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20 Magh 1431

03 February 2025

06.06.0000.215.49.25/Re-Eval

RE-EVALUATION OF THE SPECIFICATION OF RADIO SET MULTIBAND HF/VHF/UHF/MANPACK (MILITARY VERSION)

Reference:

A. Army Headquarters, General Staff Branch, Infantry Directorate letter number 23.01.901.034.02.026.01.08.02.02.25 dated 02 February 2025 (Not to all).

1. Please be informed that Bangladesh Army has planned to evaluate Radio Set HF/VHF/UHF/Manpack (Military Version). To facilitate this endeavor, interested vendors/firms/local agents of the manufacturers are requested to submit their offers directly to Army Headquarters, General Staff Branch, Infantry Directorate with an intimation to this office by **20 February 2025** fulfilling the requirements outlined below:

- a. Offer as per technical specification. In this regard, blank approved technical specification is enclosed herewith.
- b. Manual (Original Printed by Manufacture) and CD.
- c. Catalogue (Original Printed by Manufacture) and CD.
- d. Catalogue of Spare Parts (Original Printed by Manufacture) and CD.
- e. Brochure (Original Printed by Manufacture) and CD.
- f. Enlistment Certificate of DGDP and BTRC.
- g. Certification from manufacturer on permission to export the said system to Bangladesh Army.

2. All the documents are to be submitted on Manufacture's/Principal's official pad including official stamp duly signed by proper authority.

3. Forwarded for your information and necessary action please.


MD ZAHIDUL KABIR
Major
For Director General

Enclosure:

1. Technical Specification-12 (Twelve) Pages Only.

Distribution:

External:

Information:

Army Headquarters, General Staff Branch (Coordination)

Army Headquarters, General Staff Branch
Weapon Equipment & Statistics Directorate

Army Headquarters, General Staff Branch
Infantry Directorate

Army Headquarters
Master General of the Ordnance Branch
Ordnance Directorate

Action:

All Concerned Supplier/Firm

Internal:

IT Section (For uploading to website)

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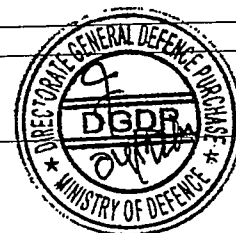
GENERAL SPECIFICATION OF RADIO SET MULTIBAND HF/VHF MANPACK (MILITARY VERSION)

Ser	Fact/Description	Tech Spec	To be filled up by Principal/Manufacturer
(a)	(b)	(c)	(d)
PART – 1: GENERAL SPECIFICATION			
1.	Nomenclature	Radio Set Multiband HF/VHF Manpack (Military Version)	
2.	Type of Radio	Military Version Software Defined Radio (SDR)	
3.	Brand Name/Make	To be mentioned	
4.	Model	To be mentioned	
5.	Country of Origin	Group A and B countries	
6.	Country of Manufacture	Group A and B countries	
7.	Country of Assembly	Group A and B countries	
8.	Year of Manufacture	Not before the calendar year of the contract	
9.	Name of Manufacture with complete address (Addresses, Telephone, Fax, Email & Website)	Details to be mentioned	
10.	Name of Principal with complete address (Addresses, Telephone, Fax, Email & Website)	Details to be mentioned	
11.	Name of Local Agent with complete address (Addresses, Telephone, Fax, Email & Website)	Details to be mentioned	
12.	Port of Shipment	Must be from the country of Manufacturing/ Assembly. Trans-shipment not allowed	
13.	Colour	Metallic Bronze (MB) Green	
PART – 2 : TECH SPEC			
14.	Frequency Range	HF (1.5-30 MHz) VHF (30-60 MHz): beyond 60 MHz is allowed	
15.	Frequency Band	HF and VHF	
16.	Channel Bandwidth	To be mentioned	
17.	Channel Spacing	To be mentioned	
18.	Number of Preset Memory Channel	Minimum 25. Specific memory channel is to be mentioned	
19.	Number of Total Working Channel	To be mentioned	
20.	Communication Range (Manpack Tactical Communication)		
		Plain Land	Urban Area
			Hilly Area
	Minimum Range	To be mentioned	
21.	Antenna Type	Details to be mentioned with various types of antennas	
22.	Communication Security		
	a. Encryption	AES 256 or higher mode encryption must be available. Details to be mentioned	
	b. Frequency Hopping	Minimum 100 hops per minute. Details to be mentioned	
	c. Other Types of Security	Any other types of communication security (if available) are to be mentioned	



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Ser	Fact/Description	Tech Spec	To be filled up by Principal/Manufacturer
(a)	(b)	(c)	(d)
23.	Dimension (W x D x H) a. Without antenna b. With antenna	To be mentioned. Picture is to be provided	
24.	Weight of the Radio set (At Functional Condition)	Maximum 8 kg with all accessories in operational condition. Details to be mentioned	
25.	Power Supply System	a. Must be operated from DC rechargeable and replaceable battery. Detail of brand, model, country of manufacture and battery rating are to be mentioned b. The battery charger should have charging facility from AC power 220 VAC ± 20% at 50 Hz. Charging from solar charger at ambient light (optional) c. 01 Set additional rechargeable battery to be provided	
26.	Battery-life/Operating Hours	≥ 8 hours of continuous operation (at high power and full duplex voice, RX: TX 9:1)	
27.	Transceiver		
	a. RF Power Output	Minimum 20 watt Minimum 100 watt by amplifier	
	b. Power Modes	Scalable Power Output modes are to be available. Details to be mentioned	
	c. Modulation Type	All modulation types are to be specified with required technical data	
	d. RF Input Impedance	To be mentioned	
	e. Receiver Sensitivity	To be mentioned	
	f. AF Output	Details to be mentioned	
	g. Squelch Type	Details to be mentioned	
	h. Types of Waveforms	Details to be mentioned	
28.	Programming Software (Tools kit, Laptop etc)		
	a. Programing Kit along with Software (Perpetual License)	To be provided	
	b. Tool Kit/Fill Gun	To be provided (if available)	
	c. Requirement of Laptop, PDA, Android Devices etc. (Optional)	To be mentioned (if required)	
29.	Mandatory Features		
	a. Auto Re-broadcasting/ data relaying / retransmission facility	To be possible. Details to be mentioned. Each set in a radio network must be capable of providing auto rebroadcasting/ retransmission and data relaying facility independently	
	b. Data Communication	Minimum 100 kbps. Details to be mentioned	
	c. Built in Test (BITE)	To be available	
	d. Instant Messaging Facility	To be mentioned	
	e. GPS Facility	To be available	
	f. CNR Facility	To be available	
30.	Optional Features		
	Battle Management System	Support BMS (Battlefield Management System or similar)	



Ser	Fact/Description	Tech Spec	To be filled up by Principal/Manufacturer
(a)	(b)	(c)	(d)
31.	Operating/Storage Condition		
	a. Operating Temperature	-10° C to +55° C	
	b. Storage Temperature	-20° C to +60° C	
	c. Humidity Permissible Condition for Operation	Maximum 95%	
	d. Operation during Fog, Rain and Snow	To be possible	
32.	Environmental Standards		
	a. Shock/Drop Proof	Military Standard 810 G or higher	
	b. Water/Immersion Proof		
	c. Dust Proof		
	d. Vibration Proof		
	e. Temperature Proof	As per operating and storage temperature	
33.	List of Standard Accessories	Price to be quoted separately Item wise	
34.	List of Optional Accessories	Price to be quoted separately Item wise	
35.	Warranty	2 (Two) Years	
36.	After Sales Service	5 (Five) Years	
37.	Model Validity	Minimum 8 (Eight) years from signing of contract	
38.	Any other	If any item not specifically mentioned above but required technically for full range of operation, the bidder should specify and quote such item(s) in their offer. In case of failure to specify and quote, the bidder must provide such items free of cost	
PART - 3: TRAINING REQUIREMENT			
39.	User Training	To be provided (As per requirement of Signals & EME Directorate)	
40.	Operations, Repair and Maintenance Training	To be provided (As per requirement of Signals & EME Directorate)	
41.	Inventory Management Training	To be provided (As per requirement of Ordnance Directorate)	
42.	Publication on Training	To be provided	
PART - 4: REPAIR AND MAINTENANCE REQUIREMENT LESS LIST OF SPARES			
43.	Books & Publication		
	a. Owners/Operations manual in English (Book Type) including CD/DVD)	To be provided (As per requirement of Signals & EME Directorate)	
	b. Workshop/Repair manual incl detail schematic and circuit diagram in English (Book Type) including CD/DVD	To be provided (As per requirement of Signals & EME Directorate)	
	c. 100% Updated master spare parts catalogue in English (Book Type) including CD/DVD)	To be provided (As per requirement of Signals & EME Directorate)	
	d. Complete and updated master spare parts price catalogue / list in English (Book Type) including CD/DVD)	To be provided (As per requirement of Signals & EME Directorate)	



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Ser	Fact/Description	Tech Spec	To be filled up by Principal/Manufacturer
(a)	(b)	(c)	(d)
PART – 5: LIST OF SPARES			
44.	List of standard spare parts, tools and accessories	To be provided (As per requirement of Signals & EME Directorate)	
PART – 6: TOOL LIST FOR DIFFERENT LEVEL OF MAINTENANCE			
45.	a. Analyser, Measuring Testing/ Fault finding and Diagnostic set	To be provided (As per requirement of Signals & EME Directorate)	
	b. Special Service Tools (SST)	To be provided (As per requirement of Signals & EME Directorate)	
	c. Special Service Materials (SSM)	To be provided (As per requirement of Signals & EME Directorate)	
PART – 7: FINANCIAL SPECIFICATION			
46.	Financial implication/ Specification	To be mentioned	



GENERAL SPECIFICATION OF RADIO SET MULTIBAND VHF/UHF MANPACK (MILITARY VERSION)

Ser	Fact/Description	Tech Spec	To be filled up by Principal/Manufacturer
(a)	(b)	(c)	(d)
PART – 1: GENERAL SPECIFICATION			
1.	Nomenclature	Radio Set Multiband VHF/UHF Manpack (Military Version)	
2.	Type of Radio	Military Version Software Defined Radio	
3.	Brand Name/Make	To be mentioned	
4.	Model	To be mentioned	
5.	Country of Origin	Group A and B countries	
6.	Country of Manufacture	Group A and B countries	
7.	Country of Assembly	Group A and B countries	
8.	Year of Manufacture	Not before the calendar year of the contract	
9.	Name of Manufacture with complete address (Addresses, Telephone, Fax, Email & Website)	Details to be mentioned	
10.	Name of Principal with complete address (Addresses, Telephone, Fax, Email & Website)	Details to be mentioned	
11.	Name of Local Agent with complete address (Addresses, Telephone, Fax, Email & Website)	Details to be mentioned	
12.	Port of Shipment	Must be from the country of Manufacturing/ Assembly. Trans-shipment not allowed	
13.	Colour	Metallic Bronze (MB) Green	
PART – 2 : TECH SPEC			
14.	Frequency Range	VHF (30-108 MHz): beyond 108 MHz is allowed UHF (225 MHz-2 GHz)	
15.	Frequency Band	UVF and UHF	
16.	Channel Bandwidth	To be mentioned	
17.	Channel Spacing	To be mentioned	
18.	Number of Preset Memory Channel	Minimum 25. Specific memory channel is to be mentioned	
19.	Number of Total Working Channel	To be mentioned	
20.	Communication Range (Manpack Tactical Communication)		
		Plain Land	Urban Area
			Hilly Area
	Minimum Range	To be mentioned	
21.	Antenna Type	Details to be mentioned with various types of antennas	
22.	Communication Security		
	a. Encryption	AES 256 or higher mode encryption must be available. Details to be mentioned	
	b. Frequency Hopping	Minimum 100 hops per minute. Details to be mentioned	
	c. Other Types of Security	Any other types of communication security (if available) are to be mentioned	



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Ser	Fact/Description	Tech Spec	To be filled up by Principal/Manufacturer
(a)	(b)	(c)	(d)
23.	Dimension (W x D x H) a. Without antenna b. With antenna	To be mentioned. Picture is to be provided	
24.	Weight of the Radio set (At Functional Condition)	Maximum 8 kg with all accessories in operational condition. Details to be mentioned	
25.	Power Supply System	a. Must be operated from DC rechargeable and replaceable battery. Detail of brand, model, country of manufacture and battery rating are to be mentioned	
		b. The battery charger should have charging facility from AC power 220 VAC ± 20% at 50 Hz. Charging from solar charger at ambient light (optional)	
		c. 01 Set additional rechargeable battery to be provided	
26.	Battery-life/Operating Hours	≥ 8 hours of continuous operation (at high power and full duplex voice, RX: TX 9:1)	
27.	Transceiver		
	a. RF Power Output	Minimum 20 watt	
	b. Power Modes	Scalable Power Output modes are to be available. Details to be mentioned	
	c. Modulation Type	All modulation types are to be specified with required technical data	
	d. RF Input Impedance	To be mentioned	
	e. Receiver Sensitivity	To be mentioned	
	f. AF Output	Details to be mentioned	
	g. Squelch Type	Details to be mentioned	
	h. Types of Waveforms	Details to be mentioned	
28.	Programming Software (Tools kit, Laptop etc)		
	a. Programing Kit along with Software (Perpetual License)	To be provided	
	b. Tool Kit/Fill Gun	To be provided (if available)	
	c. Requirement of Laptop, PDA, Android Devices etc. (Optional)	To be mentioned (if required)	
29.	Mandatory Features		
	a. Auto Re-broadcasting/ data relaying / retransmission facility	To be possible. Details to be mentioned. Each set in a radio network must be capable of providing auto rebroadcasting/ retransmission and data relaying facility independently	
	b. Data Communication	Minimum 100 kbps. Details to be mentioned	
	c. Built in Test (BITE)	To be available	
	d. Instant Messaging Facility	To be mentioned	
	e. GPS Facility	To be available	
	f. CNR Facility	To be available	
30.	Optional Features		
	Battle Management System	Support BMS (Battlefield Management System or similar)	



Ser	Fact/Description	Tech Spec	To be filled up by Principal/Manufacturer
(a)	(b)	(c)	(d)
31.	Operating/Storage Condition		
	a. Operating Temperature	-10 ^o C to +55 ^o C	
	b. Storage Temperature	-20 ^o C to +60 ^o C	
	c. Humidity Permissible Condition for Operation	Maximum 95%	
	d. Operation during Fog, Rain and Snow	To be possible	
32.	Environmental Standards		
	a. Shock/Drop Proof	Military Standard 810 G or higher	
	b. Water/Immersion Proof		
	c. Dust Proof		
	d. Vibration Proof		
	e. Temperature Proof	As per operating and storage temperature	
33.	List of Standard Accessories	Price to be quoted separately Item wise	
34.	List of Optional Accessories	Price to be quoted separately Item wise	
35.	Warranty	2 (Two) Years	
36.	After Sales Service	5 (Five) Years	
37.	Model Validity	Minimum 8 (Eight) years from signing of contract	
38.	Any other	If any item not specifically mentioned above but required technically for full range of operation, the bidder should specify and quote such item(s) in their offer. In case of failure to specify and quote, the bidder must provide such items free of cost	
PART – 3: TRAINING REQUIREMENT			
39.	User Training	To be provided (As per requirement of Signals & EME Directorate)	
40.	Operations, Repair and Maintenance Training	To be provided (As per requirement of Signals & EME Directorate)	
41.	Inventory Management Training	To be provided (As per requirement of Ordnance Directorate)	
42.	Publication on Training	To be provided	
PART – 4: REPAIR AND MAINTENANCE REQUIREMENT LESS LIST OF SPARES			
43.	Books & Publication		
	a. Owners/Operations manual in English (Book Type) including CD/DVD)	To be provided (As per requirement of Signals & EME Directorate)	
	b. Workshop/Repair manual incl detail schematic and circuit diagram in English (Book Type) including CD/DVD	To be provided (As per requirement of Signals & EME Directorate)	
	c. 100% Updated master spare parts catalogue in English (Book Type) including CD/DVD)	To be provided (As per requirement of Signals & EME Directorate)	
	d. Complete and updated master spare parts price catalogue / list in English (Book Type) including CD/DVD)	To be provided (As per requirement of Signals & EME Directorate)	



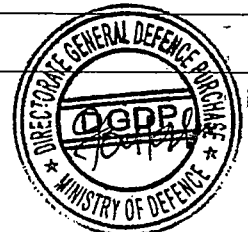
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Ser	Fact/Description	Tech Spec	To be filled up by Principal/Manufacturer
(a)	(b)	(c)	(d)
<u>PART – 5: LIST OF SPARES</u>			
44.	List of standard spare parts, tools and accessories	To be provided (As per requirement of Signals & EME Directorate)	
<u>PART – 6: TOOL LIST FOR DIFFERENT LEVEL OF MAINTENANCE</u>			
45.	a. Analyser, Measuring Testing/ Fault finding and Diagnostic set	To be provided (As per requirement of Signals & EME Directorate)	
	b. Special Service Tools (SST)	To be provided (As per requirement of Signals & EME Directorate)	
	c. Special Service Materials (SSM)	To be provided (As per requirement of Signals & EME Directorate)	
<u>PART – 7: FINANCIAL SPECIFICATION</u>			
46.	Financial implication/ Specification	To be mentioned	



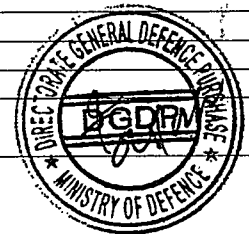
**GENERAL SPECIFICATION OF RADIO SET MULTIBAND HF/VHF/UHF MANPACK
(MILITARY VERSION)**

Ser	Fact/Description	Tech Spec	To be filled up by Principal/ Manufacturer
(a)	(b)	(c)	(d)
PART - 1: GENERAL SPECIFICATION			
1.	Nomenclature	Radio Set Multiband HF/VHF/UHF Manpack (Military Version)	
2.	Type of Radio	Military Version Software Defined Radio (SDR)	
3.	Brand Name/Make	To be mentioned	
4.	Model	To be mentioned	
5.	Country of Origin	Group A and B countries	
6.	Country of Manufacture	Group A and B countries	
7.	Country of Assembly	Group A and B countries	
8.	Year of Manufacture	Not before the calendar year of the contract	
9.	Name of Manufacture with complete address (Addresses, Telephone, Fax, Email & Website)	Details to be mentioned	
10.	Name of Principal with complete address (Addresses, Telephone, Fax, Email & Website)	Details to be mentioned	
11.	Name of Local Agent with complete address (Addresses, Telephone, Fax, Email & Website)	Details to be mentioned	
12.	Port of Shipment	Must be from the country of Manufacturing/ Assembly. Trans-shipment not allowed	
13.	Colour	Metallic Bronze (MB) Green	
PART - 2 : TECH SPEC			
14.	Frequency Range	HF (1.5-30 MHz) VHF (30-60 MHz): beyond 60 MHz is allowed UHF (225 MHz-2 GHz)	
15.	Frequency Band	HF, VHF and UHF	
16.	Channel Bandwidth	To be mentioned	
17.	Channel Spacing	To be mentioned	
18.	Number of Preset Memory Channel	Minimum 25. Specific memory channel is to be mentioned	
19.	Number of Total Working Channel	To be mentioned	
20.	Communication Range (Manpack Tactical Communication)		
		Plain Land	Urban Area
			Hilly Area
	Minimum Range	To be mentioned	
21.	Antenna Type	Details to be mentioned with various types of antennas	
22.	Communication Security		
	a. Encryption	AES 256 or higher mode encryption must be available. Details to be mentioned	
	b. Frequency Hopping	Minimum 100 hops per minute. Details to be mentioned	
	c. Other Types of Security	Any other types of communication security (if available) are to be	



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Ser	Fact/Description	Tech Spec	To be filled up by Principal/Manufacturer
(a)	(b)	(c)	(d)
		mentioned	
23.	Dimension (W x D x H) a. Without antenna b. With antenna	To be mentioned. Picture is to be provided	
24.	Weight of the Radio set (At Functional Condition)	Maximum 8 kg with all accessories in operational condition. Details to be mentioned	
25.	Power Supply System	a. Must be operated from DC rechargeable and replaceable battery. Detail of brand, model, country of manufacture and battery rating are to be mentioned b. The battery charger should have charging facility from AC power 220 VAC ± 20% at 50 Hz. Charging from solar charger at ambient light (optional) c. 01 Set additional rechargeable battery to be provided	
26.	Battery-life/Operating Hours	≥ 8 hours of continuous operation (at high power and full duplex voice, RX: TX 9:1)	
27.	Transceiver		
	a. RF Power Output	Minimum 20 watt Minimum 100 watt by amplifier	
	b. Power Modes	Scalable Power Output modes are to be available. Details to be mentioned	
	c. Modulation Type	All modulation types are to be specified with required technical data	
	d. RF Input Impedance	To be mentioned	
	e. Receiver Sensitivity	To be mentioned	
	f. AF Output	Details to be mentioned	
	g. Squelch Type	Details to be mentioned	
	h. Types of Waveforms	Details to be mentioned	
28.	Programming Software (Tools kit, Laptop etc)		
	a. Programing Kit along with Software (Perpetual License)	To be provided	
	b. Tool Kit/Fill Gun	To be provided (if available)	
	c. Requirement of Laptop, PDA, Android Devices etc. (Optional)	To be mentioned (if required)	
29.	Mandatory Features		
	a. Auto Re-broadcasting/ data relaying / retransmission facility	To be possible. Details to be mentioned. Each set in a radio network must be capable of providing auto rebroadcasting/ retransmission and data relaying facility independently	
	b. Data Communication	Minimum 100 kbps. Details to be mentioned	
	c. Built in Test (BITE)	To be available	
	d. Instant Messaging Facility	To be mentioned	
	e. GPS Facility	To be available	
	f. CNR Facility	To be available	
30.	Optional Features		
	Battle Management System	Support BMS (Battlefield Management System or similar)	



Ser	Fact/Description	Tech Spec	To be filled up by Principal/Manufacturer
(a)	(b)	(c)	(d)
31.	Operating/Storage Condition		
	a. Operating Temperature	-10 ^o C to +55 ^o C	
	b. Storage Temperature	-20 ^o C to +60 ^o C	
	c. Humidity Permissible Condition for Operation	Maximum 95%	
	d. Operation during Fog, Rain and Snow	To be possible	
32.	Environmental Standards		
	a. Shock/Drop Proof	Military Standard 810 G or higher	
	b. Water/Immersion Proof		
	c. Dust Proof		
	d. Vibration Proof		
	e. Temperature Proof	As per operating and storage temperature	
33.	List of Standard Accessories	Price to be quoted separately Item wise	
34.	List of Optional Accessories	Price to be quoted separately Item wise	
35.	Warranty	2 (Two) Years	
36.	After Sales Service	5 (Five) Years	
37.	Model Validity	Minimum 8 (Eight) years from signing of contract	
38.	Any other	If any item not specifically mentioned above but required technically for full range of operation, the bidder should specify and quote such item(s) in their offer. In case of failure to specify and quote, the bidder must provide such items free of cost.	
PART – 3: TRAINING REQUIREMENT			
39.	User Training	To be provided (As per requirement of Signals & EME Directorate)	
40.	Operations, Repair and Maintenance Training	To be provided (As per requirement of Signals & EME Directorate)	
41.	Inventory Management Training	To be provided (As per requirement of Ordnance Directorate)	
42.	Publication on Training	To be provided	
PART – 4: REPAIR AND MAINTENANCE REQUIREMENT LESS LIST OF SPARES			
43.	Books & Publication		
	a. Owners/Operations manual in English (Book Type) including CD/DVD)	To be provided (As per requirement of Signals & EME Directorate)	
	b. Workshop/Repair manual incl detail schematic and circuit diagram in English (Book Type) including CD/DVD	To be provided (As per requirement of Signals & EME Directorate)	
	c. 100% Updated master spare parts catalogue in English (Book Type) including CD/DVD)	To be provided (As per requirement of Signals & EME Directorate)	
	d. Complete and updated master spare parts price catalogue / list in English (Book Type) including CD/DVD)	To be provided (As per requirement of Signals & EME Directorate)	



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Ser	Fact/Description	Tech Spec	To be filled up by Principal/ Manufacturer
(a)	(b)	(c)	(d)
<u>PART – 5: LIST OF SPARES</u>			
44.	List of standard spare parts, tools and accessories	To be provided (As per requirement of Signals & EME Directorate)	
<u>PART – 6: TOOL LIST FOR DIFFERENT LEVEL OF MAINTENANCE</u>			
45.	a. Analyser, Measuring Testing/ Fault finding and Diagnostic set	To be provided (As per requirement of Signals & EME Directorate)	
	b. Special Service Tools (SST)	To be provided (As per requirement of Signals & EME Directorate)	
	c. Special Service Materials (SSM)	To be provided (As per requirement of Signals & EME Directorate)	
<u>PART – 7: FINANCIAL SPECIFICATION</u>			
46.	Financial implication/ Specification	To be mentioned	

