

Guide to assembly of Duelund 0.5 interconnect by Chris Bell



Figure 1 Duelund 0.5 Cable with WBT Copper Phono Plugs

If you haven't put together a cable before, your first step should be to do nothing or rather **STOP**. This well-known acronym is essential when facing emergency or survival situations but it can be equally useful when applied to any DIY project.

Stop—don't rush into doing anything because you need to

Think—about how you are going to approach the project, what tools to use, where you are going to carry out your work.

Observe—look at the kit, the instructions and your tools.

Plan—work out in your mind or on a piece of paper the best way of approaching the task and think ahead to any consequences arising from your work.

Some of you might think this is overdoing things a bit but patience and planning improves listening.

Tools you will need

Sharp pair of good quality wire cutters

Scalpel or sharp blade

Soldering iron 25W

Dentist's probe (good for hooking onto wayward wires and pushing things into place)

Solder

Isopropyl Alcohol

Heat gun

Small vice or clamp to hold plugs whilst soldering

Multi-meter

Kit Contents – all parts supplied in kit

4 Equal lengths of Duelund 0.5 wire

2 x red, 2 x white WBT-0110 Cu Topline Nextgen RCA/phono plugs (copper) or

2 x red, 2 x white WBT-0110 Ag Signature Nextgen RCA/phono plugs (silver)
10cm 9.5mm black heatshrink
10cm 9.5mm red heatshrink
20cm clear 4.8mm heatshrink
50cm 3.8% silver mundorf solder
20cm strip of plastic

Instructions—There are several ways you can arrange the wires between the plugs: a) let the wires hang loose and parallel with each other, b) place the wires in a plastic outer jacket parallel with each other, c) pass the wires across each other along their length. Arrangements a) and c) are considered first.

1. Cut your four pieces of cable to the required length.
2. Using a sharp blade, remove approximately 5mm of the insulation from the ends of each wire.
3. Use a cloth and the isopropyl alcohol to remove the brown oil residue from the silver conductors.
4. Tin the finished ends on both sides with silver solder.
5. Insert a 4cm length of the smaller heat shrink plastic over each of the wire ends, leaving 1.5cm of uncovered wire between it and the end of the wire. Use the heat gun to shrink each of these in turn.



Figure 2 Clear heat shrink applied

6. Take two of the conductors and arrange them so that these plastic-covered flat surfaces are pressed against each other.
7. Make sure that the bare conductors overlap each other as much as possible, which means they should be centrally located. This is just to align them better with the WBT plug terminals.
8. Cut three 4cm lengths of heat shrink in red and thread the first over the abutting wires. Allow 1.5cm of clearance between the beginning of this heat shrink sleeve and the end of the cleaned wire. Use your heat gun to shrink this.

Now repeat this procedure with each of the other two 4cm lengths of plastic heat shrink.



Figure 3 Heat shrink is applied as with Duelund 2.0 shown here

9. This should be repeated for the other cable.
10. Whilst carrying out these steps make sure the wires are not allowed to wave about which might allow the cables to work free of the heat shrink's grip.
11. Take each of the WBT plugs and tin their contact with a generous amount of solder.
12. Insert, carefully, one of the cables (heat shrink end) into the WBT plug, making sure you have gently pushed one of the conductors up and the other down so they will meet the plug's terminals.
13. **CAUTION:** The terminals on the silver WBT are softer than their copper terminals so push down on the silver foil with care or you will bend them. The WBT terminals are gutter-shaped, so to allow the flattened wires to drop into them they should be twisted slightly lengthwise so one of the edges is pointed down into the groove. With the end of a fine screwdriver or blade, gently push the silver foil wire into position and apply the soldering iron to the wire. As the solder melts you should see the wire sinking into the solder in the groove. Repeat this procedure for the other terminal and then the other wire.



Figure 4 WBT Silver Plug with Duelund 0.2 wire soldered in place

14. You can allow the wires to run parallel with each other as they pass to the plug at the other end or you can carefully pass them across each other to inhibit RF interference (see picture below). **Note** that these wires are not being twisted around each because they will only significantly bend in one plane which means their flattened surfaces are kept facing up at all times.



Figure 5 Wires passed across each other, flattened surfaces uppermost

15. If you wish to fold the wires as above then for a 0.8M cable length you should find that the wires cross each other with ease just seven times. The wires will have a wavy appearance and this is how they should be to allow the wires to wrap around each other.
16. Now repeat the heat shrink method (as in step 8) to the other end of the cable but this time use the black plastic. This allows you to have one red end, which can be attached always to your source component; in fact the design of the cable is such that it is not directional but some people like to keep the electrons flowing in the same direction.
17. Using your multi-meter, check which of the terminals is the signal conductor and solder this in place to the central pin of the matching WBT plug. The plugs are colour coded so you should have two in red and two in white.
18. Repeat with the other cable and check once again with your multi-meter that there are no short circuits.
19. Allow the wires to carry a signal continuously for a couple of days before any serious listening. Just as a precaution, to make sure you haven't any short circuits, it is always a good idea to use the cable first between cheap components. Enjoy.

Placing the wires in a plastic outer jacket



Figure 6 Two Duelund 0.5 wires side-by-side sandwiched between white plastic strips ready for application of heat shrink sleeve

The concept behind the Duelund wires is to avoid plastic altogether, because it encourages static charges which affect the sound. However, if you wish to put the wires in a jacket, then lay the two wires side by side and thread them into the flattened jacket. The two wires remain side by side surprisingly well during this procedure. You can then go to step 5 above and carry out the rest of the procedures but use the wide heat shrink to cover the outer plastic jacket to tether it. Or you can do what I did, in the picture above, which was to sandwich the two wires and the plastic jacket between 3cm lengths of plastic and then cover these with the heat shrink plastic. This holds the wires firmly side by side and encases the outer jacket. These ends will pass into the WBT plugs, but there is not much room for error and I was using 2mm thick plastic. You could use wood, which would be more in keeping with the Duelund design philosophy.



Figure 7 Duelund 0.5 Cable with outer jacket

For questions or suggestions please contact Chris at chris@gabelmedia.co.uk