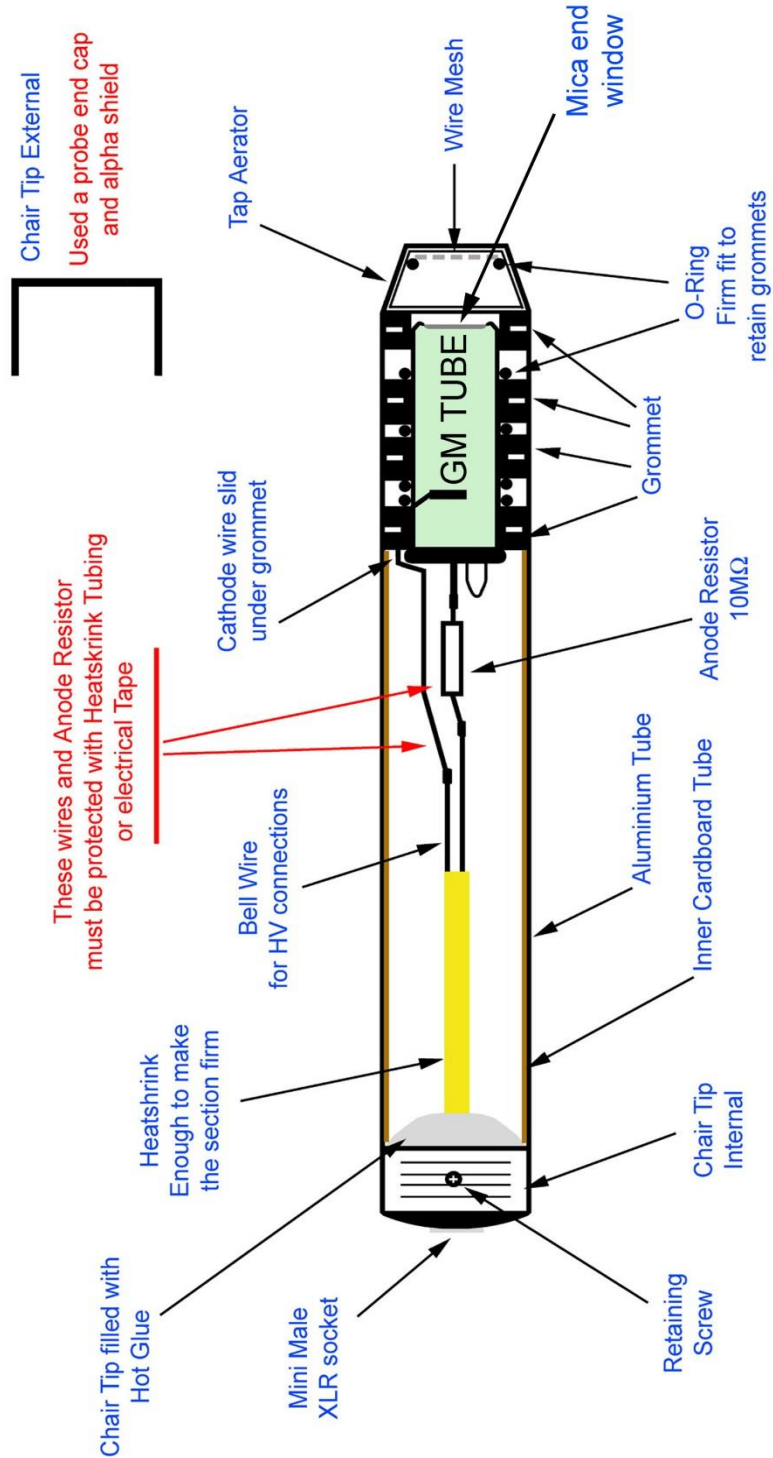
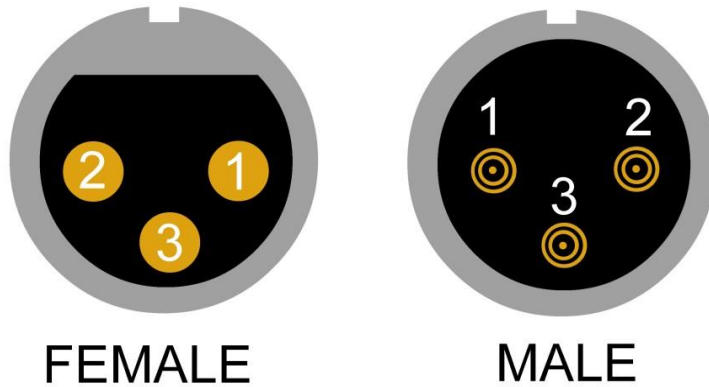


BUILDING A METAL PROBE FOR THE RADIAC 2000



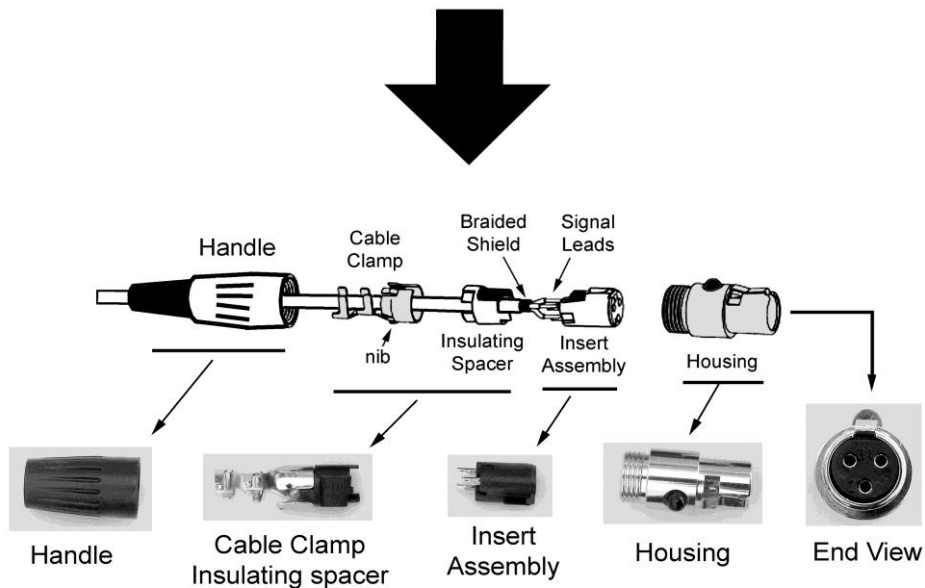
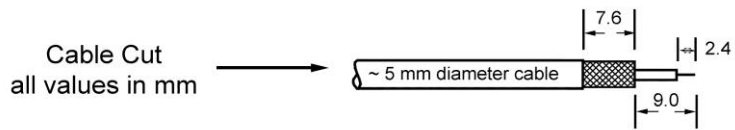
Probe Diagram - All parts except GM tube and mini male XLR socket can be found at home or the local hardware store.

MINI XLR PLUG & SOCKET



My wiring scheme for MINI XRL sockets & plugs

PIN-1	ANODE VIA 10M RESISTOR
PIN-2	CATHODE
PIN-3	SHIELD



Procedure to wire the female mini XRL plug

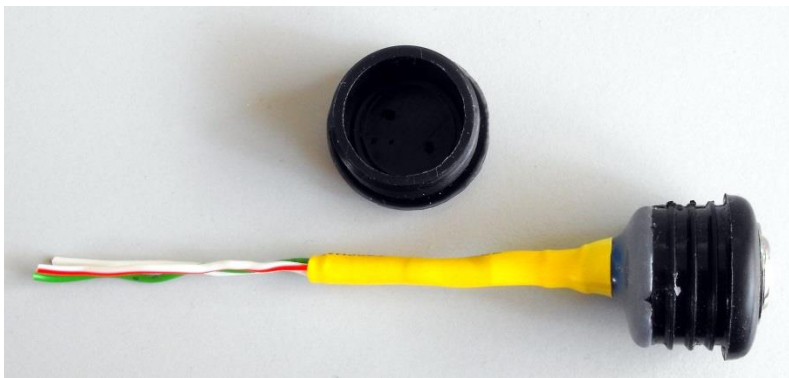
SOME OF THE MAIN PARTS NEEDED

	
<p>Female mini XLR plug</p>	<p>Male mini XLR socket</p>
	
<p>Al tube: 16 cm x 2.5 cm, ID 2.2.cm</p>	<p>male aerator for tap</p>
	
<p>Grommet & O-ring</p>	<p>Chair tip internal</p>
	
<p>Microphone cable - 4wire/5mm OD</p>	<p>Heat shrink and glue stick</p>

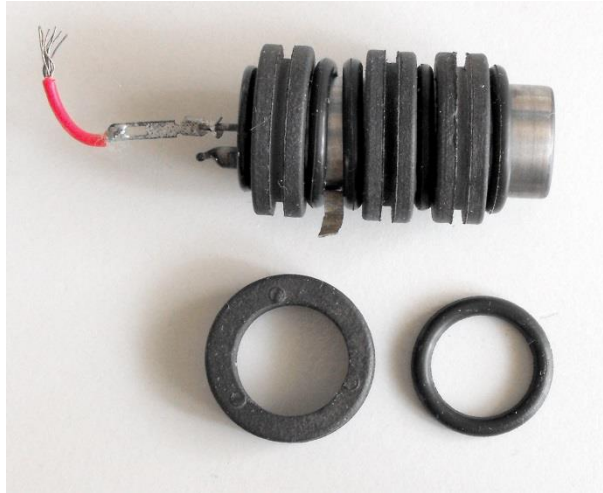
SOME ASSEMBLY TIPS



Front of tube. Place one of the aerator white ring supports in the tap section. Place mesh in this and hold in place with suitable O-ring. Secure with a little hot glue. Place grommet in to secure the housing. This grommet supports front of GM tube so distance between tube face and mesh is about 5-10 mm.



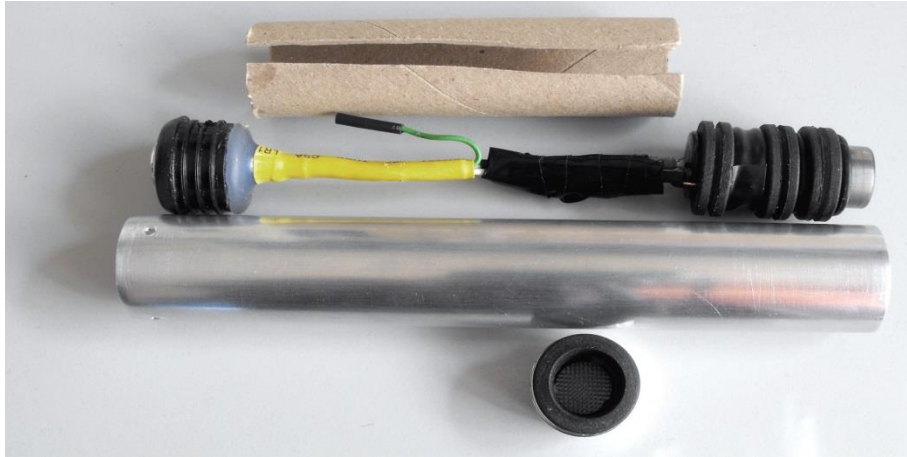
Connector end of probe. Use a leg insert for a chair. Cut suitable hole to fit mini male XLR socket. Socket wired with firm and ample length leads and secured with heat-shrink tubing. Then filled with hot glue to make very stable. Wired used is bell wire, firm but flexible.



GM tube with grommets and O-rings. Grommets have about the same ID as the OD of the GM tube – snug fit on tube, but not too tight. The OD of the grommets has the same ID as the aluminium tubing. O-rings are a firm fit and are used to maintain spacing of grommets and stop the grommets from moving. Cathode wire threaded through grommet and O-ring, then soldered to cathode strap. This strap is then secured with a thin section of tape wrapped around the tube. It covers both strap and O-rings seen in the above photo.



GM tube wired and slid very carefully into aluminium tubing. The Mica end window is clearly visible in the photo.



PARTS BEFORE FINAL ASSEMBLY



Completed probe without cable and end cap. Three screws were placed at end of probe to secure end cap.



Completed probe with cable and end cap protection. The end cap is the external plastic cap from the bottom of a chair and is used to protect the mica end window of the GM tube and as an alpha particle shield.