

also use this tape for grounding in my preamp, taping it down against the chassis for low L, high C.

To make your own cable another way, cut three strips of .005" copper foil, 3/4" wide x 18" long. Cut two strips of thin flexible dielectric material, such as polyester plastic film (.0005" - .002" thick), the same length but quarter of an inch wider. Assemble the strips as shown in Fig. 4(a). Use a fast dry spray adhesive, such as Crown 8090, on the copper and press it against the polyester film, taking care to leave about an inch and a half free and clean on each end for soldering. You can add an additional film layer on the outside of the positive and negative conductors to protect them from shorting to other nearby equipment.

At the power supply, put a 0.1μF polystyrene capacitor across the positive to ground and also across the negative to ground. This improves sound field definition and imaging, and gives greater overall clarity by lowering Z at high frequencies.

I constructed my pre-preamp on vector board and installed it in a small cast aluminum box. Solder the input and outputs directly to the circuit with high tin content or silver-bearing (2-3%) solder. If this is not possible, be sure to use high quality gold plugs and jacks treated with a contact preservative such as Cramolin-Red/Blue or the equivalent. You can run the power supply cable through a rectangular slot in the enclosure and clamp it with rubber; or for a removable cable you can use a preservative-treated pin plug/jack.

This is an inverting circuit, so reverse the polarity at your MC pins. Note also that the pre-preamp has turn-on/turn-off transients: always turn your preamp volume control down when turning the unit on or off.

#### PARTS LIST (ONE CHANNEL)

All resistors are MF ±1%, 1/4W, except as noted.

R <sub>1</sub> , R <sub>2</sub>	1.5Ω
R <sub>3</sub> , R <sub>4</sub> , R <sub>5</sub>	237Ω, 1W (or parallel 2—464Ω 1/2W)
R <sub>6</sub>	100k
R <sub>7</sub>	5.1k
R <sub>8</sub>	162Ω*
C <sub>1</sub> , C <sub>2</sub>	10mF/50V met. polycarbonate
C <sub>3</sub> , C <sub>4</sub>	2/50V met. polycarbonate
C <sub>5</sub>	5/50V polypropylene*
C <sub>6</sub> , C <sub>7</sub>	1000/25V electrolytic (Panasonic LS series or Sprague 673D series)
C <sub>8</sub>	.033μF polystyrene
Q <sub>1</sub>	2N5210 beta matched ≤5%
Q <sub>2</sub>	2N5087 beta matched ≤5%
Q <sub>3</sub>	2N2905A beta = 130 to 150 ≤5%
Q <sub>4</sub>	2N2219A matched ≤5%

Misc:

Heat sinks for Q<sub>3</sub>, Q<sub>4</sub>—Thermalloy 2275R or equivalent

Gold sockets, (RCA) and plugs

Cable, coax Belden low noise 9223 or equivalent.

Chassis

Power on-off switch

\*See text

FIG. 2

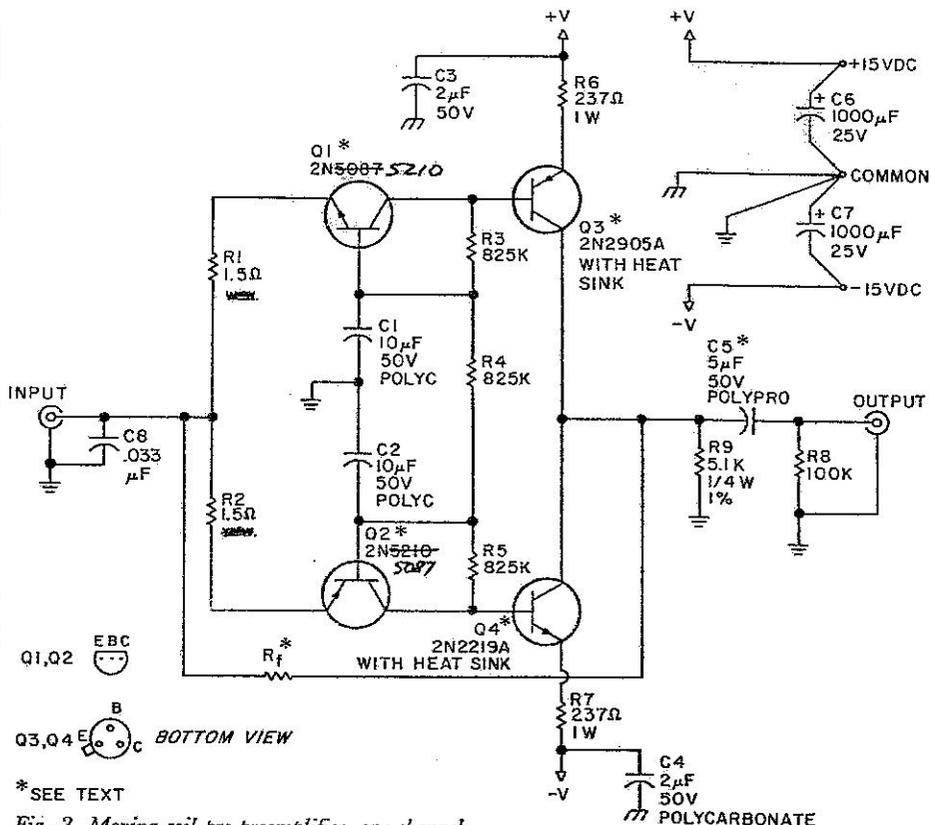


Fig. 2. Moving coil pre-preamplifier, one channel.

FIG. 4

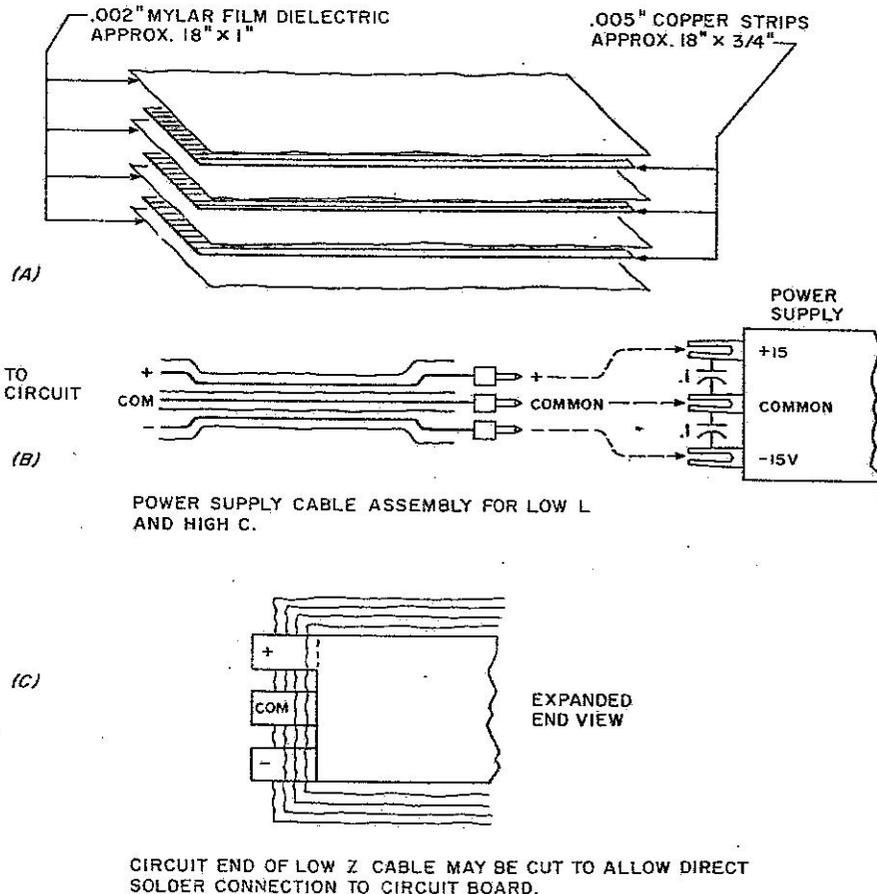


Fig. 4. Special power supply cable fabrication instructions.