





Forza Italiana

Italian audio specialists Outline have evolved significantly from the hi-fi market that spawned them in the mid to late '70s. Today the company are at the forefront of pro audio manufacture and are as innovative and forward thinking as any in the industry, a fact reflected in the multitude of patents the company have recently been afforded. Jerry Gilbert travelled to Bergamo, hometown of Outline Vice President / International Sales & Marketing Director *Giorgio Biffi*, to get the full story...

To paraphrase an old maxim, you can always tell a company by the patents it files.

And in the homogeneous world of emulation product strategies, the number of patent applications flying out of the Brescia headquarters of systems company, Outline snc, is not only refreshing, but a testament to how jealously they have protected their Intellectual Property Rights since Guido Noselli set up the company back in 1973.

If orders were placed on product performance alone, Outline would probably be way out in front. But Guido's partner, sales director Giorgio Biffi, concedes that unless you happen to have hailed from the lighting sector, Italian excellence has traditionally been overlooked in favour of the more consolidated (and tour-friendly) British and North American producers.

However, there are signs that Outline may not be flying below the radar for much longer. Despite 32 years of audio pioneering, it has been their recent line array programme which has brought them into the sharp focus of their global peers, coupled with their H.A.R.D. 212 wedge monitors.

The 'Butterfly' principle (which Biffi notes circumspectly has provided the design template for at least two other internationally-renowned company) is finding high-profile endorsement throughout the world (notably the LIVE8 event in Rome). And following this, they look set to wade further across the Rubicon at

London's PLASA Show this month when they reveal the fruits of their COM.P.A.S.S. programme which has been kept so secret that it only appeared as a 'teaser' in Frankfurt earlier this year.

COM.P.A.S.S. stands for COMpact Polar Adjustable Sound System - and it's the 'A' element which is the active ingredient.

COM.P.A.S.S. is being touted as 'history's first robotized loudspeaker enclosure,' which can be used alone or in multiples to form a Vertical Line Array

Five remotely-controllable motor-movements enable the vertical and horizontal directivity patterns to be adjusted simultaneously - symmetrically or asymmetrically - from 60° to 150° on the horizontal plane and from 0° to 15° on the vertical plane.

Also remote controllable is the regulation of the splay angle between the elements when COM.P.A.S.S. is used to form a Vertical Line Array.

However, the secret weapon is the built-in laser, which displays the plotted axes of the dispersion in real time - allowing accurate pattern mapping.

By being able to steer the dispersion pattern in difficult venues - possibly where there are no ideal rigging points - system techs will be able to cancel common inherent reflection problems.

It's small wonder that Outline took such a low-key approach in Germany. "By providing only basic information we wanted to reduce the risk of once again offering a source of 'inspiration' for

other audio manufacturers on the international scenario," explained Giorgio Biffi, over lunch high above the ancient and picturesque city of Bergamo. As is their custom, Outline has again filed for an international patent.

Despite containing seven loudspeakers - a 10in woofer, four 5in mid-woofers and two compression drivers with a 1.75in diaphragm, the COM.P.A.S.S. is remarkably lightweight and compact. It is the two DPR WG waveguides in front of the compression drivers - following the Butterfly system principle - that creates the line array characteristic.

"A system that can be remote-controlled through an internet line presents a completely innovative approach," he believes, adding that the company is now working on a wireless system that can make single adjustments via a PC tablet.

System control will again be from their own dedicated Genius 26 DSP, developed for the Butterfly, with special settings prepared for the universal XTA DP226, BSS Omnidrive and Lake Contour processors.

Flying hardware is another area in which Outline have systematically led the way. While companies were still using adaptive Aeroquip flying hardware they were already developing their own 'Fast Hanger' hardware to minimise erect/derig time.

Fast Hanger is protected by yet another patent and Giorgio Biffi explains why it is worth committing such a large percentage of their turnover to IP insurance - particularly in the largest Europe

and American markets.

The Butterfly system alone is protected by four patents, affecting the design, waveguide, hardware and cardioid solution for the bass.

All these design principles emanate from the inspirational genius that is Guido Noselli. As Giorgio explains, "If a car has four wheels Guido will question why - and wonder if he can make it run better using five."

The Outline story began when Noselli, a former musician, put his experience to use, founding the company to take advantage of the emerging hi-fi market.

But by 1976-77 Outline had left the world of private homes, drawn by the allure of the new disco market. This was to mark the start of a highly profitable period and set them on an expansion path which today sees the company, with a staff count of 35, represented at international level, via over 30 distributors in five continents.

Suffice it to say that over the past 30 years Outline has created a portfolio of thousands of corporate clients, largely discotheques, concert halls, rental firms, pubs, indoor sports venues, cruise liners, cinemas, theatres, concerts and conference halls. In spite of changing trends, some of the firm's products are still in use today.

Almost sensing the answer ahead I asked Giorgio Biffi which two products Guido would earmark as having been the most influential on the market during that period.

The first, of course, is the Spectra two-way, three-speaker system (containing two 12in woofers and a 3in rotatable mid and



compression driver). "Guido claimed to have been the first person to use the D'Appolito design principle - a configuration that was invented 30 years ago but which had fallen out of favour," says Giorgio. "He designed it and we began selling it - and then all the manufacturers started to come up with similar products, including the rotatable horns."

The other speaker he cites as a landmark would be the Tripla. "That's because Guido has been able to fit seven speakers inside a small cabinet. He likes to conserve as much volume as possible so he can achieve the solution without having to sacrifice the quality and the technical specifications.

"Tripla is still being made and in fact we are about to make some improvements." For although in 2005 line array technology would probably cover most bases, some people still prefer Tripla and Noselli believes that, with an upgrade, he can get 3dB more out of it.

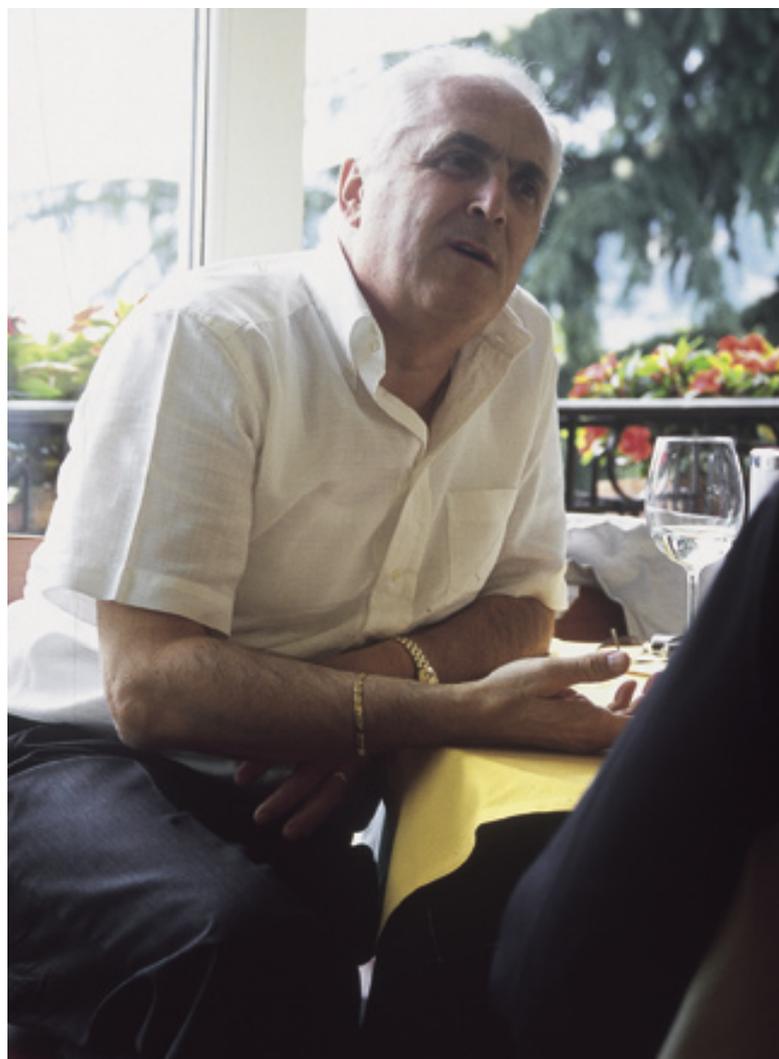
In maintaining that "almost all inventions were made between 30 and 40 years ago", Giorgio

Biffi remains full of praise for Christian Heil, godfather of the line array principle. "He achieved the result on the mid-high, and while the listener remains within the inner field the sound intensity only drops by 3dB per doubling of the distance. He got to the solution first."

Other than their system, the L-Acoustics VDoc and Adamson line arrays are the only other two that Outline respect. However, he notes that the most downloaded system on the www.linearray.com website has been the Butterfly. "We know because of the number of inquiries we get and yet while everyone appears to have heard of Butterfly many don't realise it is made by Outline."

What it has done is raise the curiosity of locally-based PA companies servicing international artistes on the Italian legs of their tour - and this surely amounts to the most effective form of marketing.

Some of the PA companies who have the inventories to support major international tours include



Agorà, Nuovo Service and Limelite, the latter recently handling Live8 in Rome (using 20 Butterfly hi-packs as side fills).

Meanwhile, over at London's Savoy Theatre, the sound system for The Rat Pack Live From Las Vegas. centres on Outline's Butterfly array with 20 CDH483 high packs (ten per hang) being flown left and right of the stage, while two Outline Victor live sub basses are also used. Stage monitoring features 14 mixes handled by Outline's Micra II self-powered and HARD 212 SP low profile stage wedges, while side fill duties are via the award-winning Outline Kangaroo Active system.

Yet Giorgio Biffi admits that while this is highly encouraging he is aware that language remains a barrier. As a result, Outline has yet to occupy its rightful position in the global pro audio hierarchy. "If we were located in the US or UK we would perform better, but the Italian market in sound reinforcement has been driven by companies like Montarbo, Cabotron, LEM who, while

successful, have never addressed the high quality end of the installation or touring market, but MI only. In the US or UK people are proud to use local products but in Italy you won't have this pride unless you are wearing Versace or driving a Ferrari. We have to fight much harder coming from Italy and seem to prefer the 'everything comes from abroad' approach."

In fact even when the Italian trade association APIAS set up in the 1980's proudly bearing its 'Made in Italy' slogan, it was designed largely for the lighting companies who dominated the international map back then.

'Outline' was the name coined by Guido Noselli during the far-off hi-fi days - without, according to Giorgio, fully understanding what the word meant. But it's worth delving deeper into those formative years.

Back in 1970 Guido was a hi-fi retailer - in the days when general electrical shops would sell everything, including white goods - and Giorgio was a rep for a top-drawer US hi-fi brand. ❁



Above: Outline played a major role at the Live 8 events held in Rome and London. Outline's 'Kangaroo' system was used in the back stage artist and VIP area at the London concert, whilst at the second site, in Circus Maximus, Rome, 20 Outline 'Butterfly' hi-packs and 'Victor Live' sub bass systems for side-fill duties were used. 24 'H.A.R.D 212 SP' provided coverage as artist monitors

Below (left): the Outline Spectra, two way, three speaker system, is cited by Giorgio as one of the most influential products to have emerged from the company's history and remains a popular product to this day

Below (centre & far right): the Outline Butterfly hi-pack combines with the low-pack to create the highly successful line array system



“Once he got the idea of developing products for music Guido produced a switching box like a matrix, enabling him to wire ten ten radio/cassette players to 20 integrated amplifiers, which in turn could be linked to 20 loudspeakers,” Giorgio remembers. Then someone from Toshiba saw it and wanted to purchase 500 units, so he started a company with the guy to manufacture that product.

“It was only supposed to go to 500 units and stop - but instead this became the birth of Outline.”

Outline started manufacturing pieces for hi-fi, which slowly started to migrate to the new world of 'discos'. When the Japanese started opening up the European hi-fi market Outline switched to the semi-pro market and by 1980-81 had come out with a series of power amplifiers, mixing consoles and EQ's.

In 1981 they became the sole distributor for American giants, Klipsch. “That really opened up the market for us, and there are still many clubs from that era using the same products. The big selling 503 mixer was followed by the Pro 405 mixer in what proved to be Outline's record year ... 1994.

“It was designed as a result of seeing the Technics SL1200 in front in the console and realising how difficult it was for the DJ with one hand on the mixer and the other on the turntable, so Guido made a compact mixing console with the same depth and height as the decks.”

Launched at that year's SIB Show in Rimini this club mixer, with its narrow high lines, number of channels and functions, became a source of inspiration for a number

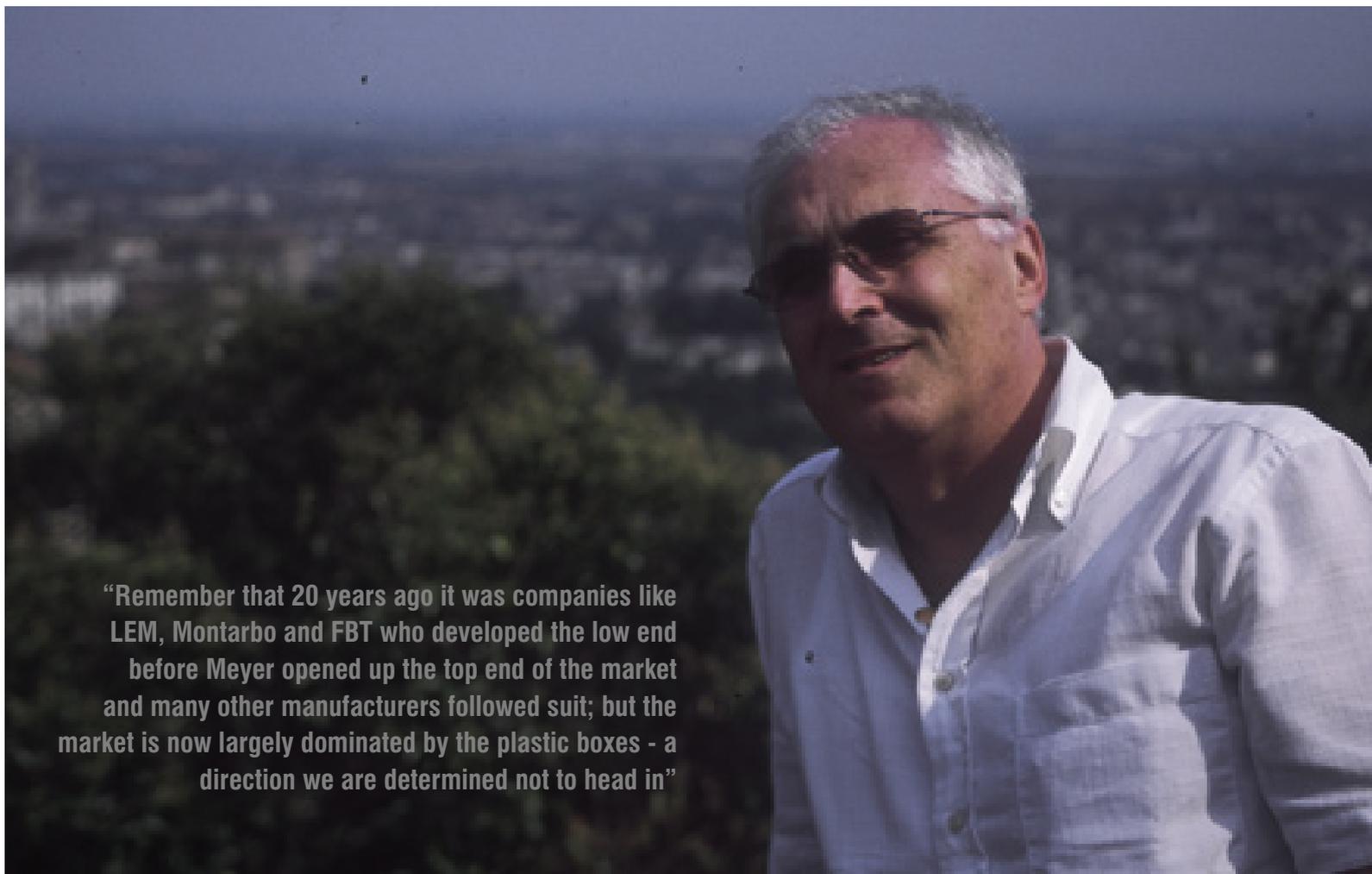
of similar products worldwide. “In 1994 we sold thousands of these consoles both at home and abroad - in fact it is a year we cannot forget.”

But the market soon became fiercely competitive. And although Outline's profile had been created in the club market they felt the live market offered them the potential to develop more interesting and innovative products. And so nearly ten years ago they started to refocus, launching their campaign on the rental companies with The Tripla, which emphasised its reliability and affordability.

Along the way Outline have been happy to form OEM partnerships with other Italian manufacturers. For instance, their drivers are all sourced from B&C, some of their amplifiers from Florence-based Powersoft. “We manufacture our own unique metal diaphragm for the compression drivers,” Giorgio explains. “These are manufactured by us and fitted into the magnetic complex of B&C in order to produce our own sound. Guido developed his own technology on the diaphragm and we have patents on that.” Working with Powersoft since 1997 they had the courage to jump into lightweight Pulse Width Modulation (PWM) technology at a sensitive time.

From a sales perspective they realise the importance of being able to sell a matched package that is correctly optimised. Their DSP, formerly manufactured by BSS, is now being developed by another British manufacturer Linear Research.

Another avenue of development in the new millennium has been the high-quality end of the self-powered loudspeaker market. 🎧



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Above: Giorgio Biffi overlooks his hometown of Bergamo
Below left: the Outline company headquarters in Brescia
and on the shop floor in the Outline factory

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Outline’s contribution to the SP genre has been considerable. Giorgio Biffi explains, “We have three HARD wedge monitors, all top-end and there are other products, such as the ultra-compact Micra, and the Kanguro with two separate sections.”

In fact Kanguro, which won a PLASA Best Product award in 2001, is the first active (self-powered) loudspeaker system made up of separate units, a Satellite and a Subwoofer, contained one inside the other to reduce the space occupied during transport. It was used recently during the Live8 concert in London.

And so Giorgio Biffi will bring

Outline’s growing caravan of products to London this Autumn, having developed markets in Asia and South Asia, Russia and Eastern Europe (largely as a result of a marketing co-operative with Coemar’s Bruno Dedoro, back in the 1990’s).

COM.P.A.S.S., he says will be just one of seven products that would collectively make the Outline stands one of the feature presentations at Earls Court this year.

He runs through this in depth - in perfect English as the mist disappears over the hills, the sun breaks through, the dark red wine continues to flow and we polish off the remains of the selezione di formaggi.

At school, he says, he wanted only two things - to learn the piano and learn English. And while he is fully prepared to talk the talk, Giorgio Biffi is happy to let his company make the sweet music. 🎹