

APPLICATION FOR EQUIPMENT FREQUENCY ALLOCATION		CLASSIFICATION UNCLASSIFIED	DATE 03/23/1994	J/F 12/06946
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DOD GENERAL INFORMATION				
TO	DEPARTMENT OF THE NAVY NAVAL EM SPECTRUM MGT OFFICE CNO N60T WASHINGTON, DC 20350		FROM	COMMANDER NAVAL AIR WARFARE CENTER AIRCRAFT DIVISION (RD66) PATUXENT RIVER, MD 20670-5304
1. APPLICATION TITLE	(U)	Southern California Microwave VTX13L-10/2SC, TTX13L AND VT05L Video/Telemetry Transmitters		
2. SYSTEM NOMENCLATURE	(U)	UNMANNED AIR VEHICLE (UAV) VIDEO/TELEMETRY		
3. STAGE OF ALLOCATION	(U)	<input type="checkbox"/> a. STAGE 1 CONCEPTUAL	<input type="checkbox"/> b. STAGE 2 EXPERIMENTAL	<input type="checkbox"/> c. STAGE 3 DEVELOPMENTAL <input checked="" type="checkbox"/> d. STAGE 4 OPERATIONAL
4. FREQUENCY REQUIREMENTS				
a. FREQUENCY(IES)	(U)	1710 MHz - 1850 MHz		
b. EMISSION DESIGNATORS	(U)	18M0F8W	250KF1D	
5. TARGET STARTING DATE FOR SUBSEQUENT STAGES				
a. STAGE 2	(U)	NA	b. STAGE 3	(U) NA
			c. STAGE 4	(U) NAvail
6. EXTENT OF USE (U) INTERMITTENT DURING SURVEILLANCE MISSIONS.				
7. GEOGRAPHICAL AREA FOR				
a. STAGE 2 (U) NA				
b. STAGE 3 (U) NA				
c. STAGE 4 (U) US&P TEST AND TRAINING RANGES.				
8. NUMBER OF UNITS				
a. STAGE 2	(U)	NA	b. STAGE 3	(U) NA
			c. STAGE 4	(U) 25
9. NUMBER OF UNITS OPERATING SIMULTANEOUSLY IN THE SAME ENVIRONMENT (U) (See Remarks)				
10. OTHER J/F 12 APPLICATION ID(S) TO BE		11. IS THERE ANY OPERATIONAL REQUIREMENT AS DESCRIBED IN THE INSTRUCTIONS FOR PARAGRAPH 11?		
(U) <input type="checkbox"/> a. SUPERSEDED		(U) <input checked="" type="checkbox"/> a. YES <input type="checkbox"/> b. NO <input type="checkbox"/> c. NAVAIL		
<input checked="" type="checkbox"/> b. RELATED				
12. NAMES AND TELEPHONE NUMBERS (U)				
a. PROGRAM MANAGER KERRY KELLEY		(1) COMMERCIAL 301-826-7695	(2) DSN 326-7695	
b. PROJECT ENGINEER MIKEL RYAN		(1) COMMERCIAL 301-826-1194	(2) DSN 326-1194	
13. REMARKS (U) ITEM 9: 2-3.				
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TRANSMITTER EQUIPMENT CHARACTERISTICS			
1. NOMENCLATURE, MANUFACTURER'S MODEL NO. (U) TTX13L-10A		2. MANUFACTURER'S NAME (U) Southern California Microwave	
3. TRANSMITTER INSTALLATION (U) Ground		4. TRANSMITTER TYPE (U) FSK Communications	
5. TUNING RANGE (U) 1710 MHz - 1850 MHz		6. METHOD OF TUNING (U) Synthesizer	
7. RF CHANNELING CAPABILITY (U) 1710 MHz, 1 MHz Increments		8. EMISSION DESIGNATORS (U) 250KF1D (U) (U)	
9. FREQUENCY TOLERANCE (U) 30 ppm		12. EMISSION BANDWIDTH <div style="display: flex; justify-content: space-around; align-items: center;"> <input type="checkbox"/> CALCULATED <input checked="" type="checkbox"/> MEASURED </div>	
10. FILTER EMPLOYED (U) <input checked="" type="checkbox"/> a. YES <input type="checkbox"/> b. NO		a. -3 dB (U) 150 KHz (U) (U)	
11. SPREAD SPECTRUM (U) <input type="checkbox"/> a. YES <input checked="" type="checkbox"/> b. NO		b. -20 dB (U) 200 KHz (U) (U)	
13. MAXIMUM BIT RATE (U) 38.4 Kbps		c. -40 dB (U) NA (U) (U)	
14. MODULATION TECHNIQUES AND CODING (U) FSK		d. -60 dB (U) 450 KHz (U) (U)	
16. PRE-EMPHASIS (U) <input type="checkbox"/> a. YES <input checked="" type="checkbox"/> b. NO		e. OC-BW (U) 250 KHz (U) (U)	
19. POWER		15. MAXIMUM MODULATION FREQUENCY (U) 20 KHz	
a. MEAN (U) 10 W (U) (U)		17. DEVIATION RATIO (U) 4	
b. PEP (U) NA (U) (U)		18. PULSE CHARACTERISTICS	
20. OUTPUT DEVICE (U) Bipolar Transistor, Class C		a. RATE (U) NA (U) (U)	
22. SPURIOUS LEVEL (U) -80 dB		b. WIDTH (U) NA (U) (U)	
23. FCC TYPE ACCEPTANCE NO. (U) NA		c. RISE TIME (U) NA (U) (U)	
24. REMARKS (U) Item 10: 5-Pole Chebychev lowpass filter between output devices and antenna connector. Approximately 0.5 dB insertion loss with approximately 25 dB attenuation at 2X transmitting frequency.		d. FALL TIME (U) NA (U) (U)	
		e. COMP RATIO (U) NA (U) (U)	
		21. HARMONIC LEVEL	
		a. 2nd (U) -55 dB	
		b. 3rd (U) -55 dB	
		c. OTHER (U) -80 dB	
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RECEIVER EQUIPMENT CHARACTERISTICS					
1. NOMENCLATURE, MANUFACTURER'S MODEL NO. (U) TRX23LA			2. MANUFACTURER'S NAME (U) Southern California Microwave		
3. RECEIVER INSTALLATION (U) Aircraft/Maverick UAV			4. RECEIVER TYPE (U) Triple Conversion Superheterodyne		
5. TUNING RANGE (U) 1710 MHz - 1850 MHz			6. METHOD OF TUNING (U) Synthesizer		
7. RF CHANNELING CAPABILITY (U) 1710 MHz, 1 MHz Increments			8. EMISSION DESIGNATORS (U) 250KF1D		
9. FREQUENCY TOLERANCE (U) 1 ppm			11. RF SELECTIVITY <div style="display: flex; justify-content: space-around; align-items: center;"> <input type="checkbox"/> CALCULATED <input checked="" type="checkbox"/> MEASURED </div>		
10. IF SELECTIVITY			a. -3 dB (U) 315 MHz		
	1st (U)	2nd (U)	3rd (U)	b. -20 dB (U) 450 MHz	
a. -3 dB	5 MHz	500 KHz	330 KHz	c. -60 dB (U) 1200 MHz	
b. -20 dB	15 MHz	1.1 MHz	590 KHz	d. Preselection Type (U) 9-Pole LC Bandpass	
c. -60 dB	35 MHz	2.5 MHz	1.3 MHz	13. MAXIMUM POST DETECTION FREQUENCY (U) 20 KHz	
12. IF FREQUENCY			14. MINIMUM POST DETECTION FREQUENCY (U) NA		
a. 1st (U) 400 MHz			16. MAXIMUM BIT RATE (U) 38.4 Kbps		
b. 2nd (U) 70 MHz					
c. 3rd (U) 10.7 MHz			17. SENSITIVITY		
15. OSCILLATOR TUNED			1st (U)	2nd (U)	3rd (U)
a. ABOVE TUNED FREQUENCY					
b. BELOW TUNED FREQUENCY			X	X	X
c. EITHER ABOVE OR BELOW THE FREQUENCY					
18. DE-EMPHASIS (U) <input checked="" type="checkbox"/> a. YES <input type="checkbox"/> b. NO			d. NOISE TEMP (U) NA		
19. IMAGE REJECTION (U) 60 dB			20. SPURIOUS REJECTION (U) 60 dB		
21. REMARKS (U)					
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ANTENNA EQUIPMENT CHARACTERISTICS			
1. (U) <input checked="" type="checkbox"/> a. TRANSMITTING <input type="checkbox"/> b. RECEIVING <input type="checkbox"/> c. TRANSMITTING AND RECEIVING			
2. NOMENCLATURE, MANUFACTURER'S MODEL NO. (U) E-400		3. MANUFACTURER'S NAME (U) SOUTHERN CALIFORNIA MICROWAVE	
4. FREQUENCY RANGE (U) 1710 MHz - 1850 MHz		5. TYPE (U) COAXIAL DIPOLE	
6. POLARIZATION (U) Vertical		7. SCAN CHARACTERISTICS	
8. GAIN		a. TYPE (U) FIXED	
a. MAIN BEAM (U) 3 dBi		b. VERTICAL SCAN (U) NA	
b. 1st MAJOR SIDE LOBE (U)		(1) Max Elev (U)	
9. BEAMWIDTH		(2) Min Elev (U)	
a. HORIZONTAL (U) 360 deg		(3) Scan Rate (U)	
b. VERTICAL (U) 90 deg		c. HORIZONTAL SCAN (U) NA	
10. REMARKS (U)		(1) Sector Scanned (U)	
NONE.		(2) Scan Rate (U)	
10. REMARKS (U)		d. SECTOR BLANKING (U) <input type="checkbox"/> (1) YES <input checked="" type="checkbox"/> (2) NO	

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APPLICATION FOR SPECTRUM REVIEW	CLASSIFICATION UNCLASSIFIED	PAGE 6
NTIA GENERAL INFORMATION		
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2. SYSTEM NOMENCLATURE (U) UNMANNED AIR VEHICLE (UAV) VIDEO/TELEMETRY		
3. STAGE OF ALLOCATION (U) <input type="checkbox"/> a. STAGE 1 CONCEPTUAL <input type="checkbox"/> b. STAGE 2 EXPERIMENTAL <input type="checkbox"/> c. STAGE 3 DEVELOPMENTAL <input checked="" type="checkbox"/> d. STAGE 4 OPERATIONAL		
4. FREQUENCY REQUIREMENTS a. FREQUENCY(IES) (U) 1710 MHz - 1850 MHz b. EMISSION DESIGNATORS (U) 18M0F8W 250KF1D		
5. PURPOSE OF SYSTEM, OPERATIONAL AND SYSTEM CONCEPTS (WARTIME USE) <input checked="" type="checkbox"/> a. YES <input type="checkbox"/> b. NO (U) TRANSMIT VIDEO AND TELEMETRY DATA FROM UNMANNED AIR VEHICLE TO SUPPORT BATTLEFIELD SURVEILLANCE.		
6. INFORMATION TRANSFER REQUIREMENTS (U) NA		
7. ESTIMATED INITIAL COST OF THE SYSTEM (U) \$3000 PER UNIT		
8. TARGET DATE FOR		
a. APPLICATION APPROVAL (U) 06/01/1994	b. SYSTEM ACTIVATION (U) 07/01/1994	c. SYSTEM TERMINATION (U) 01/01/2010
9. SYSTEM RELATIONSHIP AND ESSENTIALITY (U) TRANSMITS VIDEO AND TELEMETRY DATA FROM UNMANNED AIR VEHICLE.		
10. REPLACEMENT INFORMATION (U) XMTR IS AN UPGRADE OF VTX 13L-5 VIDEO XMTR (J/F 12/6572)		
11. RELATED ANALYSIS AND/OR TEST DATA (U) NA		
12. NUMBER OF MOBILE UNITS (U) 25		
13. GEOGRAPHICAL AREA FOR		
a. STAGE 2 (U) NA		
b. STAGE 3 (U) NA		
c. STAGE 4 (U) US&P TEST AND TRAINING RANGES		
14. LINE DIAGRAM (U) See Page(s) 4		15. SPACE SYSTEMS (U) See Page(s) NA
16. TYPE OF SERVICE(S) FOR STAGE 4 (U) Mobile		17. STATION CLASS(ES) FOR STAGE 4 (U) MOEB
18. REMARKS (U) ITEM 14: CONTACT YOUR MILDEP REPRESENTATIVE OR THE JSC FOR A COPY OF THE LINE DIAGRAM.		
DOWNGRADING INSTRUCTIONS		J/F 12/06946 CLASSIFICATION UNCLASSIFIED