

Alignment procedures for GTX330D.

## **1. TX Alignment Procedure**

Alignment of the GTX330 TX board consists of adjusting five trimmer capacitors for best power consistent with acceptable rise time and fall time.

### **1.1. Initial Trimmer Cap Settings**

Before applying power to the unit, preset the trimmer as described below:

C124: Turn fully clockwise, then turn counterclockwise 5 turns.

C127: Turn fully clockwise, then turn counterclockwise 3 turns.

C129: Turn fully clockwise, then turn counterclockwise 4 turns.

C131: Turn fully clockwise, then turn counterclockwise 1 turns.

C135: Turn fully clockwise, then turn counterclockwise 5 turns.

### **1.2. TX Alignment Steps**

1. Turn on the unit in test mode.
2. Set the SDX2000 or IFR1400 to ATCRBS mode, 50 PRF and interrogate the unit.
3. Adjust C135 for maximum power. The measured power should be greater than 150 watts.
4. Adjust C131 clockwise until pulse power just begins to drop, then turn counterclockwise  $\frac{1}{2}$  turn.
5. Adjust C129 for maximum power consistent with minimum rise time.
6. Repeat steps 3, 4, and 5.
7. Adjust the multiturn pot R177 for minimum pulse width.
8. Via the front panel display, select the test page for setting pulse width.
9. Using the CRSR button, select the pulse width field.
10. Set the pulse width to the first setting which gives a pulse width at or below 450 nS. Press the 8 key to decrease pulse width and the 9 key to increase the pulse width. The CRSR button must be pressed to load the new value.
11. Adjust the multiturn pot R177 to increase pulse width and fall time. The desired pulse width is 470 +/- 5 nS. The corresponding fall time should be in the range 80-110 nS.
12. Verify that pulse rise time is less than 85 nS, fall time is greater than 80 nS, and power >160 watts at the end of a 1.5 dB cable.