

APPLICATION FOR EQUIPMENT
FREQUENCY ALLOCATION

UNCLASSIFIED

04/14/2004

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DOD GENERAL INFORMATION

TO USMCEB	FROM Office of the Army Spectrum Manager Submitted by: (Night Vision/Reconnaissance/ Surveillance and Target Acquisition ATTN: SFAE-NEWS-NV-RUS)
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1. APPLICATION TITLE (U) Remotely Monitored Battlefield Sensor System II (REMBASS II)

2. SYSTEM NOMENCLATURE (U) BAIS, AN/GSR-6(V)2

3. STAGE OF ALLOCATION (U) ☐ a. STAGE 1 CONCEPTUAL ☐ b. STAGE 2 EXPERIMENTAL ☐ c. STAGE 3 DEVELOPMENTAL ☒ d. STAGE 4 OPERATIONAL

4. FREQUENCY REQUIREMENTS
a. FREQUENCY(IES) (U) 138.025 MHz - 152.975 MHz
b. EMISSION DESIGNATORS (U) 16K0F1D

5. TARGET STARTING DATE FOR SUBSEQUENT STAGES
a. STAGE 2 (U) NA b. STAGE 3 (U) NA c. STAGE 4 (U) NA

6. EXTENT OF USE (U) Intermittent

7. GEOGRAPHICAL AREA FOR
a. STAGE 2 (U) NA
b. STAGE 3 (U) NA
c. STAGE 4 (U) US&P, NATO and NATO member countries, ROK (See Remarks)

8. NUMBER OF UNITS
a. STAGE 2 (U) NA b. STAGE 3 (U) NA c. STAGE 4 (U) (See Remarks)

9. NUMBER OF UNITS OPERATING SIMULTANEOUSLY IN THE SAME ENVIRONMENT (U) (See Remarks)

10. OTHER J/F 12 APPLICATION ID(S) TO BE
(U) ☒ a. SUPERSEDED J/F 12/3838/4
☐ b. RELATED

11. IS THERE ANY OPERATIONAL REQUIREMENT AS DESCRIBED IN THE INSTRUCTIONS FOR PARAGRAPH 11?
(U) ☐ a. YES ☒ b. NO ☐ c. NAVAIL

12. NAMES AND TELEPHONE NUMBERS (U)

a. PROGRAM MANAGER COL Michael Bowman	(1) COMMERCIAL 703-704-3450	(2) DSN 654-3450
b. PROJECT ENGINEER Robert Foresta	(1) COMMERCIAL 732-427-5503	(2) DSN 687-5503

13. REMARKS (U)

Item 7c: Afghanistan; Iraq

Item 8c: 320 Transmitters; 95 Receivers

Item 9: 64 Transmitters; 19 Receivers

DOWNGRADING INSTRUCTIONS

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TRANSMITTER EQUIPMENT CHARACTERISTICS

1. NOMENCLATURE, MANUFACTURER'S MODEL NO. (U) (See Remarks)		2. MANUFACTURER'S NAME (U) Nova Engineering (See Remarks)	
3. TRANSMITTER INSTALLATION (U) Transportable		4. TRANSMITTER TYPE (U) Communication	
5. TUNING RANGE (U) 138.025 MHz - 152.975 MHz		6. METHOD OF TUNING (U)	
7. RF CHANNELING CAPABILITY (U) 138.025 MHz, 25 kHz increments		8. EMISSION DESIGNATORS (U) 16K0F1D (U) (U)	
9. FREQUENCY TOLERANCE (U) 3 ppm		12. EMISSION BANDWIDTH ☐ CALCULATED ☒ MEASURED	
10. FILTER EMPLOYED (U) ☒ a. YES ☐ b. NO		a. -3 dB (U) 11 KHz (U) (U)	
11. SPREAD SPECTRUM (U) ☐ a. YES ☒ b. NO		b. -20 dB (U) 19 KHz (U) (U)	
13. MAXIMUM BIT RATE (U) 1200 bps		c. -40 dB (U) (U) (U)	
14. MODULATION TECHNIQUES AND CODING (U) FSK, Manchester coding		d. -60 dB (U) 50 KHz (U) (U)	
16. PRE-EMPHASIS (U) ☐ a. YES ☒ b. NO		e. OC-BW (U) (U) (U)	
19. POWER		15. MAXIMUM MODULATION FREQUENCY (U) 1200 Hz	
a. MEAN (U) 2 W (U) (U)		17. DEVIATION RATIO (U) 3	
b. PEP (U) NA (U) (U)		18. PULSE CHARACTERISTICS	
20. OUTPUT DEVICE (U) Transistor		a. RATE (U) NA (U) (U)	
22. SPURIOUS LEVEL (U) -55 dB		b. WIDTH (U) NA (U) (U)	
23. FCC TYPE ACCEPTANCE NO. (U) NA		c. RISE TIME (U) NA (U) (U)	
		d. FALL TIME (U) NA (U) (U)	
		e. COMP RATIO (U) NA (U) (U)	
		21. HARMONIC LEVEL	
		a. 2nd (U) -45 dB	
		b. 3rd (U) -45 dB	
		c. OTHER (U) -65 dB	

24. REMARKS (U)

Item 1: Seismic/Acoustic Sensor (SAS) MX-2965, SSR Radio Repeater RT-1175C/GSQ

Item 2: SAS vendor is L-3 Communication Systems; Radio Repeater vendor is NOVA Engineering.

Item 5: The repeater receives on one frequency transmits on a frequency greater than or equal to 250 kHz away from the receive frequency.

Item 10: Low pass filter

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RECEIVER EQUIPMENT CHARACTERISTICS

1. NOMENCLATURE, MANUFACTURER'S MODEL NO. (U) AN/PSQ-16 Radio Receiving Set				2. MANUFACTURER'S NAME (U) L-3 Communication Systems	
3. RECEIVER INSTALLATION (U) Portable, Handheld				4. RECEIVER TYPE (U) Dual Stage Superhetrodyne	
5. TUNING RANGE (U) 138.025 MHz - 152.975 MHz				6. METHOD OF TUNING (U) Synthesizer	
7. RF CHANNELING CAPABILITY (U) 138.025 MHz, 25 kHz increments				8. EMISSION DESIGNATORS (U) 16K0F1D	
9. FREQUENCY TOLERANCE (U) 3 ppm				11. RF SELECTIVITY ☐ CALCULATED ☒ MEASURED	
10. IF SELECTIVITY				a. -3 dB (U) 22 MHz	
1st (U)	2nd (U)	3rd (U)	b. -20 dB (U) 72 MHz		
a. -3 dB	15 KHz	20 KHz	c. -60 dB (U) 120 MHz		
b. -20 dB	32 KHz	40 KHz	d. Preselection Type (U) Bandpass Filter		
c. -60 dB	72 KHz	77 KHz	13. MAXIMUM POST DETECTION FREQUENCY (U) 1200 Hz		
12. IF FREQUENCY				14. MINIMUM POST DETECTION FREQUENCY (U) 600 Hz	
a. 1st (U) 21.4 MHz				16. MAXIMUM BIT RATE (U) 1200 bps	
b. 2nd (U) 455 KHz					
c. 3rd (U)					
15. OSCILLATOR TUNED		1st (U)	2nd (U)	17. SENSITIVITY	
a. ABOVE TUNED FREQUENCY			X	a. SENSITIVITY (U) -110 dBm	
b. BELOW TUNED FREQUENCY		X		b. CRITERIA (U) SNR = 15 dB	
c. EITHER ABOVE OR BELOW THE FREQUENCY				c. NOISE FIG (U) 8.5 dB	
18. DE-EMPHASIS (U) ☐ a. YES ☒ b. NO				d. NOISE TEMP (U)	
19. IMAGE REJECTION (U) 60 dB				20. SPURIOUS REJECTION (U) 65 dB	
21. REMARKS (U)					

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ANTENNA EQUIPMENT CHARACTERISTICS

1. (U) ☒ a. TRANSMITTING ☐ b. RECEIVING ☐ c. TRANSMITTING AND RECEIVING

2. NOMENCLATURE, MANUFACTURER'S MODEL NO.
 (U) Seismic/Acoustic Sensor Antenna

3. MANUFACTURER'S NAME
 (U) L-3 Communication Systems

5. TYPE (U) 20 Inch Monopole

4. FREQUENCY RANGE
 (U) 138 MHz - 153 MHz

7. SCAN CHARACTERISTICS

a. TYPE (U) NA

b. VERTICAL SCAN (U) NA

(1) Max Elev (U) NA

(2) Min Elev (U) NA

(3) Scan Rate (U) NA

c. HORIZONTAL SCAN (U) NA

(1) Sector Scanned (U) NA

(2) Scan Rate (U) NA

6. POLARIZATION
 (U) Vertical

8. GAIN

a. MAIN BEAM
 (U) 0.0 dBi

b. 1st MAJOR SIDE LOBE
 (U)

9. BEAMWIDTH

a. HORIZONTAL
 (U) 360 deg

b. VERTICAL
 (U) 70 deg

d. SECTOR BLANKING (U) ☐ (1) YES ☒ (2) NO

10. REMARKS (U)

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ANTENNA EQUIPMENT CHARACTERISTICS

1. (U) ☐ a. TRANSMITTING ☐ b. RECEIVING ☒ c. TRANSMITTING AND RECEIVING

2. NOMENCLATURE, MANUFACTURER'S MODEL NO.
 (U) Radio Repeater RT-1175C Antenna

3. MANUFACTURER'S NAME
 (U) L-3 Communication Systems

5. TYPE (U) 1/4 Wave Monopole

4. FREQUENCY RANGE
 (U) 138 MHz - 153 MHz

7. SCAN CHARACTERISTICS

a. TYPE (U) NA

b. VERTICAL SCAN (U) NA

(1) Max Elev (U) NA

(2) Min Elev (U) NA

(3) Scan Rate (U) NA

c. HORIZONTAL SCAN (U) NA

(1) Sector Scanned (U) NA

(2) Scan Rate (U) NA

6. POLARIZATION
 (U) Vertical

8. GAIN

a. MAIN BEAM
 (U) 0.0 dBi

b. 1st MAJOR SIDE LOBE
 (U)

9. BEAMWIDTH

a. HORIZONTAL
 (U) 360 deg

b. VERTICAL
 (U) 70 deg

d. SECTOR BLANKING (U) ☐ (1) YES ☒ (2) NO

10. REMARKS (U)

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ANTENNA EQUIPMENT CHARACTERISTICS

1. (U) ☐ a. TRANSMITTING ☒ b. RECEIVING ☐ c. TRANSMITTING AND RECEIVING	
2. NOMENCLATURE, MANUFACTURER'S MODEL NO. (U) Antenna for AN/PSQ-16	3. MANUFACTURER'S NAME (U) L-3 Communications Systems
4. FREQUENCY RANGE (U) 138 MHz - 153 MHz	5. TYPE (U) Monopole
6. POLARIZATION (U) Vertical	7. SCAN CHARACTERISTICS
8. GAIN	a. TYPE (U) NA
a. MAIN BEAM (U) 0.0 dBI	b. VERTICAL SCAN (U) NA
b. 1st MAJOR SIDE LOBE (U)	(1) Max Elev (U) NA
9. BEAMWIDTH	(2) Min Elev (U) NA
a. HORIZONTAL (U) 360 deg	(3) Scan Rate (U) NA
b. VERTICAL (U) 70 deg	c. HORIZONTAL SCAN (U) NA
	(1) Sector Scanned (U) NA
	(2) Scan Rate (U) NA
	d. SECTOR BLANKING (U) ☐ (1) YES ☒ (2) NO

10. REMARKS (U)

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LINE DIAGRAM

RAMBASS II

AN/PSQ-16
HHM (Hand Held Monitor)RT-1175C
Radio Repeater

MK-2965/GSR

MK-2965/GSR
Seismic/Acoustic Sensor

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J/R 12/0

DD FORM 1494, MAY 91

S/N 0102-LF-001-4941

NTIA GENERAL INFORMATION

1. APPLICATION TITLE (U) Remotely Monitored Battlefield Sensor System II (REMBASS II)		
2. SYSTEM NOMENCLATURE (U) BAIS, AN/GSR-8(V)2		
3. STAGE OF ALLOCATION (U)	☐ a. STAGE 1 CONCEPTUAL	☐ b. STAGE 2 EXPERIMENTAL
	☐ c. STAGE 3 DEVELOPMENTAL	☒ d. STAGE 4 OPERATIONAL
4. FREQUENCY REQUIREMENTS		
a. FREQUENCY(IES) (U)	138.025 MHz - 152.975 MHz	
b. EMISSION DESIGNATORS (U)	16K0F1D	
5. PURPOSE OF SYSTEM, OPERATIONAL AND SYSTEM CONCEPTS (U)		(WARTIME USE) ☒ a. YES ☐ b. NO
(U) REMBASS II is a ground-based, all-weather, day-and-night, battlefield surveillance, target development, and early warning system capable of remote operation under field conditions.		
6. INFORMATION TRANSFER REQUIREMENTS(U) 1200 bps		
7. ESTIMATED INITIAL COST OF THE SYSTEM (U)		
8. TARGET DATE FOR		
a. APPLICATION APPROVAL (U) 06-15-2004	b. SYSTEM ACTIVATION (U) 07-15-2004	c. SYSTEM TERMINATION (U) NAvail
9. SYSTEM RELATIONSHIP AND ESSENTIALITY (U)	REMBASS II complements and supplements other manned and unmanned battlefield reconnaissance and surveillance systems and provides the division commander with all-weather, day-night, early warning, surveillance and target development capability.	
10. REPLACEMENT INFORMATION (U) I-REMBASS		
11. RELATED ANALYSIS AND/OR TEST DATA (U)		
12. NUMBER OF MOBILE UNITS (U) None		
13. GEOGRAPHICAL AREA FOR		
a. STAGE 2 (U) NA		
b. STAGE 3 (U) NA		
c. STAGE 4 (U) US&P, NATO and NATO member countries, ROK (See Remarks)		
14. LINE DIAGRAM (U) See Page(s) 7	15. SPACE SYSTEMS (U) See Page(s) NA	
16. TYPE OF SERVICE(S) FOR STAGE 4 (U) Land Mobile	17. STATION CLASS(ES) FOR STAGE 4 (U) FX MO	
18. REMARKS (U) Item 13c: Afghanistan; Iraq		
DOWNGRADING INSTRUCTIONS		CLASSIFICATION UNCLASSIFIED