Test Writer:	Jeff Roman						Bla	ck box	Test goal: maximum gain
Test Case Name:	Audio Preamplifier Functional Test					Test ID:			33dB, 500mV output from
Description:	Verify amplification of input signal from no output to 30db								10mV input, when
			Test Informa	tion					feedback pot fully turned.
Name of Tester:			Hardware Version:		Date:				
Setup:	>9V DC pow	er on PCB, pre	amplifier isolate	ed from AM i	nixer stage v	vhich			
	follows. Function generator to audio input, scope on.								
Equipment Needed:	DC Power Supply, Function Generator, Oscilloscope.								
			Test Resul	ts					
Test:	lı	nput	Feedback	Expecte	Pass	Fail	N/A	Comments	
			Pot Turns %						
	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				
	_	_	<u> </u>	Overall	Test Results:				

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

Test Writer:	Jeff Roman	Jeff Roman						ck box	Test goal: maximum gain	
Test Case Nam	<b>ne</b> Audio Prea	Audio Preamplifier Functional Test					Bla		33dB, 500mV output	
Description:	Audio Preamplifier Functional Test  Verify amplification of input signal from no output to 30db								from 10mV input, when feedback pot fully turned.	
	Test Information									
Name of Tester										
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:	Ir	nput	Pot Turns %		Pass	Fail	N/A	Comments		
	Frequenc y	Amplitude		Frequency	Amplitude					
	100Hz	10mV	0%	100Hz	0V					
	1kHz	10mV	0%	1kHz	ΟV					
	10kHz	10mV	0%	10kHz	0V					
	20kHz	10mV	0%	20kHz	οv					
	100Hz	10mV		100Hz	>300mV					
	1kHz	10mV		1kHz	>300mV					
	10kHz	10mV	<u> </u>	10kHz	>300mV					
	20kHz	10mV		20kHz	>300mV					
	•		•		st Results:					
Test Writer:	Jeff Roman Test Type Black box								Test Goal: Full frequency response of antenna	
		Local Oscillator Performance Test								
Description:	Characteriz	e performance							oscillator for tuning the RF reference oscillator.	
		Test Information								
Name of Tester		DOD.	Hardware Ver		h = 1-212 =	Date:			Notes: If oscillation	
Setup:	where phys following m	>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							ceases or fundamental frequency jumps, may need to reach out and physically touch the	
Resources Needed:	Two engineers. DC Power Supply, Oscilloscope, Spectrum Analyzer, meter stick.							antenna. Add to comments if this occurs.		
			Test Resu	lts						
Test:						Pass	Comments			
	Distance from Antenna	Fundament al Frequency	Fundamenta I 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									
			]							
<b>I</b>	10cm						I	1	1	
	10cm 20cm									
	20cm									
	20cm 30cm									
	20cm 30cm 40cm									
	20cm 30cm 40cm 50cm									