



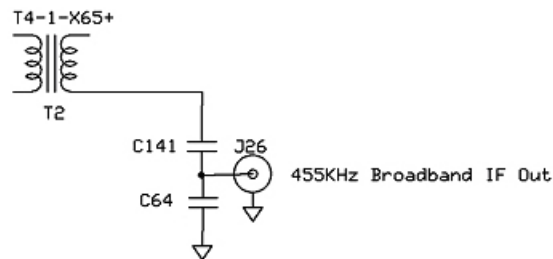
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## Sienna Construction Note 12/09/09 (updated 3/31/10)

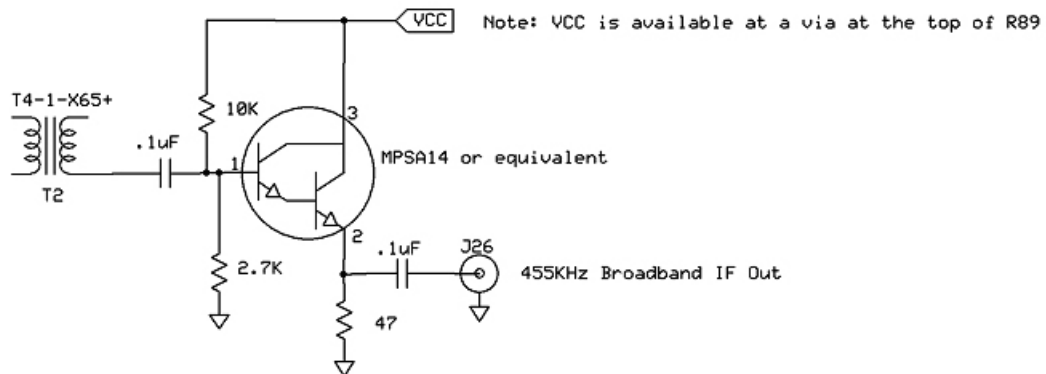
### Improved IF Output

Rev. A Receiver Boards use a capacitive divider as an impedance transformer from the 1800 ohm output impedance of the mixer to the 50 ohms needed by the back panel output. The 36:1 voltage reduction reduces signal amplitude greatly to the point that very little is left. The circuit below, implemented on rev B. receiver boards, improves this greatly. An S9 signal, nominally  $-73\text{dBm}$  at the antenna, will generate a  $-90\text{dBm}$  signal at the IF output jack (preamps on) with this mod. Mod kits are available. Rev. B boards have this improvement implemented on them.

Original circuit (Rev A boards)



Improved circuit (Rev B boards)



Resistors are 1/8W metal film

Capacitors are disk ceramic or equivalent

Two discrete 2N3904 NPN transistors may be substituted for the Darlington

Remove C64 and C141 before installing improved circuit