

	REV.	DESCRIPTION	DATE	APPROVED
	<b>X2</b>	PRODUCTION RELEASE PER ECO XXXX		

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				<b>Linear</b>	2055 CORTE DEL NOGAL CARLSBAD, CA 92009 (760) 438-7000	
				TITLE		
				<b>TEST PROCEDURE,</b> <b>RFI00001 PCB ASSY</b>		
		DRAWN W. HELLWIG	DATE 09/07/01			
NEXT ASSY	USED ON	COG. ENGINEER		SCALE NONE	SIZE A	DRAWING NO. <b>214600</b> REV. <b>X2</b>
APPLICATION		RELEASED		FILE NAME		SHEET 1 OF 3

## 1.0 OVERVIEW

This is a bench test for the RFI00001 PCB assembly. This test should be completed before the PCB is used in higher assemblies.

## 2.0 EQUIPMENT REQUIRED

Note: Equivalent equipment may be substituted.

MODEL	MANUFACTURER	DESCRIPTION
		9 Volt DC Power Supply 300 mA
87	Fluke	DVM
8640B	Hewlett Packard	RF Signal Generator
8590A	Hewlett Packard	Spectrum Analyzer
5386A	Hewlett Packard	RF Frequency Counter

## 3.0 PRELIMINARY

Visually inspect the PCB for defects, such as lifted traces, and broken or improperly installed components.

## 4.0 PCB ASSEMBLY TEST CONNECTIONS

Connect the PCB Assembly as shown in FIGURE 1.

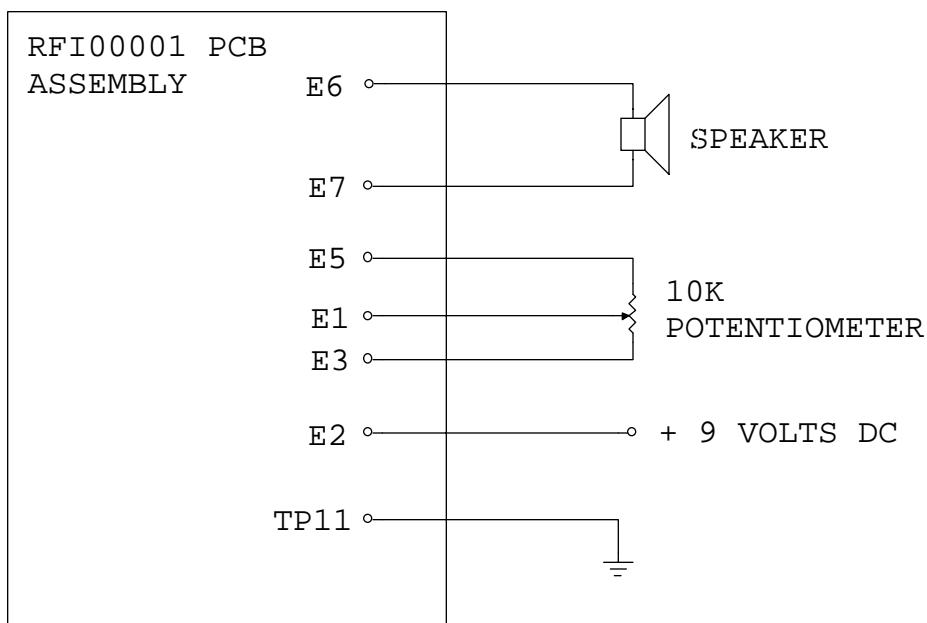


FIGURE 1

## 5.0 FACTORY TEST MODE

Factory test mode is entered by powering up the RFI00001 console PCB assembly while pressing S3 (ALL CALL) and S5 (CH 1) keys simultaneously.

## 6.0 RF ALIGNMENT

1. Connect the frequency counter to E10 (Antenna connection).
  - Note: Make sure that the frequency counter can accept +20 dBm of input power. If not, place an attenuator on the input of the frequency counter to bring the power level within the tolerance of the counter.
2. Place S1 (Lockout) and S4 (Channel Select) in the ON positions. (Switches away from the LEDs)
3. Power up unit under test while pressing the S3 (ALL CALL) and S5 (CH 1) buttons (factory test mode).
  - Note: The unit under test will come up in the transmit mode.
4. Verify that the current from the 9 VDC power supply is between 75 and 125 mA.
5. Adjust L12 until the voltage at TP2 is 3.5 volts DC (+/- 0.2 volts).
6. Adjust C76 until the frequency at E10 is 467.6875 MHz (+/- 0.00025MHz) on the frequency counter.
7. Place S4 (Channel Select) and S1 (Lockout) in the OFF position (Switchs toward the LEDs).
8. Place S1 (Lockout) in the ON position (Switch away from the LEDs) and verify that the frequency counter now reads 467.5625.
9. Place S4 (Channel Select) in the ON position (Switch away the LEDs) and S1 (Lockout) in the OFF position (Switch toward the LEDs).
10. Disconnect the frequency counter and connect the spectrum analyzer to E10 (Antenna connection). Set the spectrum analyzer to a center frequency of 467.6875 MHz and a span of 100 KHz. Place S1 (Lockout) in the ON position (Switch away from the LEDs).
11. Press S5 (CH1) and verify that the bandwidth of the signal on the spectrum analyzer is less than 12.5 KHz.
12. Place S1 (Lockout) in the OFF position (Switch toward the LEDs). The unit under test will change to the receive mode.
13. Verify that the current from the 9 VDC power supply is between 30 and 75 mA.
14. Adjust L15 until the voltage at TP4 is 3.5 volts DC (+/- 0.2 volts).
15. Remove the frequency counter from E10. Connect the signal generator to E10.
16. Set the signal generator to 467.6875 MHz at -67 dBm.
  - Note: Make sure that the RF output is turned ON.

17. Adjust L18 until the voltage at TP9 is 2 volts DC(+/- 0.1 volt).
18. Turn the RF output of the signal generator OFF.
19. Turn R75 fully counter-clockwise.
20. Adjust the test fixture 10k potentiometer so that the hissing noise from the test fixture speaker can be heard.
21. Adjust R75 clockwise to the point where the hissing noise stops.
22. Turn ON the signal generator and set its output -87 dBm with 2KHz deviation of FM modulation at 400Hz.
  - Note: The 400Hz tone should be heard on the speaker.
23. Adjust R75 until the 400 Hz tone can no longer be heard.
24. Set R75 half way between its current position and the position it was in after step 21. The squelch will now be at the optimal setting.
25. Cycle power to the unit under test.
26. Press and release the S5, S6, S7, S8, and S9 (CH1 through CH5) buttons and verify that the corresponding LED (D7, D8, D9, D10, and D11) illuminates.
27. Remove power from the PCB.

This concludes the test procedure.