How to Solder 1/4" Stereo Connectors (TRS)

Sleeve — 1/4" TRS Connecto — Tip — Ring

One type of Shielded, 3-Wire Cable

Inner Sleeve — Handle — Connector
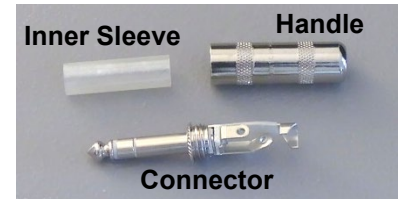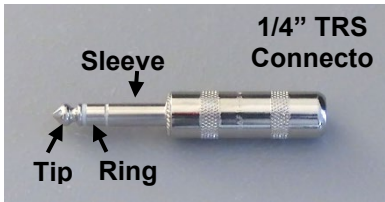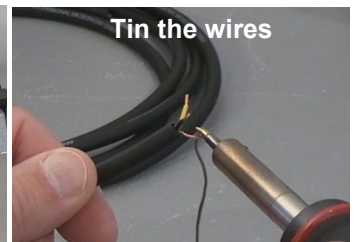
First follow Steps 1 - 5: 1) Clear the Work Area. 2) Turn on the Soldering Iron, Fan, Wet the Sponge. 3) Set up your Vice. 4) Ready the Solder, and Most Importantly 5) Put on your Safety Glasses Now!
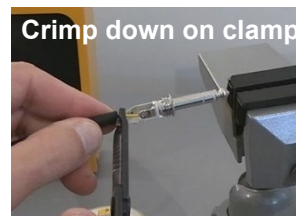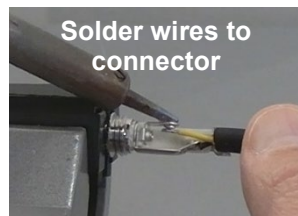
1. <u>Prepare the Cable and Connectors:</u> The preparation of the cable and connectors go hand in hand (so they are combined in this step).

   a) Determine the cable length you need – roll the cable up slightly.
   b) Take the connectors apart.
   c) Slide the connector handles (and inner sleeves) on each end of the cable, <u>and</u> in the correct orientation. Do not skip this step or you will have to un-solder your connections to get the handles and inner sleeves on later.
   d) Place the 1/4" TRS connector in the vice. Be careful not to over tighten the vice on the connector.
   e) Move the "plastic flap" out of the way, and then Tin the connector leads.
   f) Prepare both cable ends by stripping the cable jacket back, and then stripping the wire ends to pre-determined lengths (size the wires up to the connector).
   g) Twist the wire strands together as needed – then Tin the wires on the ends of the cable.

Take the connector apart

Move flap out of the way

7. <u>Soldering:</u> It's now time to solder the wires to the connector. First, "manipulate" the three wires so that they line up with the connector leads. Then with the connector firmly in the vice, hold the end of the cable and solder the "Shield" wire onto the "Sleeve" connection, then the "Black" wire onto the "Ring" connection, and finally the "Yellow" wire onto the "Tip" connection.

Tin the connector leads

Tin the wires

Pin configuration: Tip = Hot, Ring = Common, and the Sleeve = Shield or Ground

Manipulate the wires

Solder wires to connector

Crimp down on clamp

Handle on the connector

Once you are finished soldering the wires to the connector, use needle nose pliers to crimp down on the cable clamp (tighten the clamp over the cable – clamp down gently, don't pinch the cable jacket). Then move the plastic "Flap" back in place. Next, slide the handle and inner sleeve up the wire and twist the handle on the connector (the handle should "twist" on the connector very easily, if not, there may be a problem with the connector). Now that you have completed one end of the cable, it's time to solder a connector to the other end of the cable – follow the same steps as performed above.

<u>All finished:</u> Test the cable/connectors, and wrap the cable (as shown on website). This type of cable is a little challenging to solder at first, but with some extra practice, it will get easier. The 1/4" TRS connector is used with many audio-related "Patch" cables but is most recognized as the connector used on headphones. **Video Clip!**

AVCSS Tech World
Basic Audio & Technical Information

avcsstechworld.com