

## Preparation/Assembly of DNM Stereo Solid Core cables and Directionality

### Directionality of DNM Stereo Solid Core cable

DNM Stereo cables are marked with the DNM name, which also serves to indicate the preferred cable direction.\*\*

Before separating the ribbon it is important to confirm the cable direction (which way round end-to-end the cable should be placed) because once separated, the ribbon cannot be re-joined.

The printed name on the DNM ribbon should read in the direction of the signal flow ie the signal source should be placed at the start of the name **DNM Stereo Solid Core-----**, and the load should be placed at the end of the name.

\*\*note that cable directionality (as heard in listening tests) is caused by an electrostatic charge imprinted into the cable ribbon during manufacturing. The charge interacts with the amplifier's ultra-high frequency feedback detection system in a non-linear way causing a change in the sound of the amplifier. When installed into the hi-fi system the cable will (over time) discharge, so the directionality will gradually diminish.

### Preparing DNM Stereo Solid Core Cable

DNM Stereo solid core cable can be ordered ready to use with plugs fitted, or as a bare cable so you can fit the plugs yourself. In either case it is very important to determine the correct cable direction before separating the ribbon for use. Also note that the cable will generally work best when the ribbon is intact (unseparated) over as much of its length as possible. The stereo cable has four conductors inside the main ribbon and the design of the ribbon plays an important part in the performance. For an explanation of this please read the document linked as "See more information about How DNM Stereo Solid Core Cable works" on the Cable details (more information) page.

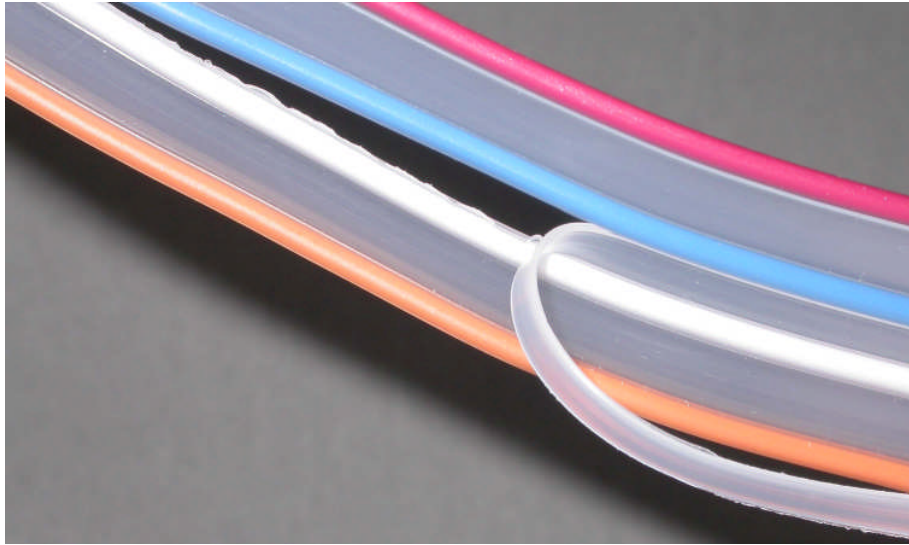
The DNM ribbon is designed to tear cleanly when pulled apart, but if it does not, use a sharp knife to assist in the separation process.

Try to avoid completely separating the left/right channel ribbons, because only the red/blue ribbon has the DNM name confirming its directionality. The DNM Precision speaker cable is printed along the centre section, so again complete separation should be avoided.

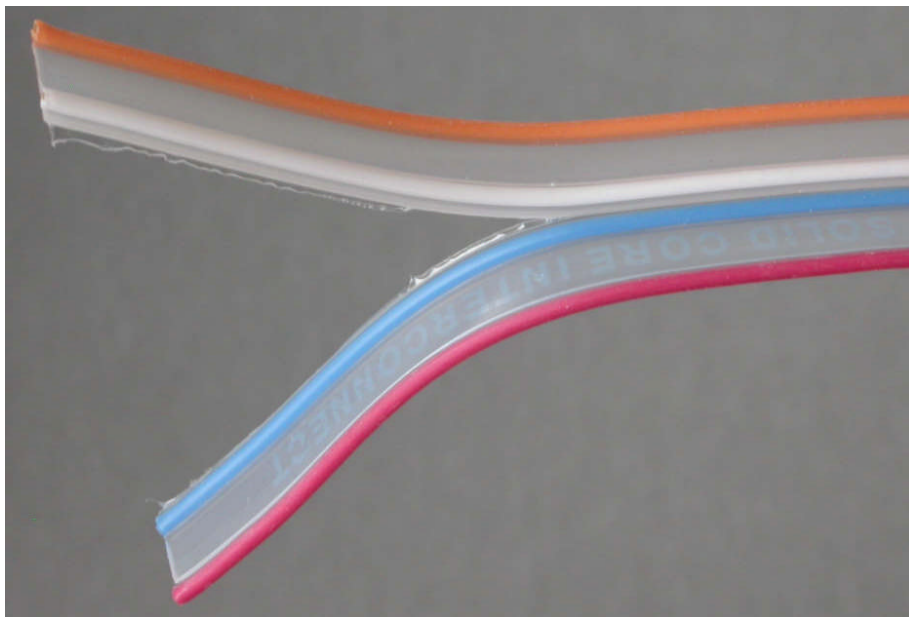
In situations where the ribbon needs to be completely separated over most of the length, for example when the power amplifiers are located between the speakers, so the left/right outgoing cables never run together, find another way of identifying the cable direction. For example keep the initial run of the ribbon intact from amplifier-to-ground with some of the printed DNM name on that section, or mark the ribbon with tape or a permanent marker before separation to identify the cable direction.

The DNM stereo ribbon is designed to be very easy to prepare for soldering and for fitting the connectors. By tearing to separate the centre section of ribbon the main ribbon can be divided into two smaller ribbons, each with two conductors. However bear in mind that the separation of the DNM ribbon is a one-way process, so first confirm the cable directionality as described above.

In the case of the DNM Stereo speaker cable, the centre section of the ribbon has a spacing strip that can be discarded after separation as shown in the illustration below.



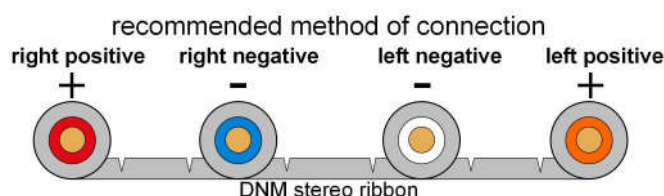
In the case of the DNM Stereo interconnect cable there is no centre spacing strip, the left and right ribbons can be separated as shown in the illustration below.



### The colour coding used in the DNM Stereo ribbon

For Stereo connection the two halves of the ribbon cable carry the left and right channels arranged with the positives on the outside and the negatives (signal returns) on the inside. The colours can be used as required, but the normal DNM colour allocation for unbalanced stereo speaker and interconnect connection is:-

Red Plus+ Blue Minus- right channel      Orange Plus+ White Minus- left channel



### Using the DNM speaker ribbon as a single run Stereo speaker cable

A suggested cable layout for connecting stereo speakers with a single run of DNM Stereo Solid Core Speaker cable is linked as “illustration” on the cable details (more information) page

The arrangement shown allows equal cable length for both channels without coiling the shorter cable run, which can be damaging for sound quality.

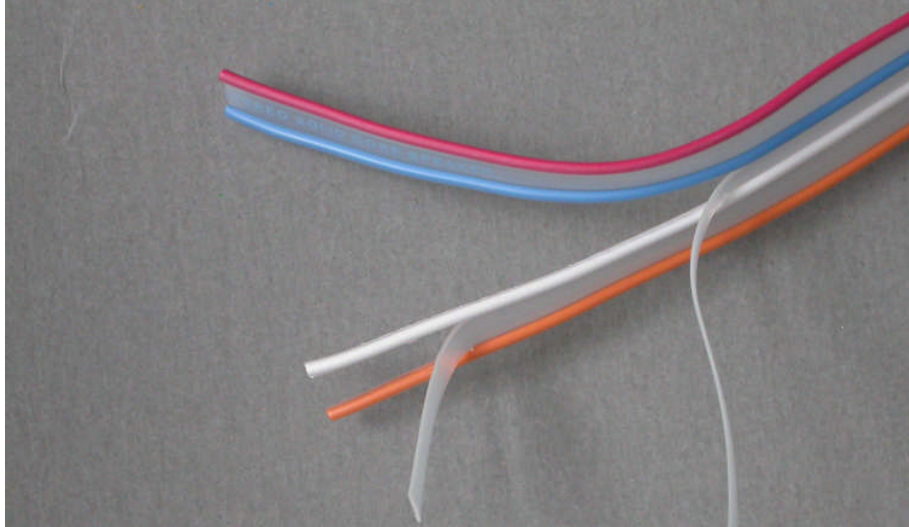
### Using two DNM ribbons to Bi-Wire or Bi-Amp speakers

The four conductors in the DNM ribbon can be used to make the four connections to each (four terminal) speaker enclosure, giving the added advantage that very little separation of the left and right ribbons will be required. For this application two runs of DNM Stereo cable will be needed to connect a stereo system so where the two ribbons must run side-by-side a minimum separation of 5cm (2 inches) is recommended to avoid sound damaging magnetic interaction.

Opinions vary on the merits of bi-wiring. DNM Stereo cables intentionally have a very low capacitance- typically 15pF/metre. Bi-wiring typically doubles the capacitance seen by the amplifier, which can adversely change the performance of the system. We therefore recommend trying single wiring first and then using that test result as a reference against which to compare the effect of bi-wiring. This precaution does not apply to bi-amping, because each amplifier sees only one cable load.

### Separating the ribbon

The conductors in each channel (each half of the ribbon) are designed to be very easily separated from the ribbon to allow fitment of the plugs, as shown below

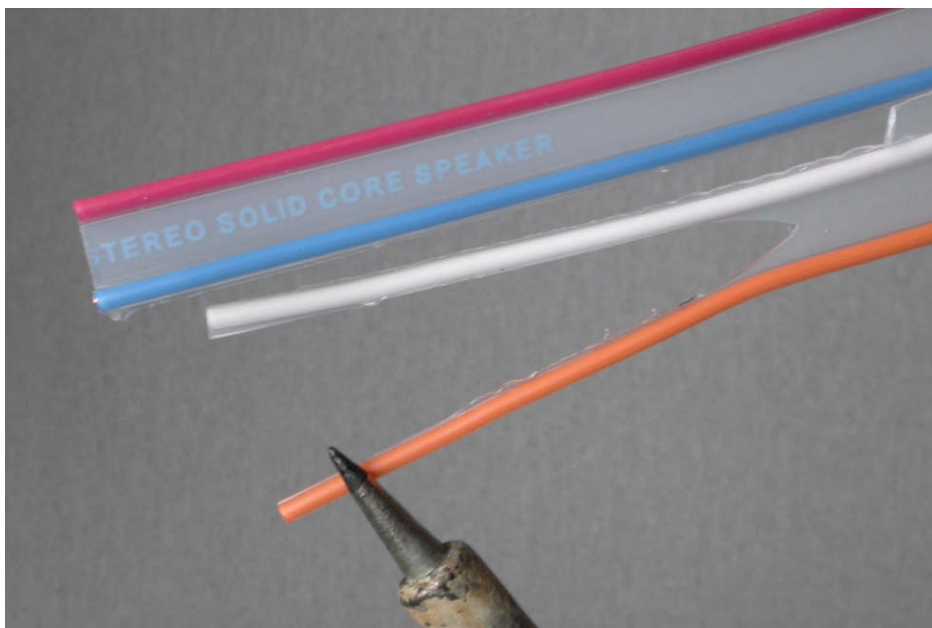


### Stripping the insulation

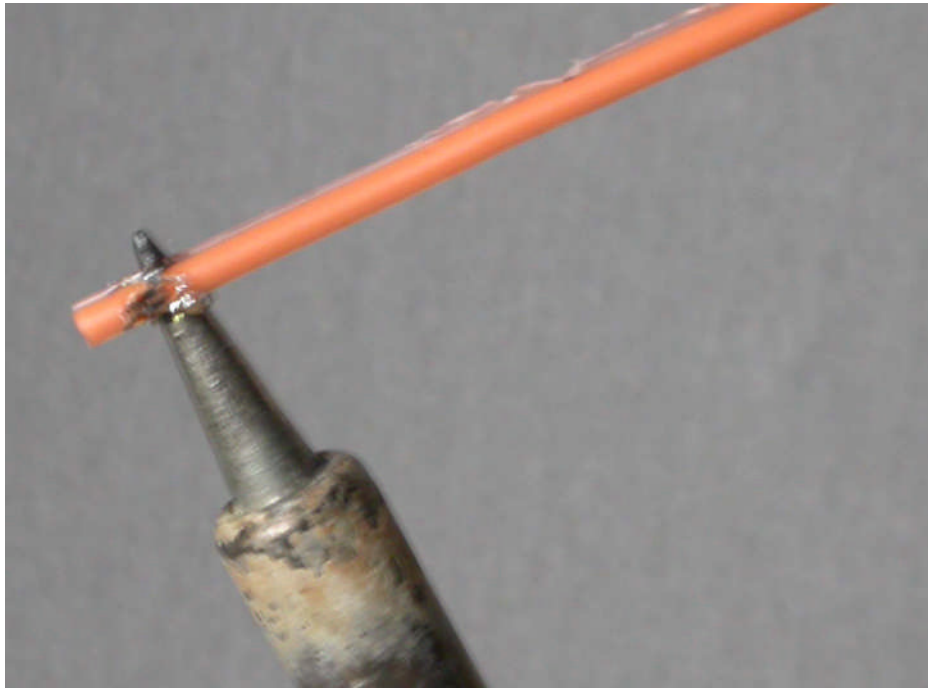
Mechanical wire strippers will damage and stretch the soft copper conductors in DNM cable, so do not use them. Instead we recommend using heat to strip the insulation, which melts the insulation rather than tearing and stretching it.

If a heated wire stripper is not available then an ordinary soldering iron can be used, ideally at a temperature of 290-300 deg C, or at full soldering temperature if the fumes from the plastic can be safely dispersed.

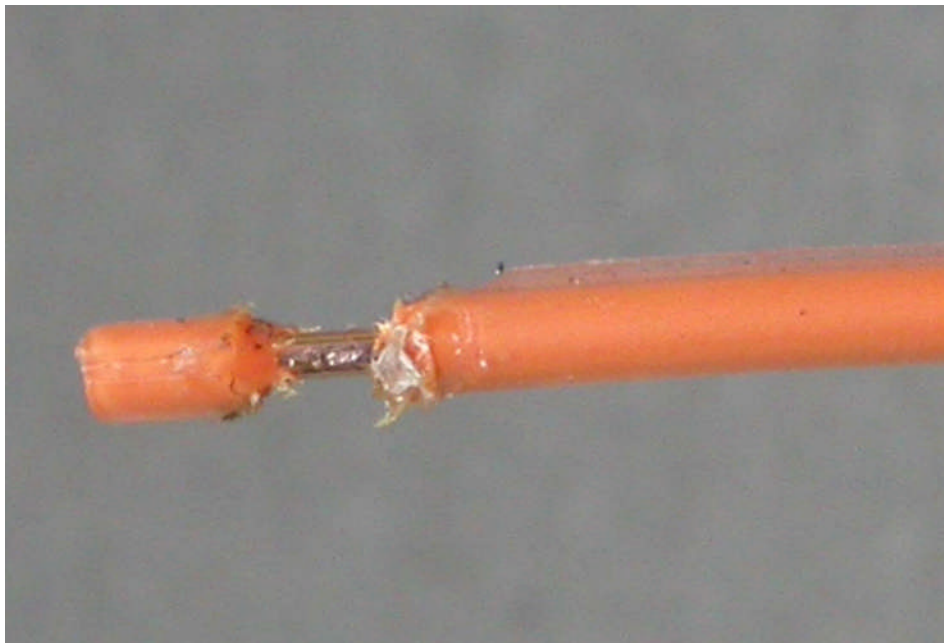
To strip the insulation simply apply the soldering iron tip to one side of the inner insulation until the insulation melts as shown below



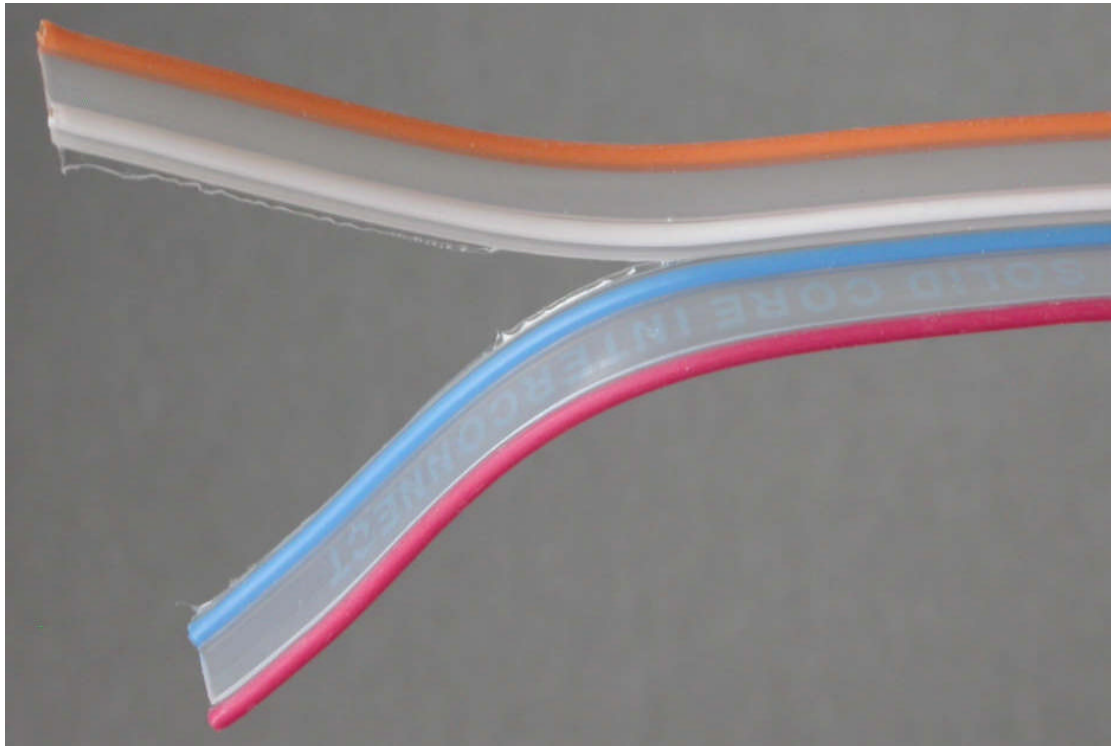
Then immediately apply the soldering iron to the opposite side as shown below



Before it can cool, gently pull the separated insulation which will easily slide off leaving the copper conductor undamaged as shown in the next illustration. Tin the exposed copper immediately before it can oxidise.

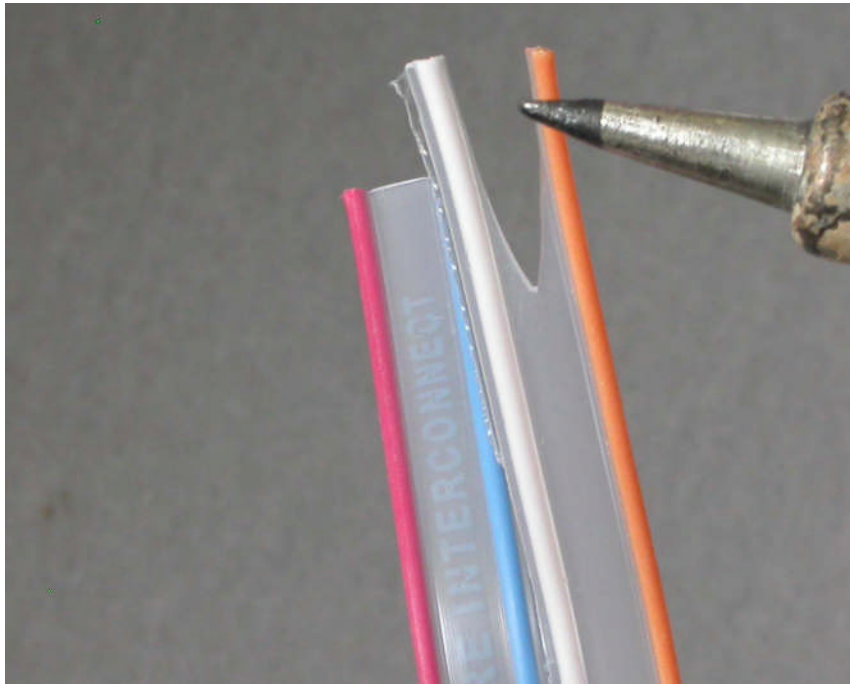


DNM Stereo Interconnect cable should be prepared in a similar way to the speaker cable, but note that the interconnect does not use a central strip of ribbon to space the left and right channels.

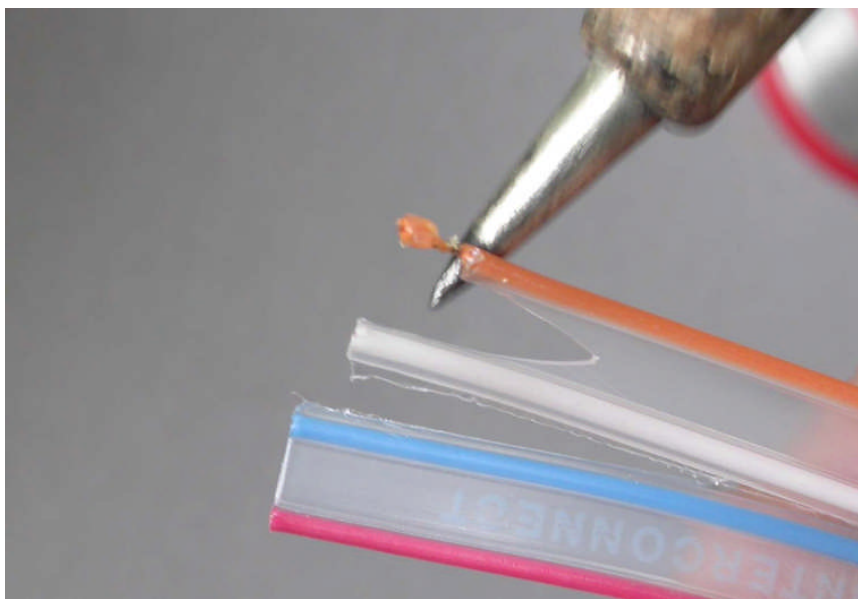


Like the speaker cable, the stereo interconnect conductors are designed to be tear separated from the ribbon, making the cable preparation quick and easy. Again heat is the only sensible way of stripping the insulation from the delicate 0.4mm diameter conductors and it should be applied by heated wire strippers or a soldering iron, as shown for the speaker cable.

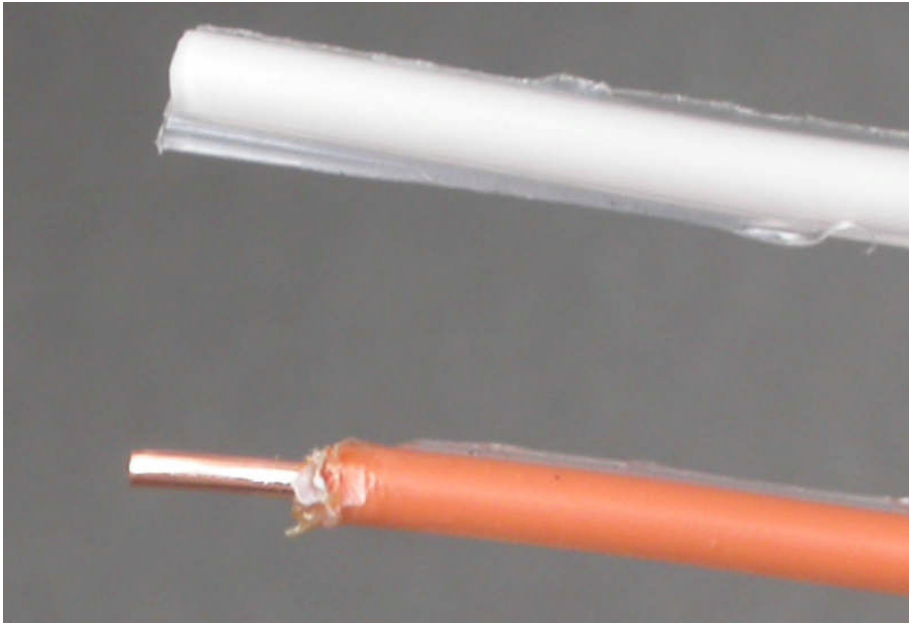
First heat the top of the cable at the correct position



Then quickly apply heat to the opposite side



Before it can cool pull off the separated end of the insulation which will slide off easily leaving a clean copper conductor ready to be immediately tinned.

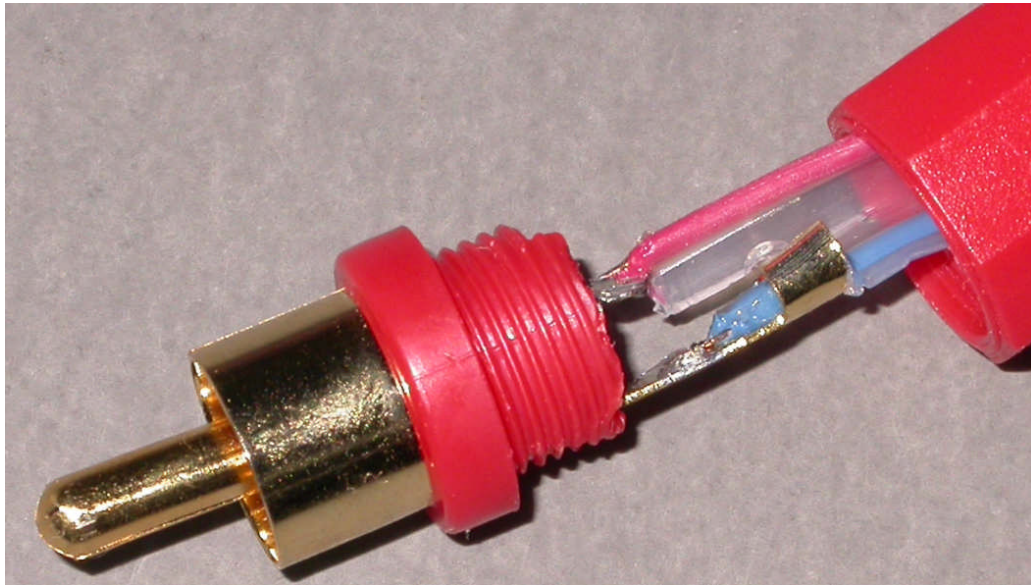


The illustration below shows the DNM Stereo interconnect cable prepared, tinned and ready for the plugs to be fitted.

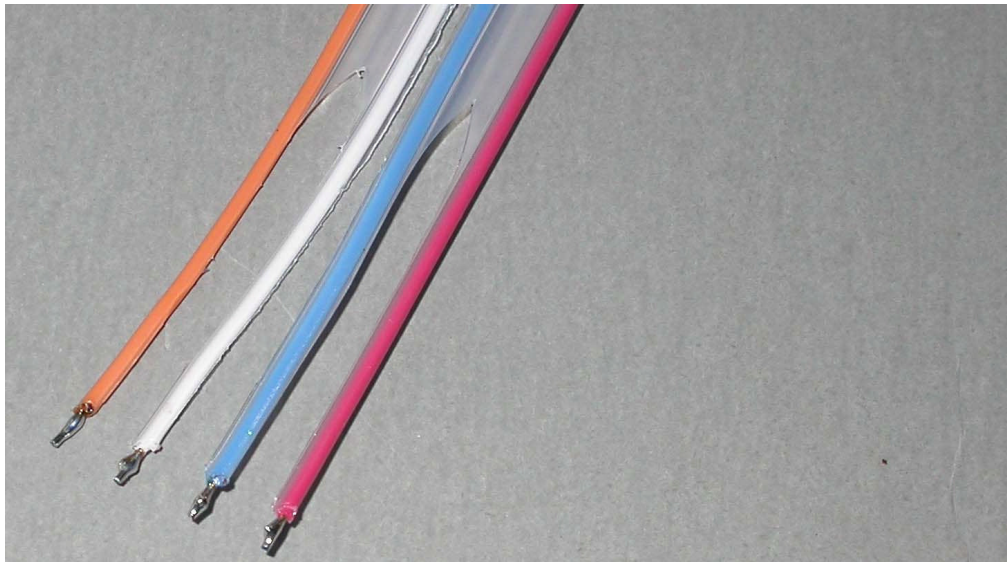


### Fitting the Interconnect Plugs

One of the DNM High Performance phono plugs is shown below, fitted onto the right hand channel (red/blue conductors) of the cable.

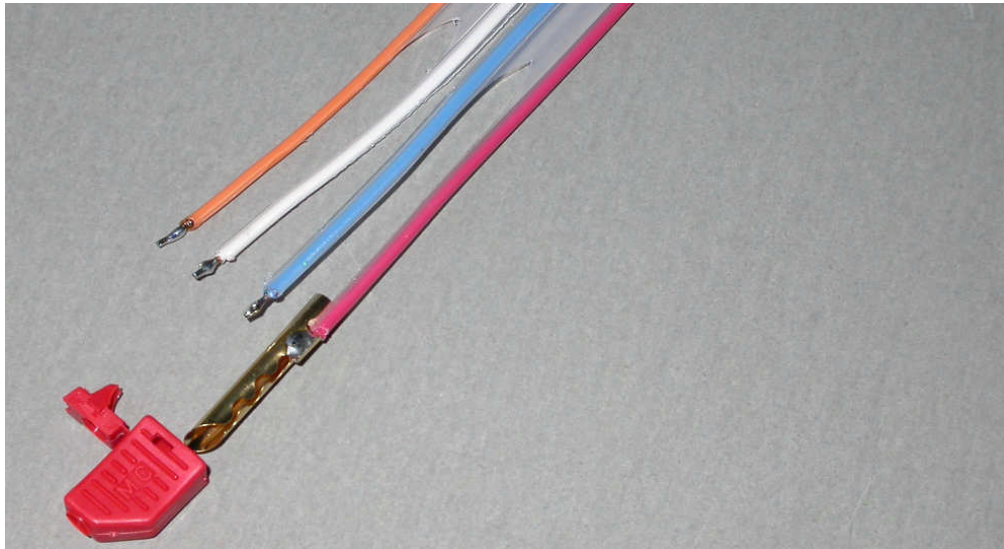


The prepared and tinned DNM Stereo Solid Core speaker cable is shown below.



One of the leaf-type 4mm speaker plugs is shown below soldered to the red conductor, with the red insulated cover lined up to fit over the plug. Because the red insulated cover fits over the outer end of the cable, it is not necessary to remember to fit it over the cable in advance of soldering.

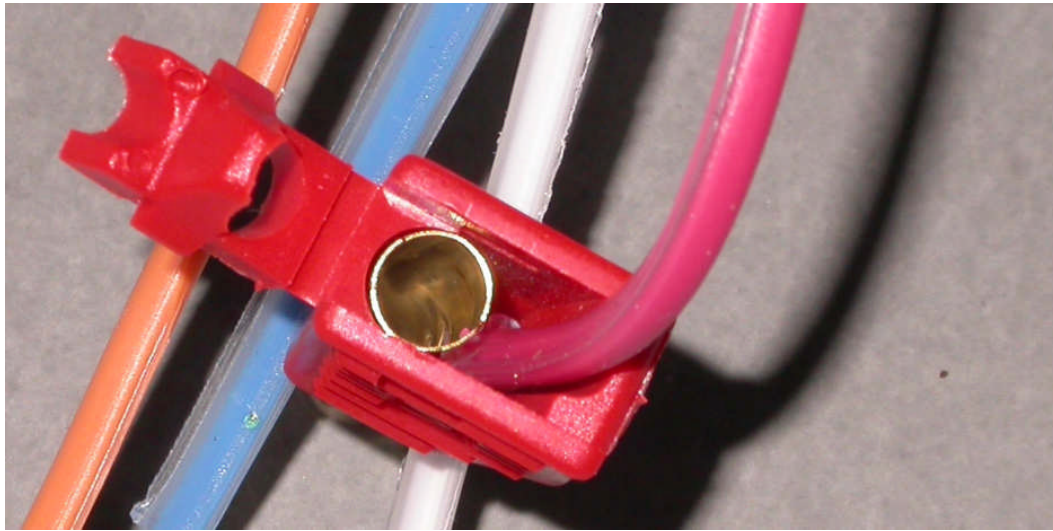
## Fitting the 4mm leaf-type speaker plugs



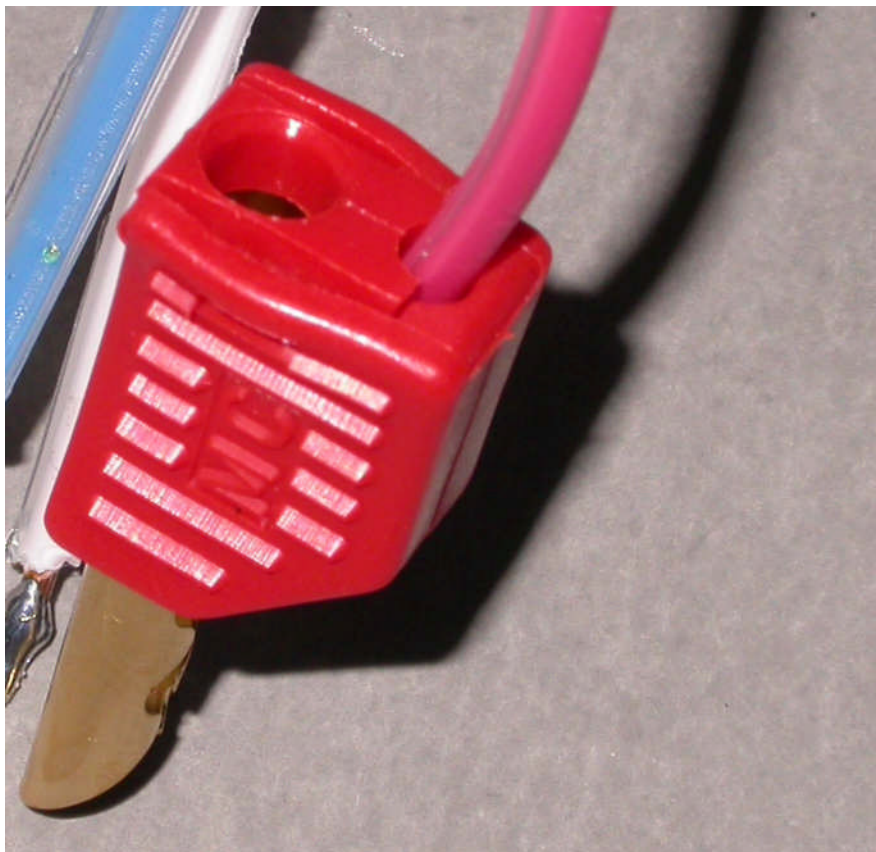
The leaf-type plug is dimensionally suited to the DNM stereo cable, the view below shows one of the gold plated 4mm plugs half inserted into the cover assembly.



Below is a rear view before the speaker plug cover back is folded closed.



The view below shows the fold-in cover almost fully closed. When fully pressed in it snaps into place.



The view below shows how DNM Stereo cable's ideal conductor size allows the 4mm leaf-type plugs to be stacked back-to-back, allowing bi-wiring without the need to solder two conductors into one plug at the amplifier end-- as is normally required when the power amplifier has only one set out output terminals per channel.

