

Is Cheap Cheerful?

Microphones and the "art" of distinction

By Patrick Morvlyth

There is a problem within the British milk industry. Fifty years ago, most milk was sold at the doorstep, and though in big cities it might be the province of the large conglomerate dairies, in the majority of towns and villages, smaller enterprises held sway. Many of these were run by groups of farmers who owned the entire production and delivery chain from grass field to milk van.

Much of this milk was of exceptional quality. Shelf life was not a great priority, given daily deliveries, so heavy pasteurisation was unnecessary and indeed some milk was pure enough for no treatment to be required at all. This allowed far more

of the subtle flavor to be appreciated.

Today milk is sold almost entirely through supermarkets. The change of work and shopping patterns provided the impetus, and the effect on specialist suppliers has been dramatic and fast. Against the rock-bottom commodity pricing of the supermarkets, the added-value cost of a delivered pint looks expensive. Prices get driven down.

Moreover, the supermarket version is always a "lite" item, never a top-quality one – good enough to pass muster but never outstanding. It has been downgraded to an article of trade, no longer a food and certainly not a luxury.

To add insult to injury, having grabbed the market, the trans-national companies now trade on the remnant perception of British milk as high quality merchandise, yet source much of it from cheap foreign producers who work to much lower standards, and then try to force the British price even lower "to compete."

Permanent pasture of the right quality takes many years to establish, there is no such thing as a fast-start cow, and a lifetime's fund of technical know-how takes, well, most of a lifetime to build up. Once these businesses are lost the chances of tasting top quality milk again are very, very low.

FREELY BORROWED

What is happening within the microphone industry is not all that different. Microphones have been around for nearly a century and a half, and the major developments have taken place within a handful of companies, mostly (though not exclusively) in Germany, Austria and the U.S.

Many of these key changes were protected at some point by patent, but they've been around so long that they're now freely borrowed – and often further developed – by newer companies. Sometimes a company's less publicly exposed expertise is also "borrowed" by disaffected employees who move on and make use of it, with dubious legality, in new businesses.

No industry remains static and these types of change are normal – they rarely cause serious disturbance to the fundamental structure.

However, this gentle evolution has altered radically over the last decade with the upsurge in cheap imports,



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(v. to concentrate energy)

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largely from China. Approximately 30 percent of the microphones on offer to the so-called professional market are goods manufactured in China, either under a Chinese name or badged with a Western marque.

Before I go any further I should underline that this is not going to develop into a xenophobic diatribe. The fact that China is involved is merely chance – a particular circumstance of labor costs and commercial development at this juncture. It could just as easily be another Southeast Asian country, the Indian sub-continent, Eastern Europe, the ex-Soviet dis-Union, Mexico or any other location with an adequate level of technical expertise and a labor force that is inexpensive.

At the moment the Chinese contribution is based to a great extent on mimicry. To take a large section of the market quickly, the easiest technique is to copy what is already there and sell it more cheaply. There is a part of Western culture that prickles at this plagiarism, but such feelings are not universal and many of the copies are not only displayed and sold without embarrassment, but even with a degree of pride.

What is not so easily copied is the thought behind the original design. A Neumann or AKG classic microphone does not use a particular structure by chance. Acoustics and the electrical demands of a design, and the materials available at the time it was conceived, are essential elements. When the classic was created, this was how it had to be, though a decade or two later different criteria might apply.

But a copy is inevitably just a parody of what is visible even if, with today's more advanced knowledge, it

does not really make much sense. This uninformed parroting also occurs with newer designs.

The process can go even further by using look-alike trademarks – whether to deceive or to emulate is a very hard question to answer – and on to wholesale copying of literature down to specifications and including frequency response graphs and polar diagrams.

Rather obviously, this is not only a simple breach of copyright but also a completely pointless exercise in that the paperwork cannot actually refer to the microphone that is sold at all. Perhaps it fools a few of the uneducated, but if they remain in that state of ignorance for very long they don't deserve to be included in the "professional" industry.

The next question must be to ask how much it matters. After all, there are many that would argue that a good copy of an old master is still a wonderful picture and has almost all the original qualities except the price tag.

Surely only a fool pays three times what he needs to for the same product?

QUALITY COSTS

Of course, the product isn't the same. It's different for three distinct reasons.

First, two microphones may share the same shape but are less likely to share the same quality of machining or engineering. It's feasible for a good microphone to be assembled by cheap labor, but quality machine tooling, steel, brass and electrical components hold a remarkably consistent price throughout the world.

Consistency is the catchword of the second reason. Both the acoustic and electrical signals handled by microphones are vanishingly tiny. To register them identically on two different

microphones calls both for high precision in manufacture and also an accurate measurement regime that can detect differences and confirm compliance with a specification.

Third, the inexpensive product is unlikely to carry with it a great deal of engineering support, even at the time of sale, let alone 10 years later. The transaction is more along the lines of a supermarket purchase – you're expected to buy on the basis of the advertising brochure and the sympathetic magic of its looks rather than on appraised performance.

The description is likely to be long on the thickness of the gold plating of the diaphragm, the warmth of the "tube" sound and how great it sounds on anything from tambourines to tenors, but short on any meaningful or believable specifications and distinctly foggy on the physics. In other words, the sort of microphone that you heave rather than grieve over at the first sign of trouble.

There is a more important reason why all of this matters, one that is far more serious than the comparison of details of a couple of microphones. As with the milk, so with the mic – we need to consider what the price distortions might eventually do to the

market as a whole.

The cheap microphone can steal an advantage temporarily because it does not have to bear any of the long-term costs of "quality." There is no requirement for a margin to be put aside for fundamental research, or to pay for the retention of highly experienced engineering staff, or to fund a servicing operation.

By contrast the expensive microphone must carry all these extra costs; which, of course, is why it's expensive. If the market is tilted heavily toward cheap products, then it becomes impossible to sustain the overall degree of profitability required to support a range of manufacturers providing the specialist designs.

And without customers prepared to pay the higher prices, microphone companies go bust just as easily as milk producers.

PAY THE PRICE?

This is not an easy conundrum to solve. Few of us love taxes, and, though we know full well that they are what funds whatever society we choose to be part of, it does not stop us from avoiding, evading or at least grumping about paying them. The long-term development prospects of



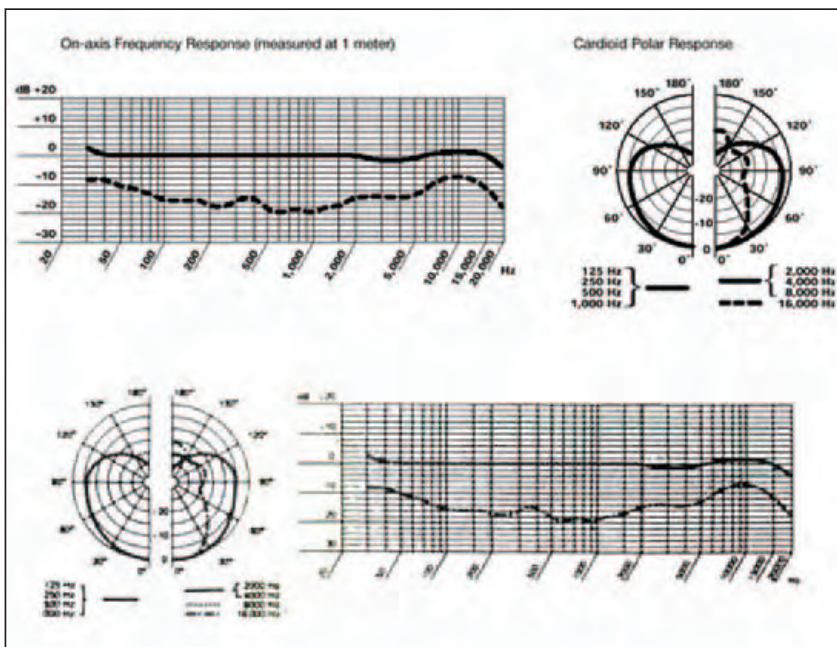
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Two response curves, one for an AKG C 426 B, the other for a Beijing Audio 797 CR998. Can you tell which is which? (For the record, the AKG data is at top.)

microphones are something every one of us would vote in favor of, but far fewer are prepared to pay for.

Yet if we want the brilliant engineering and original scientific thinking that has lined the evolutionary path of microphones to continue, we – and not “somebody else” – will have to pay for it. The situation is not helped by a current, largely U.S.-led attitude that microphones have somehow reached their peak of development and that we should concentrate on the nostalgic recreation of old designs.

In a 2001 article by Rip Rowan on *ProRec.com*, he concludes that little has happened in the way of microphone development in the last 30 years and that there is “probably no vast untapped region for us to seek.”

Really? How about, for example, Neumann, with its work on extremely high dynamic range digital microphones; Audio Technica, with its development of digital delay as a means of producing directionality that is not frequency conscious; Sanken’s multi-capsule array short gun microphones; the improvements in electret design by DPA, AKG and many others that have turned it into a prime technology; Sennheiser’s ultra-low distortion symmetrical capsule; Royer’s electronically buffered ribbons; and the compact microphone design epitomized by the Schoeps CCM range.

Shall I go on? Suffice to say that this is an incomplete selection of radical developments in microphones that give the lie to Rowan’s view. Only the short-sighted would expect microphones not to change considerably over the next 30 years – if R&D is not artificially curtailed by being deprived of funds.

Although the prediction for the next few years is that the Chinese share of the market might rise to as much as 50 percent, I don’t want to overstate the position. Berlin, Vienna, Illinois et al are still in business and are not waving a white flag yet, or even mooing like distressed cows.

FRAUGHT WITH DANGER

Some premium price companies are making use of copyright and trademark laws to prevent the worst abuses but, unlike the record industry (which seems hell-bent on making a fool of itself), the microphone world seems to realize that legal restraints, though useful, can only be a partial solution.

Of course, several of them have also considered the idea of cutting their own costs by using the cheap manufacturing countries themselves. One or two have done so to a limited extent and now buy parts, including capsules, from Chinese sources. Others view this solution as fraught with danger.

Another (and more constructive) approach is to make use of an obvious chink in the copier’s armour: the fact that they’re not adept at initiating new techniques; they merely replicate existing ones. The established companies with their inventive technical departments can produce a string of intelligent solutions to problems that enhance the perceived value of their microphones.

Not all Chinese products are direct copies of high profile, high-price Western microphones. The position is a continuum with, at the lower end, back-street box-shifters importing off-

the-shelf replicas and, at the upper end, Western hemisphere companies that take some pride in claiming to do the design work themselves and then have their ideas manufactured inexpensively in China.

Not surprisingly, the long-established companies agree that education of users is a powerful tool to help the industry retain its skills and expertise. They’re confident that the cheap “commodity microphone” with its few redeeming features will then be seen as just that by would-be purchasers. Customers need to compare value rather than price to judge a microphone accurately on its build quality, its specification and its performance.

They also need to judge the manufacturing company on its ability to provide support and service, and that may mean delving behind the comforting name badge on the front to find where the microphone really came from. Badge engineering occurs on every continent and an upstanding U.S. name or staunchly German address is no guide to where the microphone was actually made.

True knowledge is not partisan, so these skills would just as easily allow users to recognize a good microphone emerging from a new and exemplary (perhaps Chinese) company, as it would enable them to spot a dog built by one of the “old school” firms. And that’s as it should be.

It is imperative for users to show some maturity in their decisions. Buying a “warm sound,” or a microphone that is the same shape as one which was supposedly used to make a hit record 30 years ago, or something with an “M7” capsule without querying whose “M7” it is and where it was made, are reasons for embarrassment – not pride.

Professionals must have the ability to discriminate between good and better, to be oblivious to specious fads and see right through pricing structures that can’t sustain future development.

If not, we may soon be weeping over the last traces of spilt cream. ■

We thank Patrick Morvlyth for this thought-provoking article, and encourage you to send your feedback to Editor Keith Clark at kclark@livesoundint.com.



Can you pick out the real Neumann U87ai? (Hint: It’s the one outlined with the red box.)