

Beat

224 | 09-2024

11 GB
SOFTWARE
DOWNLOAD

FULL VERSION:
TONE2 ULTRASPACE*
REVERB & DELAY IN PERFECTION



► **KUASSA EFEKTOR**
MODULATION BEAT*
SWEET-SPOT FOR DRUMS & VOX

► **WAVE RUNNER II***
60 GALACTIC SOUNDSCAPES FOR
AMBIENT & SYNTHWAVE

TO THE MAX:

4 GB Loops, Guitars & Presets

for Chillout, Pop & Tech House

PODCAST
EPISODE #38
WITH YOUNGR

BUYING ADVICE

TOTAL MICROPHONES

FIND THE PERFECT ONE FOR YOU
32 MODELS IN COMPARISON



TEST: SEQUENTIAL TE0-5
TRUE OBERHEIM FOR UNDER 2.000 €

HANDS-ON: FL STUDIO WORKSHOP
SUCCESSFUL LOW END MASTERING



SPECTRAVOX
VOCODER, SYNTH
& FILTER BANK

INTERVIEW
IN TALK WITH
EMIKA



Not all cables are the same

Expert knowledge: Why shielding?

Because of their much better shielding, symmetrical cables are a must for microphones, that much is clear. But what is behind it? What types of shielding are there and where and when should you use them? We asked the expert Pascal Miguet from Sommer Cable and got the answers ad hoc. But beware: this is going to be deep!



Pascal Miguet
Product & Salesmanager / Authorised
Signatory at Sommer Cable



Microphone cable Stage 22 Highflex,
2 x 0,22 mm² | XLR / XLR, HICON (Spiral helix)

Spiral helix shield

The copper shield, known in cable technology as a „D shield“, was previously considered insufficient for optical shielding. This was because it was complicated to manufacture and the shield could not be placed very tightly. This often led to manufacturers demonizing this shield because it was difficult for them to produce. You can easily imagine this: it is very easy to braid hair, but try laying hundreds of hairs parallel to each other... that is almost impossible.

Thanks to the new gas-foamed insulators, this type of shielding has become important again because the spiral shield does not rub or damage the fragile foamed insulation when moving, bending or kinking. Many simple, cheap cables are only insulated with solid, hard PE, so this cannot happen, but the electrical values of these cables are of course less favorable.

Our cable production uses modern transposition techniques that achieve a shielding density of 99%, which is quite exceptional. In comparison, the maximum shielding density for a braid is a maximum of 95% optical coverage. Even with the relatively inexpensive cable model „The Stage“ we can guarantee a clean layer and 99% optical coverage.

The spiral helix shield can be combined with a carbon shield, which then, together with the spiral helix, achieves 100% coverage. The advantage of the spiral shield is the flexibility of the cable and the ease of further processing, since you only have to twist the shield with your thumb and middle finger when soldering and do not have to unravel it.

The carbon shield is conductive („semi-conductive“) and it ensures that the spiral shield in a guitar cable remains compact even when there is a lot of movement and that it does not cause any noise such as impact noise or crosstalk.



Microphone cable SC-Galileo 238, 2 x 0.38 mm² | XLR / XLR,
NEUTRIK® (double helix shield)

Double-D shield

Then there is the double or double spiral helix - the double-D shield - in which two shields lie on top of each other, or are separated by an insulating foil so that the two shields can be insulated from each other and also placed on the contact carrier of the connector. The carbon shield can be combined with all kinds of other copper shields, but should be applied in such a way that it can be easily removed with fingernails when assembling the cable.

The disadvantage of double-D shields is that the shields slip and these cables can easily become knotted if they are embedded under an outer sheath that is too thin.



Instrument cable The Spirit XXL, 1 x 0.75 mm² | Jack / Jack,
HICON (braided shield + carbon shield)

Braided shield

This shield is one of the most common types of shield. It is easy to produce, inexpensive and robust. It can be combined with a carbon shield and with an AL/PT foil, which in this design provides very good protection against NF and HF interference. The AL/PT foil is coated on one side with conductive aluminum and on the other side with stretchable polyester so that the foil does not tear when moved.

A better option is the combination of a weakly conductive fleece and the braid. The fleece makes the cable more flexible, thinner and smoother. The shield density and the pitch angle of the braid are adapted to the area of application of the cable. With flexible cables, the pitch angle of the braid is not as high as with cables for fixed installation.

The disadvantage of the copper braid shield is that it can fray the foamed wire insulation when it moves or bends, and it is very difficult to process in the cable assembly. If the outer jacket is too thin, it can make the cable very stiff and stubborn.

It is often falsely claimed that the combination of copper braid and AL/PT foil provides excellent shielding against electromagnetic interference. But that is not the case in reality. The best EMC shielding is a foil made of MU metal, but this is not often stranded because it is too stiff and too hard and wears out the tools used in the cable extrusion. For this purpose, special cable ducts or MU metal banding are now used in the installation.

www.sommercable.com