How to Solder a 1/4" Mono "TS" Connector – Guitar, Bass Guitar Cables

Tip **Sleeve**

1/4" Mono Connector
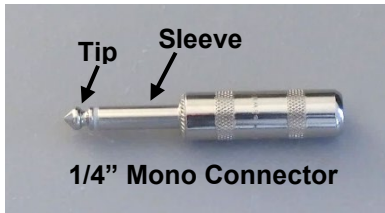
One type of Shielded, 2-Wire Cable.

Note: You can also use a 3-Wire Cable and "Twist" the "Black and Shield" wires together.

Inner Sleeve **Handle**
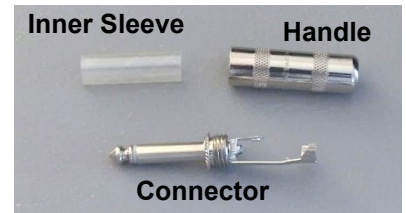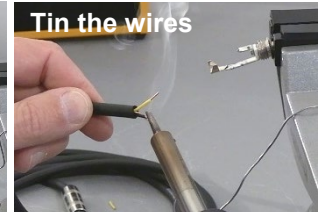
Connector

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!

6. **Prepare the Cable and Connectors:** 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, **and** in the correct orientation. Do not skip this step or you will have to un-solder your connections to get the handle and inner sleeve on later.
   d) Place the 1/4" connector in the vice, do not over-tighten.
   e) Tin the connector leads (see "What is Tinning" on Page 94 as needed).
   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 connectors). Note: If using a 3-Wire Cable – Tie the Black and Shield wires together as shown in the Video (both wires can be used for the Shield).
   g) Twist the wire strands together as needed, and then Tin the wires on the ends of the cable.
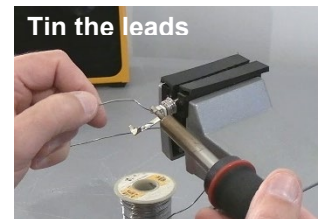
7. **Soldering:** It's now time to solder the wires to the connector. First, "manipulate" the wires so that they line up with the connector leads. With the connector firmly in the vice, hold the end of the cable and solder the "Shield" wire(s) onto the "Sleeve" connection and then the "Yellow" wire on the "Tip" connection.

Take connectors

Tin the leads

Strip jacket and wires **Tin the wires**

Pin configuration: Tip = Hot, Sleeve = Common

Manipulate the wires **Solder wires to connector** **Crimp the cable 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 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. Un-twist the handle and check the connector. Once 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.

All finished: Test the cable and connectors, then wrap the cable (see website). Although the 1/4" mono TS connector is mainly used as guitar/bass guitar/instrument cables, it was used on unshielded/twisted pair cables for older speaker connections. The 1/4" Mono TS connector is also referred to as a "phone" plug (as it was initially designed to be used with telephone switchboards). **Video Clip!**

AVCSS Tech World
Basic Audio & Technical Information

avcsstechworld.com