

hardware review



Townshend F1 Fractal

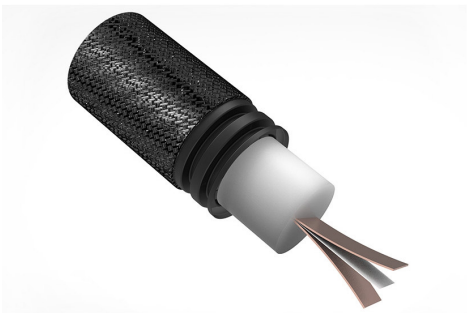
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Loudspeaker cable

Reviewers don't like to change cables, it's a pain in the proverbial because in our line of work we need a steady reference system into which we can drop new bits of kit. Reviewing cables isn't so bad, you can kind of put them in and listen, but there are many who consider that it doesn't make sense to put a speaker cable from brand A in a system where all the other wiring is by brand C. And there is a degree of logic in this, although it's quite possible to mix and match cables with fine results, it's easier to hear what a given manufacturer is trying to achieve if you listen to their products in context. What causes the biggest headache is if a cable you swap in is dramatically better than what it replaces, do you live with enlightenment for a while and then go back to something clearly inferior and come to terms with it or do you switch to the new cable. As you can imagine the temptation to do the latter is very strong but it does undermine the reference nature of the system.

I have been happily using Townshend's [Isolda](#) speaker cable for nigh on 20 years now, largely because I haven't found anything better especially when it comes to bass extension, timing and image solidity. Some find it a little restrained in the treble but I suspect that that's because it was designed to reject RFI (radio frequency interference) so it doesn't ring at high frequencies which produces a brightness that works in some systems. Isolda works particularly well with a wide range of loudspeakers and amplifiers, even those that don't like its high capacitance thanks to networks that Townshend builds into the terminals at the amplifier end. So I was surprised when Max Townshend said that for F1 Fractal he had made some major steps.

Like Isolda this cable has a pair of flat ribbons of copper in very close proximity in order to keep out RFI, but where the dielectric (insulation) on Isolda is polyester Fractal has a very thin strip of PTFE, a highly regarded dielectric found in the majority of high end cables. The strips of copper are smaller but more importantly they are housed in a flexible PVC conduit and damped with a polyurethane polymer. The conductors are therefore damped all round to stop vibration, something that Townshend Audio have been eliminating in speakers and electronics with their Seismic isolation technology for years.



It might seem bizarre that cables are sensitive to vibration but look around the next high end show you visit and note how many brands are using cable elevators. Even fairly down to earth companies have noticed that raising speaker cables off the ground has a beneficial effect on the sound. Last time I went to visit Ken Ishiwata in his Eindhoven [\[aig\]](#) noticed what looked like home made wooden cable elevators in the system, it's worth trying with any cable and can be done with cardboard tubes and elastic bands if you're handy with a craft knife.

The isolating method that Townshend employ means you don't need elevators and provides consistent damping for the full length of each cable. But it can't be made with a machine because the polymer needs to be poured into the casing as a liquid so that the conductors are held in the middle. This labour intensive approach makes Fractal expensive but as you will read it reaps rewards that are at least commensurate with the asking price.

The name Fractal refers to the radiation treatment copper conductors are given that enhances its sound quality. This was first demonstrated in the Fractal interconnects that have been available for a few years now and demonstrated a significant upgrade over the purely deep cryogenic treated (DCT) cables that Townshend makes. Having made the mistake of telling the world all about DCT and seeing it copied by all and sundry they are naturally disinclined to share the precise nature of Fractal treatment save to say that it costs €1,000 per kilo and is done in the United States.

The terminations on F1 Fractal are not only rather good looking but they house zobel networks at both ends, which means that whichever way round you use them they offer a constant impedance and won't threaten the stability of amplifiers that rely on an inductive load. They also have a choke at each end which acts as an RF filter, speaker cables act as big aerials and the noise this produces is usually injected into the chassis of the amplifier, but not here. The cable is finished in woven jacket and supplied with connectors of your choice, I requested the hollow pin type as less is more when it comes to cable terminals and I hope that they will cope with the rigours of reviewing life.



Sound quality

My first real experience of F1 Fractal came at the Indulgence show where I incorporated them into the dem [system](#), which while very good was hardly cost no object, but it soon became clear that this cable is extraordinarily revealing. I was hearing stuff that I had never encountered before, and this in a room that was compromised in many respects, not least as a result of the noise coming from other rooms. When I brought the cables back to the listening room the transparency was immediately obvious and to a game changing degree that I have never encountered with cables, in fact I've rarely come across as big an upgrade anywhere. It really is like upgrading to an amplifier of twice the capability and price, or perhaps like the change from a Class AB amp to a Class A, there is simply more information, a heck of a lot more.

Highs are fully extended but calm and clean like nothing before. Lindsay Buckingham's steel string acoustic on 'Never Going Back' (still the best track on Fleetwood Mac's *Rumours* IMHO) sounds sublime. It's usually fresh and zingy but now all the ringing has gone and you're left with the pristine resonances of a beautifully played instrument. F1 Fractal produced the sort of change that makes it difficult to adjust expectations when reviewing other pieces of kit because everything sounds so much better, well not everything because when set up isn't quite right or pieces don't gel with each other that is obvious too. It suddenly became much easier to tell when a stylus was warmed up, which seems to take at least two tracks with the moving coils I've been using of late.

It does this because the noise floor is so low, now cables shouldn't have a noise floor being passive devices but as we know they have characteristics that can make them more or less susceptible to picking up noise and they are prone to ringing. They do the latter in such a fashion that it sounds like enhanced treble shine or brightness on a good day and or with a speaker that's not too revealing, but put a very transparent speaker on the end of many cables and getting clean, extended highs becomes a challenge. F1 Fractal does extension without the glare that ringing produces, so as long as the source and amplification aren't producing any nastiness in that area you get sweet, natural highs that reflect those laid down on the tape.



Back with the system I stuck on Herbie Hancock's 'It Ain't Necessarily So' (Gershwin's World, Verve) and revelled in the ease and richness of the piano, the full fat bass and the subtlety with which the trumpet's quiet burblings end the piece, details that were revealed in full for the first time thanks to this cable. It's not just about fine detail, like Isolda this cable also produces bass that is more concrete and real than anything else I've encountered. Bass that gives the image a solidity and presence that creates a being there sense of palpable reality, it really is in the premier league. That has always been a strength of Townshend cables but here it's joined by a level of resolution that's hard to find. It's not dead neutrality either, it's vibrant musical cohesion that produces the most spot-on timing you can hope to find.

Good timing is often considered to be the domain of cables with a slightly forward balance, usually a balance achieved by the subtle ringing mentioned above. But you don't need that balance to hear how the musicians are interacting with such perfect synchronicity, you just need maximum transparency. 2L's fabulous *Belezza Crudele* (Vivaldi, Tone Wik, Barokkaneme) recording reveals this perfectly, the music is so natural and relaxed yet it has a coherence and vivacity that's inspiring. It really does open up everything you play, both in terms of analysis of what the musicians are doing and as a musical experience. When you come across an upgrade of this nature it really makes you wonder how much more there is to be heard, but I guess that's what makes the pursuit of high fidelity so absorbing, you never know how much more there is.

So you can see why cable changes are a problem for reviewers, when the change is this dramatic it takes a while to come to terms with and during that time it's necessary to adjust ones expectations of new pieces of kit. But in the long term greater transparency makes it easier to hear what the hardware is doing which helps so long as you don't end up with a microscope that reveals flaws in the hardware that regular cables mask. It's a balancing trick that means this cable is best suited to more serious kit, but the price should provide that filter, even if it's the only filter to musical detail left in between amp and speaker.

SPECIFICATIONS:

Type: Hand made loudspeaker cable with RFI filtering and constant impedance
Length tested: 5m pair
Conductor: Fractal treated pure copper strip
Dielectric: PTFE, polyurethane polymer
Shielding: N/A
Capacitance: 0.91nF/m
Resistance: 10.1mohm/m
Inductance: 1.03uH/m
Colour: black or white
Termination: optional banana or spade
Diameter: 22mm