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BOFO- PROCUREMENT OF MAN PORTABLE HIGH POWER ELECTRONIC COUNTERMEASURE (CELL/GPS/JAMMER)

Reference:

A. Army Headquarters, Engineer in Chief's Branch, Engineer Directorate letter number 23.01.901.055.02.192.01.21.10.24 dated 21 November 2024 (Not to all).

In light of above reference, the technical specification of **Man Portable High Power Electronic Countermeasure (Cell/GPS/Jammer)** is attached with this letter. Interested local firms/agents are requested to send necessary offers, catalogues, brochures, technical/training/operational/maintenance manuals and budgerary offers etcetera directly to Army Headquarters, Engineer in Chief's Branch, Engineer Directorate with intimation to this office by **08 December 2024**.


MD ZAHIDUL KABIR
Major
For Director General

Enclosure:

1. Technical Specification-04 (Four) Pages Only.

Distribution:

External:

Information:

Army Headquarters

General Staff Branch, Weapon Equipment & Statistics Directorate

Army Headquarters, Engineer in Chief's Branch, Engineer Directorate

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Inspection and Technical Development Directorate

Inspectorate of Electronics & Instruments

Dhaka Cantonment

Action:

All Concerned Supplier/Firm

Internal:

IT Section (For uploading to website)

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**Technical Specification of Man Portable High Power Electronic Countermeasure
(Cell/GPS/Jammer)**

Ser	Description	Required Technical Specification	Must be filled up by Principal/ Manufacturer
(a)	(b)	(c)	(e)
Part-1: General Specification			
1.	Name of the Equipment	Man Portable High Power Electronic Countermeasure (Cell/ GPS/ Jammer)	
2.	Brand	To be mentioned	
3.	Model	To be mentioned	
4.	Year of Production	Brand new and not before the contracted year	
5.	Country of origin	Group A & B Countries	
6.	Country of Manufacturer/ Assembly	Group A & B Countries	
7.	Name of Manufacturer with complete address (Office address, Telephone, Fax, E-Mail and web address	Details to be mentioned	
8.	Name of Principal with complete address (Office address, Telephone, Fax, E-Mail and web address	Details to be mentioned	
9.	Name of Local Agent with complete address (Office address, Telephone, Fax, E-Mail and web address	Details to be mentioned	
10.	General Description, Functions and capabilities	<p>a. It should be able to block/Jam all types of device simultaneously within the frequency band as specified in technical specification</p> <p>b. It should be capable of performing active and reactive or hybrid jamming to a target.</p> <p>c. Relatively small and backpack mounted</p> <p>d. Should support one/several open communication window on each band for own communication</p> <p>e. The Jammer should be in active service of different militaries/Law enforcement agencies. List to be mentioned.</p>	
Part-2: Technical Specification			
11.	Type of Jamming	<p>a. The systems should not be restricted to a single method of jamming, rather it should integrate multiple, varying methods into a single system.</p> <p>b. It should have both barrage, spot jamming capability. Details to be mentioned.</p>	
12.	System design	<p>a. DDS (Different Digital Synthesis) to be used to generate jamming output.</p> <p>b. On board DDS based FPGA controlled technology to be used.</p>	
13.	Operational Jamming Radius	360°	
14.	Operational Jamming Range (m)	<p>Jamming range of singled jammer is as follows: <u>Urban Area</u>. Minimum 40 meters radius. <u>Open Area</u>. Minimum 60 meters radius. Testing procedure of Jammer is attached as appendix 1.</p>	
15.	Operation Frequency Range	<p>a. The system should cover the entire frequency range from 20MHz to 2500 MHz for jamming.</p> <p>b. The system must be configured/programmed by the end user at any frequency within frequency band down to 1KHz resolution.</p>	
16.	Operation Frequency Band	Minimum 03 band should be available.	
17.	Available Jamming Standard	<p>a. VHF, UHF, Wi-Fi, Bluetooth, GSM (2G, 3G, 4G) to be mentioned. Other Jamming standards may also be mentioned (if available).</p> <p>b. Must be able to jam multiple threats simultaneously in real time.</p> <p>c. Maximum simultaneous jamming bandwidth to mentioned.</p>	

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Ser	Description	Required Technical Specification	Must be filled up by Principal/ Manufacturer		
18.	Continuous Uninterruptable Jamming Period	To be mentioned. However, the system should jam for minimum two hours from DC source (external battery).			
19.	Power output (W)	a. Minimum power output should be 30W or above in case of GSM, UMTS and LTE signals. b. The power output to given for each band as follows:			
		Band	Frequency	Watt	
		VHF			
		UHF			
		2G			
		3G			
		4G			
		Bluetooth			
20.	Initial Warm up time	The system's minimum time required before operation from cold-start shall not exceed 01 (One) minutes.			
21.	Power Consumption				
	a. At Maximum RF Power	To be mentioned.			
	b. At Stand By Mode	To be mentioned.			
22.	Battery				
	a. Type of Battery	a. Rechargeable Lithium-Ion/lithium-polymer or equivalent. b. One additional battery to be provided.			
	b. Battery Operating Time	Minimum 2 Hours continuous operation for any band.			
	c. Low Battery Alarm	The System should have audio/visual indication for low battery warning.			
	d. Operational Power Source:				
	AC Power and Charging facility	AC 220 ± 10%, 50Hz, Standard power source will be provided.			
	DC power source	System to be operated from DC power source. Power source will be replaceable and rechargeable.			
	e. Battery charging time with battery charger	To be mentioned.			
23.	Antenna				
	a. Type	High Gain Omni directional Antennas.			
	b. Number of Antennas	To be mentioned (Minimum 2, Must cover full frequency range 20 to ≥2500 MHz)			
	c. Antenna Impedance (Ω)	To be mentioned			
	d. Antenna Height	Antenna along with the jammer should not exceed 1.5m.			
	e. Antenna sensitivity	To be mentioned.			
24.	Cooling System	To be mentioned.			
25.	Dimension of Jammer Set (Lx Hx W)	To be mentioned.			
26.	Weight (In full Operational condition)	To be mentioned. It should be less than 20 Kg.			
27.	Colour	To be mentioned			
28.	Environmental Standards				
	a. Operational Temperature	0°C to +60°C			
	b. Humidity	95% Humidity or above			
	c. Vibration	To be mentioned.			
	d. Rain/Splash Proof	To be mentioned.			
	f. Protection against Radiation and EMI Shielding	a. RF & EMI Shielding protective layers to avoid RF/EMI interferences. b. The equipment must be designed to protect user from Radiation hazard of any protective suit needs to be worn should be included in list of standard item. c. Certificate to be provided by the manufacturer regarding health hazard.			
	g. Storage Temperature	To be mentioned			
29	Built in Diagnostic Self- Test/Alarm System				
	a. VSWR	To be mentioned.			
	b. Low & Over Voltage.	To be mentioned.			
	c. Over Temperature	To be mentioned.			
	d. Additional features to be mentioned	To be mentioned.			

Ser	Description	Required Technical Specification	Must be filled up by Principal/ Manufacturer
30.	Connectivity	a. Jammer should have provision of various ports (Ethernet/LAN/HDMI etc) for connectivity with external Computer/Laptops/ Modem etc for software integration. b. Will have provision of wired/wireless remote connectivity to operate the jammer from a distance	
31.	Backpack Carrier	To be mentioned.	
32.	Maximum Operational Altitude	Minimum 2500m.	
33.	GPS Facility (In Built)	To be available (Details To be mentioned)	
34.	Control software	a. Easily Programmable Software to be installed in Windows 10 or later version operating system. b. Control and programming backup software to be available with the system. c. Details about the software to be provided with the tender document.	
35.	Laptop (4:1) Internationally reputed brand laptop should be included in the system Origin from Group A & Manufactured/Assembly from Group B countries. Detail configurations are as under:		
	a. Processor: Core i7 or above, 11th generation or above, Minimum 2.2 GHz without turbo.		
	b. HDD: Minimum 500GB or higher (preferably SSD)		
	c. RAM: 16GB DDR3 RAM or higher		
	d. Motherboard: To be mentioned.		
	e. Monitor: Minimum 12 inch		
	f. Any other information- Details to be mentioned.		
36.	Maintenance support	Maintenance service to be provide by the local agent and manufacture for 05 (Five) year from the date of acceptance of the item and manufacture is to provided necessary waveform support as per end user requirement for 05 (Five) year.	
37.	Model Validity	Minimum 10 years. Certificate to be provided by the manufacturer	
38.	Any other	Any items/accessories not mentioned above but require for full range of operation/use of the offered Man Portable ECM to be mentioned.	
39.	List of standard accessories (For full range of operation)	Details to be mentioned	

Bil of Quantity/Material (BOQ/BOM) of Standard items

Ser	Name of item	Brand	Model	Quantity	Country of Manufacturer
1.					

40.	List of Optional accessories	Details to be mentioned	
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Bil of Quantity/Material (BOQ/BOM) of Optional items

Ser	Name of item	Brand	Model	Quantity	Country of Manufacturer
1.					
2.					

Part-3: TRAINING REQUIREMENT

41.	a. User Trg	To be provided (As per requirement of Engr Dte)	
	b. Op, repair and maint Trg	To be provided (As per requirement of EME Dte)	
	c. Eqpt mgt Trg	To be provided (As per requirement of Ord Dte)	

Part-4: REPAIR AND MAINTENANCE REQUIREMENT LESS LIST OF SPARES

42.	a. Books & Publications		
	(1) Owners/Operations Manual in English (Book Type including CD/DVD)	To be provided (As per requirement of EME Dte)	
	(2) 100% Updated Master Spare Parts Catalogue in English (Book Type including CD/DVD)	To be provided (As per requirement of EME Dte)	
	(3) Complete and Updated Master Spare Parts price Catalogue in English (Book Type including CD/DVD)	To be provided (As per requirement of EME Dte)	
	(4) Workshop/Repair Manual in English (Book Type)	To be provided (As per requirement of EME Dte)	

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Ser	Description	Required Technical Specification	Must be filled up by Principal/ Manufacturer
Part-5:LIST OF SPARES			
43.	List of Fast and Slow Moving Spare Parts	To be provided (As per requirement of EME Dte)	
Part-6:TOOL LIST FOR DIFFERENT LEVEL OF MAINTENANCE			
44.	a. Analyzer, measuring & testing/Fault finding and diagnostic set	To be provided (As per requirement of EME Dte)	
	b. Special Service Tools (SST)	To be provided (As per requirement of EME Dte)	
	c. Special Service Materials (SSM)	To be provided (As per requirement of EME Dte)	