

KENWOOD

ASB-1002

Service Bulletin

Amateur Radio Division

Subject: TS-450/690 Distorted TX w/TNC

Date: November 18, 1992

Note: This bulletin supercedes bulletin ASB-994, dated April 10, 1992.

We have received several reports of distorted transmitter audio when using a packet TNC controller such as the AEA PK-232 or Kantronics KAM, etc. The symptom will generally disappear if the transceiver and TNC unit are powered from different sources.

Cause: The audio output level from the TNC is generally too high and causes overload of the microphone amplifier circuit. In previous models such as the TS-440S the incoming TNC audio was inserted after the microphone amplifier. With the TS-450/690S it is inserted before the microphone amplifier. Just moving the insertion point to the output of the circuit is not satisfactory since the drive level for FM packet is higher than that required for SSB.

Procedure:

1. Add a 10 db attenuator to the PKD line on the IF unit (X48-3090-XX). This will prevent overmodulation of the microphone input circuit.
 - a. Change chip resistor R233 from 10K to 18K ohms (RK73FB2A183J)
 - b. Change chip resistor R234 from 1K to 8.2K ohms (RK73FB2A822J).
 - c. Delete chip capacitor C173 (100pF) and add chip resistor R299, 1.5K ohm (RK73FB2A152J)
2. Add the following note to page 35 and 37 of the Instruction manual.
3. When adjusting for proper ALC levels with an AFSK RTTY terminal or Packet TNC terminal you should adjust VR-13 on the IF Unit for a reading similar to the one shown in the accompanying diagrams.

Note: The transceiver and RTTY or TNC terminal should use separate power supplies, in order to prevent RFI (Radio Frequency Interference.)

Caution: This modification requires soldering equipment rated for CMOS type circuits. It also requires familiarity with surface mount soldering techniques. If you do not have the proper equipment or knowledge do not attempt this modification yourself. Seek qualified assistance.

Time required for this modification is 30 minutes or less. Copyright 11/18/92 Kenwood U.S.A. Corporation.

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Communications and Test Equipment Group

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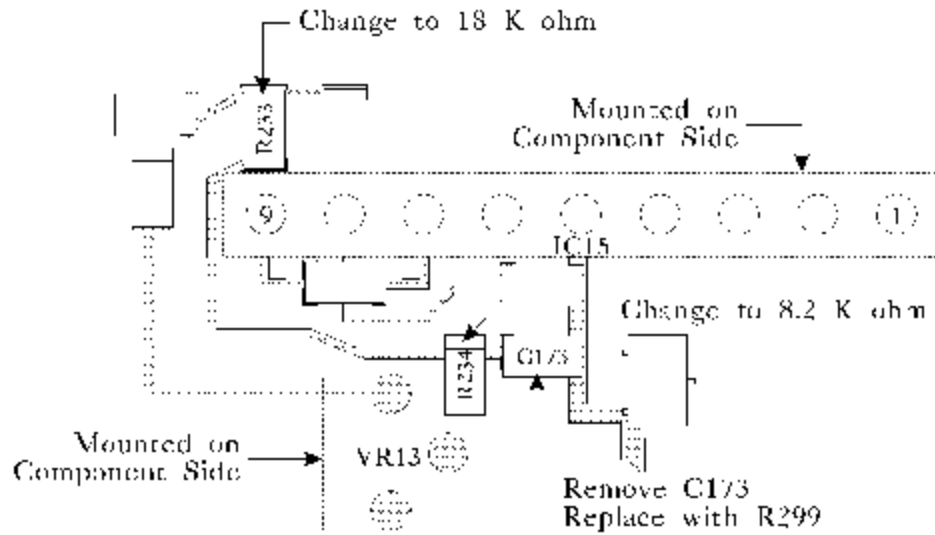
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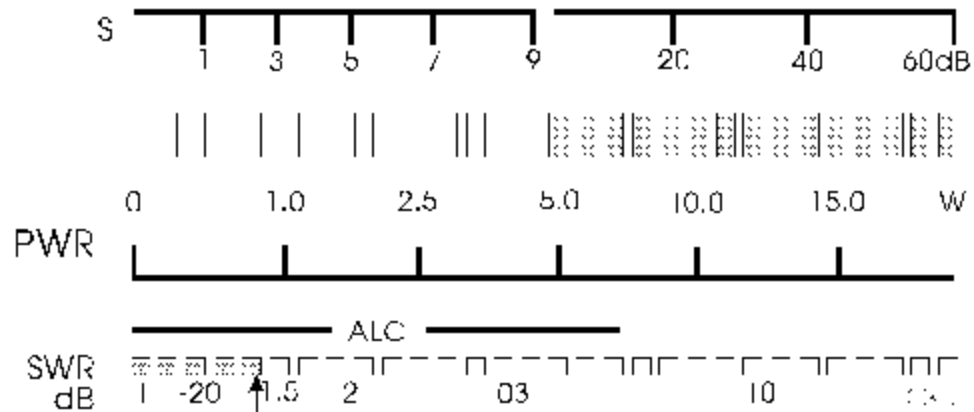
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Part of IF Unit X48-3090-XX Foil Side View



Don't make initial ALC adjustments for Packet, etc. over this level. Adjust higher only if you can do this without distortion.