

Looking for a good weekend project? If you like to operate on 160 and 80 meters, this one is tailored for you. It's simple to build, inexpensive, and can add years to the life of your rig.

Beverage Antennas

There's More To Them Than Meets The Eye

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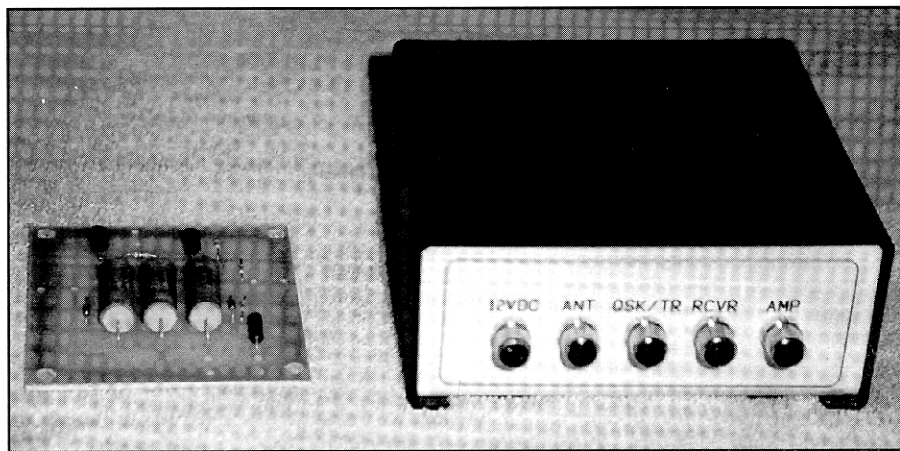
The "Beverage" antenna is probably the best DX antenna ever invented for use on the 80 and 160 meter amateur bands. The low noise and directive characteristics make it a must for the serious DXer on those bands, especially during low sunspot years.

There are, however, several real dangers to your transceiver which result from energy getting back into the radio through the auxiliary antenna input on the back panel of your transceiver. That input is "unprotected" on almost all makes of amateur radio equipment. How do you know if your rig is protected or not? That is a very good question. To answer that question, trace the receive or auxiliary antenna input on your schematic diagram starting from the back-panel phono jack. If that signal line does *not* go through a set of relay contacts (or transistor switch) which are either open during transmit or grounded, the auxiliary input during transmit is unprotected.

What happens during transmit is very similar to a public address system when the microphone gain is too high and feedback causes an ear-piercing squeal. Your front end is subject to "self destruct" from the feedback loop that occurs during transmit from excessive RF energy coupling back through the receive antenna. This can happen whether using loops, beverages, or whatever type of antenna you may be using. This is not a problem when receiving on your transmit antenna, since it is disconnected from the receiver section of the transceiver and protected by a T/R relay.

How likely you are to have this problem depends on both the distance the receive antenna is from your transmit antenna, and the power level being transmitted. Naturally, the higher the power the greater the danger.

John, K9UWA, got me interested in 160 meters several years ago, and I got "hooked" on working DX on that band. Without beverage or other low-noise-type antennas, working DX from the mid-west was a rare occurrence. However with good receiving antennas I have been able to do quite well, even this far from the coast. In fact, I was able to win zone 4 in the 160 Meter SSB Contest in 1990, 1991, and 1992 in the single operator category. My transceiver is a Ten-Tec Corsair II, and my first experience with RF feedback showed up in several ways:



This view shows the completed board outside of a suitable cabinet. This is the rear of the cabinet showing the connecting jacks.

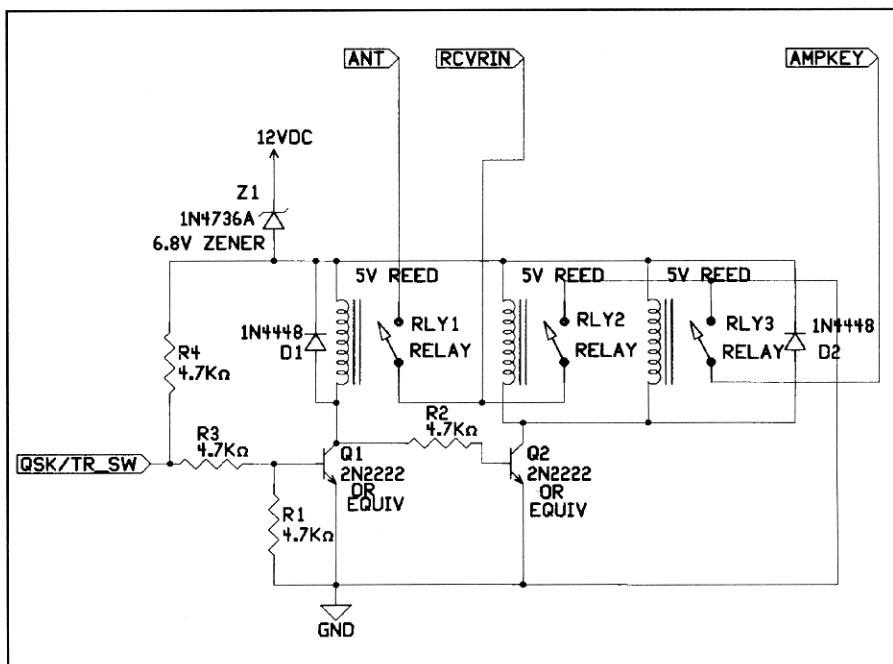


Fig. 1- Schematic diagram for the front-end saver.

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