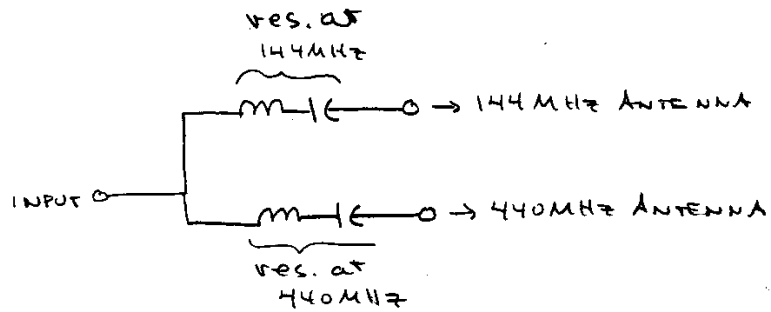


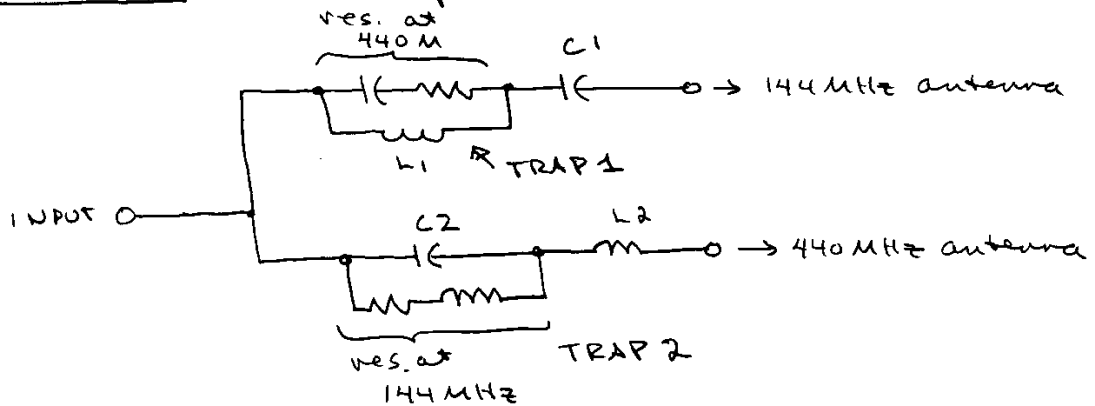
"Diplexer"

1st thought



Problem - the load (transmission line & antenna) off resonance can greatly alter the behavior of each $\text{---} \text{---} \text{---}$

Better idea : use traps:



This blocks 440 MHz from 144 MHz antenna and 144 MHz from 440 MHz antenna, regardless of impedance of output.

NOTE: Trap 1 acts like L1 at 144 MHz, so C1 is added to cancel L1's impedance.

Trap 2 acts like C2 at 440 MHz, so L2 is added to cancel C2's impedance.

Let's choose "passband" of blockage to be 10% of center frequency, and impedance (real) of each trap to be $1k\Omega$ at resonance.

Resulting values:

