

Reference: **Dual VCO PCB ASSEMBLY, 650-030-0036.**

### **Alignment procedure when Dual VCO is mounted in a Radio.**

#### **• Rx VCO**

1. Set the unit to the highest receive frequency, 174MHz and **ADJUST L303** so the VCO control voltage at terminal 15 is set for 6.6Vdc ( $\pm 0.1V$ ).
2. Set the unit to the lowest receive frequency, 148MHz, then **VERIFY** that the VCO control voltage at terminal 15 is 1.0Vdc or higher.

#### **• Tx VCO**

1. Set the unit to the highest transmit frequency, 174MHz and **ADJUST L203** so the VCO control voltage at terminal 15 is set to 7.15Vdc ( $\pm 0.1V$ ).
2. Set the unit to the lowest transmit frequency, 148MHz, then **VERIFY** that the VCO control voltage at terminal 15 is 1.0Vdc or higher.

### **Alignment procedure when Dual VCO is mounted in the test fixture.**

#### **• Rx VCO**

1. With the Rx VCO powered up at 4.5Vdc ( $\pm 0.1V$ ) on VCO terminal 4, set the Control Voltage at terminal 15 to 6.6Vdc ( $\pm 0.1V$ ) and **ADJUST L303** so the output frequency at VCO terminal 2 is 219.3MHz. ( $\pm 0.2MHz$ ).
2. Set the Control Voltage to 1.0Vdc ( $\pm 0.1V$ ) on VCO terminal 15. **VERIFY** that the frequency at terminal 2 is 193.3MHz or LOWER.

#### **• Tx VCO**

1. With the Tx VCO powered up at 4.5Vdc ( $\pm 0.1V$ ) on terminal 8, set the Control Voltage at terminal 15 to 7.15Vdc ( $\pm 0.1V$ ) and **ADJUST L203** so that the output frequency at VCO terminal 6 is 174MHz. ( $\pm 0.2MHz$ ).
2. Set the Control Voltage to 1.0Vdc ( $\pm 0.1V$ ) VCO terminal 15. **VERIFY** that the frequency at VCO terminal 6 is 148MHz or LOWER.

VCO shield (E201) is to be installed and soldered to PCB prior to tuning VCO module. All tabs of shield to be soldered to PCB, corner seams to be sealed

