

# How to Make a 15-to-9-Pin Multi-Strand Shielded Cable

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## Goal

Build a 6-foot DB-9(female) to DB-15(male) shielded multi-strand cable.

## Necessary Materials

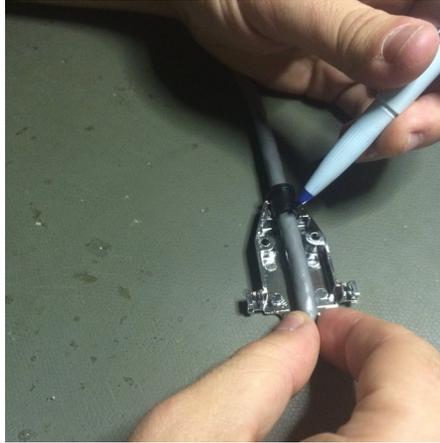
1. Approximately a 6-foot shielded multi-strand cable.
2. A female DB 9-pin connector and male DB 15-pin connector as shown below.



3. Shells for each connector.
4. 2 tight strain reliefs (short thick black tubing).
5. Corresponding nuts and bolts for clamping the shells.

## Step 1

Add the black strain relief tube to the cable, and note its position wedged in the first indentation of the shell. Pull the cable forward enough so that when the top part of the cable is stripped, the wires will reach the pins. Mark the cable where the top part of the cable will be stripped.



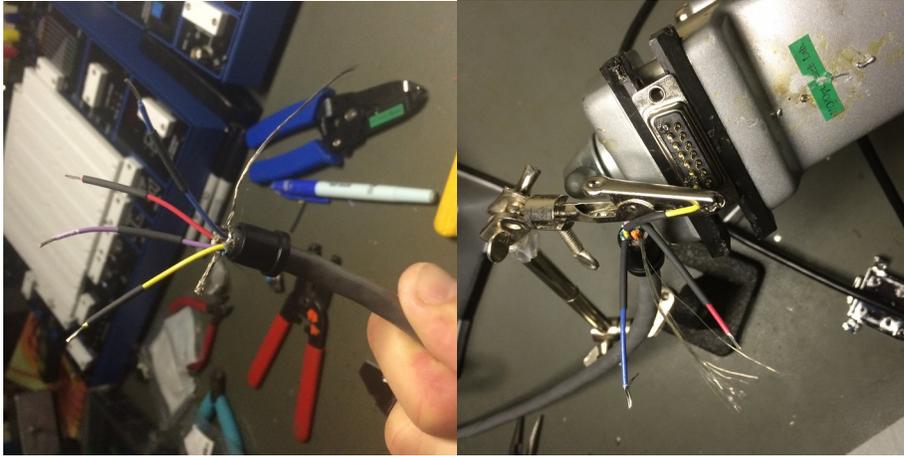
## Step 2

Start with one end of the cable that will be connected to the 15-pin DB. Strip the cable's plastic outer layer. Underneath the plastic is a braided metal layer. Take off most of the fiber layer, but keep enough strands to make a connection for ground.



### Step 3

Peel off the remaining metal foil layer to find the multi-colored wires. Add around 5 mm of heat-shrink tubing to each of the wires (the picture shows too much heat-shrink tubing). Next, strip off the tip of each colored wire's plastic wrap so that the wire can be soldered.



### Step 4

Find out which pins of the 15-pin connector need to connect respectively to those of the 9-pin connector (make an appropriate pin to pin mapping between the connectors). Then make up a color-code system so that the colored wires will each go to the 9 and 15-pin connectors appropriately. Your map might end up looking something like this:

Wire Color	DB-9 PIN	DB-15 PIN
YELLOW	2	7
RED	3	8
PURPLE	4	2
BLUE	5	4

## Step 5

Now solder each wire to the corresponding pin input. The best technique is to get the two connection parts hot first, and then add the lead-based solder. (MAKE SURE YOUR HEAT-SHRINK WRAP IS STILL ON EACH WIRE, PUSHED BACK).



## Step 6

Pull the heat-shrink wrap over the connection points. Use a heat gun to shrink the wrap over the connections. If metal wire is showing, then to prevent possible shorting, wrap the exposed parts in electrical tape.

## Step 7

Repeat the above process for the 9-pin connector.

## Step 8

Now the cable can be tested to ensure proper function before the shells are put on. Test the cable to ensure it works as expected.

## Step 9

If the cable works, then add corresponding shells to each pin connector. Make sure that the strain reliefs are tight in the back so there is no wiggle room.

