



# SERVICE BULLETIN

from: TRIO-KENWOOD COMMUNICATIONS, INC.

TS-180S

#817

**SUBJECT:** Ts-180S USE WITH A LINEAR AMPLIFIER

**DATE** 3/20/80

1. FAST PROTECTION WITH A LINEAR:

For complaints of fast protection, such as when operating CW semi-break-in with a linear, check C73 at the base of Q1 on the LPF unit X51-1180-00. If it is a luf, change to a 3.3uf, 25V or greater. This will compensate for slow linear relay closure.

2. PREMATURE PROTECTION:

The radio should protect at 3:1 SWR, or at 24W opened (no) load. To test the protection circuit, load the radio at 24W into a known 500hm dummy load through a Bird 43 wattmeter. Disconnect the load from the wattmeter. The protection light should just lite. Adjust the protection pot VR1 on the LPF unit for protection at 24W, with no load.

3. For complaints of VOX CYCLING, MEMORY JUMP, READOUT JUMP, OR TONE "BEEP" at key up or down with a linear amp, suspect linear induced relay transients entering the radio via the ACSY relay wiring.

For example, Drake L4B linears before Serial Number 5500 do not have a quench diode across the DC operated relay. Install a 1N4005 or equivalent across the relay in the linear to eliminate the back-EMF induced by the linear into the TS-180S. Similarly, Henry linears also don't have a diode across the relay and may give these symptoms when operated with a TS-180S.

JEB/yn