

Test Writer:	Jeff Roman				Test Type:	Black box		Test goal: maximum gain 33dB, 500mV output from 10mV input, when feedback pot fully turned.	
Test Case Name:	Audio Preamplifier Functional Test				Test ID:				
Description:	Verify amplification of input signal from no output to 30db								
Test Information									
Name of Tester:			Hardware Version:			Date:			
Setup:	>9V DC power on PCB, preamplifier isolated from AM mixer stage which follows. Function generator to audio input, scope on.						Time:		
Equipment Needed:	DC Power Supply, Function Generator, Oscilloscope.								
Test Results									
Test:	Input		Feedback Pot Turns %	Expected Output		Pass	Fail	N/A	Comments
	Frequency	Amplitude		Frequency	Amplitude				
	100Hz	10mV	0%	100Hz	0V				
	1kHz	10mV	0%	1kHz	0V				
	10kHz	10mV	0%	10kHz	0V				
	20kHz	10mV	0%	20kHz	0V				
	100Hz	10mV	100%	100Hz	>300mV				
	1kHz	10mV	100%	1kHz	>300mV				
	10kHz	10mV	100%	10kHz	>300mV				
	20kHz	10mV	100%	20kHz	>300mV				
Overall Test Results:									

Test Writer:	Jeff Roman					Test Type:	Black box		Test Goal: Full frequency response of antenna oscillator for tuning the RF reference oscillator. Notes: If oscillation ceases or fundamental frequency jumps, may need to reach out and physically touch the antenna. Add to comments if this occurs.
Test Case Name:	Local Oscillator Performance Test					Test ID:			
Description:	Characterize performance of local oscillator.								
Test Information									
Name of Tester:				Hardware Version:			Date:		
Setup:	>9V DC power on PCB, antenna fully extended and stabilized in a position where physical proximity is easily measurable. Oscillator isolated from following mixer stage, spectrum analyzer probing oscillator output. One engineer places hand at a stable distance from antenna, the other records						Time:		
Resources Needed:	Two engineers. DC Power Supply, Oscilloscope, Spectrum Analyzer, meter stick.								
Test Results									
Test:						Pass	Fail	N/A	Comments
	Distance from Antenna	Fundamental Frequency	Fundamental Signal Strength	Signal Strength at 2nd harmonic	Amplitude				Failure defined as oscillation frequency being grossly unstable or uncorrelated to antenna proximity. Record comments on signal appearance.
	1cm								
	10cm								
	20cm								
	30cm								
	40cm								
	50cm								
	60cm								
	70cm								
Overall Test Results:									

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	20kHz	10mV	0%	20kHz	0V				
	100Hz	10mV	100%	100Hz	>300mV				
	1kHz	10mV	100%	1kHz	>300mV				
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