



# How do you solder wires onto piezo benders?

## Soldering Wire to Piezo Benders

### Equipment required:

Temperature-controlled soldering iron  
PbSn or Pb Free solder 0.020" (0.5 mm) diameter  
rosin core solder  
Kester 1544 flux or equivalent  
28 to 32 AWG stranded wire  
Isopropyl alcohol

### Soldering Procedure:

Pre-heat soldering iron to 300°C (572°F).

Strip approximately 5/32" (4 mm) of insulation from the wire and tin the lead with solder.

Apply a small pool of liquid flux near the ceramic surface's outer edge and add a small dot of solder with the soldering iron for a maximum of 0.5 seconds.

Lay the tinned wire on the solder dot and position the wire for desired orientation.

Apply the soldering iron to the wire, and solder the connection for no more than 0.5 seconds, reflowing the solder onto the wire to complete the solder joint. Do not add additional solder unless the wire strands are not adequately covered by solder.

Repeat this procedure for the wire to metal substrate connections including the metal substrate of the bender. Try to keep all connections close together and observe the same lead lay as before.

Clean the flux off all connections with isopropyl alcohol.

Visually examine each joint. The solder connection should be smooth and bright with no cracks or crazing.

Discard the bender if the joint on the ceramic fails by lifting off the silver coating of the bender. **DO NOT** solder to another spot on the ceramic surface - the performance and life of the bender will be degraded. The metal connection can be resoldered as required.



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