

# Ranger RCI-2950

## Documentation Project

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### TX Alignment

#### [TX Alignment Locations](#)

SETTINGS	CONNECTION	ADJUST	ADJUST FOR
<b>Remove TP1, TP2, TP3 Jumper PCB.</b>			
<b>DRIVER BIAS:</b> Set mode to LSB Mic Gain to minimum	Connect DC Ammeter between TP3 and TP2.	<b>VR11</b>	In TX adjust for 50 to 60mA.
<b>FINAL BIAS:</b> Set mode to LSB Mic Gain to minimum	Connect DC Ammeter between TP3 and TP1.	<b>N/A</b>	In TX check for 100-120mA.
<b>DO NOT ADJUST VC3 AS THIS IS PART OF 54 MHz TRAP</b>			
<b>Replace TP1, TP2, TP3 Jumper PCB.</b>			
Mode LSB Frequency to 28.000MHz Adjust VR14 fully counterclockwise. Adjust VR12 fully counterclockwise. Set generator for 30mV RMS, 1KHz sinewave.	Connect an audio generator to (pin 2) and ground (pin 1) of Mic connector. Connect a wattmeter and 50ohm dummy load to the antenna connector. Set wattmeter for 30 Watt scale.	<b>Mic Gain</b>	Key the transmitter and slowly increase Mic Gain until you obtain about 10 Watts.
		<b>L19, L48 L47, L46, L43</b>	Adjust for maximum reading on wattmeter. Reduce RF gain if necessary to maintain about 10 to 15 Watts on wattmeter.
Increase Mic gain to maximum (fully clockwise).	Same as above.	<b>L34</b>	Adjust for maximum output power
<b>SSB CARRIER BALANCE:</b> Set mode to USB MIKE GAIN to minimum.	Same as above.	<b>VR7</b>	Key TX; adjust for minimum carrier on scope or wattmeter. If necessary readjust for best balance of sideband suppression between LSB & USB
<b>SSB HIGH PWR:</b> With Mic gain still a maximum on LSB Set RF PWR control on radio to minimum.	Same as above.	<b>VR12</b>	Key the transmitter and adjust for 25 Watts.
<b>SSB LOW PWR:</b> With Mic gain still a maximum on LSB Set RF PWR control on radio to minimum.	Same as above.	<b>VR16</b>	Key the transmitter and adjust for 10 Watts.
<b>AM POWER HIGH:</b> Set RF PWR control on radio to maximum Put mode selector on AM.	Connect a wattmeter and 50ohm dummy load to the antenna connector. Set wattmeter for 30W scale.	<b>VR13</b>	Key transmitter with no modulation applied and adjust for 10 Watts.

Mic Gain to minimum			
<b>AM POWER LOW:</b> Set RF PWR control on radio to minimum. Mic Gain to minimum	Connect a wattmeter and 50ohm dummy load to the antenna connector. Set wattmeter for 30W scale.	<b>VR15</b>	Key transmitter with no modulation applied and adjust for 2W.
<b>RF METER:</b> Set RF PWR control on radio to maximum. Mic Gain to minimum.	Connect a wattmeter and 50ohm dummy load to the antenna connector. Set wattmeter for 30W scale.	<b>VR8</b>	Adjust so panel meter agrees with Wattmeter.
<b>AMC:</b> Mode to AM Set generator for 30mV RMS, 1KHz sinewave. With Mic gain at maximum	Same as above.	<b>VR14</b>	Adjust for 100% modulation. Use modulation meter or oscilloscope with RF sampler.
<b>FM DEVIATION:</b> Put mode selector on FM	Key transmitter and check for 4kHz deviation $\pm$ 0.5 kHz. Use deviation meter or service monitor.	<b>N/A</b>	Simply check for sufficient transmit audio. <b>There is no deviation adjustment provided in this radio.</b>

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**Disclaimer:** Although the greatest care has been taken while compiling these documents, we cannot guarantee that the instructions will work on every radio presented.