

Burmester Factory Tour

Burmester, founded in 1977, is one of the most reputable high-end audio manufacturers in Germany. Led by owner Dieter Burmester, his team of engineers, and passion for perfection combined with love of music and engineering expertise, Burmester makes some of the best audio products in the world. Over the years, Burmester products have received multitudes of awards from around the world, celebrating the products excellence in design, sound quality and reliability. Today, Burmester has already extended its reach from the home audio into the luxury car audio market.



Premier auto brands such as Bugatti, Porsche, and Mercedes-Benz have already collaborated with Burmester on its auto audio system.

Invited by Burmester North America distributor Robb Niemann, my wife and I took a much anticipated trip to Berlin after the 2013 Munich high end show to visit the Burmester factory. The Burmester factory is around 30,000 square feet in size; considered big scale for a high-end audio company. When we arrived at the factory, we were greeted by the founder Dieter Burmester, Robert Hagemann (General Manager), and our representative today - Fabien.

Unfortunately, Dieter had to excuse himself from the tour, as he had to attend the World premiere of 2014 Mercedes-Benz's new S-Class presentation at Hamburg, Germany. He will be representing Burmester to introduce their brand new in-car stereo system designed specially for the S-Class.

I was deeply honored that Dieter actually took time outside of his busy schedule to just meet with us briefly. During our short meeting, we were able to sense Dieter's passion and dedication to his work, and how his character passed on to the brand he created.

Burmester – The Burmester museum



↑(The Legendary 777 pre-amplifier)



Upon entering the Burmester museum, we marveled at the array of equipment spanning twenty to thirty years of production. Back in the day, one could have only seen this extraordinary craftsmanship in the pages of a magazine - unless you were fortunate enough to have owned a piece of this state of the art equipment. Yet Burmester's products withstand the test of time. You simply cannot sense the age of these carefully crafted designs. You could easily examine any of these 30 year old units and find elements of modern design, whether its quality of parts or the chrome plating, to be in mint condition. Also, all units in the museum can be powered on and still provide excellent sound quality.

In the museum, the crown jewel of Burmester, the legendary 777 pre-amplifier is the center case of the tour. This was the very first product that Dieter created and it was the one that orchestrated Burmester's rise to fame. It was named 777 according to its launch date of July, 1977. Since then, Burmester have followed the tradition of naming their equipment in correspondence to its official release date.

Enthusiasts of Burmester products can easily name some classic products, such as the 808, 909, 911, 948, 956, 001, etc. Corresponding its model number with its release date, it means these models came out in the 80s, 90s and 2000s. In an industry that relies on constant improvements in technology, it's remarkable that these models are still current production models.

In fact, this is one of the classic trademarks of Burmester products. Like other luxury goods, such as Rolex or Patek Philippe watches, Chanel or Hermes leather goods, Burmester products share similar characteristics as these luxury goods are uniquely different from other products in the industry. Burmester positions all its products as audio jewelry. Unlike other home stereo products, Burmester does not fall

into the vicious cycle of yearly or bi-yearly product releases. Burmester focuses on bringing products to the market with the best craftsmanship, quality and design, to last a lifetime rather than focusing on pushing out new products every year to entice user to upgrade. This also results in exceptionally high retaining values of their products, similar to other luxury goods.



↑ (Chrome and gold plating finish on the remote)



↑(The 808 preamp is one of the most beautiful preamplifier in the world, in my opinion)



↑ (Numerous awards on the wall in the museum)



↑(909 mk1 amplifiers in black and chrome finish.)

Burmester – Hand made in Germany

To understand how each Burmester product is constructed, we first need to know the careful selection of every single part for their machines. Each and every part is carefully examined, tested, measured and paired to ensure maximum reliability, even for something as small as a resistor. Resistors that Burmester eventually select to put into their machines have a 3% yield rate. The low yield rate is not a testament to the quality of parts Burmester purchases, but the extreme high standards that Burmester enforce to ensure only the best of the best parts available make it out of their selection process. The parts that are put into every unit ensure the highest level of stability and lowest margin of variance to create everlasting machines.

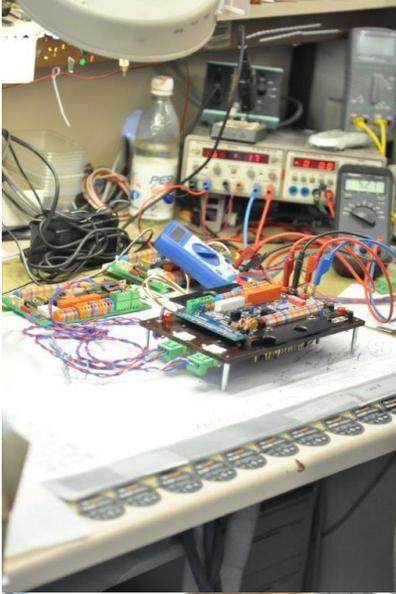
Fabien further explained to us that when Dieter first graduated, he worked for a high tech medical company where the final product in that industry is known for zero tolerance for error and flawless functionality. Thus, this kind of attention to precision and zero tolerance for error stuck with Dieter when he started designing Burmester. That is also why Burmester machines are known for its durability and precision, even after 36 years of use.

Implementing these extreme high standards to select the absolute best parts is not rocket science. Having said that, very little hi-fi manufacturers will ever adapt this practice, simply because of high cost. Parts that cost other manufacturers cents will cost Burmester a hundred times, or a thousand times more. The only other company I can think of that goes into such extreme lengths would be FM Acoustics from Switzerland.

There are about 50 employees at the Burmester Factory. The work environment is well organized and clean, with ample lighting and music playing in the background as the



↑(PCB going into the soldering station)

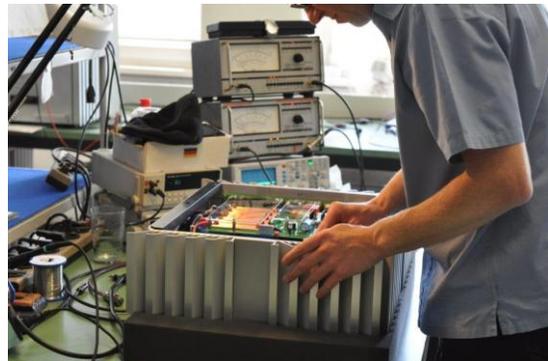
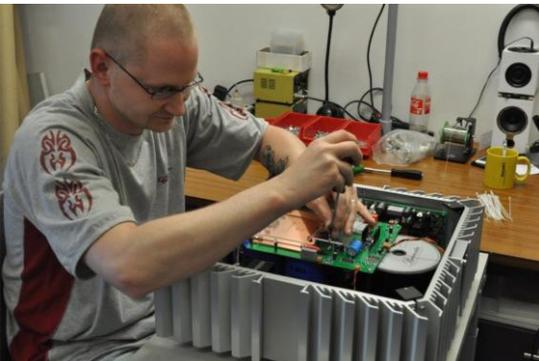


engineers work. Using Burmester's own music system of course. Most female engineers are responsible of the assembly of printed circuit boards. Burmester's reasoning behind this is simply because female crafters are more meticulous when it comes to assembling delicate parts. Every single resistor and capacitor is personally installed onto the PCB by the trained female engineers as nothing is outsourced out of country for cheaper labor. Burmester prides themselves in saying all their products are 100% German handmade.



After all the parts are installed and layout is completed, the soldering process is relegated to a computer automated soldering machine. When it comes to Soldering, the most important thing is consistency and accuracy, and while Burmester engineers are considered the top of their field, it is impossible to reduce human error to zero no matter how experience or talented you are. The automated soldering station constantly monitors the temperature of the solder to its optimal condition, and as the transport belt transfers the PCB into the soldering station, the automated process will accurately complete all solder points. The engineers would remove the completed PCBs and examine all the solder points.

Every completed PCB will then has to go through a series of testing, and only after it passes every extensive test it is then assembled into the machines by hand. Every process from production to assembly is all done in the Burmester facility. The engineers told us that its takes about 3 weeks on average for the completion of a single Burmester unit. To be certified by Burmester, each machine has to go through a daunting multi-stage testing process.

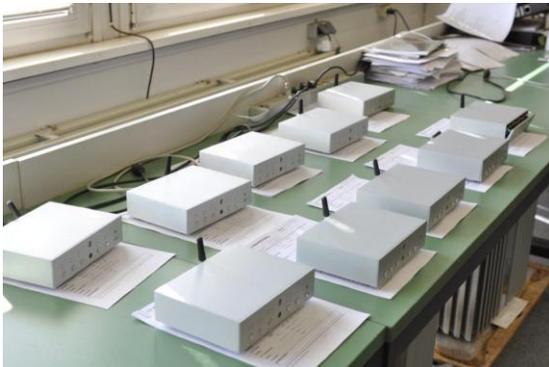


Burmester – Testing Bombardment



Every single Burmester machines is carefully selected and built to withstand any rigorous task thrown in their way. Comprehensive stress tests are conducted on every Burmester machine, a stamp of approval is never given just because the machine can power on normally. Extreme or even impossible scenarios are thrown at these machines to see how it can withstand these kinds of conditions. For example, in terms of power amplification, under normal condition it is consider excellent if the machine can maintain linearity under 2 ohms speaker loads. But that's not enough to pass Burmester's stress test, where they will stress test the equipment in under 1 ohm or 0.5 ohm loads. Even then, it is expected for the power amplifier to remain linearity after hours of constant load. Only then Burmester will certify its power amplifiers as worthy of its name. You may ask how Burmester can achieve this kind of performance. The answer lies in the ultra high specs of parts they use. Burmester always knew that only when you carefully match high quality parts that are perfectly compatible that would allow you to achieve that maximum efficiency. This is why the Burmester 911 power amplifier has had one of the highest damping factors of all amplifiers manufactured worldwide for the past 20 years.

Some may question whether or not if this kind of rigorous testing is necessary, and the simple answer might be no. There might never have been a scenario during normal use that will ever allow the machine to reach such extreme conditions. Like driving a supercar, even though you may never reach the maximum speed of 350km/h, it is reassuring to know that it is perfectly capable of achieving such a level if it is ever necessary. It is a sense of confidence in its capabilities and ambition in testing new limits. It represents the spirit of every audiophile – uncompromising design, and the pursuit of the highest fidelity of sound.



↑ (Even though the 113 is an entry level DAC, it will still go through the same rigorous level of testing at the Burmester manufacturing facility)



↑ (All the CD players and preamp on the shelf are going through the Burmester test)



↑(All ten 909 on the testing process)



↑(every unit comes with testing document)



↑(099 being put through the computer testing process)



↑(A shelf of amplifiers being tested)



↑(All amplifiers after the test, ready to be packed)



↑(All preamplifier / phono / CD players after the test, ready to be packed)

Burmester – Database Archive



It may seem irrelevant to talk about Burmester's database because of the fact it is hard to imagine the significance it plays in the success of their products. This is not a fact to be ignored as this is integral to a very important aspect for the successes of the Burmester product line and its unrivalled customer service. As I've mentioned earlier, it is very normal for Burmester machines to be used for 20 to 30 years. Other than the product itself having the ability to run continuously through extreme rigorous tests, unprecedented in the industry, customer service also plays a major role in the continuing success of Burmester high end audio products. Burmester keeps not only a database of every single product they have released; they also have kept a large inventory of replacement parts for every Burmester product. Combined with a complete database consisting of design schematics, circuit diagrams, it allows Burmester engineers to easily repair machines from decades ago and restore them to its initial factory release state.





The most important database which is not as easily accessible is the archive room. During the creation of each Burmester unit, every part is carefully picked out and paired for optimum performance. Specific records of all that data for every single unit produced is kept in the archive room. We were able to sneak a peek into the Archive room. The room contains the individual testing data for every single Burmester unit ever produced since 1977. The data is organized by serial number, and only the binders in this room contain the individual internal setting and data for your specific Burmester product.



With this preserved database, engineers will be able to tune and adjust your machine to Burmester standards and make them sound as if they just came out of the factory. Without this data, service technicians would never be able to repair product to its original specification when first manufactured.



Given the convenience of digital databases, one may wonder why Burmester continues to keep a hardcopy of all reference data which takes up space and more effort to maintain. Fabien explained that while all the data in the archive have been transferred digitally into computer databases, Dieter still prefers maintaining a hardcopy of all the records. It provides a very stable and safe backup in case anything was to happen to the digital database. Burmester would not want to risk their reputation of unparalleled customer service and their brand's guarantee of lifetime support to its customers in case of a computer malfunction. This kind of dedication to tradition is rarely seen today, especially for a hi-fi equipment maker.

↑(The Archive room is strictly forbidden from visitors; hence I can only take pictures outside the door.)

Burmester – The demo room



There were two small regrets that I had during the Burmester factory tour. One was that because Munich's hi-fi audio convention just ended when we visited the company, a lot of equipment that was on display at the convention has not been shipped back yet. Thus, we were unable to listen to them at Burmester's own demo room. However, we were still able to tour around the large listening room at the Burmester factory. The demo room is a large open space without many decorations or design to the space, but has the presence that the Burmester system brings, a sense of elegance and class to the space.



When talking about the beauty of Burmester products, the first thing that comes to mind is Burmester's famous special metal chrome plating techniques. When it comes to hi-end audio equipment design, nothing is more luxurious and attractive than the eye popping chrome finish that you will see on all Burmester products. I have yet to see any other company that can compare to the chrome plating techniques that Burmester implements into their manufacturing. The flawless chrome mirror finish that is applied to front panel with the Burmester Logo curved in just brings a sense of finish that hasn't been replicated by anyone else. This perfect chrome plating is also long lasting, undeterred by time or humidity. I have personally witnessed a 20 year old Burmester preamp with the same



flawless chrome front panel as it just came out of the box. This exceptional technique was introduced by an established metalsmith who has given Burmester many years of service and expertise to the polished finished product that sets Burmester high-end audio equipment apart from all other manufacturers. The 2nd regret I have is that this individual is retiring and was not able to meet him during my visit. However, Robb Niemann told us that the old metalsmith has an apprentice that will eventually take over his duties at Burmester. The apprentice has worked under the old metalsmith for twenty years now, and yet still hasn't received the approval of his master to take over his duties. The metalsmith said his apprentice is still five years away. Whether or not he meant it jokingly, it goes to show you the dedication to perfection and quality every employee at Burmester has towards the Burmester products.

Summary



Many audiophiles often say that Burmester is NOT cheap.

I agree because I believe in the notion that you get what you pay for, and that is exactly the case with Burmester. Any Burmester on average takes 3 weeks to assemble and has to go through meticulous quality tests before it is delivered to its owner. Given it is completely made in

Germany, the cost of German labour, combined with the high cost of ultra selective parts, jewelry-like construction, the best service and support in the industry, and not to mention the best sound in the business; it's hard to imagine Burmester products to be priced cheaply. Once you understand Burmester, you may also say that Burmester is NOT cheap, but it is worth every penny.

It is Burmester's philosophy to create products that are "Art for the Ear". They are aiming for audio perfection, and treat their products as everlasting artworks. During my Burmester factory tour, I experienced firsthand what it is like when a company is built with one idea in mind, and it's the pursuit of audio perfection, and the uncompromising steps it took to create something that is truly extraordinary. Given Burmester's popularity, and the two to four months waitlist it has for its products, I may say that Dieter Burmester was right in believing that there are many other audio enthusiast / perfectionist out there who share and appreciate his vision of "Art for the Ear".

Edward Ku