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E-Mail: adp2army1@dgdp.gov.bd

Baishakh 1431

06.06.0000.215.49.24/Std

69 May 2024

RE-EVALUATION OF THE SPECIFICATION OF RADIO SET HIGH FREQUENCY (HF) MEDIUM RANGE (VEHICLE & BASE STATION VERSION), VERY HIGH FREQUENCY (VHF) MEDIUM RANGE (VEHICLE & BASE STATION VERSION) AND VERY HIGH FREQUENCY (VHF) MANPACK

- Army Headquarters, General Staff Branch, Signal Directorate letter number 23.01.901.032.03.099.01.20.03.24 dated 20 March 2024 (Not to all).
- Army Headquarters, General Staff Branch, Signal Directorate letter number 23.01.901.032.03.099.01.28.04.24 dated 28 April 2024 (Not to all).
- In light of above references, a technical specification of Radio Set High Frequency (HF) Medium Range (Vehicle & Base Station Version), Very High Frequency (VHF) Medium Range (Vehicle & Base Station Version) and Very High Frequency (VHF) Manpack is attached with this letter. Interested authorized vendors/firms/local agents of the manufacturers are requested to submit your offer for above mentioned Radio Set High Frequency (HF) Medium Range (Vehicle & Base Station Version), Very High Frequency (VHF) Medium Range (Vehicle & Base Station Version) and Very High Frequency (VHF) Manpack directly to Army Headquarters, General Staff Branch, Signal Directorate with intimation to this office by 30 May 2024 fulfilling the requirements mentioned bellow:

Offer as per technical specification.

Letter of authorization by Manufacturer/Principal mentioning that the said company will be the local b. vendor/agent for offered model.

Manuals (Original Printed by Manufacture) and CD.

- 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 Directorate General Defence Purchase and BTRC. g.
- Valid Certificate from Original Equipment Manufacturer (OEM) as authorized agent.
- Certification from manufacturer on permission to export the said system to Bangladesh Army.
- All the documents are to be submitted on Manufacture's/Principal's official pad including official stamp with signed by proper authority.
- Forwarded for your information and necessary action please. 3.

Majof

For Director General

#### Enclosure:

Technical Specification-24 (Twenty Four) 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, Signal Directorate

Action:

All Concerned Supplier/Firm

Internal:

IT Section (For uploading to website)

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**ANNEX A TO** DGDP LETTER NO 06.06.0000.215.49.24/Std **DATED: 09 MAY 2024** 

# GENERAL SPECIFICATION OF RADIO SET HIGH FREQUENCY MEDIUM RANGE (BASE STATION VERSION) (MILITARY VERSION)

<del></del>		TATION VERSION) (WILLIARY VERSION)	
000	Fact/Description	Technical Specification	To be filled up by
Ser			principal/ manufacturer
(a)		(c)	(d)
FAI 1.	RT 1: GENERAL SPECIFICATION		
"	Nomenclature	Radio Set HF (Medium Range) (Vehicle	
2.	Type of Radio	and Base Station Version) (Military Version)	
-	Type of Nauto	Military version (Base Station Version)	
3.	Brand Name/ Make	Software Defined Radio	
4.	Model	To be mentioned 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 Manufacturer with	Details to be mentioned	
	complete address (Addresses.	- Claire to be incliabled	
	Telephone, Fax, Email &		
	Website)		
10.	Name of Principal with complete	Details to be mentioned	
	address (Addresses, Telephone,		
11.	Fax, Email & Website)		
11,	Name of Local Agent with	Details to be mentioned	
	complete address (Addresses, Telephone, Fax, Email &		
	Telephone, Fax, Email & Website)		
12.	Port of Shipment	Must be from the country of	
		The me we do country of	
		Manufacturing/Assembly. Trans-shipment not allowed	
13.	Color	Metallic Bronze (MB) Green	
PAR	2: TECHNICAL SPECIFICATION	William Dienzo (MID) Green	
14.	Frequency Range	40.00	
	requestry statige	1.6 MHz-30 MHz. Below 1.6 MHz and	
15.	Frequency Band	above 30 MHz are allowed	
16.	Channel Bandwidth	To be mentioned	
17.	Channel Spacing	To be mentioned	
18.	Number of Preset Memory	Minimum 50. Specific memory channel is to	
	Channel	be mentioned	
19.	Number of Total Working	To be mentioned	
	Channel		
	Tactical Communication Range		
20.	Static	All Over Bangladesh	
1	On the Move	Minimum 20 km both in Urban & Hilly Area	
	(Base to Vehicle)		
21.	Antenna Type	Broad band antenna is preferable. Details	CHERN DECE
22	Antonno Touris and Commission	of all types of antennas to be mentioned	Commercial
22.   23.	Antenna Tuning Unit (ATU)	To be mentioned	S   A   E
<b>—</b>	Communication Security		E DGDP
- 1	a. Encryption	AES 256 or higher mode encryption must	12 × 1
F	b. Frequency Hopping	be available. Details to be mentioned	The County
		Minimum 100 hops per minute. Details to	THEOTHY OF VECTOR
·	c. Other Types of Security	be mentioned  Any other types of communication	Sign
	Jes C. Coduity	Any other types of communication security	(6) N
		A-1 3 3 9 5 1	11,261

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D::SIGS-03 COM-0312. Re-Eaval Board Radio SettBofO for Gen Spec of Radio Set on 27.02.24/Anx A. B. C. D & Eti. Anx A - HF Med Rng Base Stawn

Ser		Technical Specification	To be filled upeby principal/ manufacturer
(a)	(b)	(c)	(d)
_ :	(Optional)	(if available) are to be mentioned	147
24.	Dimension (W x D x H) (Without Antenna)	To be mentioned. Picture is to be provided	
25.	Weight of the Radio set (Complete at Functional	To be mentioned	
_	Condition) Power Supply System		
6.	Tower Supply System	a. Must be operated from both AC (220 VAC ± 20% at 50 Hz) and 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 ± 20%. Charging from solar charger at ambient light (optional)	
7.	Transceiver	Government (Optional)	
	a. RF Power Output	(1) Min: 25 W or below	W
		(2) Max: 100 W or above	
		(3). Radio set must qualify in both the	
	b. Power Modes	above parameters.	
		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	
i	d. RF Input Impedance	To be mentioned	
İ	e. Receiver Sensitivity	To be mentioned	
	f. AF Output	Details to be mentioned	
	g. Squelch Type	Details to be mentioned	
8.	h. Types of Waveforms	Details to be mentioned	
٠. ا	Programming Software (Tools kit a. Programing Kit along with		
	Software (Perpetual License)	To be provided	
	b. Tool Kit/Fill Gun c. Requirement of Laptop	To be provided (if available)	
	(Optional)	To be mentioned (if required)	
7.	Mandatory Features		
H	a. Automatic Link Establishment (ALE)	Available (3G ALE or above)	
-	b. Data Communication	Minimum 400 II	
ŀ	c. Built in Test (BITE)	Minimum 100 kbps. Details to be mentioned	
Ī	d. Instant messaging Facility	To be available To be mentioned	
Ī	e. GPS Facility	To be memored To be available	
ľ	f. SDR Facility	To be available and details to be provided	
ı	g. CNR Facility	To be available	
f	h. Remote Control Facility	Minimum 100 meter (wired/wireless)	
	Optional Features	within too meter (wired/wireless)	
ſ	a. IP Interfacing facility with	To be available and details to be mentioned	
	rield Exchange		
	,	Support BMS (Battlefield Management System) or similar standards	GENERAL DEFENS
	Operating/ Storage Condition		
	a. Operating Temperature	-10° C to +55° C	DGDP &
-	b. Storage Temperature	-20°C to +60°C	15 T T T T T T T T T T T T T T T T T T T
	c. Humidity Permissible Condition for Operation	Vlaximum 95%	
_  -	1 ~	To be possible	
		2 2 2 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	
ים מים	CONTRACT CONTRACTOR OF CONTRAC	RESTRICTED ( SE A 1873)	( ) ( = ( ( ) + (
,0-03 C	ം സംഗംഗ, സംഗംഗ ലാമന് Radio,SellBoIO for Gen Spac of Radio Sel o	n 27.02.24Janx A. B. C. D. & Elf. Amx A. HF Med Ring Base Status Status and Company	
		7.33	Ca Carle

S'on		Fact/Description		Technical Specif	ication			o be filled up by
Ser (a)		/6\	 					cipal/ manufacturer
(a)	and	(b) Snow	<del></del>	(c)				(d)
32.		ronmental Standards	L			<del></del>		
J.2.,		ain/Splash Proof	<del></del>	<del></del>	<del></del>			
		ist Proof	Military S	Standard 810 F or h	iabar			
		pration Proof	wintary S	raiteata o lo Lot ti	iignet			
		mperature Proof	As per or	perating and storag	o Tomo	ovetime.		
33.		of Standard Accessories						
		or otalidata Plotessories	as standa	o pe memoneo) F(	ollowing	item/Acce	essorie	es are to be offered
Ì		Bill of Qu		terial (BOQ /BOM)	of Star	dard Iton		
	Ser	Eqpt Name/ Nomencla	ture	Part No	Qty	Countr		Decile
				,,,,,	QLy	Manufa		Rmks
	â.	Transceiver (Including Al	E, BITE,		<del> </del>	iatottoto	oluic	
		ATU and Instant Messagin	g Facility		1		•	Ï
		etc)		<u>. •                                     </u>	-	j		
1	b.	Radio Earthing					_	
l	C.	Handset		• " in				
	d.	Antenna (Two different Ante	nna to be					
- 1	1	given as Standard Item)	complete	SET <sub>A</sub>	Í			
ł	e.	with accessories Antenna Mast (One Antenna	- 141-	- 1				
	J 6.	be given in Standard item)	OF ISBIVI E	ļ.•				
		With accessories	combiere	ļ ·			ĺ	
	f.	Power Supply System	<del></del>	<u></u>	ļ			·
	~	(1) AC Power Supply Comp	lete with					
		cables		4.				
		(2) DC Power Supply Comp	lete with	,	<del>  </del>			
1		cables		•			1	
		(3) Sealed Rech	argeable					
Į į		Maintenance Free Battery (	minimum					
- 11		120 AH) (02 Nos) with	charging	÷	]			
- 11		facility (Battery charger). Ac	ceptable	g	i i		1	
11	g.	Programming Kit along	- Contain					
- 11	₽.	Software (Perpetual License	with	4	ļ		1	
- 11		be offered in 10:1 ratio)	ם מות נס				1	
11	ħ.	GPS Facility with Accessorie	s <sup>.</sup>					<del> </del>
			_	. s				
] ]	ĵ.	Data Communication facil	ty with	3				<del>-</del>
[]		Accessories (Data Transfer			- 1		1	
- 11		similar, To be offered in 10:1 rai	io)	h.	- 1		- }	
11	16	Tool KEIN Our DE						
- 11	k.	Tool Kit/Fill Gun (if available accessories (To be offered			Ī		- 1	
		ratio)	ILI ROTT	A.			- 1	
11	ī.	Carrying Bag (To be offered	as ner			·		CCNERAL DECAM
	. 1	requirement)	as per	.10			N.	
		· · · · · · · · · · · · · · · · · · ·	İ	.	ĺ			
	m.	Required cables, connected	rs and	· ··	<del></del>		1	DGDP S
	- 1	associated accessories			ł		11/2	マス*//
بالي				*			\	MSTRY OF SEE
34, <u>L</u>	ıst of	Optional Accessories	T	(Details to be men	tioned)	ollowing	ltem/A	ccessories are to
				be offered as option	nal:			



		Fact/Description		Te	chnical Spec	ificatio	on	To be filled up by
Ser	-	/1-1			·		<u> </u>	principal/ manufacturer
(a)	<del></del>	(b)		in e	(c)			(d)
ĺ	1 22	Bill of Ut	uantity/il	Vlater	ial (BOQ /BO			
	Ser	Eqpt Name/Nomencl	lature		Part No	Qţy	Country of Manufacture	
	a	Handset						
ļ	b.	Radio Earthing				<u> </u>		
}	d.	Programming Software Data Communication fa	7174	479785		<u> </u>		
	u.	Accessories (Data Transfersimilar to be offered)	acility er Cable	with e or				
	ė.	Laptop (To be offered in 10:	1 ratio)			<b></b>		
	f.	BMS (Battlefield Managem	ent Sys	tem		<del>                                     </del>		·
		or similar)						 
	g.	Carrying Bag/ Tra	ansporta	tion				
	h.	Case/Transit Case			<del></del>			
	11	Interface cable with Field Ex	xcnange		: <del></del>			
	1	Any others to be mentioned				<u> </u>		
35.	Warra				o) Years			
36. 37.		Sales Service			e) Years			
		Validity		contr				1
38.	Any of	ther	1	If an	y item not s	pecifica	ally mentioned	
				above	but required	d techi	nically for ful	
			] ;	specii	of operation, y and quote	the s	upplier should	1
				offer	y and quote	Such II	em(s) iti tuei	
PAR		RAINING REQUIREMENT		-0.00			· · · · · · · · · · · · · · · · · · ·	
39.	User 7	ralning raining		To b	e provided (A	s per r	equirement o	1
	<u> </u>			Sign	als & EME Dir	}		
40.	Opera Trainir	tions, Repair and Mainte	enance	Tob	e provided (A	s per r	equirement or	f
41.		ory Management Training			als & EME Dir			
71,	invent	ory Management Halling	ľ	Ordi 10 D	e provided (A ance Director	Ť Į		
42.	Public	ation on Training	<del></del>	Tob	e provided			<del> </del>
PAR	T-4 : RE	PAIR AND MAINTENANCE	REQUIR	REIME	NT LESS LIS	T OF S	PARES	
43.	Books	S& Publication						<del>T</del>
	a. Ow	ners/ Operations manual in E	nglish	To b	e provided (As	per re	quirement of	· · · · · · · · · · · · · · · · · · ·
	LINOOK	TAbe) incidning CD(DAD)		Sign	als & EME Dir	ectoral	e)	
	D. VVC	orkshop/Repair manual incl		To be provided (As per requirement of				
	/Book	atic and circuit diagram in E Type) including CD/DVD	English					
	c. 100	0% Updated master spare	narte	To b	n provided (A			<u> </u>
İ	catalo			Sign	e provided (As als & EME Dir	per re	quirement of	
	includi	ng CD/DVD)	1	O1911	AIO G LIVIE DIII	COMMI	<del>-</del> /	
	d. Cor	nplete and updated master	spare	To be	provided (As	për re	quirement of	
	parts p	orice catalogue / list in E		Signa	als & EME Dire	ectorat	e)	
Tr. At Pro-	(Book	Type) including CD/DVD)						
		T OF SPARES						
44.	access	standard spare parts, tools an	1	To be	e provided (As	s per re	equirement of	
PART	GEOGESS	OLLEST FOR DIFFERENT LE	VEL OF	Signa	als & EME Dire	ectorat	3)	
45.	a. Anai	yzer, Measuring Testing/Fault						ENERAL DECE
	findina	and Diagnostic set		Siuns M G I	provided (As ils & EME Dire	per re	quirement of	
ļ	b. Spec	cial Service Tools (SST)		To he	provided (As	ner re	Tuirement of	
Į			] ;	Signa	ils & EME Dire	ectorate	ā) Āraifettiētif Oj	DGDP \$
	c. Spec	cial Service Materials (SSM)		To be	provided (As	per re	uirement of	
	<b>3</b> = 1 =			Signa	is & EME Dire	ectorate	e)	MSTRY OF INC.
		ANCIAL SPECIFICATION						
46	Financi	al Implication/ Specifications		To be	mentioned			103 ES 00
					Λ.Λ	1/5	2 4 5 373	
				E-C-	A-4 RICTED	$\# \mathbb{Z}$	· cha	* (* Thousand **)
D:15IGS-03	COM-0312. Re-	Eaval Board Radio SettBofO for Gen Spec of Radio Set o	on 27,02.24\Anx	A, B, C, D	& Elf, Anx A - HF Med Ro	Base Sta V	ersion.doc	1 100
								aka C

ANNEX B TO DGDP LETTER NO 06.06.0000.215.49.24/Std DATED: 09 MAY 2024

## GENERAL SPECIFICATION OF RADIO SET HIGH FREQUENCY MEDIUM RANGE (VEHICLE VERSION) (MILITARY VERSION)

0		LE VERSION) (MILITARY VERSION)	
Ser	Fact/Description	Technical Specification	To be filled up by Principal/ Manufacturer
(a)	(b) T 1: GENERAL SPECIFICATION	(c)	(d)
1.	Nomenclature	I D. W. C. C. C.	
		Radio Set HF (Medium Range) (Vehicle and Base Station Version) (Military Version)	
2.	Type of Radio	Military Version (Vehicle 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 Manufacturer 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.	Color	Metallic Bronze (MB) Green	
PART	2: TECHNICAL SPECIFICATION	Twist televis Signature (1992) Crooti	
14.	Frequency Range		
		1.6 MHz-30 MHz. Below 1.6 MHz and above 30 MHz are allowed	
	Frequency Band Channel Bandwidth	HF	
	Channel Spacing	To be mentioned	
		To be mentioned	
	Number of Preset Memory Channel	Minimum 50, Specific memory channel is to be mentioned	
	Number of Total Working Channel	To be mentioned	
20.	Technical Communication Range		
	Static (Vehicle to Vehicle)	Minimum 30 KM	
L	On the Move (Vehicle to Vehicle)	Minimum 15 KM both in urban area and hilly area	
	Vehicle to Base	Minimum 100 KM	CENERAL DECE
21.	Antenna Type	Vehicular Broad band antenna is preferable. Details of all types of	DODP
22.	Antenna Tuning Unit (ATU)	antennas to be mentioned	
	Communication Security	To be mentioned	12KY 1.*/
	a. Encryption	AES 256 or history	STRY OF DEFE
		AES 256 or higher mode encryption must be available. Details to be mentioned	VI VI
	o. Frequency Hopping	Minimum 400 hone nor minute 5	5 3 17 7
		Minimum 100 hops per minute Details	to the

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D.15155-03 COM-0312. Ro-Eaval Board Radio Satisio for Gan Spet of Radio Set on 27.02.24(Anx. A.B. G., D. & EL.). Anx. B. HF Med Rog Vel

(a) 24.	(b)		To be filled up by Principal/ Manufacture
24.	<b>.</b>	(c)	(d)
24.	c. Other Types of Security (Optional)	to be mentioned	
24.	o. Other Types of Security (Optional)	Any other types of communication	
24.		security (if available) are to be mentioned	İ
	Dimension (W x D x H) (Without Antenna)	To be mentioned. Picture is to be	
	, ,	provided provided	
O.F.	10/6-2-1-1		
25.	Weight of the Radio set (Complete at	To be mentioned	
26.	Functional Condition)  Power Supply System	No.	
	" ower outpry dystern	a. Must be operated from 12/24 Volt	
		DC battery (preferably from vehicle power source)	
		b. DC rechargeable and replaceable battery may be proposed. Defail of	
		brand, model, country of manufacture	
		and battery rating are to be mentioned	
		c. The battery should have charging facility from vehicle system (preferable)	
07		- Identy from vehicle system (preferable)	
27.	Transceiver		
	a. RF Power Output	(1) Min: 25 W of below	
		(2) Max: 100 W or above	
		(3), Radio set must qualify in both the	
- 1	b. Power Modes	above parameters	
		Scalable Power Output modes are to be available. Details to be mentioned	
[	c. Modulation Type	To be available (Details to be	
- [		mentioned)	
ļ	d. RF Input Impedance	To be mentioned	, <u>, , , , , , , , , , , , , , , , , , </u>
ŀ	e. Receiver Sensitivity	To be mentioned	
	f. AF Output	Details to be mentioned	
ŀ	g. Squeich Type h. Types of Waveforms	Details to be mentioned	
28.	Programming Software (Tools kit, Lapto	Details to be mentioned	
	a. Programing Kit, along with Software	To be provided	
L	(Perpetual License)	To be provided	
	b. Tool Kit/Fill Gun	To be provided (if available)	<del></del>
	c. Requirement of Laptop (Optional)	To be mentioned (if required)	
		, , , , , , , , , , , , , , , , , , , ,	ř
	Mandatory Features		
1	a. Automatic Link Establishment (ALE)	Available (3G ALE or above)	
	b. Data Communication	Minimum 100 Kbps. Details to be	
		mentioned	
- 1-	c. Built in Test (BITE)	To be available	
-	d. Instant messaging Facility	To be mentioned	
	e. GPS Facility	To be available	
1	f. SDR Facility	To be available and details to be	CANERALDER
-	OVER THE RESERVE OF THE PERSON	mentioned	
	g. CNR Facility	To be available	DGDP
0.	Optional Features		DGDP &
_	a. Remote Control Facility	Minimum 100 meter (wired/ wireless)	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\
[ 2	b. IP interfacing facility with Field	To be available and details to be	RY DE TIFFE
10 1	Estaban	mentioned	OI VI
	Exchange		
	Exchange c: Battle management	Support BMS (Battlefield Management	
	Exchange	Support BMS (Battlefield Management System) or similar standards	20 Sigs
	Exchange	System) or similar standards	10 Sigs
E	Exchange  Battle management	B-2	10 Sigs 6
E	Exchange	B-2	1 10/10/

Ser	Fact/Description	Technical Specification	To be filled up by Principal/ Manufacture
(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	
	e. Earthling for communication vehicle/Tank/APC/ Armored Vehicle etc (whenever applicable)		
32.	Environmental Standards		<u> </u>
Į	a. Rain/Splash Proof		
ĺ	b. Dust Proof	Military Standard 810 F or higher	
	c. Vibration Proof		
}	d. Temperature Proof	As per operating and storage	
		As per operating and storage Temperature	
33.	List of Standard Accessories	(Details to be mentioned) Following Ite offered as standard:	em/Accessories are to b
	Bill of Quantity	/Material (BOQ /BOM) of Standard Items	
	l Ser i Edpt Name/ Nomenclature		
-	a. Transceiver (Including ALE, BITE, SDR Features, PA, ATU and		
ļ	Instant Messaging Facility etc)		
	b. Radio Earthing		
	c. Handset		
	d. Antenna (Two different Antenna to be given as Standard Item) complete with accessories		
	e. Vehicle mounting kit (for radio and antenna) will all accessories		
	f. Power Supply System		
Ш	(1) DC Power Supply Complete		
	with all necessary cables		
	(2) Sealed Rechargeable Maintenance Free Battery (Minimum 120 AH) (02 Nos) acceptable from local source		
	g. Programming Kit along with Software (Perpetual License and		
	to be offered in 10:1 ratio)		
1 1	h. GPS Facility with Accessories		
	<ul> <li>Data Communication facility with Accessories (Data Transfer Cable or similar)</li> </ul>		SEWERAL DESC
	k. Tool Kit/Fill Gun (if available) with accessories (To be offered in 10:1 ratio)		DØDP
	I. Carrying Bag/ Transportation Case/Transit Case (To be offered as per requirement)		THE OF DESCRIPTION OF THE PARTY
1	m. Required cables, connectors and associated accessories		Sigs A

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DilSiGS-03 COM-0312-Re-Eaval Board Radio-SellBoilO for Gen Spec of Radio Set on 27:02.24Vanx A. B. C. DilSiGS-03 COM-0312-Re-Eaval Board Radio-SellBoilO for Gen Spec of Radio Set on 27:02.24Vanx A. B. C. DilSiGS-03 COM-0312-Re-Eaval Board Radio-SellBoilO for Gen Spec of Radio Set on 27:02.24Vanx A. B. C. DilSiGS-03 COM-0312-Re-Eaval Board Radio-SellBoilO for Gen Spec of Radio Set on 27:02.24Vanx A. B. C. DilSiGS-03 COM-0312-Re-Eaval Board Radio-SellBoilO for Gen Spec of Radio-SellBoilO fo

Ser				Technical	Specificat	To be filled ਧਟ੍ਰੇ by Principal/ Manufacturer			
(a)	ļ.,	(b)			(c)		(d)		
34.	List of Optional Accessories			offered as optional	(Details to be mentioned) Following Item/Accessories are to be offered as optional:				
Ì	Fa	B	ill of Quantity	/Material (BOQ/BO	M) of Opti	onal Items	3		
	Ser	Eqpt Name/Nome	enclature						
	a.	Handset							
	p.	Radio Earthing	_ <del></del>						
1	C.	Programming Softwar	e						
ļ	d.	Data Communication	facility with						
		Accessories (Data Ti							
	1	or similar to be offered							
	e.	Laptop (To be offered							
	f,	BMS (Battlefield	Management						
i	<b>∐</b>	System or similar)			_				
1	g.	Carrying Bagi T	ransportation	•					
		Case/Transit Case							
	h.	Interface cable	with Field						
ĺ		Exchange	<del></del>	<u></u>					
	J <sub>j</sub>	Any other to be mantic							
35.	Warra		2 (Two) Yea						
36.		Sales Service	5 (Five) Yea						
37.	Model	Validity	Minimum 8 (	Eight) years from sig	ning of cor	itract			
20	Manage - I	t	<u>L</u>	•	_				
38.	Any of	ner	If any item	not specifically me	entioned a	bove but			
			required tec	hnically for full rand	re of oper	ation the	]		
	ł		bidder shoul	d specify and quote	such item/	s) in their			
			offer. In cas	se of failure to spe	cify and o	uote, the			
D'A-D'	T O T		i blader must	provide such items fr	ee of cost				
39.		RAINING REQUIREME	NT						
) 39.	Useri	raining		To be provided (As	per require	ement of			
40.	02000	tions. Programs as it as a dis-		Signals & EME Dire	ectorate)				
40.	Trainin	tions, Repair and Mainte	enance	To be provided (As	per require	ment of			
41.			<del></del> _	Signals & EME Dire	ectorate)				
٠٠,١٠	HIVEHU	ory Management Trainir	ıg	To be provided (As					
42.	Dublice	ation on Training		Ordnance Directora	ite)				
		AUOHOH HAIRING	MOE BEOWE	To be provided					
43.	Books	PAIR AND MAINTENA & Publication	NGE REQUIR	EMENT LESS LIST	OF SPAR	<u>ES</u>			
<del>-</del> .ਹ.	DOOKS	ners / Operations manual	T 2 - 12 7 1	THE RESERVE OF THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TW					
	(Book	Type) including CD/DVE	n in Euglisti	To be provided (As	per require	ment of			
	h W/c	rkshop/Repair manual	inal deteil	Signals & EME Dire	ctorate)				
	schem:	atic and circuit diagran	ilici detali i	To be provided (As	per require	ment of	-		
j	(Book	Type) including CD/DVE	y n nit ⊏iiBheur I	Signals & EME Dire	ctorate)				
1	C 1009	6 Updated master spare	, porto	To be much at at	<del></del>				
	catalog	ue în English (Book Tyr	z parts	To be provided (As	per require	ment of			
ł	CD/DV	D)	be) including	Signals & EME Dire	ctorate)	}			
ļ		plete and updated mast	er spare	To be provided (As					
	parts p	rice catalogue / list in E	English	To be provided (As Signals & EME Dire	per require	ment of			
i	(Book	Type) including CD/DVD	2)	dialigity of EINE DIFE	Clorate)				
44.	List of	standard spare parts, to	ols and	To be provided (As	nor radiales				
}	access	ories	0.0 4,14	Signals & EME Dire	per require	ment of	GENERAL DEGE		
PART	-6 TOO	L LIST FOR DIFFEREN	IT LEVEL OF	MAINTENANCE	ciorate)		GENERAL DESCRIPTION OF THE PROPERTY OF THE PRO		
45.	a. Anai	yzer, Measuring Testing	/Fault	To be provided (As )	nor roquiro	minimit of T			
	finding	and Diagnostic set		Signals & EME Direct	ctoreto, her rednite	metir of	DGOP		
Ī	b. Spec	cial Service Tools (SST)		To be provided (As p	orricale)	molid in fi			
j	र¥रस्ट			Signals & EME Direct	per require:	neur of	***		
ſ	c, Spec	ial Service Materials (S	SM)	To be provided (As p		mont of	THE RESERVE TO THE RE		
		_		Signals & EME Direct	storeto) her rednilei	HEUL OI	VI US		
<b>PART</b>	-7: FIN/	ANCIAL SPECIFICATION	DN	Signal of Pixit Diff.		200	- 10 Supple		
				<del></del>	110	<b>3</b> 435 (			
				B_A	$\mathcal{I}$	- O10	F) * M * M * M * M * M * M * M * M * M *		

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D.ISIGS-03 COM-0312, Re-Eaval Board Radio SetIBofO for Gen Spec of Radio Set on 27.02.24 Anx B. HF Med Rng Ven Version do FT CARTINE COM-0312. Re-Eaval Board Radio Set IBofO for Gen Spec of Radio Set on 27.02.24 Anx B. HF Med Rng Ven Version do FT CARTIN COM-0312.

^			
Ser	Fact/Description	Technical Specification	To be filled up by
			Principal/ Manufacturer
(a)	(b)	(c)	(d)
46.	Financial Implication/ Specifications	To be mentioned	197







ANNEX C TO
DGDP LETTER NO 06.06.0000.215.49.24/Std
DATED: 09 MAY 2024

# GENERAL SPECIFICATION OF RADIO SET VHF MEDIUM RANGE (BASE STATION VERSION)

Ser	Fact/Description				
40,	, acapescription		rechnical	Specification	To be filled up by
(a)	(b)			(-\	principal/manufacture
PAF	T 1: GENERAL SPECIFICATION	<del></del>		(c)	(d)
1.	Nomenclature		in Set VILLE Ma	-lines D. Market	
		and	Boss Statio	dium Range (Vehicle	
		Vers	ion)	n Version) (Military	
2.	Type of Radio			se Station Version)	
L.		Soft	ware Defined F	sayio sae gration vetaloti)	
3.	Brand Name/make		e mentioned	10010	
4.	Model		e mentioned		
5.	Country of Origin		ip A and B cou	ıntries	
6.	Country of Manufacture	Grou	p A and B cou	Intries	
7.	Country of Assembly		ip A and B cou		
8.	Year of Manufacture	Not I	pefore the cale	ndar year of the	
<u> </u>		contr	act		
9.	Name of Manufacturer with	Deta	ils to be mentic	ned	
	complete address (Addresses,				
	Telephone, Fax, Email &				
10.	Website) Name of Principal with	<u> </u>			
10.		Detai	ils to be mentio	ned	
	complete address (Addresses, Telephone, Fax, Email &				
	Website)	1			
11.	Name of Local Agent with	Detai	ls to be mentio	nod	
	complete address (Addresses,	Detai	is to be illelific	ried	
	Telephone, Fax, Email &				
	Website)				
12.	Port of Shipment	Must	be from the co	untry of	
		Manu	facturing/Asser	mbly.Trans-	
40		shipm	ent not allowed	i l	
13.	Color	Metal	lic Bronze (MB	) Green	
PART	2: TECHNICAL SPECIFICATIO	<u>N</u>		•	
14.	Frequency Range	30 M	Hz – 88 MHz.	Above 88 MHz is	
15.	Fraguency Panel	also a	llowed. Multiple	e band preferable	
	Frequency Band Channel Bandwidth	VHF			
17.			mentioned		OUT DATE OF
18.	Channel Spacing Number of Preset Memory	lo be	mentioned		DGOD
10.	Number of Preset Memory Channel	ivlinim	um 25. Specif	ic memory channel	DGOP E
19.	Number of Total Working	To be	e mentioned mentioned		₩ DGOP B
	Channel Channel	10 ng	mennoued		11. 1 7 7 7 7 1 1
	Communication Range (tactical o	ommi	nication\		
	Base Station Version	Plain	Urban Area	Hilly Araa	THE REST OF BELLEVILLE
	Minimum Range	25k	20km	Hilly Area 12km	C S195 0
				151/11	- C 3 1 5 0 1

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CHISTOR-GI CONT-GITZ RO-Enval Bound Randon Settled TO for Gam Spec of Randon Set on 27.02.24 Arts A. B. C. D. E. B. Arts C-Vity Mod Ring Base Size Version.docs

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Ser	Fact/Description	Technical Specification	To be filled the by
	•		principal/manufacturer
(a)	(b)	(c)	(d)
21,	Antenna Type	Antenna complete with accessories	
		details to be mentioned with various	
- 33	Astrono Mark	types of antenna	
22.	Antenna Mast	Antenna Mast (height and segment)	
		complete with accessories details to be mentioned	
23.	Communication Security	mentioned	
20.	a. Encryption	AES 256 or higher mode encryption	
	Jan 2. 10. Jan 10. 1	must be available. Details to be	
		mentioned	
l	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	
24.	Dimension (W x D x H)	To be mentioned. Picture is to be	
25.	(Without Antenna) Weight of the Radio set (At	provided To be mentioned	
20.	Functional Condition)	to se institutied	
26.	Power Supply System	a. Must be operated from both AC	
	1,4,5	(220 VAC ± 20% at 50 Hz) and 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	
ĺ		solar charger at ambient light (optional)	
27,	Transceiver	Test of the second of the least (epitolial)	
	a. RF Power Output	1. Minimum 5 Watt or below.	
		2. Maximum 40 Watt or above.	
		3. The set must qualify in both the	
	In Discourse N. S	above parameters.	·
	b. Power Modes	Scalable Power Output modes are to be	
	c. Modulation Type	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	CENERAL DESC
28.	Programming Software (Tools		
	a. Programing Kit along with	To be provided	DEDP
	Software (Perpetual License)	To be invested the state of	
	b. Tool Kit/Fill Gun c. Requirement of Laptop	To be provided (if available)	**
	(Optional)	To be mentioned (if required)	TO THY OF SECTION OF THE SECTION OF
	The state of the s	/23.05	

Ser		FactiDescription	T	echnical Sp	ecificat	ion	pri	To be filled up by incipal/manufactu	
(a)		(b)		(c)				(d)	
29.	Mand	atory Features		<u>\</u>			<u> </u>		
		uto Re-broadcast/ data	To be	possible.	Details	s to be			
	relayii	ng/ retransmission	mention				Ì		
	facility	<i>f</i> .							
	b. D	ata Communication		n 100 kbps	s. Deta	ils to be			
		. 17. b. one	mention						
ĺ		uilt in Test (BITE)	To be a						
	~	stant messaging Facility		entioned		<b></b>			·
		PS Facility	To be a						
		NR Facility	To be a	/ailable					
30.		nal Features	2.51						
		emote Control Facility		100 Meter		wireless)			
		attle management		BMS (Battle					
	Syster	TI	wanage	ment System	or Sim	ilar)			· · ·
	C. M	obile Adhoc Network ET) facility	To be av	raliable.					
31.		eting/ Storage Condition		· · · · · · · · · · · · · · · · · · ·	_			<del></del>	
J. 1.		perating Temperature	-10° C to	155°C				<del></del>	
		torage Temperature	-20° C to						
	c. H	umidity Permissible	Maximur					<del></del>	
]		tion for Operation	Mayhhh	11 90%					
İ		peration during Fog.	To be po	esible					
1		and Snow	. o be pe	oʻolbi C					
32.		onmental Standards				!	<del></del>		
Ī		plash/Rain Proof		· · · · · · · · · · · · · · · · · · ·					·
		ust Proof	Military S	Standard 810	F or high	aher			
[	c. V	bration Proof	•						
ĺ	d. Te	emperature Proof	As per		and	storage			
			temperat						
33.	List of	Standard Accessories	Following	g Item/Acces	sories	are to be			
		to be quoted separately	offered a	s standard:		1			
ļ	item w		(185) - (186) m (1		=			· · · · · · · · · · · · · · · · · · ·	
	Ser	Bill of Qua	intity/ivia	erial (BOQ					_
į	Sei	Eqpt Name/ Nomencl	ature	Part No	Qty	Country		Rmks	
-	a.	Transceiver (Including	DITE		1	Manufact	ure		_
		Instant Messaging facilitie							
ŀ		Handset	<u> </u>						-
		One Antenna complete	with all						$\dashv$
Ì		accessories (To be off							1
		standard item)							
ĺ		One Mast complete	with all						7
	] [	accessories (To be off	ered as					CENERAL DESC	
		standard item)							
		Power Supply System						5 DONE	
		(1) AC Power Supply of	omplete						7
		with cables							_  ∙
		(2) DC Power Supply of	omplete					TRY OF DESCRIPTION	1
		with cables	4	<u> </u>				2 5105	_

Ser	* act/Description Te			Techni	cal Spe	cificati	on		e filled up by	
(a)	1	(b)		<u></u>	(c)			brincibs	al/manufactu	rer
(4.)	<del>   </del>	(3) Sealed	Rechargeab	a l	(.0)		Y	<u> </u>	(d)	17
			Free Batte			ļ	1			
		(Minimum 120 Al		h						
ŀ	11	charging facility.	s, coz (103), wii Accentable: fro:	n						.
Į.		local source	-rocióbrabió. Il or	"						
	f.		it along wit	b			<del> </del>			_
1	''	Software (Perpet	ual Licence an							
		to be offered in 10	iai ricellee all 14 ratiol	۳		-				
	g.	GPS Facility with	Accessories			<del></del>				<del>-</del>
	h.	Auto Re-broad								4
	11.	relaying/ Retrans								}
	11	with accessories (	To be offered i	y		1				
ļ		5:1 ratio for withou		11						
	<u> </u>	Data Communica		h		+				_
	1.		non racility with							
		Cable or similar).				İ		1		
1		in 10:1 ratio	to po officio	<b>4</b>			ļ			İ
	k.	Tool Kit/Fill Gur	i (if available	<del>a   -</del>		<del></del>				$\dashv$
	'''	with accessories	To be offere	4		1				Ì
	11	in 10;1 ratio)	( so onoio	٦						
	<del>                                    </del>	Required cables,	connectors an	ų.		<del>                                     </del>	<del></del>		<del></del>	-
		associated access		<u> </u>				İ		İ
	m.	Carrying Case/Sto				<del> </del>	<u> </u>			$\dashv$
34.	List	of Optional Access		Folk	awina l	tem/Ac	cessories	are to be	e	
		to be quoted sepa		offer	red as o	ptional:	+	4,0 10 50	l	
	wise)					1			j	
		Bill	of Quantity/N	aterial	(BOQ/	BOM) o	f Standar	d Items	<del></del>	
	Ser	Eqpt Name/ No	menclature	Part	Qty		ntry of		mks	$\neg$
	<u> </u>			No		Manu	facture			
	a.	Handset								7
	b.	Programme Softw								ヿ
	Ç.	Data Communic								7
		with Accessor								
	<u>                                     </u>	Transfer Cable or	similar)		<u> </u>					i
	d.	Laptop (To be of	fered in 10:1	ļ.	]					7
		ratio)								
	e.	BMS (Battlefield	Management							-
		System)								_
	f.	Carrying Case/Sto								_
O'E	g.	Any others to be n			<u></u>					
35. 36.	Warra		2 (Two) Year			<del></del>				
_ <u>36.</u> 37.		Sales Service	5 (Five) Year					· · · · · · · · · · · · · · · · · · ·		
3/	INIOGE	l Validity	Minimum 8	(Eight)	years	trom si	ighing of			
		•	contract							
38.	Any o	ther	If any item n	ot opioci	Figother :=	va=4!	ما مام		WERAL DECE	<del></del>
00.	l villiy o		but required	toobni	incally ()	ieunoue	ed above			
			operation, th							
			quote such i	tem/e/	in fhair	offer in	ony and		XGDP 景	
			failure to spe	cify and	in unote.	ouch il	der must	XXII	コフラジ	
			provide such	items f	ree of c	ario biu est	rei iiingr	THIS.	OF DELLE	
		_		Time (					HQ Sin	
							16.7			

		TYZOTTYIOTZD	
o er	\$act/Description	Technical Specification	To be filled up by principal/manufacturer
(a)	(b)	(c)	(d)
PAF	RT-3: TRAINING REQUIREMEN	NT .	i duy
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)	<del></del>
42.	Publication on Training	To be provided	
PAR	T-4: REPAIR AND MAINTENAL	NCE REQUIREMENT LESS LIST OF SPA	NDEC
43.	Books & Publication	THE CONTENT LEGG LIGITON OF SPA	TRES
	a. Owners/Operations manual in English (Book Type) including CD/DVD)		
	b. Workshop/Repair manual incl detail schematic and circuit diagram in English (Book Type) including CD/DVD	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)	
PART	T-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 DIFFEREN	LEVEL OF MAINTENANCE	
45.	a. Analyzer, 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)	
D & D T	c. Special Service Materials (SSM)	To be provided (As per requirement of Signals & EME Directorate)	
PARI	-7: FINANCIAL SPECIFICATION		
46.	Financial Implication/ Specifications	To be mentioned	Sign
		· · · · · · · · · · · · · · · · · · ·	22 1 1 1 1 1 2 2 2

ANNEX D TO
DGDP LETTER NO 06.06.0000.215.49.24/Std
DATED: 09 MAY 2024

## GENERAL SPECIFICATION OF RADIO SET VHF MEDIUM RANGE (VEHICLE VERSION)

Ser	Fact	Technical Specification	To be filled up by principal/ manufacturer
(a)	(b)	(c)	(d)
PAR	T 1: GENERAL SPECIFICATION	<u> </u>	
1.	Nomenclature	Radio Set VHF (Medium Range)	= = = = = = = = = = = = = = = = = = = =
		(Vehicle and Base Station	
		Version) (Military Version)	
2.	Type of Radio	Military Version (Vehicle 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 Manufacturer with	Details to be mentioned	
	complete address (Addresses,		
	Telephone, Fax, Email &		
	Website)		
10.	Name of Principal with	Details to be mentioned	
	complete address (Addresses,		
	Telephone, Fax, Email &		
44	Website)	Details to be mentioned	
11.	Name of Local Agent with	Details to be trientrioned	
	complete address (Addresses, Telephone, Fax, Email &		
	Website)		
12.	Port of Shipment	Must be from the country of	
12.	Tott of Grapment	Manufacturing/Assembly. Trans-	
		shipment not allowed	
13.	Color	Metallic Bronze (MB) Green	
		•	
	T 2: TECHNICAL SPECIFICATION		
14	Frequency Range	30 MHz - 88 MHz. Above 88 MHz	
		is also allowed. Multiple band	
		preferable .	ENERAL DECA
15.	Frequency Band	VHF .	
16.	Channel Bandwidth	To be mentioned	DOOP
17.	Channel Spacing	To be mentioned	
18.	Number of Preset Memory	Minimum 25. Specific memory	
40	Channel	channel is to be mentioned	
19.	Number of Total Working	To be mentioned	10 5 05
L	Channel		

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DISTISSIS COLLAND Ro-Exyst Board Radio SchBoil for Goe Spen of Radio Sct un 27.82.26Ann A. B. C. D & EA, Ann D - Viff Med Rug Veh Version do

Ser	Fact.		Technical Specification			To be filled up by principal/ manufacturer
(a)	(b)			(c)	(d)	
20.	Communication Range (	tactical co				Vest
	Vehicle on Move	Plain La	Land Urban Area Hilly Area			
	Minimum Range	10 kn	n	08 km	06 km	
	Vehicle on Static	Plain La	and	Urban Area	Hilly	
	Minimum Range	15 kn	n	12 km	08 km	
21,	Antenna Type	þ	e me	of vehicle antenna entioned. Various a may be proposed	types of	
22.	Communication Secur	ity				
	a. Encryption	e		256 or higher tion must be a to be mentioned		
	b. Frequency Hopping	N L	/linimt	um 100 hops per to be mentioned	minute.	
	c. Other Types of Securi	s		her types of comm y (if available) ar ned		
23.	Dimension (W x D x H) (Without Antenna)	T		mentioned. Picture	is to be	
24.	Weight of the Radio s Functional Condition)			mentioned		
25.	Power Supply System	v	ehicle	o be operated from power source (pre	ferable)	
		p 6 6	eplace ropos ountry attery hargin	eable battery need Detail of branc y of manufactur rating are to be me ne battery shoul	nay be I, model, re and entioned d have	
26.	Transceiver		· .		<u></u>	
	a. RF Power Output	3	. Max . The	mum 5 Watt or belo limum 40 Watt or ab set must qualify in l parameters	ove	
	b. Power Modes	to m	icalab o be nentio	le Power Output m available. Details ned	to be	
	c. Modulation Type	s d	All modulation types are to be specified with required technical data			GENERAL DESCRIPTION
	d. RF Input Impedance			mentioned		₩\QGOP }
	e. Receiver Sensitivity			mentioned		*
	f. AF Output			to be mentioned		OF VETS
	g. Squelch Type			to be mentioned		OF DE
	h. Types of Waveforms	5 <u>  D</u>	etalis	to be mentioned	13 5 Q	3 Sept. 19 Sign 19 Sig

ru'.,		٠	
Ser	Fact	Technical Specification	To be filled up by principal/ manufacturer
(a)	(b)	(c)	(d)
27.			
	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)	item	
28,	Mandatory Features		
	a. Auto Re-broadcast/data	To be possible. Details to be	
	relaying/ retransmission facility	mentioned	
	b. Data Communication	Minimum 100 kbps. Details to	
	a Puilt in Test /PITE)	be mentioned	
	c. Built in Test (BITE) d. Instant messaging Facility	To be available To be mentioned	
	e. GPS Facility	To be available	
	f. CNR Facility	To be available	. ,
29.	Optional Features	10 No Wediania	
	a. Remote control facility (Optional)	Minimum 10 meter (wired/	
	d. Promote control lacinty (Optionar)	wireless)	
	b. Battle Management System	Support BMS (Battlefield	
		Management System or similar)	
i	c. Mobile Adhoc Network (MANET)		
	facility		
30.	Operating/ Storage Condition		
	a. Operating Temperature	-10° C to +55° C	
	b. Storage Temperature	-20° C to +60° C	
	c. Humidity Permissible	Maximum 95%	
	Condition for Operation d. Operation during Fog. Rain and	77 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	
	Snow	To be possible	
31.	Environmental Standards		
	a. Shock/Drop Proof	,	
	b. Splash Proof	<u>[</u>	
	c. Dust Proof	_[	
	d. Vibration Proof	Military Standard 810 F or higher	
	e. Earthling for Communication	issumed y executed a control of higher	·
	Vehicle/ Tank/APC/ Armored Vehicle etc (whenever applicable)		Ī
	ete (whenever applicable)		
	f. Temperature Proof	As per operating and storage	
		temperature	
32.	List of Standard Accessories (Price		
	to be quoted separately item wise)	to be offered as standard:	14
	Ser   Eqpt Name/ Nomenclatur	Material (BOQ /BOM) of Standard	
	Edbrigame, Momenciatus	e Part No Qty Country Manufact	
	a. Transceiver (Including BITE,		
	Messaging facilities etc)		DODP E
	b. Handset		
		ith all	
	accessories (To be offer	ed as	OF OF DETERMINE
	Standard item)		Q 2108 X
		TO 3 10 5 375	1187 10 2

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0.151GS-03 COII-0312. Re-Exval Board Radio SeliBolo for Gen Spec of Radio Set on 27.0224Anx A, B, C, D & E4. Anx D - VHF Med Rag Veh Version.docs

Ser	r 🕏 Fact			Technical Specificat			ition		o be filled up by cipal/ manufacturer
(a)		(b)			(c)			рии	(d)
(a)	d,	Power Supply	ı Švetem	<del>'</del>	(.0.)			T	l'm')
	u.		r Supply comple	te with					-
		_		_					
l			chargeable Maint						
			(Minimum 120 A						
ļ		from local sou	rging facility. Acc	ebrabie					
	e.		Kit along with S	oftware					
			ense and to be						,
		in 10:1 ratio)							
	f.		vith Accessories	alawia a /					-
	g,	Retransmissio	dcasting/ Data re	elayirig/ with					
			To be offered in 5						
		for without wa	ve form)						
	ĥ.		unication facilit						
			Data Transfer C offered in 10:1 ra						
	j.		Gun (if available						
	1,		To be offered		·				
		ratio)							
•	k.	Required ca associated ac		s and					
	J.		radio in Military V	ehicle	<u> </u>	ļ			<del></del>
	m.		se/Transportation						
,	<u></u>	Transit Case/	Storage Case						
33.			cessories (Price						ils given below the
	to be	quoted separat	ely item wise) Bill of Quantity/l	to be of	ffered as o	opuona NV) of	li. Standard		nical specification
	Ser		lame/ Nomenclat		Part	Qty			Rmks
:		<u>.</u>			No		Manufac		
	a.	Handset	-						
	b.	Programme S	oftware nunication faci	ility Wil		<u> </u>	<del> </del>		
	C,		Data Transfer Ca						
		item)		ü					
	d.		offered in 10:1 ra						
	e.	BMS (Battlefi   similar)	eld Management	System	or				
	f.		ase/Transportatio	in Cas	ë/:				
		Transit Case/	Storage Case						
	g.		be mentioned			<u> </u>		,	
34.	Warr	anty	2 (Two) Years						1911
35.		Sales Service	5 (Five) Years						GENERAL DEFENS
36.		el Validity	Minimum 8 (Eight						DGDP
37.	Ãny c	other	If any item not						
			required technic bidder should s						THE OF ULFUS
			their offer. In ca						AT UT UE
			the bidder must				f cost	-	HQ Sin
-							1555	માસ્ટ હે	

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ser	<u> </u>		
Ser	Fact	Technical Specification	To be filled up by
(a)	(b)	(c)	principal/ manufacturer
	RT-3: TRAINING REQUIREMENT	(0)	(d)
38.	User Training	To be previded (As asset	
.0.0.	User Hailing	To be provided (As per requirement of Signals & EME	
		Directorate)	
39.	Operations, Repair and Maintenance	To be provided (As per	
Ì	Training	requirement of Signals & EME	
1/0		Directorate)	
40.	Inventory Management Training	To be provided (As per	
		requirement of Ordnance	
4.31	Frank 1. 12 - Well	Directorate)	
41,	Publication on training	To be provided	
FAR	T-4: REPAIR AND MAINTENANCE R	EQUIREMENT LESS LIST OF SP	ARES
42.	Books & Publication		
	a. Owners / Operations manual in	,	
	English (Book Type) including CD/DVD)		
	b. Workshop/Repair manual incl detail	Directorate)  To be provided (As per	
	schematic and circuit diagram in	To be provided (As per requirement of Signals & EME	
	English (Book Type) including CD/DVD	Directorate)	
	c. 100% Updated master spare parts	To be provided (As per	
	catalogue in English (Book Type)	requirement of Signals & EME	
	including CD/DVD)	Directorate)	
	,	,	
	d. Complete and updated master	To be provided (As per	
	spare parts price catalogue / list in		
	English (Book Type) including	Directorate)	
	CD/DVD)	,	
PAR	T-5 : LIST OF SPARES		
43.	List of standard spare parts, tools	To be provided (As per	
	and accessories	requirement of Signals & EME	
		Directorate)	
PAR	T-6 TOOL LIST FOR DIFFERENT LEV		
44.	a. Analyzer, Measuring Testing/Fault	To be provided (As per	
	finding and Diagnostic set	requirement of Signals & EME	
ŀ	h Special Convince Totals (COT)	Directorate)	
1	b. Special Service Tools (SST)	To be provided (As per	
		requirement of Signals & EME Directorate)	
}	c. Special Service Materials (SSM)		
İ		To be provided (As per requirement of Signals & EME	
		Directorate)	
PAR	1-7: FINANCIAL SPECIFICATION	- dimension	
	Financial Implication/ Specifications	To be mentioned	3Q 5igs



**ANNEX E TO** 

DGDP LETTER NO 06.06.0000.215.49.24/Std **DATED: 09 MAY 2024** 

### GENERAL SPECIFICATION OF RADIO SET VHF MANPACK (MILITARY VERSION)

Ser	Fact/Descrip	tion	Tech Spec	To be filled up by Principal/ Manufacturer
(a)	(b)		(c)	(d)
والمنازع بالأبار	T-1: GENERAL S	PECIFICAT		
1.	Nomenclature		Radio Set VHF (Manpack) (Military Version)	
	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 Manufac		Group A and B countries	
7.	Country of Assembl		Group A and B countries	
8.	Year of Manufacture		Not before the calendar year of the contract	
9.	Name of Manufactomplete (Addresses, Teleph Email & Website)	address	Details to be mentioned	
10.	Name of Princ complete (Addresses, Teleph Email & Website)	address none, Fax,	Details to be mentioned	
11.	Name of Local A complete (Addresses, Teleph Email & Website)	address	Details to be mentioned	
12.	Port of Shipment		Must be from the country o Manufacturing/ Assembly. Trans-shipment not allowed	
12	Colour		Metallic Bronze (MB) Green	
	T - 2 : TECH SPEC		Wetalic Dionze (WD) Oreen	
	Frequency Range	<u> </u>	30 MHz - 88 MHz. Above 88 MHz is also allowed	<u> </u>
45	Eroguanov Bond		VHF	
	Frequency Band Channel Bandwidth	· ·	To be mentioned	
			To be mentioned To be mentioned	
	Channel Spacing Number of Prese	t Blaman		
18.	Number of Prese Channel	i Methory	is to be mentioned	
	Number of Total	Morking		
19.	Channel			
20	Communication R		Dack Tactical Communication)	
20.		Plain	Urban Hilly Area	
	Adjulyana Danas	Land		-{
03	Minimum Range	08 km	06 km   05 km  Details to be mentioned with various	
	Antenna Type		types of antenna	COLLAG
22.	Communication Se	curity	150.050	CENTRAL DESCRIPTION OF THE PROPERTY OF THE PRO
	a. Encryption		AES 256 or higher mode encryption must be available. Details to be mentioned	DGPP
. !	b. Frequency Hop		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 fi <u>ll</u> ed up by Prin⊯pal/ Manufacturer
<b>1</b> )	(b)	(ĉ)	(d)
3.	Dimension (W x D x H)  a. Without antenna  b. With antenna	To be mentioned. Picture is to be provided	
<del>'4.</del>	Weight of the Radio set (At Functional Condition)	Maximum 8 kg with all accessories in operational condition. Details to be mentioned	
5.	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 10 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.			
	a. Programing Kit along with Software (Perpetual License)		
	b. Tool Kit/Fill Gun	To be provided (if available)	
	c. Requirement of Laptop, PDA, Android Devices etc. (Optional)		
29.			
	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	GENERAL DESCRIPTION
	f. CNR Facility	To be available	
30.	Optional Features Battle Management System	Support BMS (Battlefield Management	DOOP
02	On anothing/Otana as Canalities	System or similar)	\* <u>\</u> \*\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\
31.	Operating/Storage Condition	-10° C to +55° C	THE DESCRIPTION OF THE PARTY OF
	a. Operating Temperature	-10° C to +55° C	170F VELS
	b. Storage Temperature	Maximum 95%	1610 5180
	c. Humidity Permissible	LiviaVittiniti adva	

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D.ISIGS: 03 COM-0312, Re-Eaval Board Radio Setibol Of for Gen Spec of Radio Set on 27.02.24 Anx A; B, C, D& E15, Anx E=VHF Manpack.do

Ser		Fact/Description		Tech Spe	C		Т	o be filled up by Principal/ Manufacturer
(a)		(b)	(c)				(d)	
	Con	dition for Operation						
	Rain	and Snow	To be	possible				
32.		ronmental Standards						
		Shock/Drop Proof		Military Standard 8	310 F c	or higher		
		Water/Immersion Proof						
		Dust Proof		]				
į		Vibration Proof						
	e.	Temperature Proof		As per operating temperature	g and	storage		
33,	List	of Standard Accessories		Following Item/ A	ccesso	ries are		
	(Pric	e to be quoted separately I	<u>tem</u>	to be offered as st				
i	wise							
				ntity/Material (BO	2/BOM			ltems
	Ser	Eqpt Name/ Nomenclat	ure	Part No	Qty	Countr		Rmks
ļ						Manufa	cture	
	a.	Transceiver (including						
	<del></del>	Instant Messaging Facility	etc)	<u>-</u> -				
ŀ	b.	Handset			ļ			
	C,	Two Antennas complete all accessories (To be o			ł			
		as Statndard Item)	ileieu					
ŀ	d.	Rechargeable/ Recharg	eahle					
l	u,	Battery 02 Sets x B						
		offered as Standard Item						
ł		Fitted with Radio & 01x Ex						
	e.	Charger (Battery Ch	arger					
		including Accessories)						
l	f.		rrying					
ļ		Bag/Harness	417					
ļ	g.	Programming Kit along						
		Software (Perpetual Lic						
ŀ	<u> </u>	and to be offered in 10:1 r			-	<del></del>		
-	h.	GPS facility with Accessor Auto Re- broadcasting/		<u> </u>				
- 1	j.	relaying/ Retransmission	Dala					
		each Radio Set	JŲL				1	
ľ	k.	Data Communication f	acility					
- 1	•••		(Data					
		Transfer Cable or simila						
		be offered in 10:1 ratio)						
Ī	Ţ,	Tool Kit/Fill Gun						
		(if available) with access						
ļ		(To be offered in 10:1 ratio						
- 1	m.	Carrying Case/ Transpor						
		Case/ Transit Case/St	orage					
[		Case		<u> </u>		<del></del>		Sc Sins

Ser	<u> </u>	Fact/Description	···	Tech Spec	To he	afilled un by P	rincipal/ Manufacturer
(a)		(b)		(c)	i o ne	· med up by T	(d)
34.		of Optional Accessorie		Following Ifem/ Ad	cessories ar	e to be offered	as standard
ĺ		e to be quoted separatel	y Item				
	wise)		227 1972 4 - 11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	0 10 0 10 1			
	Ser	Eqpt Name/ Nomen	li of Qua	ntity/Material (BO Part No			
	261	Edbrivatie, Notice	lature	Paπ No	Qty	Country of Manufacture	Rmks
	a.	Handset				Manuaciqie	·
	b,	Manpack Carrying	· · ·				,
		Bag/Harness					
	C.	Programme Software					
	d.	Data Communication	facility				
		with Accessories Rechargeable Battery			ļ		
	e. f.	Laptop (To be offered in	10-1				
	. ••	ratio)	1 1-0-1				
	g.	BMS (Battlefield Manag	ement				
		System or similar)					
	h.	Carrying Case/ Transp					<u></u>
		Case/ Transit Case/	Storage				
		Any others to be mantic	ined		<del> </del>		
35.	Warr			o) Years	<u> </u>		
36.		Sales Service		e) Years			
37,		el Validity	Minin	rum 8 (Eight)	years from	-	
100	*	V+		g of contract			
38.	Any o	other		iny item not			
				oned above bu ically for full	it required range of		
				ition, the bidder sh			
				uote such item(s) i			
			In ca	se of failure to			
				, the bidder must p	provide such		
PAR	T 3*	TRAINING REQUIREN	FNT	free of cost			
		2					
39,	User	Training	of Sig	provided (As per nals & EME Directo	requirement		
40.	Oper	ations, Repair an		provided (As per			<u>,</u>
		tenance Training	of Sig	nals & EME Directo	rate)		
41.		itory Management	To be	provided (As per	requirement	<del>-</del>	
	Train			inance Directorate)			
42.	PUDJI T. 4:	cation on Training	lo be	provided	TOO 1 1077 67	00455	
43	Book	REPAIR AND MAINTE	NANCE	REQUIREMENT L	ESS LIST OF	SPARES	
		wners/Operations manu	I To be	provided (As per	requirement		
	in	English (Book Type		nals & EME Directo			
		ding CD/DVD)	.		·		
	b. Wo	orkshop/Repair manual in	ol To be	provided (As per	requirement		
	detail	l schematic and circu am in English (Book Type	it of Sig	nals & EME Directo	orate)		
		am in English (Book Type ling CD/DVD	7				1011
			r To be	provided (As per	requirement		SENERAL DECEMBER OF THE PARTY O
	spare	parts catalogue i	n of Sig	nals & EME Directo		1	
		sh (Book Type) includin	g			- (	DGDP
}	CD/D		d T- t-	and the second			
	u. t		elofsia	provided (As per	requirement		The state of the s
		ogue $l$ list in Englis	h oi oig	rung eminim Dijêrî(	varel		OF ULTURAL TO THE PARTY OF THE
	(Bool	k Type) includin					HOSO
	CD/D	VD)				্ত্ৰিক প্ৰকৃতি	
				E-4			151
Bacco	2.0011 -***	n Da Barrel Barrel Barrel Barrel	:	RESTRICT	CO 11 .	( St	
ทป์จเกิจ์(	الاه-مناء -	2. Re Eaval Board Radio SoftBolO for Gon Spo	e or Kadio Set o	n 21.UZ.24IANX'A, B, C, D & E15. Anx	E - VHF Manpack.doc.	ेका कर्न	

, <del>با</del> غر	A		
3er	F. Description	Tech Spec	To be filled up by Principal/ Manufacturer
(a)	(b)	(c)	(d)
PAR	T - 5: LIST OF SPARES		
44.	List of standard spare parts tools and accessories	of Signals & EME Directorate	e)
PAR	T - 6: TOOL LIST FOR DIFFE	RENT LEVEL OF MAINTENA	NGE
45.	a. Analyser, Measuring Testing/ Fault finding and Diagnostic set	To be provided (As per request of Signals & EME Directorate	
	b. Special Service Tools (SST)	To be provided (As per requot of Signals & EME Directorate	
	c. Special Service Materials (SSM)	of Signals & EME Directorate	
PAR	T -7: FINANCIAL SPECIFICA	<u>TION</u>	
46.	Financial implication/ Specification	To be mentioned	O Sigs



