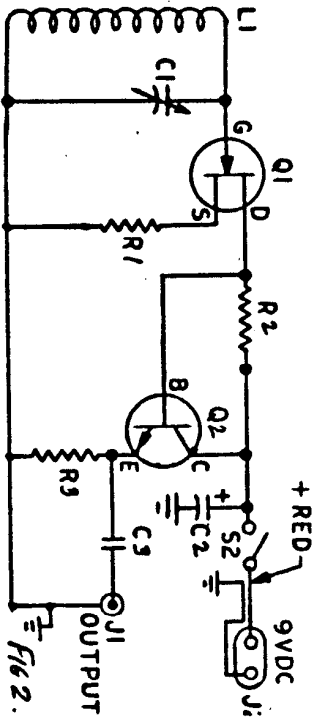


Loops for the Barlow Hadley,
(or anything else!)
Grant Penning

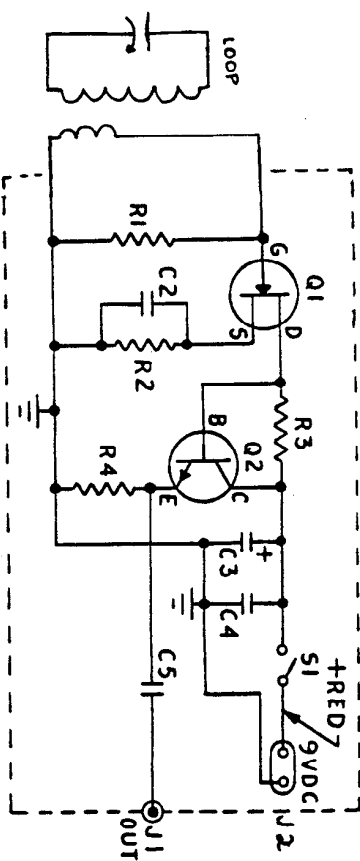
The 3M has a 5pf capacitor that is in series with any antenna plugged into the antenna jack. This is a very effective attenuator at MW frequencies. Without it however, (depending on your location) you might encounter overloading on some SW bands, and possibly on MW also, assuming you have some hefty locals.

I pondered this loss of RF for awhile, and decided the easiest thing to do without re-designing the set was to install a switch to short it out for maximum sensitivity when I wanted it. Most of the time I leave it out of the circuit, and can copy the smallest of the desert stations here in the daytime with the loop to be described next. It makes quite a difference on the short-wave bands also.

Loop #1 uses a 6" ferrite bar for the antenna, and a single PFT preamp, and is housed in a black plastic box, with a metal cover. (RS 270-232) The bar is resonated with a single var-tuning capacitor. (HS272-1344) Operation is much like the "SEM" except that I made no provisions for tilting. Battery drain is 3ma. I mounted my capacitor to the metal cover, alone with an on-off switch, and built the pre-amp components around the cap. Operation is quite good, although you are limited on your nulling, unless you prop it up on a book or something. For it's size, 74x2" (approx) it gives excellent gain, nulling, and maximum usefulness. One source for the ferrite bar is Lafayette Radio. I got mine out of an old radio. Schematic fig. 2. Q1, 2N3819PFT, Q2, 2N3646, R1, 1k, R2, 4.7k, R3, 2.2k. C1, 365uuf, C2, 10uf, C3, .01uf.



Phil Bythway sent in this loop amplifier circuit (originally from Ralph Sanserino) some time back, but it seems to have gotten lost in the mess around here. Finally, it reappears:



Although the circuit was originally designed for a direct coupled loop (it worked fine with a ferrite loop I threw together), it tended to overload Phil's receiver when he direct coupled it to his Wedge loop. So he hooked it up to the link coupling from his Wedge instead (as shown). This circuit was put together using perf-board and pins, and enclosed in a metal box. The only problem noticed so far has been some shortwave feedthrough when the loop is not tuned correctly to the desired signal's frequency. Put the amp as close to the link output as possible.

- Parts list for loop amplifier:
- Q1 2N3819 or 2N5485 N channel FET
 - Q2 2N3646 NPN
 - C2, C4, C5 .01 uf, 15 v
 - C3 100 uf, 15 v
 - R1 100 K Ω 1/4w
 - R2 680 Ω 1/4w
 - R3 1 K Ω 1/4w
 - R4 3.9 K Ω 1/4w
 - S1 SPST switch
 - J2 Battery snap