

Sweden  
Marten Design  
Coltrane

Coltrane — the super loudspeakers with exceptional accurate positioning and splendid sound field from Marten Design



*In the eyes of the audiophiles, Sweden is a nation of significance as a lot of small production companies of audio components are located in this country and many of them are famous Hi-end brand names. These companies, with only a handful of staff, have their operation handled by mostly family members. Nevertheless, all their products are of top quality. Marten Design is one of these companies specializing in the production of top class loudspeakers. Coltrane comes from its high-end loudspeaker series comprising Coltrane Supreme, Coltrane and Coltrane Alto. This report is about Coltrane, the middle model in this series.*

## Focus On Diamond Tweeter

**R**ich in European style, the classical appearance of Coltrane makes you think of the antique radio. On the other hand, the several white ceramic units remind you that it is a pair of modern hi-end loudspeakers. The front of its enclosure tilting slightly backwards is made of solid wood (with options of maple, cherry, oak, walnut etc. available) 61mm thick. Both sides and the back of the enclosure are made of 3-layer boards (cellular Kevlar board 1-inch thick in-between two layers of carbon fibre). These boards are put in the high-temperature vacuum oven for further processing to make them bend backwards – looking somewhat like a boat placed upright. When knocking at the enclosure,





it produces a very low-frequency sound and makes you feel that it is very rigid. However, its actual mass is relatively not too heavy. Since there are no parallel facets inside, it eliminates the standing waves effectively. Four big original carbon fibres feet blend well with the metal pedestal. The handcraft and polishing finish are flawless. Wow, simply put it there on display and the audiophiles will fall in love with it at first sight!



Then, take a look at the reproduction units. They are all manufactured by Thiel and Partners (Accuton) from Germany including the three very eye-catching white ceramic units: one 4-inch mid-range and two 9-inch woofers. However, the focus is on that 0.75-inch diamond tweeter! As a matter of fact, the diamond tweeter is extremely expensive. I trust that its price is enough for you to buy a pair of medium floor-standing loudspeakers of good quality. Its frequency response goes right up to 100kHz. In practice, it means that there is virtually not any limitation for replaying high frequency.



### The Ceramic Units Not Simple at All

The ceramic units are also worth special attention. The majority of musical signals are replayed by the mid-range unit. The attractiveness of voices depends on its reproduction capability. The two woofers handling the low frequency are also proven to be of superb quality. All reproduction units are equipped with the famous Bybee Quantum Purifier to minimize high-frequency distortion and noises and boost the dynamic effects. Coltrane has not any single big baffle but each reproduction unit has its own small baffle made of zinc. It has been reported that there is hardly any adverse influence to the sound quality.

Of course, the crossover featuring simplicity is made of selective materials. The coil made of metal foil (adopting Teflon core for those with high value), Mcap and MIT polypropylene capacitors and Mundorf non-inductive resistors etc. All spare parts are hand-welded with wire and fixed with highly elastic glue to eliminate vibration before being bi-wired to WBT loudspeaker panels. Well, the internal wire is designed by Jorma from Sweden too. The 3-way crossover points are 300 Hz and 4kHz respectively.

According to the manufacturer, the placement of their loudspeakers is highly 'elastic'. They can be placed near the wall. The knob below the binding posts enable +/-1.5dB tuning of the low frequency response as a means of compensation for different patterns of placement or rooms. For sure, we treat it with care and still place them at our standard listening position with little fine-tuning and the low frequency response remaining at normal position so as to obtain the best effects.



## Run-in Required for Digital Gears as Well!

In the first attempt, Esoteric P-03 and D-03 were still used. The Boulder amplifier was another component for the audio system. When listening to it, I found plenty of details with accurate image. However, the sound appears comparatively tight. In my opinion, it is because the loudspeakers have not been run in sufficiently! However, when Lincoln told me that this pair of has been run in for hundreds of hours, I was a bit disappointed naturally. If this pair of loudspeakers costs less than one hundred thousand dollars, the performance is good enough. Nevertheless, in terms of a selling price at more than several hundred thousand dollars, I have not gone too far to be more demanding for this pair!

When I made another attempt with Cary CD306 laser player in the audition room, something strange took place. The definition has deteriorated though already expected. However, the overall performance was more pleasing. How come it turns out like this! Cary

costing seventy thousand dollars has outperformed Esoteric selling at one hundred and seventy thousand dollars. It is unlikely to be so. Definitely, the performance of Esoteric was 'terribly great' last time! Finally, I asked Lincoln why and was informed that this set of Esoteric had just arrived and been unpacked. The set I heard last time was borrowed for temporary use only and it has already undergone sufficient run-in. That is why the difference is so great! When I listened to it two weeks later, it was totally different. By that time, I was able to realize the potentials of Coltrane. It also proves that the digital gears also require run-in!

## Three-dimension Voices Definitely in Its Own Style

First, I listened to Five Songbirds of FIM. In particular, the bouncing bass was excellent when Jacintha sang 'Danny Boy'. The carefree percussion and the relaxing saxophone appearing now and then were very touching indeed, not to mention the



voice performance. The singer's breathing and intonation were truly lifelike. At the end of the final lingering voice, Coltrane has managed to reproduce the slight 'shivering' effect. It verifies my first impression on it with plenty of details and nothing missing virtually. Of course, it is due to the super definition of both Esoteric and Boulder. Anyway, it is only because the highly sensitive Coltrane capable

of reproducing any faint signal makes it possible to reproduce such magnified clear image.

Coltrane has figured out the excellence of 'The Sixth Dali's Love Song' in 'The Treasures of Asia-Pacific'. Right in the beginning, the three-dimension sound effects of opening the door, walking, barking and wind really make you feel like enjoying movie in a cinema. I have similar experience with other high-class loudspeakers in this aspect. Coltrane merely reproduces them faithfully but not showing its outstanding performance yet at this point. Well, the subsequent vocal solo, chorus, percussion, electronic synthesizer and other instruments, if not managed



properly, will turn out in a mess, or have lots of faint details appearing nowhere in the case of comparatively weak definition. Certainly, Coltrane will not turn them into a mess. The complicated coherence is faithfully reconstructed to produce a deep and wide sound field. Very often, the sound seems to have come from afar beyond both sides of the loudspeakers. The gradually strengthening faint percussion, which appeared in the beginning, is reproduced without anything missing as well. In the later part, the female vocal appears to move swiftly to the front and the back, the right and the left. Coltrane has recreated such mysterious atmosphere at its best.

All in all, the three-dimension vocal

reproduced by Coltrane is attractive and rich but does not try to please the audience merely with sweetness. Obviously, the singers in 'Five Songbirds' have different personality of their own and Coltrane reveals their individual style and charm with great details.

### Excellent Replay of Coltrane Jazz by Coltrane

Coltrane featuring high speed and extremely clean texture is therefore able to reproduce particularly clear details. What does it look like when replaying violin? I try it with Mutter's Carmen-Fantasie. The sound of Mutter's violin is very rich indeed but it will end up with the adverse effect if the reproduction is too 'bright' due to high speed. Well, it is not the case



with Coltrane. The pure and rich sound of Mutter's violin is coupled with the beautifully articulated treble. Even more, the overtone is superbly unique of its kind. It is extremely exceptional to be capable of having the nearly perfect coherence from the low to high frequency for the entire violin movement!



The loudspeakers of Marten Design are often named after the masters of jazz. Apart from Coltrane, the models of another series – Heritage – include Miles 3, Duke, Ellington and Alice probably because the designer is particularly fond of jazz! Will its loudspeakers be particularly competent for replaying jazz as well?

Let us go back to the story right away. In the second audition, I have brought a SACD 'Standard Coltrane' deliberately to have the Coltrane loudspeakers replay 'Coltrane' as a matter of fact in this instance. Right from the beginning of Track 1 - 'Don't Take Your Love From Me', the saxophone played by John Coltrane 'talks' to the audience in a sullen manner. Merely upon listening to the first sentence, I know that Coltrane's replaying jazz is worth it. Fortunately, it happens to be so. Otherwise, I really do not know how to handle the case when Coltrane fails to replay 'Coltrane'.

The good performance of Coltrane (the loudspeaker) not only reproduces faithfully the saxophone played by



Coltrane (the artist) – the air-blowing sound, as well as the little 'prop-out' sound, makes people think of the vibration of a reed between the lips. Moreover, the texture of bass (without clear-cut sound effects from the right and the left channel in the old recording – though not so audiophile-like) gives the audience a better-than-expected three-dimensional feel. Everything is in its proper place. It sounds as if the audience can sense the

short and long duration of having the drum brush on the brass cymbal. Its clarity even doubles that of the sound of air movement caused by opening and closing 'Hi-Hat'!

### Gigantic Scene Exceeds Its Dimensions

After several auditions, I feel that Coltrane is exceptionally good at replaying large-scale and complicated movement but not jazz and there is hardly any rival for the powerful drumbeats in particular. At first, its classical appearance made me thought that it was merely

mild and classical. For sure, it has possessed such characteristics as well. When replaying some comparatively mild CDs, it did give me such impression in the first instance. I almost thought that it was not suitable for replaying music with too much dynamics (especially when I saw its ceramic reproduction units vibrate with considerably big amplitude). However, when it replays 'Drum and Track Disc', it is really something. The drumbeats appear terribly dynamic. It is so powerful and great! 'Symphony No.1' composed by Guan Xia in 'The Dragon Experience' reveals the taste



of Wagner. The overwhelming momentum of the splendid woodwind



instruments and the brass is magnificent without boundary. The performance of Coltrane is 'big': big orchestra, big scene and big momentum. When replaying other large-scale pieces including 'Mahler Symphony No.2', 'Lang Lang plays Tchaikovsky Piano Concerto No.1' and 'Picture At An Exhibition', Coltrane gives me the impression of 'big' as well. In particular, the depth, dynamics and coherence have all surprised me ...unlikely to have such performance reproduced by loudspeakers of this size!

## Ceramics and Diamonds Show Their Respective Prices

Will the treble sound better and appear more outstanding with the diamond tweeter incorporated in Coltrane? The diamond tweeter will definitely bring about better sound. Otherwise, what is the use of incorporating such expensive units? However, it is not worth mentioning if this pair of loudspeakers reproduces particularly outstanding treble simply because of incorporating the diamond tweeter. Coltrane knows this well. Therefore, it emphasizes the full-range coherence in a very smart way. The violin and the piano have an abundance of overtone. The sound field is clear and open. It has not placed emphasis on any particular kind of treble but gives

you a natural feel. When replaying the same musical source with other loudspeakers without diamond tweeters for comparison, anyone enjoying music will see that the performance of Coltrane is obviously better. As a result, the audience has no alternative but to admit that it is worth the high price.

Apart from the diamond tweeter, are the ceramic units really better than the paper cone and metal units? In fact, there is no answer. Each kind of reproduction units has its own characteristics and sound. The sound effect reproduced by the loudspeakers depends on their designers' techniques in developing its best potentials. The weak points of the ceramic unit are that they are brittle, easily broken, and expensive and require long run-in period. If not handled properly, the sound



can appear very hard (bad). Its good points include very high definition, high speed, good dispersion, little coloration and extremely excellent mid-range and bass. It is capable of reproducing very beautiful sound. Marten Design has developed such characteristics to the maximum limit. Coupled with the unrivalled diamond tweeter, Coltrane is amid the most distinguished ceramic loudspeakers. However, it does not mean that the use of the same units will bring about the same sound since various factors including the materials, shape, dimensions of the enclosure and even the glue used for bonding will lead to different effects. You may realize that the reproduction units of a famous brand name appear almost the same as those of Coltrane but I can tell you that the sound effects vary greatly between the models of these two brand names. Which one is better? If I tell you that both of them are good, you will definitely say that I try to push you around. Nevertheless, the fact is that there is only a kind of true sound while more than one kind of good sound exist. It all depends on your own taste and preference to decide which one is better.

## Medium Size Comparable to Gigantic Ones

Coltrane adopts a practical approach with positioning on very solid ground, high speed, and releasing explosive power. It is capable of reproducing earth-shaking momentum of big 'scenes', apparently not in proportion to its moderate size. In other words, it has become a 'big' loudspeaker

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model. I would like to stress again that it is also capable of reproducing fine details. Please don't be misled by my above description that this pair of loudspeakers simply plays 'rough'. The replayed big 'scenes' give me a really unforgettable impression. In my previous audition when listening to Boulder power amplifier, I commented that it was not only capable of releasing unlimited dynamic power but also fine details to your satisfaction. Surprisingly, Coltrane has also given me similar impression. It is not difficult for amplifiers to have tremendous power but not easy to reproduce fine details as well. On the contrary, most medium and small size loudspeakers are able to recreate fine details but not easy at all to reproduce the momentums of such 'big scenes', power and dynamics at ease in the way Coltrane performs. Let us put it this way. The momentums reproduced by Coltrane equals or exceed those reproduced by other loudspeakers bigger in size by one-third.

## What Kind of Sound at The Cost of Several Hundred Thousand Something? Super Sound of Course!

At first, I saw that the design concept of Marten Design is 'in pursuit of the most accurate sound (Every company says so!) at the price of XX affordable by the audiophiles.'

Wow, what is the price? Is it likely to be offered at cheaper prices with such production quality? Therefore, my response by instinct is '??' when being told that Coltrane costs several hundred thousand! Later, upon realizing its materials, structure and sound (especially voices), I have to agree that it must be sold at this price.

As to the question whether the price of over several hundred thousand is considered 'affordable', it all depends on how you see it!



### Coltrane Specifications :

■ 3-way design ■ Units : 3/4" Inverted diamond dome tweeter, 3.5" Ceramic mid-range, Two 9" ceramic woofers ■ Crossover Points : 300Hz, 4kHz ■ Frequency Response : 20Hz — 100kHz, +/- 2dB ■ Sensitivity : 89dB/W/m ■ Impedance : 4 Ohms ■ Maximum Power : 300 W ■ Dimensions: 44.5" (1130mm) H × 12.3" (313mm) W × 24" (610mm) D ■ Weight: 104 lbs (47kg)

# C o l t r a n e



# A few words from Lincoln

Have heard some audiophiles comment on the loudspeakers incorporating Ceramic Drivers. The defects they revealed include the following: the sound of ceramic units is thin, dry, and incapable of replaying explosive sound effects, with the treble comparatively harsh, and the bass not diving deep enough. Certainly, I dare not agree to these comments on the loudspeakers incorporating ceramic units. In my opinion, there are two possibilities for the audiophiles to make such comments. First, such pair of loudspeakers commented are virtually below standard. The sound effects will not change much even after incorporating other reproduction units instead. Second, these audiophiles have made their comments merely based on visual expectation instead of audition. As they see that the diaphragm of ceramic units is white and thin, they take it for granted that these units are likely to reproduce inferior sound quality.

For more than five years, I have used Venture Grand Excellence Diamond SE incorporating ceramic units. I have also listened to over ten pairs of loudspeakers of various models of different brand names incorporating ceramic units. Though each pair of them has different timbre and characteristics, in my opinion, as long as the matching amplifier is of good quality (no matter whether it is

of transistor or vacuum tube design), coupled with sufficient run-in (not less than 300 – 500 hours), then the kind of clear and articulated sound effects featuring fast transients reproduced by ceramic units are attractive indeed. Well, the factors virtually charming the audience are the wide expansion of the high and the low frequency, the sharp texture of the mid-range and the rich musicality .... I trust that those friends of mine having paid visit to my home must have been impressed deeply by the superb charm of the loudspeakers with ceramic units. In fact, the extremely thin ceramic diaphragm featuring superb light mass and super rigidity without physical deformation is exactly the kind of material for manufacturing the optimal cones sustaining perfect piston movement.

Regarding this pair of Coltrane tested by Thomas Leung, I was greatly impressed by the loudspeakers of this Sweden brand in CES two years ago. Now, this pair of Coltrane in the audition room of our magazine looks great. First, its enclosure is made of highly selective materials. All of them are expensive, including the solid walnut baffle which is 61 mm thick, the 1-inch-thick cellular Kevlar in between two layers of carbon fibre boards bonded at high temperature to form the one-piece enclosure looking like the bottom of a boat and the high precision pedestal with stainless steel spikes. The excellent craftsmanship

reveals top-class European standards. As to the 4-inch Accuton ceramic mid-range and the two 9-inch ceramic woofers, they are also not cheap at all. Well, the 0.75-inch diamond tweeter drawing everyone's attention is exceedingly expensive indeed. Therefore, Coltrane is definitely a state-of-the-art loudspeaker made at skyrocketing costs. When listening to a musical piece of violin accompanied by piano, the proportion of the two instruments, the three-dimension feel and the positioning are reproduced accurately. The beautiful sound touches everyone's heart. When listening to voices, the texture is filled with emotions. The singer's image is vivid and lifelike at a proper distance from the accompanying instruments. The voices and the sound of instruments blend perfectly well. It shows the super definition of the loudspeaker. The explosive section of the symphony truly reproduced with gigantic momentum without boundary and the dynamic response without a trace of stress let you realize why a truly state-of-the-art loudspeaker is worth such a high price.

Many of my friends after listening to Coltrane, apart from praising its marvelous performance, have made the following comment, "Loudspeakers incorporating ceramic units reproduce 'thin' sound? How come saying so!"

