



# SERVICE BULLETIN

from: TRIO-KENWOOD COMMUNICATIONS, INC.

60

SUBJECT: TS-120 REPAIR NOTES

DATE 12/18/79

SYMPTOM

REPAIR ACTION

No CW, No audio  
Receiver Sens down  
Analog Dial Cal OFF  
Carrier in SSB  
Loss of Digital  
Smoke at Final unit

Side tone oscillator Q25 on AF GEN unit 2SC 1815  
T-1 L34-0696-35 On RF unit shorted  
Mechanical adjustment  
RF unit D-2 and D-3 Shorted See TKC Service Bulletin  
Check P-5/J-5 on Carrier unit  
Check for long ends of wire shorted to case inside  
final unit also burned L-10 and L-11, 1A0-1011-04 (100uh)  
IF shift control turned max CW  
The RF gain control was turned max CCW  
Replace the TEMP comp CAP C-17 SEE TKC Service Bulletin.  
Check the Carrier point adjust and make sure final  
bias is set to 150Ma

SSB Audio bad  
Power on meter Max  
VFO Freq drift  
TX Audio BAD

Check D-15 PLL unit

PLL digital NG  
High IC in RX  
15 Meters only  
RX TX only 10M

Check the Final transistors  
The BCD Rotary band switch has a broken wafer  
The BCD Divider Q-16, 74LS163 on PLL unit bad. Check  
the BCD inputs against the pin 2 frequency.

28.5 HF OSC  
No CW filter  
No RX

Check ground screws and tighten at Relay unit X41-1250  
Solder short across pins 1-2 J-29 IF unit  
After the CW filter was installed the pins were not  
cut off shorting the signal to ground.

Analog dial off  
TX out 40M only  
No 15M  
3.5 and 7 band same  
Low RF out  
No TX all bands  
No digital no TX  
No RX No digital  
Intermitt SSB Audio  
No key or TX  
No TX

Perform VFO tracking adjustment at 50 and 450  
40 M 50W and 10M 10 W bad finals  
Core on the VCO transformer for 15M broken  
Shorted trace at Band Switch under IF unit  
All bands, Q12, SN16913 on the AF gen unit, 2SK19GR bad  
L-25 open on the Rf unit Small green inductor.

15M osc.

Q-12 mixer on the PLL unit bad  
Q-26 mixer on the PLL unit bad  
Pin 5 of J-5 on AF GEN unit loose  
D-26 and Q-24 2SA562 on AF gen unit bad  
R-8 220 ohm at key socket burned open. Make sure  
that customer uses shielded line on telegraph key.  
On 15M band only with antenna HF oscillation when  
first speaking. Install Ferrite bead on base of  
first mic amp Q-18 AF gen unit.

No TX

Loss of AVB Voltage at RF unit. Check Q-9 2SA473 on  
the filter unit, also check 6 volt Zener diode.

JEB/yn