MAINTENANCE MANUAL
DRC-200
DUPLEXER TUNING PROCEDURES

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The following procedures must be used to tune the duplexer to the transmit and receive operating frequencies. The duplexer must be retuned any time the frequencies change or whenever the unit has been repaired or any module (duplexer, etc.) has been replaced. Refer to Figures 1 and 2 when performing these procedures for connections and tuning screws.

NOTE

The duplexer has been factory tuned for 462.675 Mhz transmit and 467.675 Mhz receive frequencies.

EQUIPMENT REQUIRED

- Signal Generator with 50 ohm output impedance and output attenuator
- Communications Monitor with 50 ohm input impedance and signal level indicator
- 50 ohm pads (quantity of 3); a 6, 10 or 20 dB pad may be used
- 50 ohm termination load
- Hollow shaft nut driver
- Slotted screwdriver with long, narrow shaft to work with nut driver
- Phillips head screwdriver

ERICSSON

TUNING INSTRUCTIONS

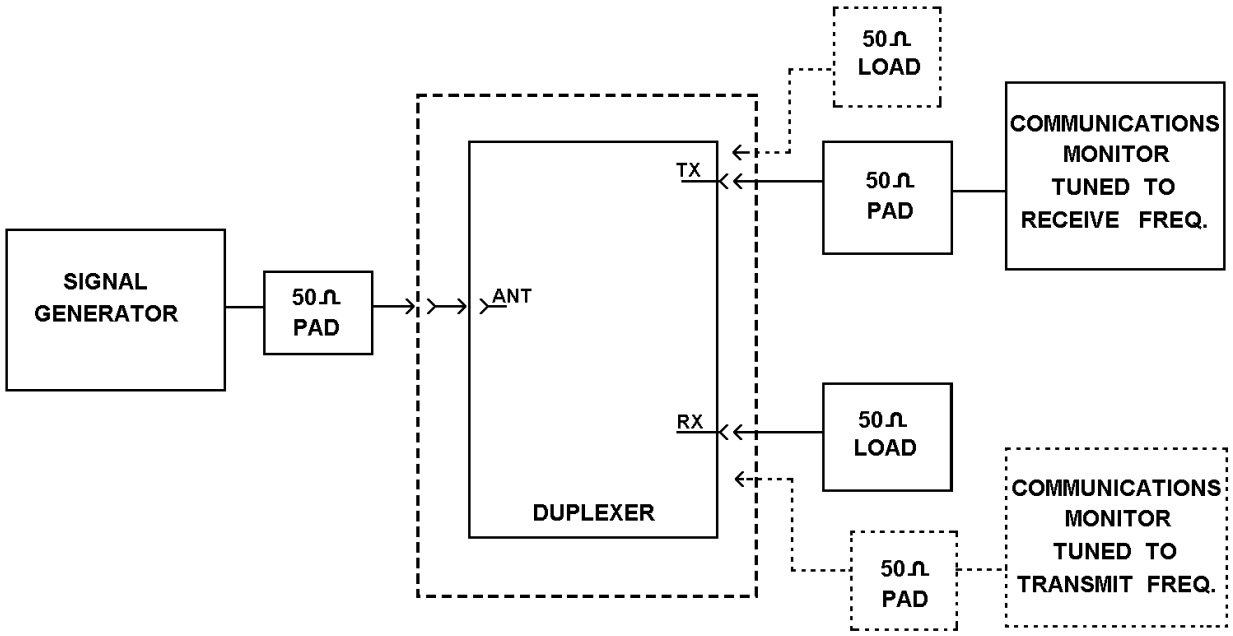


Figure 1- Duplexer Test Setup

WARNING

Do not tune the duplexer with transmitter keyed into the duplexer.

1. Turn off the DRC-200 with the front panel POWER ON/OFF switch and unplug AC power cord.

2. Remove the eight (8) black Phillips head screws that fasten the cover wrap to the chassis and slide the cover wrap off towards the rear of the unit.

3. Remove the fifteen (15) screws holding the top metal shield to case.

4. Remove three (3) screws on inside of case holding front panel to metal chassis.

5. Gently pry up snaps and remove front cover to gain access to duplexer tuning screws.

6. Remove four (4) screws holding power amplifier on the chassis to gain access to the duplexer BNC connectors.

7. Connect the signal generator output through the 50 ohm pad to the ANTENNA connector on the rear panel.

8. Disconnect the cable from the TX port on the duplexer and connect the communications monitor through a 50 ohm pad to the TX port.

9. Remove the cable from the RX port and terminate the RX port into a 50 ohm load termination pad.

10. Tune the communications monitor to the receive frequency.

11. Unloosen the tuning screw shaft locking nuts (Figure 2) on all six (6) tuning screws.

12. Tune the signal generator to the receive frequency and adjust for a high output.

13. Adjust the three transmitter port tuning screws, one at a time, for minimum signal level on the communications monitor. It may be required that each screw be adjusted more than once to obtain a minimum signal level indication.

14. While monitoring the signal level, tighten the tuning screw locking nuts after final adjustment of the transmitter port. It may be necessary to readjust the tuning screws while tightening the locking nuts to retain minimum signal level obtained in Step 13.

15. Disconnect the communications monitor and 50 ohm pad from the TX port.

16. Disconnect the 50 ohm load termination pad from the RX port and connect the communications monitor through the 50 ohm pad to the RX port.

17. Connect the 50 ohm load termination pad removed in Step 16 to the TX port.

18. Tune the communications monitor to the transmit frequency.

19. Tune the signal generator to the transmit frequency and adjust for a high output.

20. Adjust the three receiver port tuning screws, one at a time, for minimum signal level on the communications monitor. It may be required that each screw be adjusted more than once to obtain a minimum signal level indication.

21. While monitoring the signal level, tighten the tuning screw locking nuts after final adjustment of the receiver port. It may be necessary to readjust the tuning screws while tightening the locking nuts to retain minimum signal level obtained in Step 20.

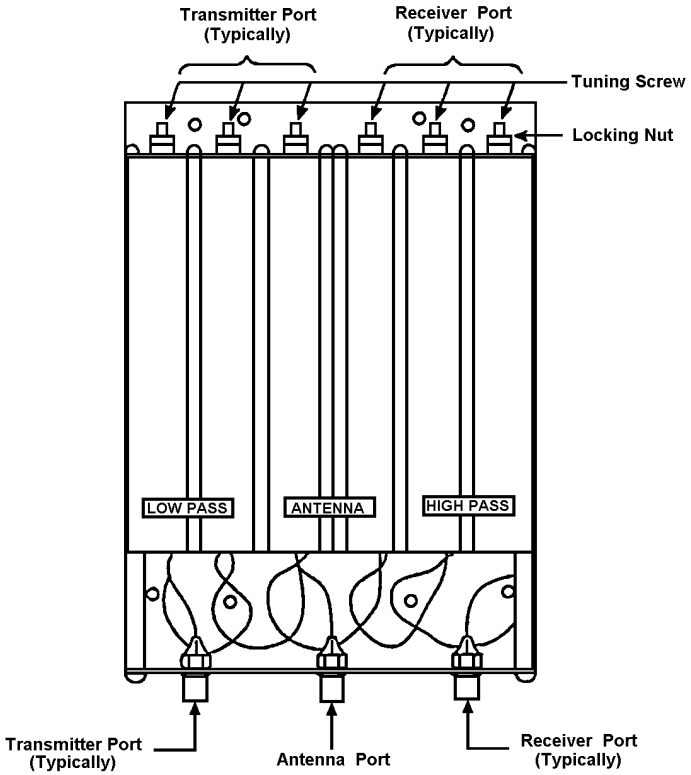
22. Disconnect the communications monitor and 50 ohm pad from the RX port and reconnect the cable to the RX port that was removed in Step 9.

23. Disconnect the 50 ohm load termination pad from the TX port and reconnect the cable removed in Step 8 to the TX port.

24. Disconnect the signal generator and 50 ohm pad from the ANTENNA connector on back panel.

25. Reassemble the radio by performing Steps 6, 5, 4, 3 and 2.

Figure 2 - Duplexer Connections and Tuning Adjustments



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