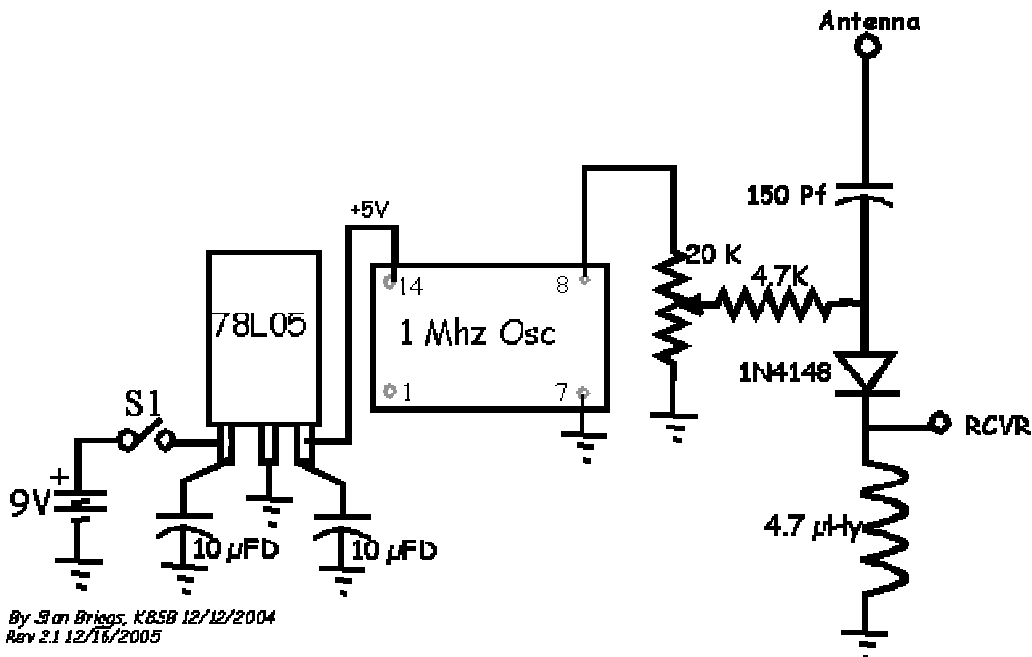


# K8SB Active Attenuator Schematic



Rev 12-16-2005

## K8SB Active Attenuator Notes

**Battery Life:** The maximum current draw for the crystal oscillator module is rated as 15 mA. An alkaline ANSI/NEDA 9 volt battery has a rating of about 600 Ma-Hr. That would last about 40 hours. The prototype active attenuator current draw turned out to be only 5 mA. The prototype unit was tested for continuous operation and ran for 75 hours on a fresh battery. That works out to be about 15 fox hunts!

**Offsets other than 1 Mhz:** The amount of attenuation of a two meter signal changes depending upon the offset of the receiver from the transmitter frequency. As it turns out, because of the nature of the waveform of the oscillator signal, the level of the harmonics of the signal diminish depending upon which harmonic it is. For Example, if the transmitter frequency is 147.420 MHz the amount of attenuation at 146.420 MHz will be greater than at 145.420 Mhz. The attenuation at 144.420 MHz will be even greater than both of those.

**Effect at even megahertz frequencies.** The active attenuator is not useful on even megahertz frequencies such as 146.000 MHz or 147.MHz because the harmonic of the fundamental oscillator frequency will override the input signal. (If one were going to have to use an active attenuator of this type on an even megahertz frequency a low pass filter with a cutoff of about 6 MHz could be placed between the oscillator output and the detector circuit).

**Transmitting into the active attenuator:** A test was done in which 5 watts of RF was fed into the RCVR port of the active attenuator for a minute with no detrimental effect noted. The active attenuator represents enough of a mismatch to the transmitter that with most transceivers the SWR protection circuit in the transceiver will tend to shut it down. It is probably a good idea to set the transceiver to its lowest output power setting to be on the safe side in case one keys the transmitter by accident.

Der 1MHz Quarzoszillator OSZI 1,000000 für 1,55€ von Reichelt müßte da funktionieren.