

## TS-520 WAVEFORM SHAPER

□ Here's a nifty idea for CW buffs who own Kenwood TS-520S or TS520SE transceivers. A conversation with a fellow ham on 80 meters one night netted me this easy, inexpensive modification to soften the '520 keying.

Fig. 14 shows a capacitor across the key jack, and an inductor in series with the key. The capacitor is a 100-V Mylar unit with between 0.4 and 0.6  $\mu\text{F}$  of capacitance. Choose a value that results in a pleasant keying waveform. The inductor uses an iron-core toroid (about 1/2-inch-OD, T50-2 mix or equiv.). The inductor value is not critical, so try using a core from your junk box. The core is wound with 30 to 40 turns of no. 26 enameled wire.

After you have installed this circuit, you can get a fair idea of your keying waveshape by listening to the CW sidetone. The effect of the circuit is similar to a slightly heavy weighting, and the sound is almost bell-like—a joy to copy. The waveform shaper also makes your signal distinctive in a pile-up. Under QRM or weak-signal conditions, however, the standard "hard" keying will punch through better.

On-the-air reports are encouraging, with most operators preferring the soft keying for general-

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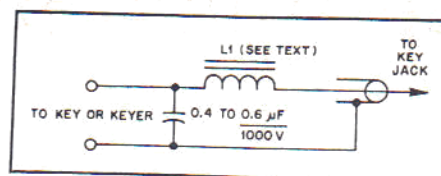


Fig 14—CW waveshaping circuit for the TS-520S. Component values are not critical.

purpose ragchewing. High-speed operators may prefer to use a smaller capacitor to avoid "blurring" characters. I mounted the components on a perfboard and installed it inside my Heath keyer. A switch on the front panel allows me to put the shaper in or out of the circuit. My thanks to Dick Jaeger, W3DP, for this neat modification. —Bruce Cope, KB3LF, Bethlehem, Pennsylvania

[This item was adapted from an article in the Delaware-Lehigh Amateur Radio Club newsletter. —Ed.]