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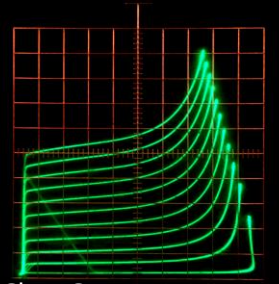
Convert a Shure PGA31 Cardioid Headset Microphone to the RØDE Wireless System

Why do I use a headset microphone?



- I make my videos in a noisy environment
  - Most of my test equipment and some of my computers have noisy fans
  - My location is subject to unpredictable street noise
  - I have poor sound insulation in my lab (garage).
- My solution is to make my voice louder than the other sounds by putting the microphone closer to my mouth
  - I move quite a bit while working on equipment so a fixed mic will not work
  - Normal lavalier microphone placement is not close enough and picks up to much noise from the test equipment fans

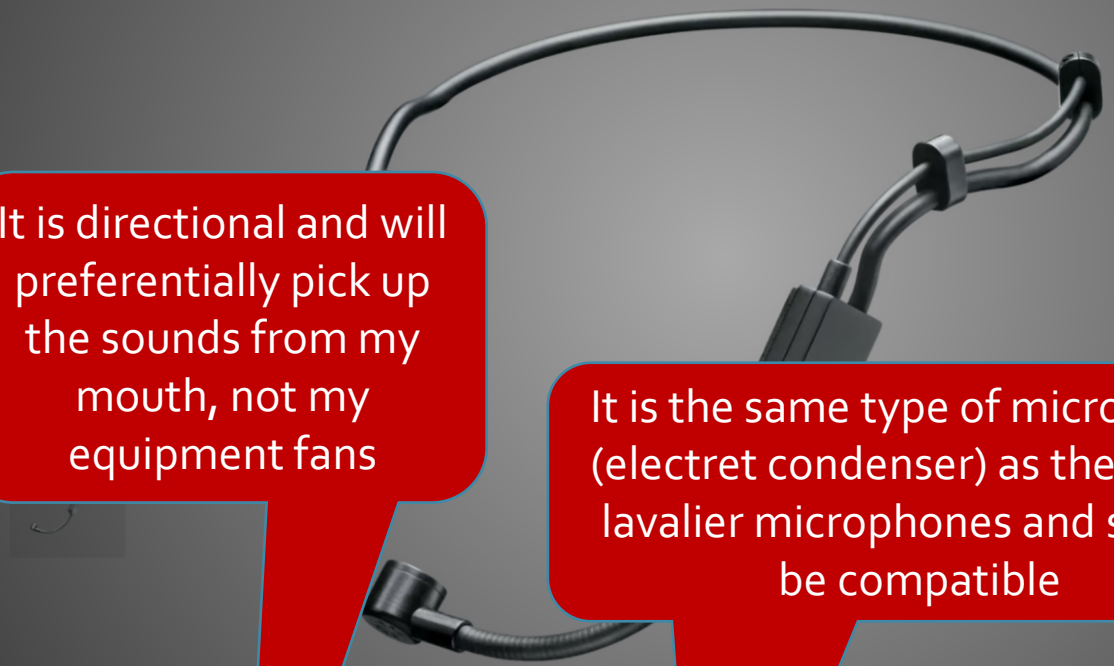
A headset microphone is the best solution for me

RØDE Filmmaker with optional headset adapter for lavalier microphones

SHURE PRODUCTS MICROPHONES WIRELESS EARPHONES HEADPHONES IN-EAR MONITORING CONFERENCING SOFTWARE DSP, ROUTING & MIXING LOUDSPEAKERS ACCESSORIES SHURE MERCHANDISE

SPECIAL OFFERS 0

PGA31 EXPLORE RELATED PRODUCTS REVIEWS SUPPORT TECH PORTAL ADD TO CART



It is directional and will preferentially pick up the sounds from my mouth, not my equipment fans

It is the same type of microphone (electret condenser) as the RØDE lavalier microphones and should be compatible

PGA31

Headset Condenser Microphone

SKU: PGA31-TQG

Reasonable!

$49.00

Get it by Mon., Sep. 25 when you order within 10 hrs. 37 min.

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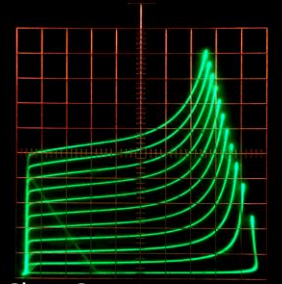
OVERVIE DETAILS

Cardioid headset condenser microphone offers clear and reliable hands-free audio at an affordable price. Features include a permanently-charged electret condenser element, flexible gooseneck, tailored frequency response TA4F (TQG) and a windscreen

It uses a proprietary connector that only works with the Shure wireless system

RØDE Filmmaker Block Diagram



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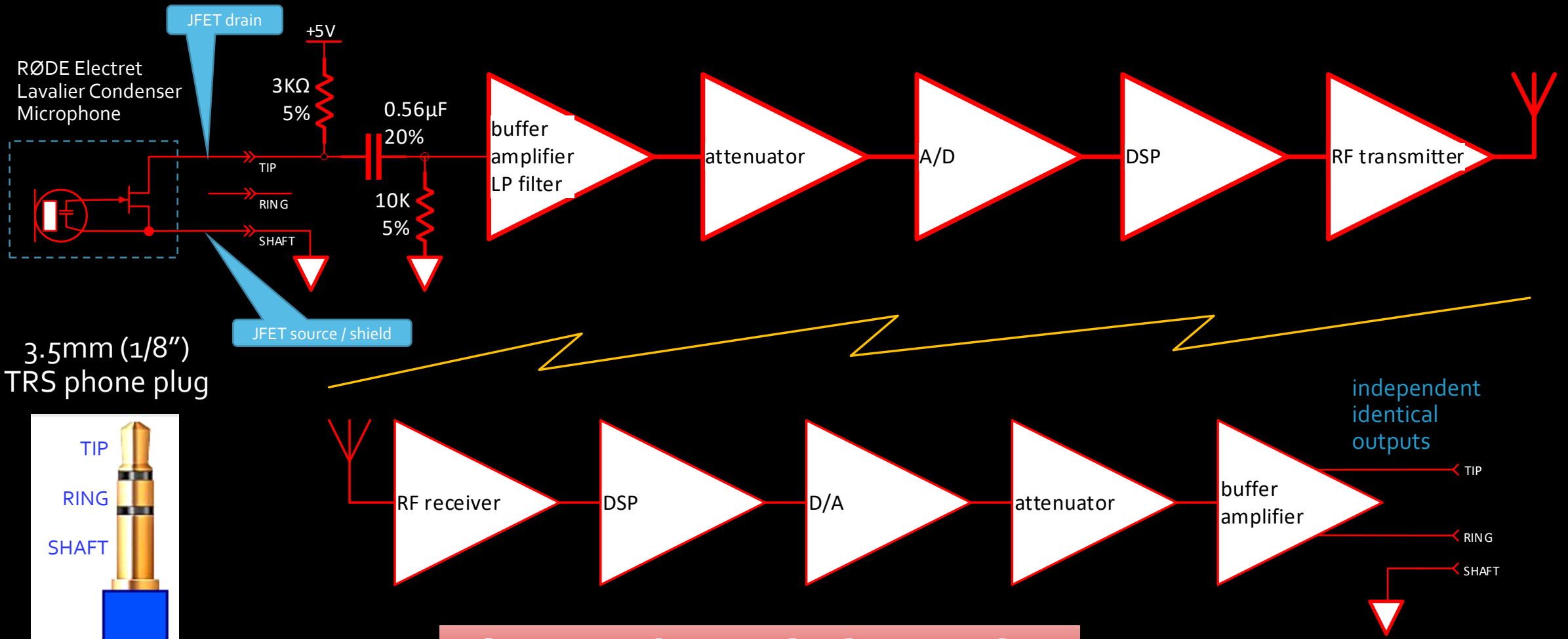
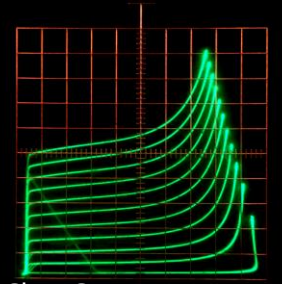
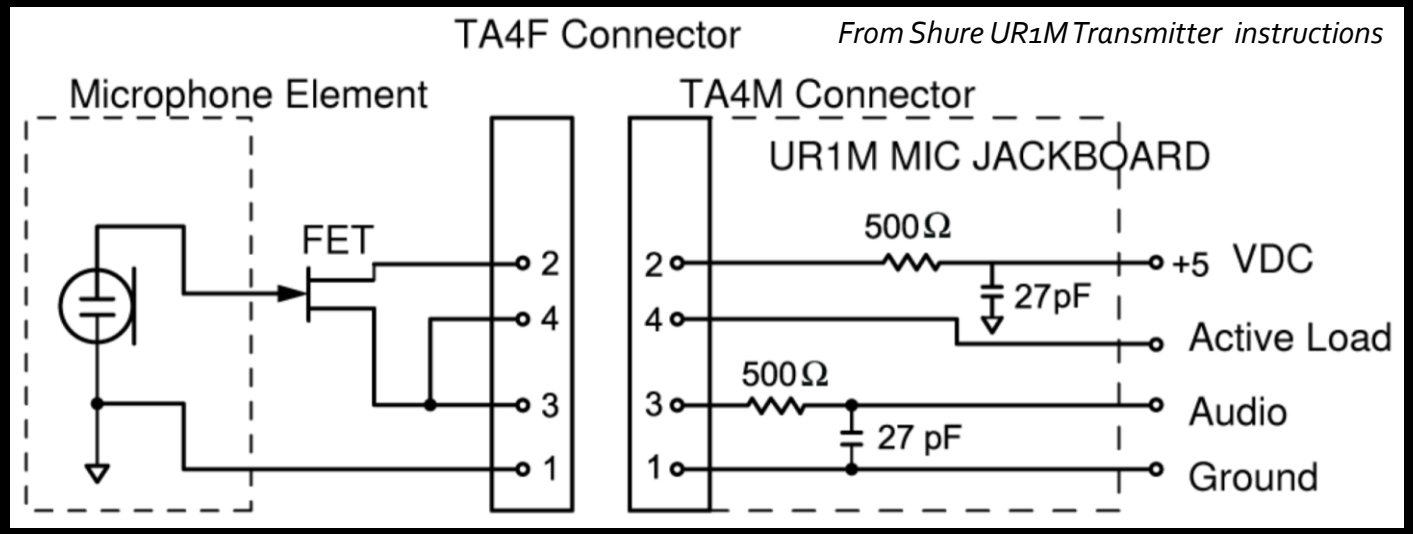


electronics gain is 1 (odB)

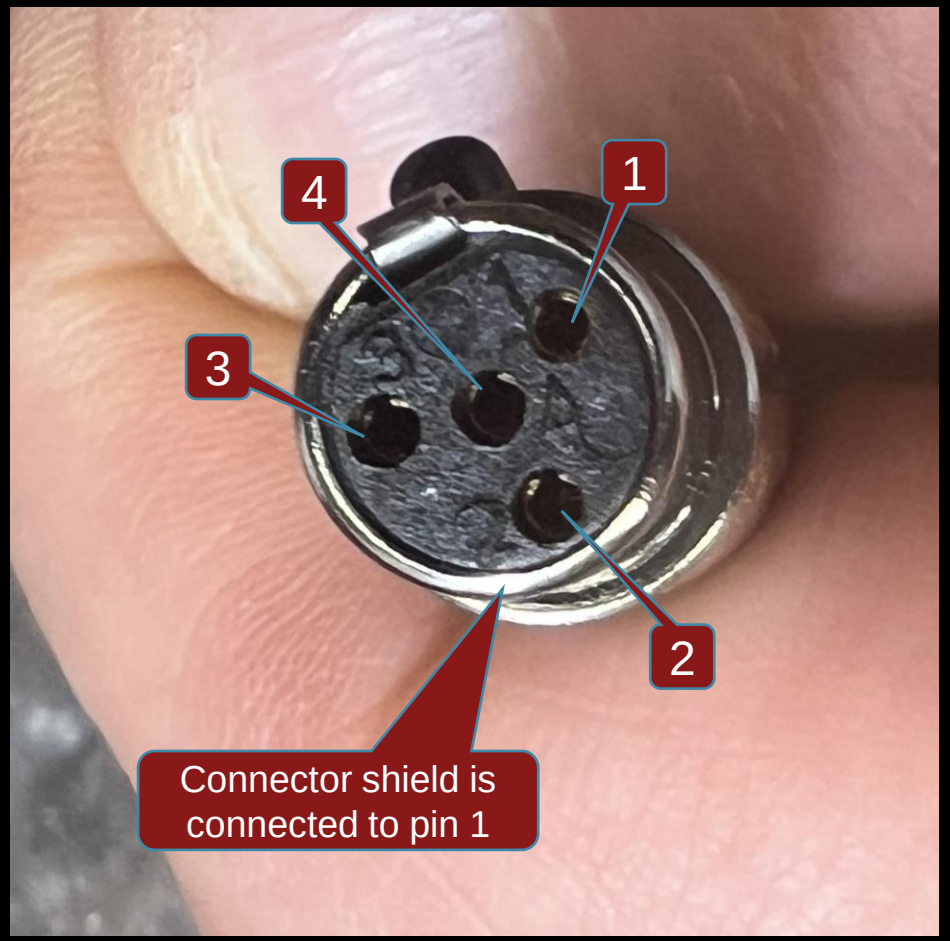
Shure TA4F Connector Wiring



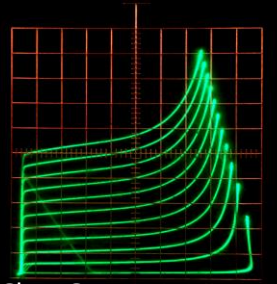


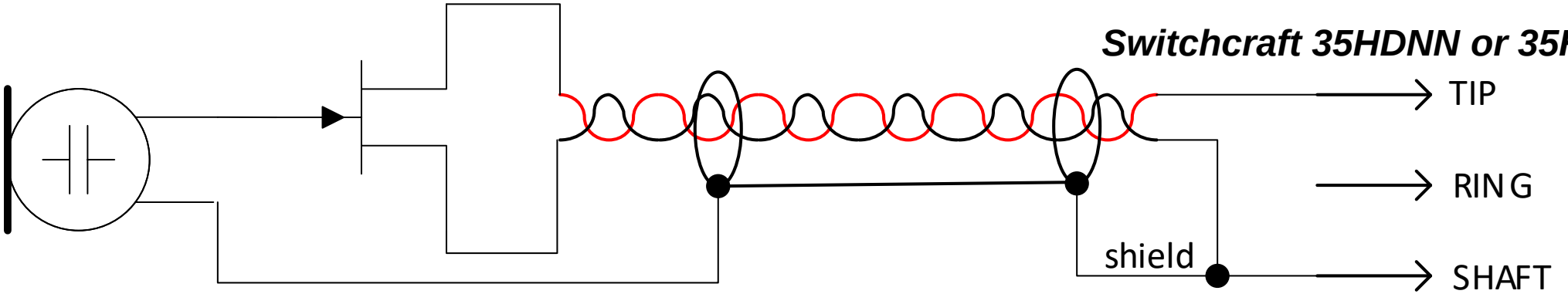
PIN	wire	function
2	RED	JFET Drain
3	BLACK	JFET Source
4	BLACK	JFET Source
1	shield	shield / microphone return
shield	shield	shield / microphone return

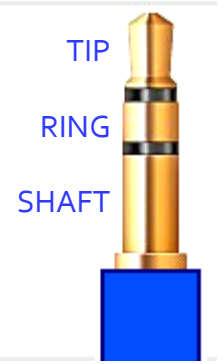
PGA31 TA4F Cable Connecter

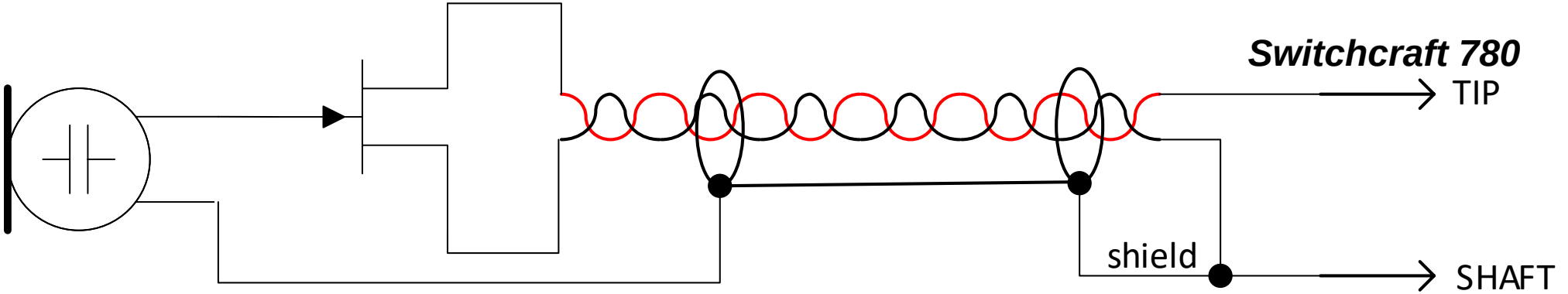


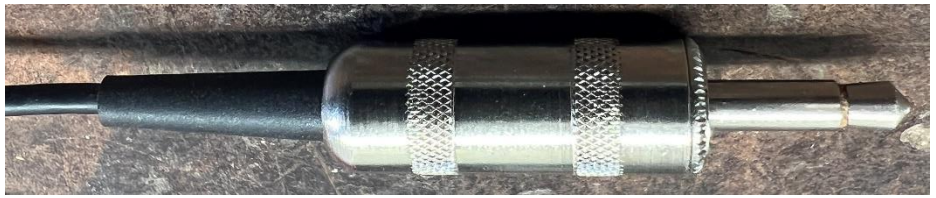
Shure PGA31 Headphone Microphone to RØDE Wireless System 3.5mm Phone Plug Schematic



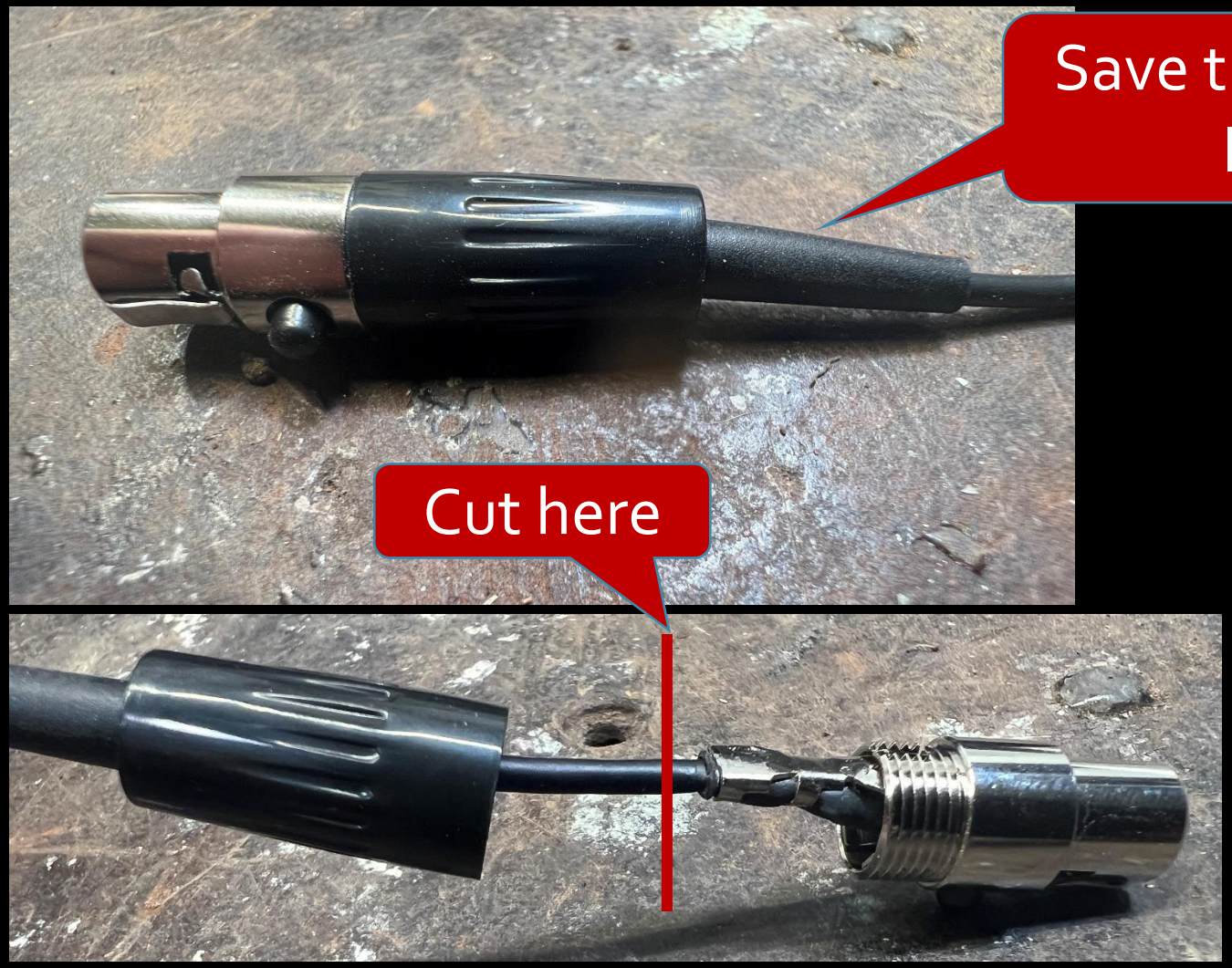








Shure PGA31 TA4F Cable Connecter



Start by cutting the TA4F connector off the end of the cable

Add the needed connector pieces to the cable in the proper order **BEFORE** you start soldering

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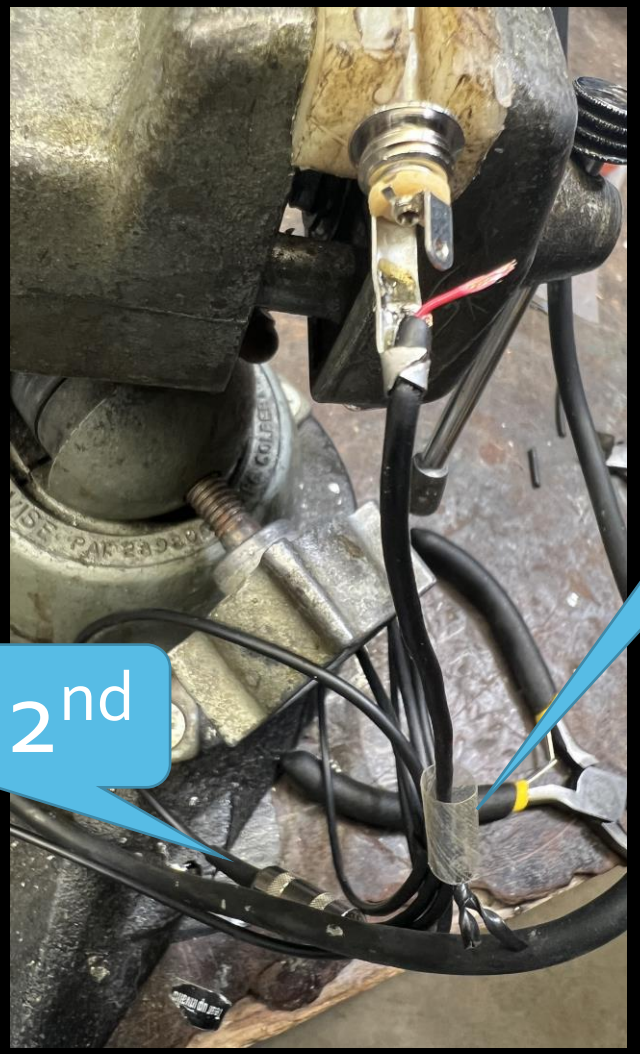

Expose the shield

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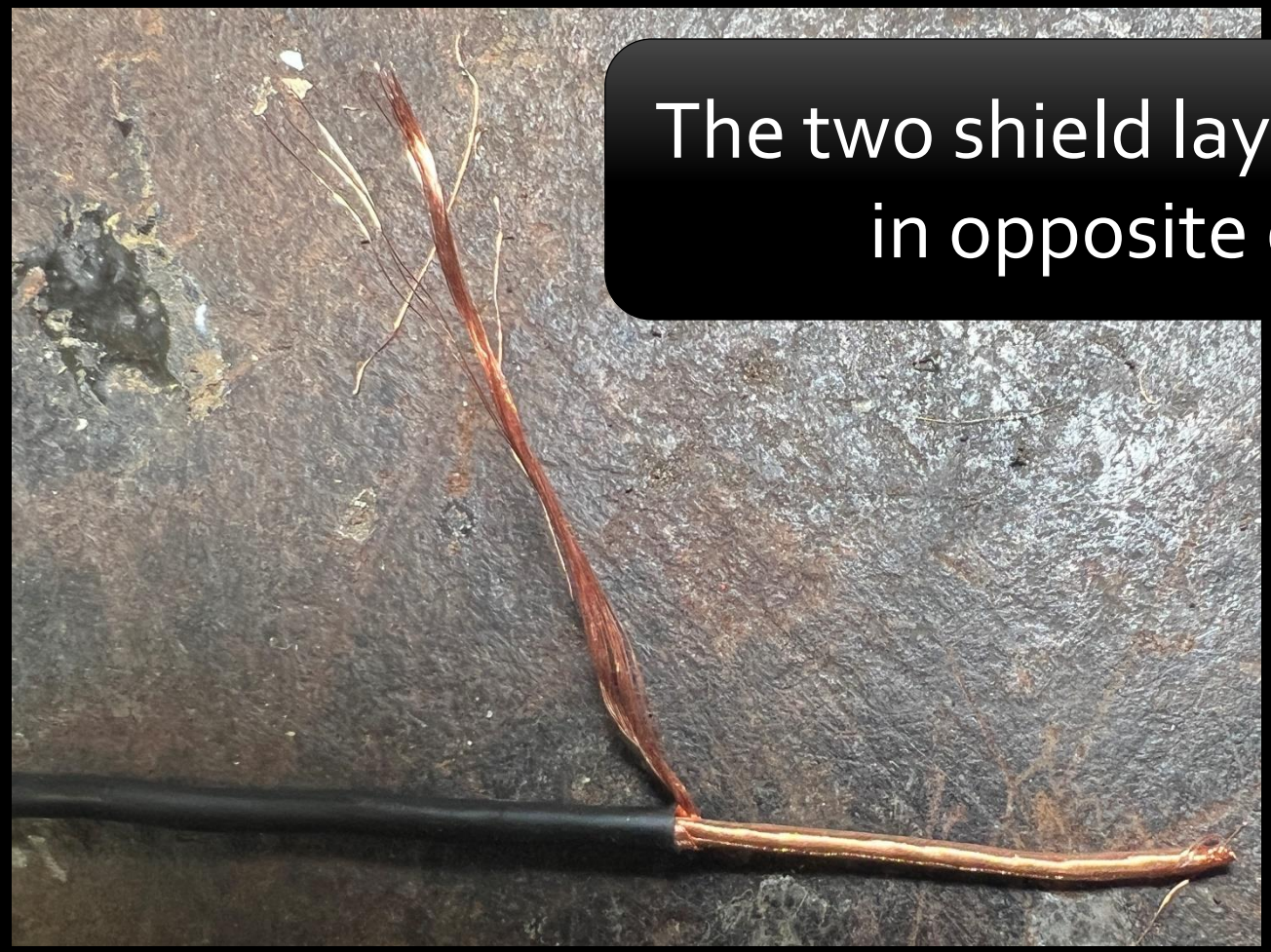
Strip the soft rubber sheath insulation off the cable using the 16 gauge (1.3mm) opening on your stripers

Unravel the Two Shield Layers

The two shield layers are wrapped in opposite directions



Cut off the White String Pieces

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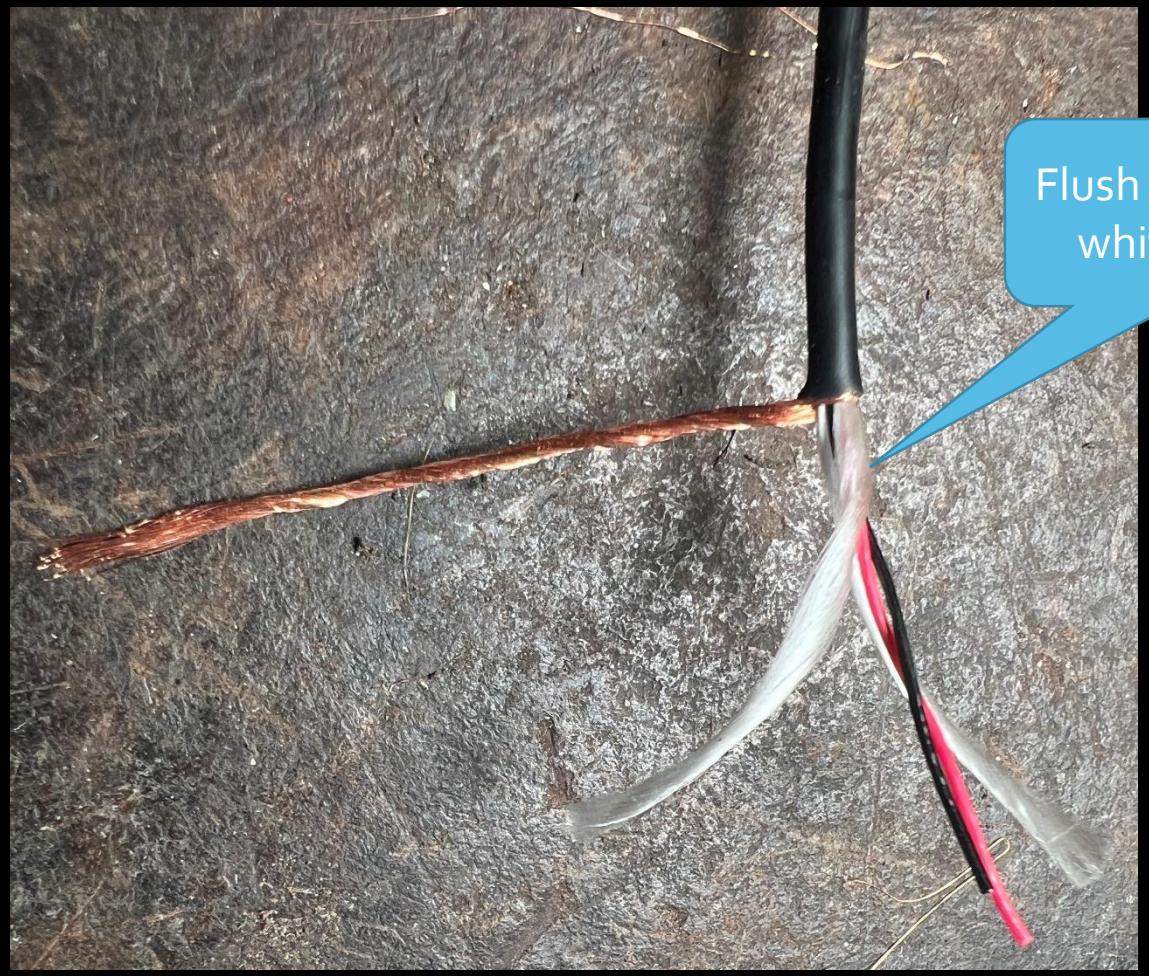
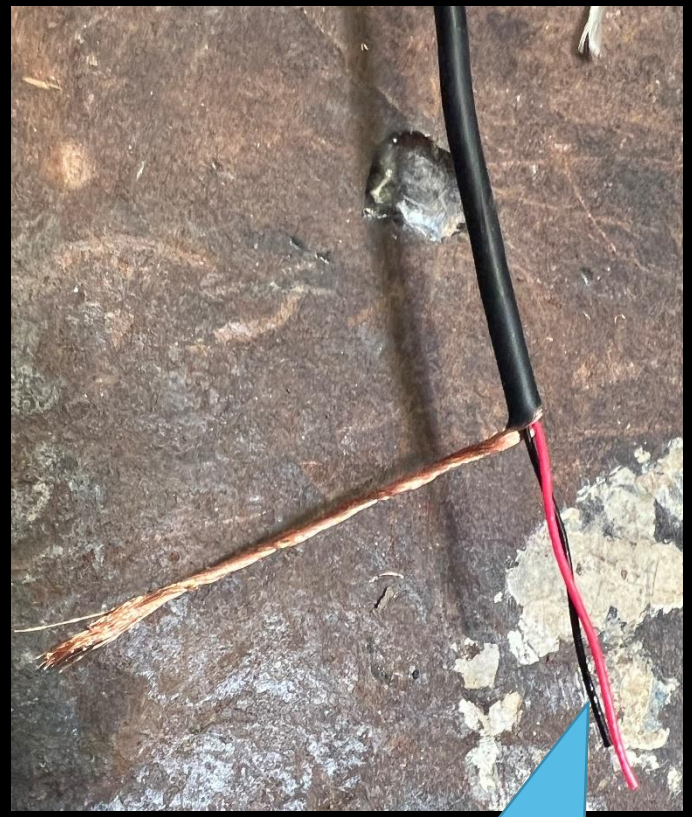
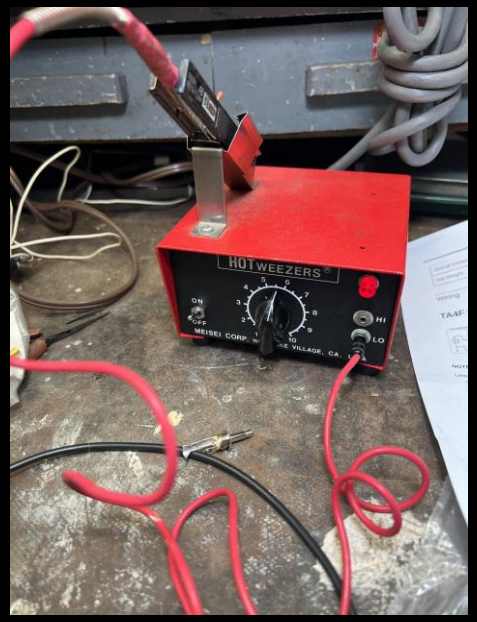


Strip the Black Source Lead and Combine it with the Shield



Strip the black wire and combine it with the shied



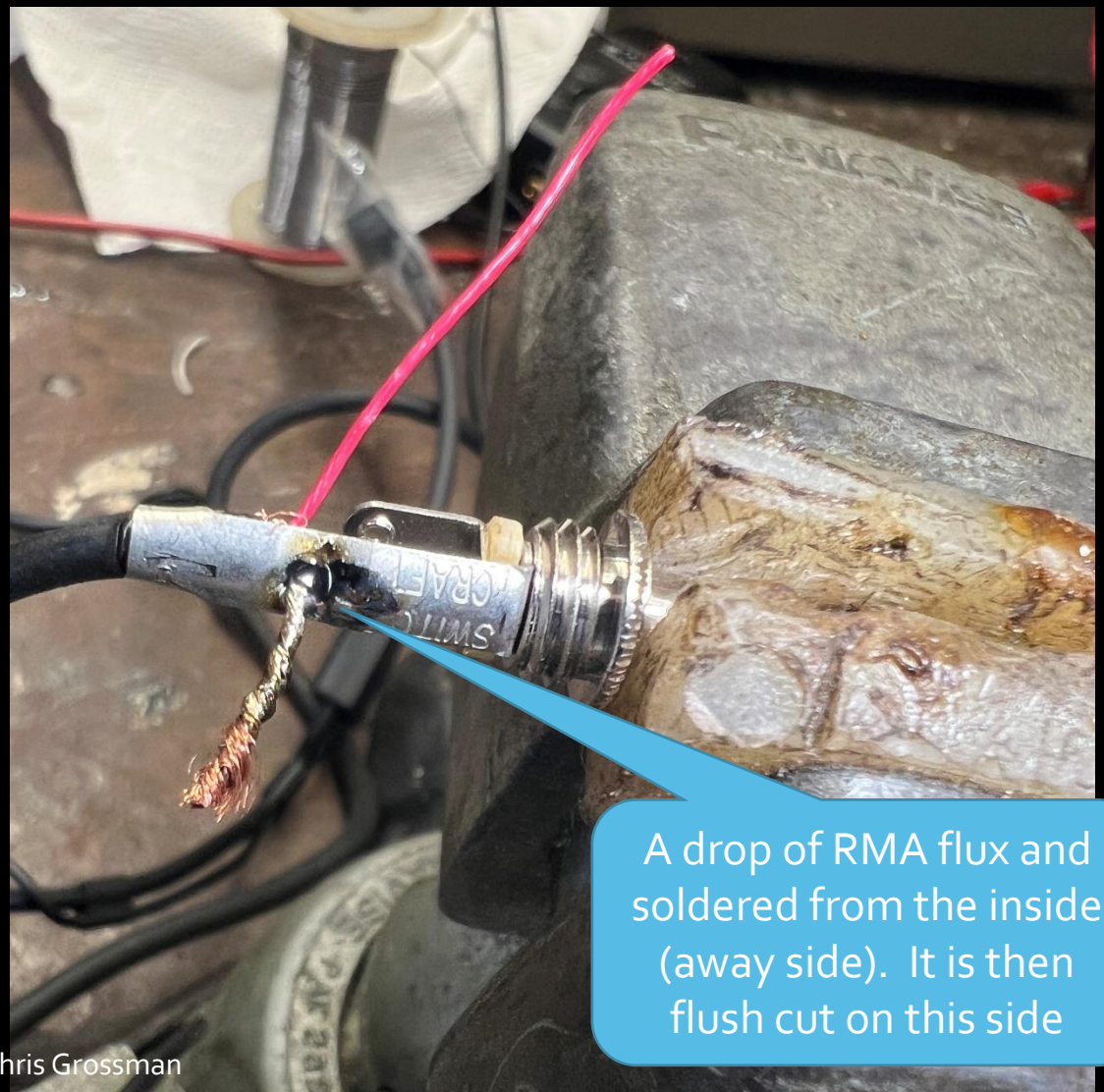
Thermal Wire Stripper

Push the combined stripped bundle through the hole in the shaft connection

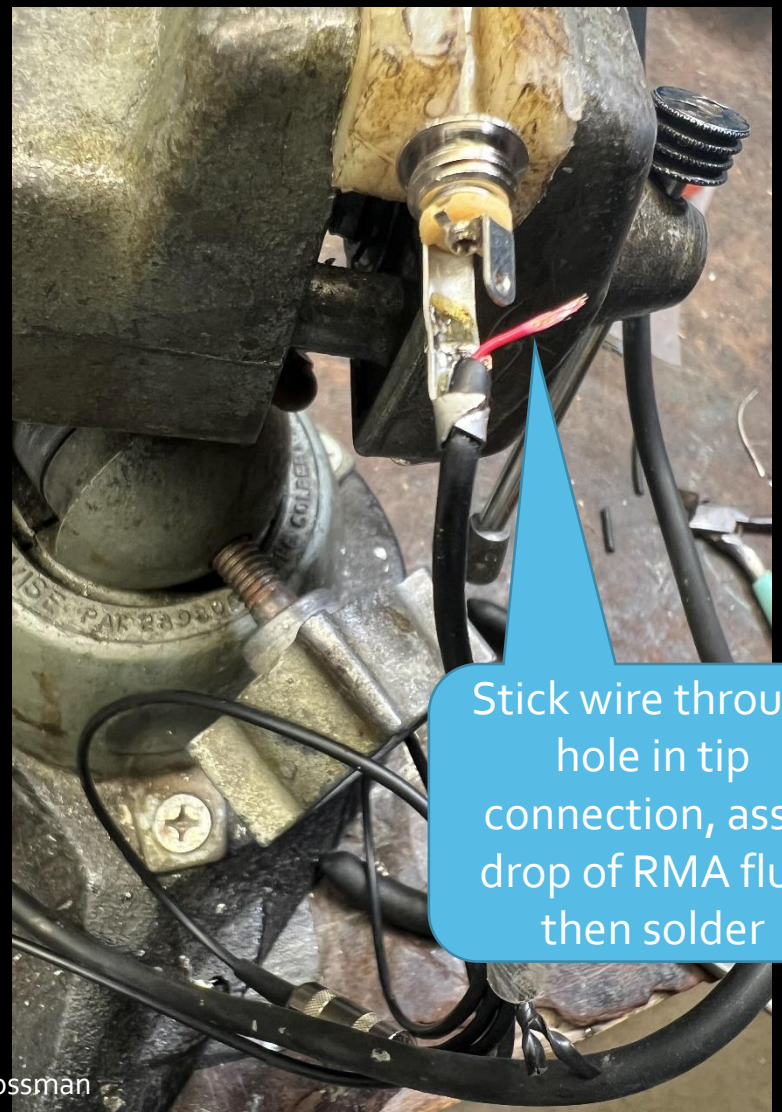
Clamp down the tangs on the shaft connection to hold the wire in-place

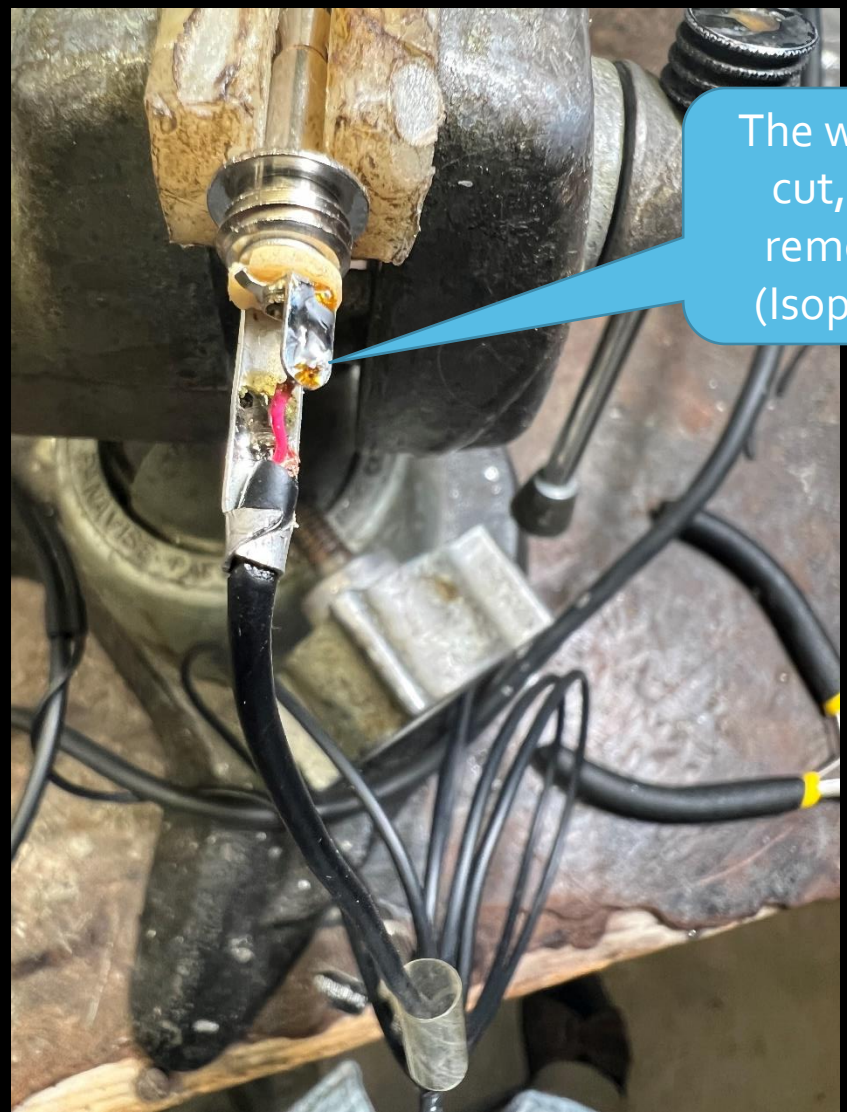
Wire is crimped into place with longnose plies before soldering

Solder shield to shaft connection and flush cut

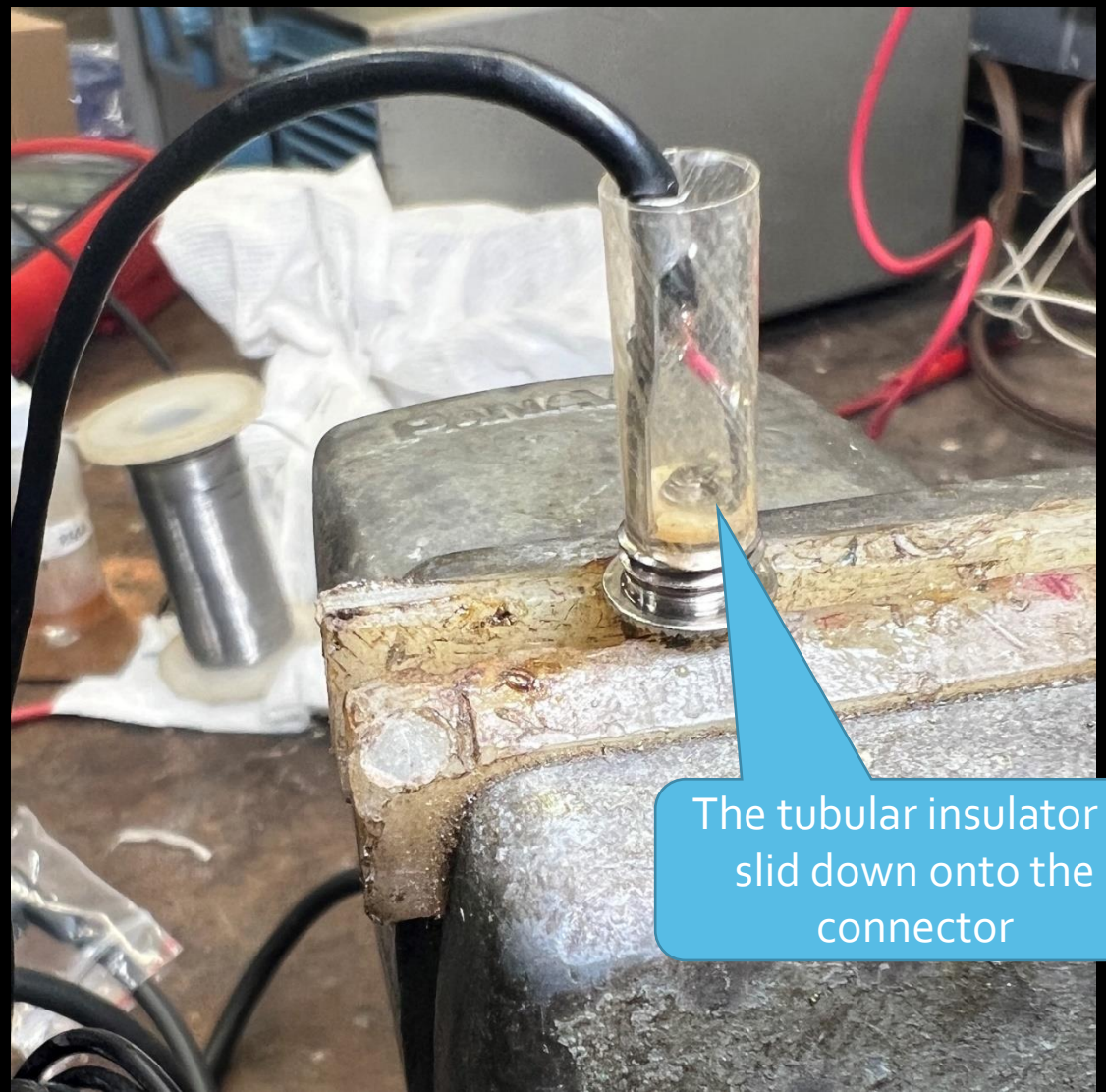


Solder the JFET drain to the tip connection and flush cut



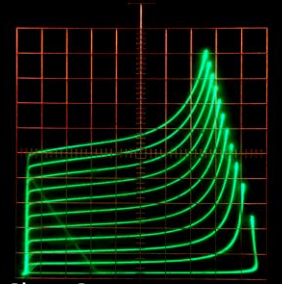


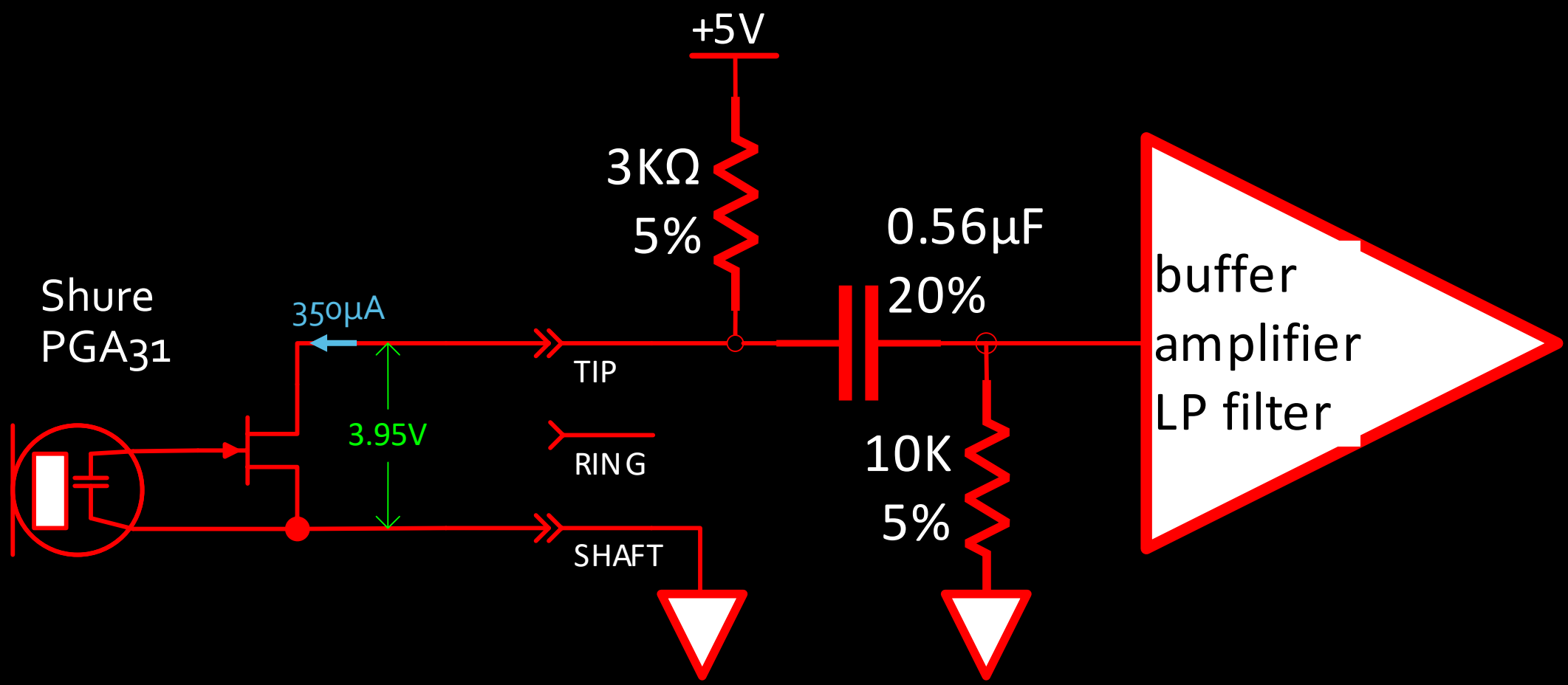
Assemble the connector once the flux has been cleaned off with IPA (Isopropyl Alcohol)



Assembled 3.5mm Connector

DC Operating Condition of the Shure PGA31 with the RØDE Filmmaker





- This conversion "should work" with any RØDE wireless system that is compatible with their lavalier mics.
  - Filmmaker
  - Wireless PRO
  - Wireless GO
  - Wireless GO II
  - Wireless ME
- This conversion "should work" with any Shure electret condenser microphone that uses the TQG(TA4F) connector
  - Lavalier Microphones
    - MX150, WL183, WL184, WL185, WL93
  - Headset Microphones
    - MX153, PGA31, PGA98H, SM31FH, SM35, WCM16
  - WB98H/C Horn Instrument Microphone

I have only verified that this works with my Shure PGA31 and RØDE Filmmaker System

Me comfortably wearing the Shure PGA31 with my glasses

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