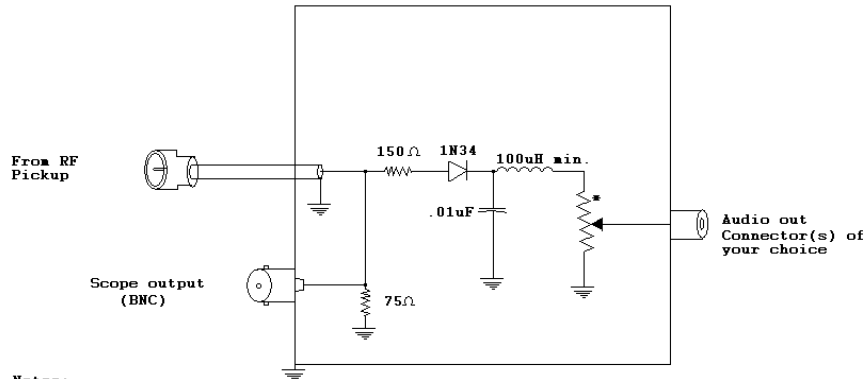


RF Detector and Scope interface



Notes:

All of this is optional of course and can be made as fancy or as simple as you like. This is a minimal requirement design for clean flat response within the passband of the RF pickup, which is about -25dB from 2-50 MHz.

* The output potentiometer should be an audio taper pot in the vicinity of the load impedance. Eg: if going into an audio mixer, amplifier etc use a 10 - 50kohm pot. If using just to drive headphones, a 500 ohm to 1K ohm pot would be appropriate.

The 150 ohm resistor serves only to minimize loading on the scope output. Both resistors should equate to a 50 ohm load on the cable to maintain flat response.

More Notes: (on the pickup)

You should measure the output at the Scope Output connector and determine it's relative dB attenuation to the RF line level. This is a useful thing to know. The RF pickup is a CURRENT pickup which will deliver a VOLTAGE output to the Scope jack proportional to the power in the line when terminated in a 50 ohm load, as is done here. This will be accurate so long as the termination is properly maintained. The formula for determining the exact RF attenuation of this pickup is as follows: Using the peak to peak voltage seen on the scope:

$$\text{Attenuation (dB)} = 20 \log (\text{pk-pk scope signal}) / 2 * \sqrt{\text{RF power} * 100}$$

It should turn out to be about -22 to -36dB depending on load. Do this test with the audio pot all the way down.

Enjoy! You'll LOVE having this to listen to your signal and SEE what's really going on.