More details about DNM Stereo Solid Core cable

DNM Cable Design
At DNM Design we control the ultra-high frequency characteristics of our cables to optimise the amplifier-to-cable interface. This ensures amplifier stability which improves sound quality to a degree that, when combined with DNM single solid core conductors, an ultra-high fidelity cable performance is achieved, providing unrivalled clarity. We have not discovered any other cable at any price that works as well with our much more expensive DNM amplifiers!

Three DNM stereo cables designs are available, all at a modest price.
More details about the conductors and the ribbon are shown in this document.

DNM Solid Core conductors
DNM cables use single round ultra-high purity copper conductors, to ensure that magnetically generated back-emf is truly proportional to the signal, and to minimise eddy currents. The complex transient magnetic field generated by an audio cable is radiated and collected by the copper conductors. The round (cross-section) of the radiation is intentionally the same shape as the conductors in DNM cable, which minimises eddy current formation.
This contrasts with heavy multi-stranded and flat section conductors that can generate untidy eddy currents that scramble the delicate audio signal.

The three DNM Stereo cables, use different conductor diameters to suit the application:-
1mm used in DNM Stereo Solid Core Speaker cable for medium sensitivity speaker applications
0.65mm used in DNM Stereo Solid Core Precision cable for high sensitivity speaker applications
0.4mm for interconnect applications

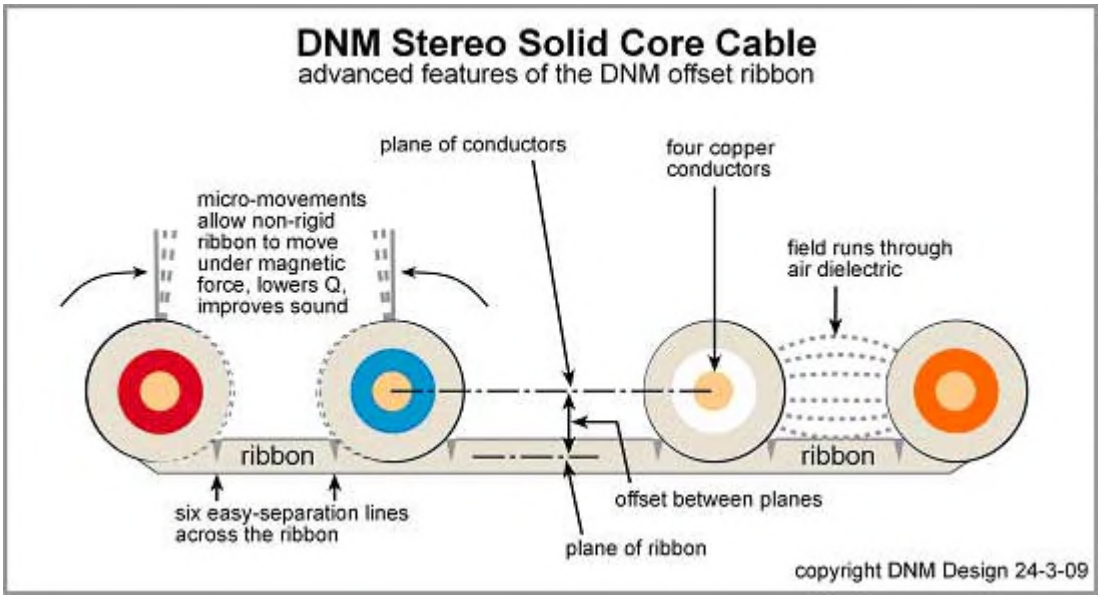
The unique DNM stereo ribbon
DNM stereo solid core cables use LDPE (low density Polyethelene) insulation in a unique ribbon that is designed to improve the audio performance and the ease of cable assembly. The ribbon is easily separated by tearing and the insulation can be stripped from the conductors using heat. DNM Stereo cables are among the easiest to prepare to a high standard and this is confirmed by our £12 labour price to fit the plugs onto a stereo length of cable.

The DNM stereo ribbon is made in three versions, dimensioned for the application. The ribbon contains four conductors to carry two channels, ideal for stereo or one bi-wire channel. The ribbon controls the all-important spacing between the conductors.

Within each channel the spacing defines the RCL balance (resistance, capacitance and inductance) which determines the ultra-high frequency loading, a factor that strongly influences the sound quality of the driving amplifier. Close-spaced or twisted cables have too much capacitance, which can change amplifier sound quality or, in extreme cases, even cause the amplifier to become unstable.

Between the channels the DNM ribbon holds the spacing constant over the distance that both channels are routed together. Keeping the side-by-side spacing constant greatly improves resolution when compared with random cable placement. In the case of the interconnect cable, the stereo ribbon halves the number of separate cables behind the equipment, reducing uncontrolled magnetic interference. In the case of the speaker cable a single ribbon is ideal for use as a bi-wire cable.

The advanced features of the DNM Stereo ribbon



The four solid core conductors are encased in a semi-transparent outer ribbon. This is designed with an offset between its own plane in the base of the ribbon, and the plane of the conductors, as shown in the illustration above.

The offset design gives several key advantages. It causes air to be the primary dielectric, reducing the capacitance between the conductors and increasing linearity. It causes the ribbon to be less stiff in its hold on the conductors.

Carefully selected spacing between the conductors minimises the high frequency reflections that can greatly reduce the performance of the amplifier. The spacing between the conductors keeps the capacitance of the cable low and the inductance reasonably high, so that the amplifier does not see a short circuit at high frequencies. This important design point ensures that DNM cable provides a friendly load for the amplifier to drive.

The easy-separation feature designed into the ribbon helps to make cable preparation easier but it also offers an another advantage, it reduces the tendency for the ribbon to resonate when speaker current causes the conductors to be magnetically pulled together. This reduces the mechanical Q, further improving sound quality.

The advanced features in the three types of DNM Stereo Solid Core cable combine to offer a new level of sound clarity at a modest price.