

# HIGH-END SPEAKER CABLES

Nothing in high-end audio is more controversial than cables, and especially loud-speaker cables. Critics of the audiophile community (you know who you are) claim that we are deluded, that we know nothing about the laws of physics, and that we are deliberately ignoring the rules of comparative listening just so we can peddle expensive snake oil.

Sound familiar?

No, of *course* we don't agree with that, because otherwise we wouldn't be publishing this magazine. At the same time, we need to recognize that certain rogue manufacturers are feeding this myth by selling breathtakingly expensive cables that promise what they won't be able to deliver. Want cables for \$35,000? You almost certainly don't, but someone must, because they're out there.

But we don't care. Lots of people have more money than sense, and there are plenty of luxury products to suit their (almost infinite) budgets. Are these products any good? Who knows? Who cares?

Perhaps it bears repeating that our mission is to help you listen to music (and watch films) at home under the best

possible conditions. If we could fulfill that mission by recommending speaker cables from Home Depot, we would. But we can't.

## The physics of speaker cables

Our critics would tell you that the physical characteristics of wire are well known, and that nothing else matters. The easiest characteristic to measure is resistance. You want a minimum of resistance, to impede as little as possible the flow of electrons from amplifier to loudspeaker. There's not much to disagree with there. There's *capacitance*. The parallel surfaces of long wires act like a capacitor. If capacitance is strong enough, it will act like a low-pass filter, rolling off high frequencies. And there's *inductance*. Because a cable is not a pure resistor, it will also act like a coil in series with the resistance of the cable. That can also roll off higher frequencies.

Did you follow that? No? No matter, because that won't help you tell a good cable from a bad cable.

Many years ago, we devised a truly *objective* test for loudspeaker cables. It allowed us to see, on the screen of an oscilloscope, the difference between what was going into a speaker cable

and what was coming out the other end. If the cable was truly passing on everything, we wouldn't see anything. If it was impeding the flow of electrons, the screen display would have a lot on it, presumably showing us what we were missing. And if the cable was rolling off high frequencies, we could see those highs right there on the screen, because they weren't getting through.

On that test, the differences among cables were huge, much greater than we had anticipated. Some cables seemed all but perfect. Others were rolling off highs, or indeed lower frequencies as well. But after a while, we dropped that test.

Why? Because what we saw on the screen had no correlation whatever with what we heard. The assumptions as to what a cable should be doing seemed to be wrong. What's more, the cable that scored best on our "objective" test, apparently passing on everything, was the very worst-sounding cable we reviewed. It was, by the way, wire we had bought at a local hardware store.

By the way, despite the claims by critics of the audiophile movement that our listening methods are flawed, we *did* actually perform some blind tests, and — when we could — double-blind tests. The differences our panelists heard were huge, ranging from superb down to unlistenable.

Why do these differences exist? What we know is that the cable characteristics our critics learned in Physics 101 are only the beginning. As for the technical measurements that can be done, they or may not tell you how a cable will sound.

Or, more pertinently, how *music* will sound through that cable.

Let's mention one more cable characteristic that is much talked about, but that we dread.

One major cable manufacturer recommends specific cables to people whose systems sound unpleasant in some way or other. For example, if your highs are shrill, you choose one cable; if the sound is muffled you choose another; if the bass is thin...you get the idea.

That is *wrong, wrong, wrong*. Did we mention that it's wrong? Cables are not tone controls. When it comes to that,

tone controls, once common on amplifiers, were a lousy idea too. If there is something wrong with your system, you should find the cause and fix it, not attempt to compensate for it by introducing some other mistake. Flaws don't cancel, they add up.

Now that we have once again staked out the ground for our philosophy, let us speak of the cables we reviewed, how we did it, and what we heard.

### Setting up the test

We wanted to evaluate three cables, all from Alpha in Japan, a division of Furutech. All three share a special characteristic, their monocrystal construction. That means that the strands of copper are drawn by the Ohno continuous-cast process. There are no barriers between crystals, because each strand is a single crystal. Is that useful? Well, we've heard some amazing cables made from monocrystal technology.

Alpha makes three monocrystal cables. One of them, the S-14, is familiar to us, and it has in fact been in our Audiophile Store for some time. We like it, and we consider it a bargain. But Alpha has two other such cables, both quite a lot more expensive. Were they worth the extra money?

Though the S-14 had already been reviewed in *UHF* No. 95, we listened to it again in the new context. The reference cable, which is always our starting point, is one we have owned for many years, the Pierre Gabriel L3. Made of silver strands and fitted with WBT locking connectors, it remains a contender for top honors. It is 5 metres long, a length that allows us the flexibility to place test loudspeakers where they will sound best. Back when we had acquired it, a 2.5 m length cost \$3,500. Ours, at double the length, would have cost...

We made up 3-metre lengths of all three of the cables to be evaluated. We installed the same connectors on all three, the Furutech FT-212G, which we now consider to be the best banana connector in the world. Its heavy metal body is not connected to the circuit, and so the conductor is a low-mass piece of gold-plated pure copper, not the brass used in the majority of connectors. Rhodium plating is an option. Like the

WBT's, they lock under pressure with a slight twist of the collar. All three pairs were broken in for many hours. Yes, we're aware that our naysayers don't believe that makes any difference either.

We chose three music selections, all three from LP, played on the reference turntable of our Omega system. Two of the panelists, Steve and Albert, were told nothing of the cables until later, and identified them only by their colors, blue, purple and black.

### The Alpha S-14



This blue cable is the familiar original of the family. It is by far the lowest-priced, and in fact we had been startled to find a monocrystal cable at this price (\$49.95 per metre). The 3 m pair we made up for this test cost \$299.70. The two sets of Furutech FT-212G bananas added \$280, for a total of just under \$580. Of course, lower-cost connectors are available, just as cheaper tires are available for Lamborghinis.

The "14" in the cable's name does not refer to the gauge, as you might expect. In fact, Furutech rates the thickness of each conductor as 8.9 mm, which it says corresponds to 15 gauge. Our own measurements place it closer to 13 gauge, for what it's worth. The insulation is polyethylene, and the outer jacket is blue PVC. Cotton fillers keep the twisted pair of conductors in place.

We found the S-14 easy to handle. Some early OCC cables had to be handled with gloves, because their fine strands could break the skin and cause infection. Not so this Furutech. It is flexible, and easy to place.

Incidentally, we had little trouble finding Furutech knockoffs from China, with similar but not identical markings, and much lower prices. We also had little trouble finding knockoffs bearing such famous names as Kimber Kable and Siltech. *Caveat emptor.*

We began the listening session with the title composition from a

long-discontinued Proprius choral LP, *Laudate!* It made us wonder once again why Proprius has never re-released this superb recording, either on LP or on a digital medium.

The choral ensemble seemed more distant with the S-14 than with our reference cable, which meant the massed voices had decreased presence, and a little less low-end body as well. "All the singers are positioned within an oval in the centre," said Steve. Albert agreed that the voices occupied less of the space before us. We were playing the recording at quite high level, and the very loudest passages were less well defined, the complex textures even starting to come apart. The final *Amen*, which blew us away the first time, was more subdued.

We had not, of course, expected this economy cable to outdo our reference, which was far more expensive.

We moved on to Rimsky-Korsakov's lively *Dance of the Tumblers* from the superb Reference Recordings LP, *Dances From the Operas* (RM-1505). Once again, we played the recording at quite high level, and we liked both the impact and the rhythm. "It's so good," said Albert, "that I found myself not even comparing the two versions."

Still, compare them we must. We liked the timbres of the instruments, which were close to what we might expect to hear in a live performance. We agreed that the cable was doing an excellent job, but we noticed some differences. On loud passages, the brass seemed to have extra harmonics. The orchestral structure, which had hung together so well, seemed more chaotic. The impressive illusion of depth was somewhat reduced, though it was by no means gone.

We were being demanding, and so far the cable was delivering.

The final recording was Barbra Streisand's new *Encore* album of show tunes (Columbia 88985). We selected a duet by Streisand and Hugh Jackman, *Any Moment Now*. This was a song composed for the Broadway musical *Smile*, but not included in the show. It is a striking portrait of a couple whose relationship is falling apart, though both wish it weren't.

Though the recording is generally



(Canadian) per metre. A 3 m pair of these cables would thus cost more than \$1,000, not counting the connectors. The price is by no means outlandish, but we would therefore be more demanding. At this price, they needed to deliver more than just solid performance.

We're not sure what the "FS" part of the model name means. "Alpha" is of course the brand. Furutech says the thickness corresponds to a gauge of AWG 12.

From the first measures of *Laudate!*, it was obvious that it provided more than a mere incremental improvement. We loved the large sound stage and the depth in this remarkable choral recording. We also praised the body and the coherent musical structure. The harmonics hung together better. All this was good.

Yet in several ways this cable sounded different from our reference, though whether it was more or less accurate was initially uncertain. The soft passages were more relaxed, more laid back. Should they be? The choral voices were silkier than with the reference, but with the silkiness came a reduction in dynamic impact. The final *Amen* didn't have all of its amplitude.

So far so good, though. We weren't yet certain whether it was more competent than our own silver cable, but it did outpoint its less expensive brandmate.

It continued to impress us with *The Dance of Tumblers*. If the S-14 had seemed not quite at ease in the very loud passages, this cable communicated the orchestra's immense energy with ease and equanimity. The impact of this large orchestra all but blew us over, and we could listen through one layer of instruments to hear the others. The pizzicato passage was rounder, more pleasant. The finale had all of its drama. This was one fine cable.

Yet there were differences. "The overall sound is darker," said Albert. "There isn't quite the brilliance I heard with our reference cable."

We finished with Streisand and Jackman's *Any Moment Now*. The dramatic qualities of the song are of supreme importance, and both cables so far had delivered them. We wondered whether the sometimes elusive words would emerge more clearly than they had with the S-14, and — dare we hope? — our reference cable.

The sheer drama of this tragic love song survived just fine. "There is good definition," said Steve, "but there is also extra warmth. I also liked the dynamics. They have more nuance than with the blue cable. They're less brutal." Were the lyrics easier to follow? We thought they were, though Albert found them harder to understand in the last part of the song. "They're clear, and yet they're a little veiled compared to our reference."

The FS-Alpha is not quite as good as our much more expensive reference, but it has its place in a first-rank system all the same. We liked it.

### The Alpha S25



The S25 (the model designation is written with no hyphen) is similar in construction to the S-14 but with more strands, and therefore lower resistance. The diameter of each conductor is 14.5 mm, which Furutech describes as 13-gauge. Once again, we thought that rating was somewhat low.

We expected that it would be considerably more expensive than either of the other cables, and we were surprised to find this wasn't the case. List price in Canadian dollars is \$166 per metre. Our 3 m pair would cost just below \$1,000, not counting the connectors. Yes, these last two cables are almost the same price.

This cable is fatter than either of the others, despite a lower gauge than its purple brandmate, and we anticipated it might be better. We couldn't take that for granted, though. A number of manufacturers have thicker cables that are no better, and sometimes they are even catastrophically bad.

well done, it is somewhat over-orchestrated, and we sometimes had to strain to understand the lyrics. That was true even with our reference cable.

Once again the S-14 had a bit less low-end body, but on this recording that was an advantage. The orchestra no longer drowned out the words, and that made the story easier to follow. Albert agreed, but he was uncertain as to which version one he preferred. "Certain passages seem louder, but they're not necessarily more attractive."

What we heard this time was much what we had heard in our massive speaker cable review in issue No. 95. We thought then that the S-14 was a bargain, with a place in a very good system, and we still think so.

### The FS-Alpha



Like its slimmer sibling, the FS-Alpha is flexible and easy to place, without the stiffness of some cables. However, the price is much higher, \$173



And this cable really is plumper than either of the others, though it is also made from monocrystal copper, and its structure is similar. We discussed whether a pleasant color, such as purple or blue, is preferable to dull black. Albert said he preferred black, which tended to disappear. A cable, unlike small children (it is said), should be heard and not seen.

We didn't get very far into *Laudate!* before we realized we had a winner. The dynamics were on a scale vaster than with either of the other two cables. The timbres of the male and female voices emerged convincingly from the mass of sound. The tonal variety was impressive.

"Such beauty!" exclaimed Albert. "Everything is just right. The voices are limpid and beautiful. Each layer of the ensemble is clear. The piece seemed shorter...*too* short."

If we had been impressed with the rendition of the choral piece, we were floored by what it did with full orchestra. The impact was immense, and the strong rhythm drew us right in. "They've lifted the veil," said Albert, "they've washed the windows, they've turned on all the lights."

Indeed, might this medium-priced cable actually be superior to our expensive reference? Our notes on this record-

ing seemed to point in that direction. "It's beyond great," said Steve. Both Albert and Gerard wondered whether this might be the best cable yet. But we know from experience that it's easy to fall in love with a product that merely does things differently, and the session was not yet over.


We listened intently to *Any Moment Now*. The voices in the spoken segment were natural, and the dramatic tension in the song just crackled. During the sung passages, with their sometimes heavy-handed orchestration, we had the impression that the words might be clearer, that we could hear through the instruments to follow the text. If so, perhaps this cable really should be our new reference.

But that might not be so. Listen to a piece of music enough times, and you'll become more and more familiar with the words, and indeed with the instrumentation, and then it is easy to believe that you're hearing more. We had now listened to each selection four times, and we knew them by heart. It would be all too easy to find ourselves comparing the S25 to the other two test cables rather than to the reference. We knew, then, that we needed to hear our reference again.

We did, and it was actually superior. Albert referred to its sound as "luminous." Even in the busiest passages, we found it easier to follow the words. Repeated listening really had made the difference. We concluded that our long-time reference cables did deliver the best performance.

Albert wondered what would happen if we installed the same connectors we had used on the test cables. The Pierre Gabriels came with WBT-0645 locking bananas. They were among the best available at the time, but we know a lot more about connectors now. The older WBT's, like other connectors of the time, were made of massive brass, plated with gold.

Really, all three of the Alpha cables were impressive. We thought the S-14 was a bargain when we first reviewed it, and we certainly haven't changed our minds. Its budget-friendly price makes it a great choice for many, possibly most, systems.

The other two cables are a puzzle, however, because their prices are close enough to be essentially identical. Both are very good, but the sheer energy that emerges from the S25 makes it the clear winner. Should we add it to our store? That seems an obvious choice. 

## CROSSTALK

I was feeling a bit apprehensive when this session began, because these cables might seem to be very similar. Would I be able to hear significant differences among them?

First came the blue cable. It handled vocals very well, but its sound stage was a bit too shallow, and the woodwinds seemed compressed, missing some of their natural resonance.

The purple cable marked a dramatic improvement. I found fewer faults and began to appreciate the subtle changes in each piece. The full orchestra had gigantic impact and its timbres were authentic. I wondered if the last black cable could possibly be any better.

It made a big difference. I felt the music take me over. The room and the equipment disappeared, the music absorbing me completely.

The black cable was better than the others, no question. The purple was in second place followed by the blue, a distant third at the finish line.

—Steve Bourke

I always find blind tests fascinating. Not knowing the brand and the price has a freeing effect that is truly refreshing. It allows listening without expectations, letting the music speak its tune. Besides analyzing the pros and cons, I just waited to see which component would let the music through, unhindered.

Through the blue cable, the music arrived with wrinkled clothes, showing some tears, slightly dishevelled by the journey and a bit out of breath, but it was the music I knew. With the purple cable the music showed up confidently, in a velvety smooth

costume, cozy and warm.

And then, with a drum roll, a bright spotlight and a standing ovation, the music beamed at us and bowed with a huge smile, simply yet impeccably dressed for the occasion. That was the black cable. Reference quality, I think.

—Albert Simon

My conclusion? All three of these monocrystal cables are superb, even if you don't take their prices into consideration. Even if you have a superb, well-chosen system, you can't go wrong with any of them.

That said, I maintain that the S-14, which we've heard before, is a rare bargain. Put the right connectors on them, as we did, and they will delight you. But it's the S25 that thrilled me. I think it will thrill you too.

—Gerard Rejskind