

Bose, sound pioneer and solid teacher, falls silent

Washington: It all began because he wanted music in the background when he was writing his doctoral thesis. The way Amar Gopal Bose recounted the story, he went out and bought the best garden-variety speakers, but the sound and timbre it produced just didn't cut it. He was also a young violinist by then, and to his keen ears, the sublime Stradivarius was a tinny and incomplete experience coming through uni-directional speakers. And so, he told this correspondent in a 1999 interview, began his quest into physical acoustics and psychoacoustics.

By the time he fell silent this week at 83 some half century later, Bose had established a rich and expansive reputation as a pioneer in acoustics, his privately held Bose Inc., with its eponymous speakers and audio accessories, racking up more \$ 2 billion in sales. From the Sistine Chapel to many stadiums across the world, Bose systems became synonymous with pristine acoustic quality, riding on his early promise to produce "Better Sound Through Research," the company's slogan.

Bose never flaunted his Indian origin (he was arguably the first billionaire of Indian-origin in the U.S), and in fact for many years till around 1990, few people knew the storied speaker company was actually founded by someone of Indian origin (his mother was American). But Bose didn't hesitate to speak about his Indian roots when asked, and in fact, took pride in it in later years, although he was born in Philadelphia in 1929. His father, Noni Gopal Bose, was a freedom fighter who had fled Kolkota in the 1920s to escape British persecution, and ended by in Pennsylvania, after arriving in Ellis Island with five dollars in his pocket. After he married an American schoolteacher, the Boses lived in suburban Philly in the 1930s, where, as the sound pioneer recalled in a Discover interview, there was great prejudice against colored and racially mixed people.

"The food we ate (at home) was Indian, and both my mother and father were very deep into the ancient philosophy of India, so it could well have been an Indian household," Bose recalled, segueing it with the challenges outside. "The prejudice was so bad in the United States at that time that a dark person with a white person would not be served in a restaurant. My father, mother, and I would try it occasionally. We would sit there, and the food would never come. My father would ask for the manager. He would pretend to be an African American because the prejudice was against them, not Indians. He would say in a quiet voice: "I notice that we are good enough to earn money to cook the food, good enough to earn money serving the food, good enough to give our lives in the war for our country. Could you explain to me why it is that we are not good enough to pay money and eat the food?"

"When he spoke in a quiet voice like that, everyone in the whole restaurant would fall silent, too, and listen to it. Then he would say to my mother and me, 'It is time for us to go.'"

His school experience at Abington senior was less eventful, although Bose made his first connection with engineering as a Boy Scout when he was 12. One of the other scouts had a radio transmitter, and Bose learned that if he correlated the parts in the transmitter with a diagram, he could learn to read schematic drawings. At 13, he realized that he could pretty much fix anything electronic, and so he started a business repairing radios (it was still largely a pre-TV era) that

grew rapidly because many able-bodied radio repairmen had gone off to war. He was already an entrepreneur in his teens.

He was a shoo-in for MIT, where he went to study electrical engineering in 1947 even as his father remained tuned in to India's freedom struggle. In fact, it was in India in 1956, when Amar Bose was visiting on a Fulbright scholarship, that he really began reading deeply about acoustics, having already had his epiphany about developing an authentic audio system after his poor experience with sound during his grad school years.

The way Bose looked at it (and heard it), most speakers at that time were designed in a way sound simply radiated forward uni-directionally. But sound actually bounces off surfaces, whether it be walls or ceilings, and allowing it to do so by directing it at different angles enhances the acoustic experience. And so arrived, too much wow and flutter, the first-generation Bose 2201 speakers, the first product of his Massachusetts-based Bose Inc., which he founded in 1964 -- featuring 22 full-range drivers installed in a box shaped like an eighth of a sphere.

In time, it would evolve into the best-selling cubic surround sound speakers and a variety of other audio equipment, from noise cancelling headphones to wave radio, making Bose arguably the first billionaire of Indian-origin in the U.S. But it was never about money for him. In later years, after Bose Inc. was on track to become a billion dollar entity, he splurged on areas ranging from cold fusion to new suspension system for automobiles, happy that he did not have to account to shareholders because the company was privately held. Some critics felt he was burning money on unrealistic projects, just as many felt his audio products were over-priced and over-hyped, but Bose was unswerving in his core beliefs of quality, pursuit of excellence, and improving the human experience and condition.

In fact, his passion was really research and teaching, and he often lamented on the decline of research spending in the U.S. His latest project was a stunning new suspension system for cars (which would have been a boon for pot-holed India), about which he spoke to this correspondent in 2007. But it never made it to the market. The scuttlebutt in gearhead circles was he could never bring the cost under control and therefore it never hit the market, although there are plenty of promo videos online.

However, his greatest output, audio and technology products aside, may well be the many brilliant students he produced (including Indian pioneers such as Suhas Patil, who began as Bose's teaching assistant and went on to found the company Cirrus Logic). He is survived by his son Vanu, also his protégé in radio engineering and wireless, and his daughter Maya, both from his first wife Prema, who he subsequently divorced.

Bose remained on the MIT faculty well into his twilight years. In 2011, to no one's surprise, Bose donated most of the stock in his privately held company to MIT, his alma mater that worshipped him as much as he was devoted to it. "Amar Bose was an exceptional human being and an extraordinarily gifted leader," MIT's President Rafael Reif said in a statement on Friday, as news of his death trickled out. "He made quality mentoring and a joyful pursuit of excellence, ideas and possibilities the hallmark of his career in teaching, research and business. I learned from him, and was inspired by him, every single time I met with him."

At Bose corporation itself, which the pioneer headed as CEO for just four years in the 1970s before he became chairman, there was a deep sense of loss among its 9000 employees. "It is impossible to put into words what Dr. Bose meant to each of us, and to Bose," Bob Maresca, president of Bose Corp., said in a statement. "He was more than our chairman. He was our teacher -- always encouraging us, always believing that we could do great things, and that anything was possible."