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 data				**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:									