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Nagaoka Styluses
A Tale of Adamantine Sound

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长冈唱针
钻石之音传奇

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A Tale of Adamantine Sound

钻石之音传奇

Story by Charles T. Whipple
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Red Room is a basement bar in the Aoyama district of Tokyo, a place where music lovers congregate to sip wine and listen to favorites from long-play albums spinning on a 33 RPM turntable, picked up by styli from Nagaoka, the only maker of diamond-tipped record needles in Japan.

The sound level prevents casual conversation, but customers didn't come to talk, they came to listen. To them, analog sound carries more breadth and depth than any CD can reproduce. To them, the sound is both nostalgic and progressive.

The company of Nagaoka is domiciled in the city of Higashine, Yamagata Prefecture. Such beautiful countryside is not the sort of place you'd expect a world-leading company to be found or to thrive. Still, the company's history tells the tale of sound in modern times.

"CDs were first marketed in Japan in 1982," explained Company President Kae Nagaoka. "And by 1989, digital had basically overcome the analog sound market. Our company was in the black, but our then-president could read the writing on the wall. He decided to liquidate the company and give all employees liberal severance pay. He then organized a new Nagaoka and rehired many former employees, but record needles, which had been the mainstay of the previous company, accounted for less than ten percent of overall revenue."

In fact, Nagaoka lost money on record needles, but the company still listened to the voices of aficionados. They said those who loved and treasured their vinyl records and record players still wanted and needed high-quality diamond-tipped needles.

In Tune with the Inaudible

The new Nagaoka concentrated on producing important parts for other manufacturers, including items that needed the micro-accuracy of Nagaoka processing. And with the profits garnered from those parts, the company kept its record stylus production going.



In the Groove

A listening room with high-end turntable, amplifier, and free-standing speakers recalls for many listeners the breadth and depth of analog records. However, such fidelity to recorded sound would be severely limited were it not for Nagaoka needles in the groove.

业界王者

顶级转盘、功放和自立式音箱构成的听音室让听众回忆起模拟唱片的气息与深度。而录音的高保真如果缺少了业界王者长冈唱针也就无从发挥。

红房子 (Red Room) 是位于东京青山区的一家地下酒吧，乐迷们在这里汇聚一堂，边品红酒边听着黑胶唱片里传来的他们喜爱的音乐。唱盘的转速为 33RPM，其唱针由长冈株式会社生产。长冈是日本唯一一家生产钻石唱针的厂家。音乐声盖过了谈话声，但人们来这里并不是为了聊天，而是为听音乐。对于他们来说，黑胶唱片的模拟声音比 CD 的声音更有深度和广度。在他们听来，这种声音既怀旧又先进。

长冈株式会社坐落在山形县东根市。你可能想象不出这样美丽的乡村里竟然会有一家世界领先的公司在市场打拼。而且，这家公司的历史就是现代声音的发展史。

"CD 于 1982 年进入日本市场。"长冈春江社长介绍说，"到 1989 年的时候，数字声音已经基本超越模拟声音市场，虽然我们公司仍处于盈利状态，但当时的社长已经看出前景不妙。所以他决定将公司进行清算，将所有员工发放一笔丰厚的遣散费。随后他又组建了一家新的长冈公司，并重新雇佣了很多老员工。但是作为旧公司产品拳头的唱针在新公司总营业额中所占比重不到 10%。"

实际上，长冈公司的唱针业务是亏损的，但是公司仍然会聆听发烧友的心声，知道那些珍爱自己的黑胶唱片和唱片机的人们仍然需要高质量的钻石唱针。



"We understand why people love their analog sound systems," said President Nagaoka. "Please go to our listening room to experience it for yourself."

Production Dept. GM Takahiro Goto led the way. "You will want to sit as close to the center of the room as possible," he said as he readied the turntable. The record he picked was a Carpenters album, and soon the sound of "Yesterday Once More" filled the room.

"Did you notice how deep and broad the sound was?" Goto asked after Karen Carpenter had finished her song. "They say that the mastering of vinyl records of yesteryear picked up not only the audible sounds but also the inaudible ones. Still, the vibrations lower and higher than what we can hear still affect us. That's what gives the extra depth and breadth of sound we seem to hear from analog records."

Goto put away The Carpenters album. "Come," he said. "Let's go see how diamond-tipped record needles are made."

He led the way to the production floor.

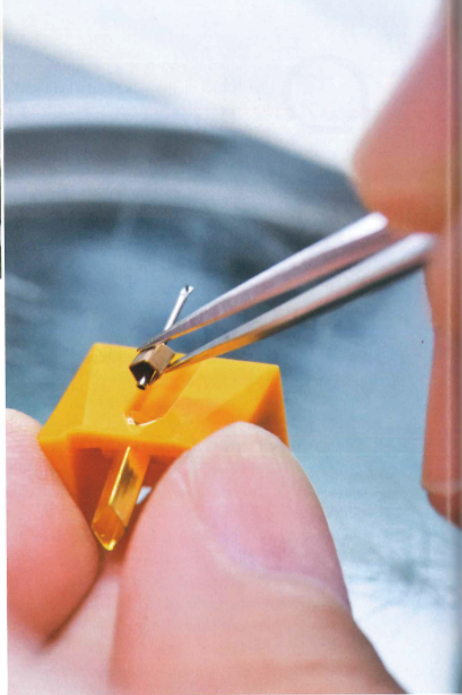
Through the automatically opening door, tense-faced women attended to a line of machines.

"Women are best at detailed work that requires pinpoint accuracy," Goto said. Indeed, Nagaoka workers obviously knew exactly what they are doing, and every day they did those jobs that resulted in 6,500 diamond-tipped needles produced every hour.

Next-Gen Tech

The machines used to make Nagaoka styluses are nearly the same today as they were back in the 1980s, when vinyl records were at their peak. The needles produced and their production process are nearly the same. A team of engineers keeps the machinery in tune and ready to go. Meticulously kept up, the production lines depend finally on the human eye via microscopes where quality control is concerned.

In fact, the Nagaoka people who do this control of the production process sit at microscopes, working



Vital Diamonds

Women at Nagaoka's Yamagata factory assure superb-quality diamond needles. Professionals insert stylus arm into the cartridge, but the component must undergo listening tests by sharp-eared pros and more. President Kae Nagaoka holds stylus cartridge like the jewel it is.

with quick, accurate, gloved fingers to move the diamond-tipped needle on through the process as eyes peer into microscopes to see even the tiniest possible flaw.

Nagaoka is the only producer of needles for phonographs and phonographic equipment in Japan. Its products are known around the world by everyone in the music industry. Its quality is taken for granted by industry professionals who know that the men and women on the line will not let a sub-par product get through the process and into a phonograph cartridge.

A trip through the Nagaoka factory in Higashine, Yamagata, shows even to the untrained eye that quality comes first, always. And the company's penchant for quality includes the production processes as well as the final styli.

无声胜有声

新的长冈公司主要为其它厂家生产重要零件，比如那些需要细微精度加工的零件。依靠生产这些零件赚得的收益，公司一直维持着唱针生产。

长冈社长说道：“我们能够理解人们为什么如此钟爱模拟声音系统。请到我们的听音室亲身体验一下吧。”

董事兼制造部长后藤孝宏为我们带路。“你们得尽量坐到房间的中央。”他边说边调试好唱盘。他挑了一张卡朋特的唱片，很快，“昨日重现”的歌声便充满了房间的各个角落。

“你们能感觉到这种声音是多么的深厚和宽广吗？”在卡伦·卡朋特一曲终了后，后藤问我们道，“他们说往昔的黑胶唱片不仅能记录可听音，还能记录不可听音。由于高于或低于人耳能听到的频率的振动依然会对我们产生影响，所以我们能从模拟唱片里听到更为深厚和宽广的声音。”

后藤将卡朋特的唱片收好后说：“走吧，我们去看看钻石唱针是如何制造出来的。”

他带我们来到了生产车间。

穿过自动门，女工们正神情紧张地操作着一排机器。

后藤说：“女性最擅长高精度的细致工作。”确实，长冈的工人们显然十分清楚自己正在进行什么的工作。他们每天从事着这些工作，每小时能够生产出 6500 只钻石唱针。

新一代技术

现今用来生产长冈唱针的这些机器和 20 世纪 80 年代相比几乎没有变化，那时黑胶唱片正处于巅峰期。而且生产出的唱针产品及生产过程几乎也和以前一样。有一组工程师负责设备维护，确保机器可以随时开工。除了精心的维护，生产线最终还得依靠人眼透过显微镜进行质量把控。

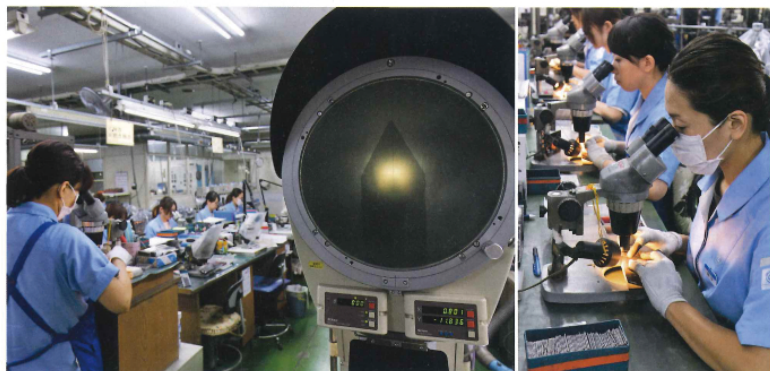
实际上，控制生产过程的长冈工人坐在显微镜旁，全程用带着手套的手指飞快而精准地转动着钻石唱针。他们的眼睛一直透过显微镜在观察，以确保产品毫无瑕疵。

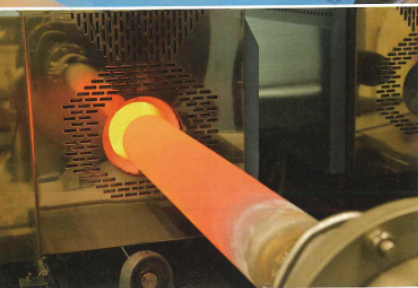
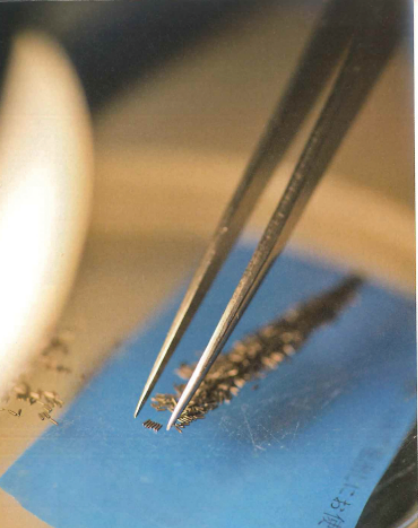
长冈是日本唯一一家为留声机和留声机设备生产唱针的厂



钻石点睛

长冈山形工厂的女工保证钻石唱针的顶级品质。专业人士将唱针臂插入唱头，且部件需要经过听觉敏锐的专业人士的聆听测试。长冈江社长手持唱头就像捧着一件珠宝。





phonograph needles climbed. And, where needles had been less than 10 percent of the reorganized Nagaoka's annual revenues, that share also began to climb. Things began to look up.

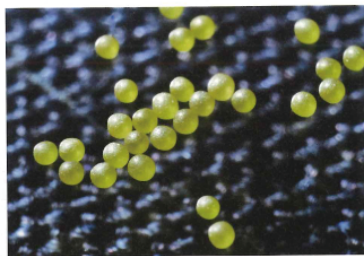
Currently many music companies are publishing old favorites, like those from The Beatles or Jimi Hendrix, and modern artists record on vinyl as well. For example, Ed Sheeran's *Divide* LP sold 62,000 units in 2017, according to nielsen.com's year-end music report.

"We can meet the demand for vinyl record player styli," said President Nagaoka, "but we are now putting a great deal of effort into new product development, and promotion of our own brands—Nagaoka, Jeweltone, Vinon, and Movio."

She picked up a black box with the name NAGAOKA gold-stamped on the top. She opened the box and extracted a pair of earbuds.

"These are ruby earbuds," she said. The jewels give extremely high fidelity, regardless of the music source. The earbuds may be a bit expensive, but when you listen to them reproducing sounds from an Elton John record, for example, you can be sure that the price is more than right, if not righteous.

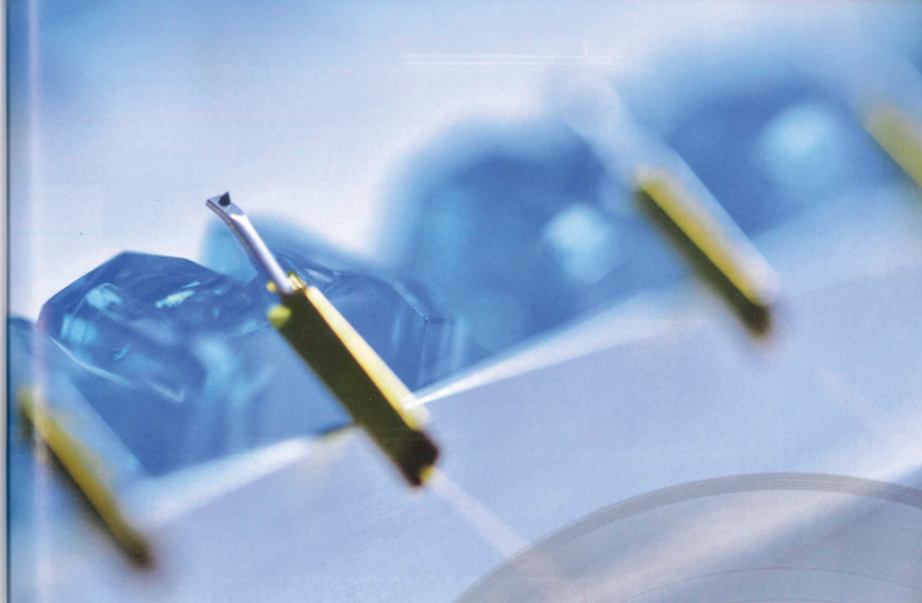
Watch out for Nagaoka. Not only does it make the best record needles in the world, but its stable of products keeps growing, and they, too, are among the very best. ■



Vinyl Revival

CDs were introduced to the music market in the early 1980s and by about 1988 were outselling vinyl records, and over the next few years, sales of vinyl records went into steep decline. Of course, demand for phonographs and replacement needles for them plunged at the same time. Still, a few diehard aficionados kept their records and their stereos, their phonographs, and their high-fidelity speakers. These consumers kept asking for replacement needles, or replacement cartridges that had Nagaoka needles in them.

Then, for some reason not entirely understood, vinyl records began to make a comeback soon after the turn of the 21st century. Sales rose. By 2014, Amazon became the largest retailer of vinyl records, and demand for



家。长冈的产品在全球音乐界人尽皆知。音乐界专业人士理所当然地认可长冈的产品质量，因为他们知道长冈的一线工人们不会让任何一个低于标准的产品通过检验，安装到留声机的唱头上。

到山形县东根市的长冈生产车间参观后，即使是非专业人士也能看出在这里永远是质量第一。长冈对质量的追求体现在生产过程及最终的唱针产品中。

唱片市场复苏

CD于20世纪80年代早期进入音乐市场，到1988年的时候，其销售量已经超过黑胶唱片。在接下来的几年里，黑胶唱片的销售量急剧下滑。与此同时，对留声机及替换唱针的需求也随之大幅降低。但是，一些黑胶忠粉们仍然保留着他们的唱片、立体声、留声机和高保真扬声器。这些消费者们对替换唱针或是装有长冈唱针的替换唱头仍有需求。

接下来，由于一些不甚清晰的原因，在迈入21世纪之际，黑胶唱片又开始回归市场，销售量增多。到2014年的时候，亚马逊已成为黑胶唱片的最大零售商，对留声机唱针的需求也一路增长。曾经在长冈的年收入中占比不足10%的唱针业务，其份额也开始攀升。情况开始好转。

眼下，许多唱片公司正重新出版以前的热门歌曲，如披头士乐队、吉米·亨德里克斯的唱片，以及现代音乐家的黑胶唱片。根据nielsen.com网站的年终音乐报告，艾德·希兰的黑胶唱片专辑“Divide”在2017年的销售量为62,000张。

Molecular Level

Precision work, along with visual examination and performance trials, helps ensure world-class diamond-stylus cartridges. Furnace glowingly bonds diamond tips to steel shanks. A wide array of Nagaoka diamond stylus cartridges. A stylus arm clearly shows the diamond stylus at the tip.

分子层面

精密的工程、视觉检验与性能测试是生产世界级钻石唱针唱头的保证。使用高温熔炉将钻石粒粘上钢针。品种丰富的长冈钻石唱针唱头。唱针臂上的钻石唱针尖清晰可见。

长冈社长说：“我们可以满足黑胶唱片机的唱针需求，但是我们也正在投入巨大的精力来开发新的产品和促销 Nagaoka（长冈）、Jeweltone（珠宝音）、Vinson（美音）和 Movio 等新产品。”

她拿起一个黑色盒子，盒面印有 NAGAOKA 的金色字样。她打开盒子，从里面抽出一幅耳塞。

“这些是红宝石耳塞。”她介绍道，“无论音源如何，宝石都能确保高保真的音质。”这副耳塞可能有点贵，但是当你听到耳塞里传来的埃尔顿·约翰的高保真声音的时候，你一定会觉得物超所值。

请关注长冈。不仅因为这里生产全世界最好的唱针，还因为它一直在丰富产品种类，而且质量上乘。