for bi-wiring or bi-amplification. The terminals are designed and assembled by TRIANGLE. Built with High quality copper alloy they provide an excellent conductivity. They accommodate a 5 mm diameter cable and receive banana plugs with a locking system for excellent security.



### Twin vent: solid bass

The unique element to the Twin Vent is that it discharges the rear wave created by the bass drivers through a single vent. This system means that each of the drivers can operate in complete isolation. Increasing the volume of the sound does not disrupt the tonal balance, the only remaining distortion limit is the driver mechanics. The results in terms of power handling are amazing. The listening experience offers dynamic, solid, well sustained bass.



## Filters and Inside Cables

### High quality components

The performance optimization of each loudspeaker has allowed TRIANGLE to use fewer components in its filters and audio signal path. As a result, the range benefits from greater transparency and a more refined tonal balance. The new filtering system, separating the bass section and the midrange/treble section on the Delta and Alpha models eliminates the emission of electromagnetic waves and improves upon the finesse of the midrange/high frequencies.

The internal cable (supplied by highly-regarded US manufacturer, Kimber Kable) was selected for its detail when it comes to the medium/high frequencies and for its steadiness in relation to the bass frequencies. The combination of these two cables, containing strands of different sections, minimizes resonance and enhances performance.

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A

**ALPHA**



Δ

**DELTA**

○ Sensitivity (dB/W/m)	92	92
○ Bandwidth (+ - 3dB Hz - kHz)	32-20	35-20
○ Power Handling (W)	140	120
○ Repetitive peak power (W)	280	240
○ Ways	3	3
○ Nominal impedance	8	8
○ Minimum impedance	3,3	3,2
○ Low frequency roll-off (Hz)	290	280
○ High frequency roll-off (KHz)	2,6	2,7
○ Dimensions (mm, H x L x P)	1270x233x372	1170x233x372
○ Dimensions with pedestal (mm, H x L x P)	1330x370x386	1230x370x386
○ Net Weight (kg)	34,70	33,00

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**THETA**



**GAMMA**

○ Sensitivity (dB/W/m)	90	91
○ Bandwidth (+ - 3dB Hz - kHz)	45-20	50-20
○ Power Handling (W)	90	90
○ Repetitive peak power (W)	120	180
○ Ways	2	2
○ Nominal impedance	8	8
○ Minimum impedance	4,4	4
○ Low frequency roll-off (Hz)	-	-
○ High frequency roll-off (KHz)	2,7	2,5
○ Dimensions (mm, H x L x P)	465x233x372	260x582x381
○ Dimensions with pedestal (mm, H x L x P)	-	-
○ Net Weight (kg)	11,55	14,40



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