



TEST.

Swiss Cables Reference

31.03.2014 // JÜRGEN SAILE AND DIRK SOMMER

A lot has been written about cables over the years and now even we can't refrain from indulging in this topic ! Many readers are skeptics when it comes to cables which cost more than five Euro per meter, sensing some kind of rip-off. Considering the pricing of some premium cable creations, this may come as no surprise. That said, we would consider it grossly negligent to not inform our readers about the quality of the Swiss Cables.

The designers of the Swiss Cables obviously have a clear understanding of the long history of cable design, especially about what worked exceedingly well and why. The inner structure of their products reminds me a little of the fabled Western Electric cables of yore and some principles found in their design.

But the Swiss are far from having simply repackaged a role of Western Electric wires in a new shell. Actually, their cables are a blank sheet design, starting from scratch. As designers for their cables, Swiss Cables has commissioned Lumen White Research in Switzerland, a company known, between others, for their ingenious loudspeakers designs.

In the early 70s, Pierre Johannot of the French National Institute for Electric Research published an article in the French High End magazine "L'Audiophile" on his research surrounding MDI, signal distortions in cables caused by electrical micro-discharges at the conductor-dielectric junction. MDI distortions occur predominantly in the presence of synthetic polymer dielectrics, the very materials which practically dominate modern audio cable



The Swiss cables' outer shell is very sturdy and can't be pinched by hand. This was probably chosen to avoid the cables' innards from being affected by external forces

design! While the engineers at Western Electric did not know about MDIs yet, they used natural insulators like cotton and silk for their cables, as synthetic polymers were not yet available.



The lightly dressed "Golden Boy" of the golden era of Western Electric, holding a role of cables

Swiss cables avoid the generation of MDIs in their cables, inter alia, by using a dielectric made from natural fibers which bears at least some visual resemblance with the Western Electric textile insulations. The Swiss Cables use air as their main dielectric. Materials widely found in cables today, like Teflon, are explicitly excluded from the Swiss Cables designs - for sonic reasons. While the Swiss cables' diameter could remind one of a decent gardening hose, when lifted up they prove to be surprisingly light. Their protective shell is very solid and does not deform easily, hence the cables are not the overly flexible during installation behind racks.

As regards the choice of conductor technology, the designers for Swiss Cables had their own innovative ideas. The cables use solid core conductors produced from a copper alloy, not as conventional wires are, by mechanical drawing, but via a specialized process of continuous casting. Continuous casting avoids the tensions, discontinuities and micro-gaps in the molecular crystal lattice which are present in all mechanically drawn wires and are known to cause various forms of signal deterioration. Hiroyasu Kondo of Audio Note used to age his wires for decades in an attempt to reduce these effects in his cables.

That the quality of signal transfer in cables strongly depends on the homogeneity of a wire's crystal lattice has become widely recognized by now. It is the very reason why cable manufacturers try to improve the signal quality of their cables via various methods including cryogenic treatments, the use of special alloy like in the case of the Swiss Cables or other metallurgical measures.



As seen here, no synthetic polymers are used as dielectrics

Simply put, wires consist of many polycrystalline lattices, which again are made up of microscopically small crystals. Without special treatment, these structures do not form ideal signal conductors. Alloying copper with other metals attempts to reduce the discontinuities in the crystal lattice, aiming for a smoother and more consistent structure and signal transfer function. Naturally, this topic is a widely more complex subject from metallurgy than can be covered within the scope of this review.

What then is the effect of inserting the Swiss Cables into the listening chain? I started my tests with the Swiss cables power cords, and later added their interconnects and loudspeakers cables. I first used the power cords with my power amplifiers, simply because the respective ac outlets were the most accessible in my system. Doubtlessly it may have made more sense to start with the preamplifier, but that notwithstanding, starting with the power amplifiers already yielded a memorable effect which was clearly audible in my system even without any lengthy burn-in. When I hooked up my power amps with the Swiss Cables power cords, the sound became instantly more transparent and dynamic. The high frequency range however appeared slightly leaner, indicating the need for more initial burn-in. Which made me wonder whether inserting additional power cords already now would thin out the treble even more. At this very moment, the often quoted "synergy-effect", routinely invoked by corporations in need of justifying costly overhauls, came to my mind. Next day I connected my preamplifier with the Swiss Cables Reference power cord as well.

To my utter surprise this resulted in a complete sonic harmony in the system – something I had envisioned, but not expected. I recognize that this may not sound logic to some, but it simply is what happened. On top of that, the system made another leap forward in clarity and dynamic agility. This came as even more of a surprise, considering the fact these sound improvements were brought about by a cable which was installed outside of the system's signal path. With this accomplishment at hand, I simply settled into listening to music, and could have easily forgotten about any further writing, were it not for my editor in chief who would probably show me the red card for such nonchalance. After a week of further burn-in, curiosity got the better of me and I went back to the initial set-up with only the power amplifiers connected via the Swiss Cables power cords. The treble which had been slightly on the lean side a week ago, had made place for a vastly more fluid and richer high frequency portrayal as a result of the additional burn-in. An effect to be noted. Some may think that such observations are merely the result of the ears undergoing a habituation process and adapting psycho-acoustically to a new component. But to know such with certainty, would necessitate solid expertise in the disciplines of psycho-acoustics. Lacking such, and being the pragmatic I am, I simply trust my ears and let listening be my guide. In any case, the Swiss Cables clearly benefit from being given time for proper burn-in. And, something I did not know yet at the time, they continued to get better and better for weeks to come !



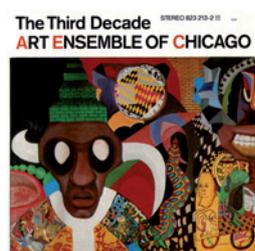
After a few days, I received the Swiss Cables Reference interconnects and loudspeaker cables which allowed me to connect my whole system with them for the first time. Expecting the need for another round of burn-in, I was in for a surprise once more, as the interconnects and loudspeaker cables integrated themselves instantly and seamlessly right out of the box. Checking back with the manufacturer provided the explanation: the interconnects and speaker cables undergo a special burn-in program at the factory, while the power cords do not. With the complete system now wired with Swiss Cables, the sound improved again across the board, making another leap forward in transparency, dynamic capabilities and sonic wholeness, while the increased transparency at all times remained fully and harmonically integrated with the music, the sound staying free from any traces of sterility.

As most audiophiles know well, increased transparency can easily give rise to listening fatigue, when weaknesses in the system or the music get overly magnified. On the other hand, it is increased transparency which makes the full musical expression and details available to us when listening at low volumes. Navigating this sonic challenge successfully is something the Swiss Cables do extremely well!



Reinhard Goebel's recording with the Musica Antiqua Köln ensemble provides a ruthless test for all equipment. Founded 30 years ago with the goal to reproduce historic classic performances in their original format, the ensemble were pioneers of a new idealism in their time. Their use of original historic instruments can easily give rise to edginess, further accentuated by Deutsche Grammophone recording style which often verges on treble overdose. How do the Swiss Cables navigate these treacherous waters? Naturally, they can't trans-mutate these recordings into RCA Living Stereo gold, but with the Swiss Cables in the system, the instruments sound much more harmonious, without

any glossing-over or sugarcoating in the play. The original character of the music is fully preserved, but with the Swiss Cables simply more music emerges from the recording. A real class act!



Next in line is the Art Ensemble of Chicago's LP The Third decade. Founded in 1960, this avantgarde-band has always prided itself of its black roots and its African musical heritage. Original African costumes and full warrior body paintings used to be an integral part of the band's live performances. Their music features an abundance of instruments, especially of the percussive kind. In the case of this LP, I counted no less than 70! Recorded in 1984 The Third Decade marks the end of the band's cooperation with the ECM record label. At that point in time, their music had already lost part of its avantgardistic edge. The

LP's first title „Prayer for Jimbo Kwesi“ starts out in a rather relaxed and harmonious fashion, but that changes not long thereafter. Of special interest here is track 4, which features an abundance of percussion effects. After a slightly spaced out contra bass intro, the drummer brings on a multitude of bells, cymbals and who-knows-what other instruments. Via the Swiss Cables, they are all placed in the sound-space with superb precision and natural timbre, devoid of any trace of edginess. These instruments are harmonically extremely complex and very difficult to reproduce. The human ear will mention instantaneously if something is off-target here.

With my system completely wired with the Swiss Cables References, the sound had become utterly organic and immensely musical. While every individual Swiss Cables cable brings these signature qualities of the whole product range to its specific position in the chain, the brand's design approach clearly aims beyond offering individual super-cables, and provides for a complete cable system with consistent quality and integral sonic performance. While many of us have assembled a diverse mix of different cable brands in our systems, when it comes to the Swiss Cables, replacing all cables in the chain with their products clearly results in a added performance enhancement. That's certainly good for the company, but before all else its simply the fact. Compared with my own eclectic mix of cables, the Swiss Cables sound clearer, more transparent and dynamic, while a little less voluminous. I view the latter as the result of their improved precision and time-coherence in the mid-range and bass bands. The sound-space projected by the Swiss Cables is slightly more compact in size, a quality which will especially benefit those with horn systems. The mid-range is slightly less forward and more relaxed, which places the musicians about one step backward in space. Especially those recordings which always make one feel as if the microphone had fallen into the piano now sound more natural and realistic, while at the same time less artificially “in-your-face”. The Swiss Cables bring immense subtlety and finesse to the sound and endow it with an infinite palette of sonic colors. Especially the latter is of great importance to me. The realistic reproduction of solo violin has remained one of the most difficult tasks in audio - the Swiss Cables master this challenge better than any other cable I know! Unsurprisingly, classic music benefits immensely from the cables' sonic homogeneity.

Such performance reminds me of a well known Japanese tube guru's invocation of “No superfluous sound !” While made in another context, it fully grasps the nature of the Swiss Cables. They are now the second excellent cable brand from Switzerland which I have come to know. Does the country's pristine high mountain air have any role in this?

STATEMENT ONE.

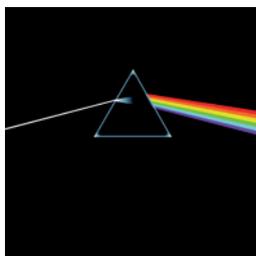
Immensely clear and dynamic, with outstanding bass control. Very homogenous and organic rendition endowed with an infinite palette of sonic colors. If the budget permits, install them everywhere in Your system.

In my view, a system's active components ultimately determine its sound, while cables play a supportive role. While my loudspeakers' 98db efficiency tend to reveal even minute effects and changes, that may be different in other systems. To provide our readers with a second opinion, my colleague Dirk Sommer has listened to the Swiss Cables in his system as well. Here his report:

The first set of Swiss Cables arrived accompanied by Anton Suter who heads their manufacturing and distribution. Unlike my „tube loving“ colleague Juergen Saile, I heed no general preference for tube amplifiers but at the time of my review happened to listen via a tube-preamplifier and tube power amplifiers as well. To connect them I need very long, symmetric interconnects while my Ayon Epsilon power amps only accept loudspeaker cables terminated with spades. Since I didn't mention these details when ordering the Swiss Cables, I had to bring in the excellent Einstein 'The Poweramp', which normally does duty in the living room, to handle amplifying duties in the meantime – naturally, starting with my usual set of cables. Power cable duties were handled by an ac cord originally handcrafted by the former German Cello distributor and marked by a rather substantial cross section. When I replaced it with the Swiss Cables Reference power cord, the playback leaped forward in

transparency, resolution and dynamics, while the sound became more airy and slightly more spacious. In short: simply more detail emerged from the music.

A further gain in clarity and definition happened when I replaced my reference loudspeaker wires with the Swiss Cables References. The upper bass region saw a slight attenuation as my Lumen White monitors don't emphasize this region, something one becomes occasionally aware of when playing less accomplished recordings. Despite their considerable length of 6 meters, the Swiss Cables interconnect stayed true to the brand's signature qualities, revealing that my down-to-earth EAR 912 preamp is capable of more detail and sound-field extension than I had previously imagined possible. Thus inspired, I ordered a set of the – physically surprisingly light – Swiss Cables loudspeaker cables with spades so I could use them with my Ayon power-amplifiers.



When the loudspeaker cables arrived, I inserted them into my system and re-installed the Swiss Cables interconnects for further listening, when, on a very quiet evening I suddenly became aware of a nearly inaudible hiss emerging from my speakers. Something neither Anton Suter nor me had noticed during our initial listening session which had simply overwhelmed us with the Swiss Cables' leap forward in transparency and dynamic impact. With the EAR 912's output transformer-balanced and the Ayons featuring a symmetric circuit, complete silence is the usual outcome. The riddle's solution: the Swiss Cables are available shielded or unshielded, with the latter considered sonically preferred,

where suitable. In my listening room however, in which every nonsymmetric phono-stage will morph into a radio receiver whether on single-ended or symmetric cables, shielding is a must. My order redefined, a set of the shielded version of the Swiss Cables Reference interconnects were dispatched my way. In the meantime I left the loudspeaker cables in my system, allowing them plenty of additional hours of burn-in.

When Thomas Wendt, owner of Genuin Audio and Swiss Cables' German distributor visited me with the shielded version of the interconnects, I took the occasion to insert them right away into the system and embark on a listening session with numerous of our habitual superbly recorded test tracks put to work. The session yielded a consistent and conclusive outcome with both of us preferring the better defined, dynamically more differentiated sound and superior sound-space projection of the Swiss Cables over my previous reference cables on all tracks. While listening to multiple test tracks in a row is an efficient way to map the sonic capabilities of components under review, such sessions are not primarily designed for listening pleasure. Hence, after our firework of reference tracks, Thomas Wendt suggested that we conclude the evening with Pink Floyd's „Money“ – strictly for entertainment only. Out of convenience, I selected to play a version I had on my hardisk, originally ripped via iTunes, but that quickly turned out less than an audiophile revelation. So we switched back to my old interconnects as their fatter upper bass helped to gloss over the slightly harsh accents of the originally thinly recorded track. I then remembered that I still owned a version of the track on vinyl, on the 4-LP „Echoes“ album. That remastered edition of the classic is said to have seen significant input from analog recording virtuoso Tim de Paravicini. Via the Brinkmann-EMT cartridge the LP revealed lots of low frequency information, but already at the beginning of the track, during the ringing of the cash register, we both yearned for more resolution. Exactly that more in transparency we got when we re-installed the Swiss Cables Reference interconnects. Whenever we listened to well recorded tracks, the loudspeaker cables and interconnects from Switzerland became our first choice.



As the sonic signature of the Lumen White monitors and the Swiss Cables is nearly identical, when combined, their outstanding transparency, exceptional bass control and love for detail can occasionally become too much of a blessing with poor recordings. As I write this, the Swiss Cables reign undisputed in my system, connecting my preamp, mono-blocks and Lumen White reference monitors. While they don't put any lip-gloss on bad recordings, there is no way to live without these cables, once one has experienced the wide, airy sound-space they project, their wealth of details and abundance of timbral colors, their superbly resolved dynamic gradations, all fully and harmonically embedded as

natural attributes of an integral musical wholeness.

As my colleague already mentioned in his introduction, the Swiss Cables are not a five dollar buy. During the past 15 years, I have reviewed a lot of cables, including some very expensive ones, and some where the pricing logic was clearly beyond comprehension. The latter is not the case here: while, ticket-wise, the Swiss Cables are not cheap, they clearly stand out in the overheated high-end cable market by offering an extraordinarily attractive price-performance ratio.

STATEMENT TWO.

The Swiss Cables don't miss or hide anything: they present us the most minute details of the – often imaginary – recording venue, reveal the finest rhythmic subtleties of the recording, unfold an endless palette of sonic colors in front of us and unravel even the smallest dynamic gradations in the music. They do so while preserving the musical gestalt as a natural and holistic whole at all times. The Swiss Cables are neither too analytical - nor do they gloss over or sugarcoat anything.

LISTENED WITH. (JÜRGEN SAILE)

Digital-Drive	Ayon CD-T
DAC	Borbely Audio
Turntable	Apolyt
Tonearm	Triplanar
Cartridge	Clearaudio Goldmund, van den Hul Grasshopper
Preamplifier	Shindo Monbrison
Power Amplifier	Shindo Cortese, Thomas Mayer ELROG 211SE, 6HS5 PSE
Loudspeakers	WVL A100i, Ancient Audio Studio Oslo
Cables	Audio Consulting RCA Reference, Auditorium 23 LS

LISTENED WITH. (DIRK SOMMER)

Turntable	Brinkmann LaGrange with tube power supply
Tonearm	AMG Viella 12"
Cartridge	Brinkmann EMT ti
Phono Amplifier	Einstein The Turntable's Choice
Computer	iMac 27", 3.06 GHz Intel Core 2 Duo, 8 GB, OS X Version 10.8.5
Audioplayer	Amarra Symphony 2.6, Audirvana
D/A-Converter	Mytek 192-DSD-DAC
Preamplifier	EAR Yoshino 912
Power Amplifier	Einstein The Poweramp, Ayon Epsilon
Loudspeaker	LumenWhite DiamondLight Monitors
Cables	Precision Interface Technology, Sunwire Reference, HMS Gran Finale Jubilee, Audioplan Powercord S, Audioquest Wild und Diamond
Accessories	PS Audio Power Plant Premier, Sun Power Line, Audioplan Powerstar, HMS-Wall Outlet, Acapella Bases, Acoustic System Feets and Resonators, Finite Elemente Pagode Master Reference Heavy Duty und Cerabase, Harmonix Real Focus, bfly Bases and Feets

MANUFACTURER'S SPECIFICATION.

Swiss Cables Reference

Speaker Cable Reference	1390 Euro für 2.5m
Interconnect Reference	860 Euro für 2 x 1m, Cinch ungeschirmt
	940 Euro für 2 x 1m, Cinch geschirmt
	990 Euro für 2 x 1m, XLR ungeschirmt
Power Cord Reference	390 Euro für 1m

MANUFACTURER.

Swiss Cables

Address	Bahnhofstr. 2A CH-6162 Entlebuch Schweiz
E-Mail	info@swisscables.com
Internet	www.swisscables.com

DISTRIBUTOR.

Genuin Audio

Address	Bhyleneerstr. 1 03044 Cottbus
E-Mail	thomas.wendt@mac.com
Internet	www.genuin-audio.de