



# SERVICE BULLETIN

from: TRIO-KENWOOD COMMUNICATIONS, INC.

20

SUBJECT: SERVICE NOTES ON TS-700A

DATE 10-18-77

## POWER SUPPLY

1. 9 volts down: The MFC4060 Q11 and 2SA495 Q9 are bad.
2. No 2IV: Replace Q3 2SC733(y) (X43-1120-00) Power supply unit.
3. Dial light is very bright: Replace shorted Q2 2SA671 on rear panel.
4. Intermittant +9 volt supply: The legs of Q12 2SD235 are too short at the PC board. The leads were pulled away from the board. Replace Q12.
5. Power supply intermittant when tapped: Check for short leads on pass transistors, pulled out of circuit board.
6. No Rx - no Tx: Check diode D6 Zener in power supply. -6V supply. If shorted, replace.
7. No 13.8 volts at power supply: The wire on bridge D-1 is not soldered.
8. +9 volts is okay, but 21 volt only 16 volts: Q1 is bad in power supply 2SC733(y).



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## TRANSMITTER

1. No modulation: Replace bad diode D-15 Varactor on (X52-1080-21).
2. USB or LSB is too high frequency: Recheck alignment of carrier board according to TKC Service Manual procedures.
3. No RF out AM CW SSB: Replace D13 on GEN unit (X52-1080-21).
4. FM Rx and Tx different frequency: Readjust all Het unit frequencies. Also check VFO linearity and adjust Tx frequency L-3.
5. Tx wrong frequency: Adjust L-3 at (X52-1080-21). 10.7 oscillator for final Tx frequency.
6. No power out FM: Check for loose connection at L-3, the 10.7 coil on GEN unit (X52-1080-21).
7. No Tx or Rx: The fixed channel switch is in the wrong position.
8. Low power out only 8W. 21 volt supply down to 16V: The protection diode D-7 in the power supply is shorted.
9. VFO drift: Q1 3SK22(y) in VFO is bad.
10. No Tx FM: D15 on (X52-1080-21) GEN is bad.
11. Drive control does not peak: This is normal - leave at center 500 position.
12. No Tx: Tx B terminal touch to ground at (X52-1080-21) GEN unit.
13. No Tx FM: Check diode D16 on GEN (X52-1080-21).
14. Only 3 watts out: Bad Q2 2N5642 in final amplifier.
15. The RF meter doesn't work, but Tx output okay: Bad diode D1 on BPF, the IN60 is open.
16. No Tx: Bad Q3 in mixer unit (X48-1130-21) 3SK35(BL).
17. No VFO output: Cold solder joint of R2, 100 ohm resistor inside VFO on circuit board.
18. Intermittant Tx: Bad ALC pot on mixer board VR-2 (X48-1130-21).
19. No Tx 147 Simplex: Loose resistor not soldered on rear circuit board of band switch.



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## RECEIVER

1. Spurious signals on receive; if the output level or VFO is too high or mixer Q3 on (X50-1300-20) Het unit: SN76514 is bad.
2. If the noise blanker does not work: Check Q6 2SK19(GR) on (X55-1120-00).
3. There is no audio from receiver - no 21 volts: Q-1 2SC733(y) in 21 volt supply is bad.
4. FM receiver sensitivity is down 30 - 40 db: Check 10.245 Xtal at TP-1 on FM IF unit (X48-1140-20). If oscillator level is down, replace crystal.
5. Receiver sensitivity is intermittant and Tx intermittant: Check contacts R-T relay. Replace if bent or miss-contact.
6. If you cannot adjust the center meter: Make sure S meter start, VR-4, is set at zero. If you cannot get enough adjustment with center meter, adjust VR-1, replace Q4 2SK19(GR) on (X55-1120-00).
7. No Receive: Check for solder touch at 133 terminal on Het unit, if there is no 133 Het output. (X50-1300-00)
8. No Rx or Tx and no VFO light: Check diode D2, IN60 located on VFO circuit board.
9. VFO drifts or moves with shock: Wire is not soldered VFO main coil L-1.
10. No repeater operation: Check for wire that is touching at repeater switch.
11. No receive: Resistor R-7 is touching Q1, 3SK41 on (X55-1120-00) board.
12. No Rx on 144, or any one band: Check Het Xtals - Realign the Het unit.
13. Center meter drifts for the 300,000 series and before: Send for the TKC bulletin on Center Meter Drift.
14. VFO is intermittant when turned: There is loose tension on VFO rotor and stator plates. Rebend tension spring.

RECEIVER (Cont'd.)

15. Rx audio output distorted: Check Q4 2SC734(y) on (X49-1060-00).
16. No SSB or CW receive: Resistor R73 is touching to the can of T-6 on (X52-1080-21).
17. FM receive okay but SSB sensitivity is down: Check alignment of SSB IF transformers T4-T5-T6.
18. FM receive is bad: Bad T-1 on the (X48-1140-20).
19. Scratchy audio with internal speaker: Check for bad speaker.
20. No 146 band: Replace bad Het Xtal on Het board (X50-1300-70).