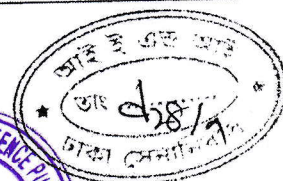
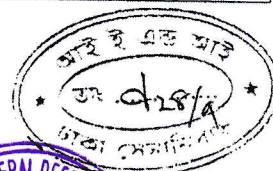


TECHNICAL SPECIFICATION OF FIELD TELEPHONE EXCHANGE – 20 LINES

Ser No	Description	Technical Specification/Requirement	To be filled up by the Manufacturer/ Principal
PART-1: GENERAL SPECIFICATION.			
1.	Nomenclature	Field Telephone Exchange- 20 Lines.	
2.	Brand Name/Make	To be mentioned.	
3.	Model	To be mentioned.	
4.	Country of Origin	Group A and B Countries.	
5.	Country of Manufacture/ Assembly	To be mentioned.	
6.	Year of Manufacture	Not before the calendar year of the contract.	
7.	Name of Manufacturer with complete address (Addresses, Telephone, Fax, Email & Website)	Details to be mentioned.	
8.	Name of Principal with complete address (Addresses, Telephone, Fax, Email & Website)	Details to be mentioned.	
9.	Name of Local Agent with complete address (Addresses, Telephone, Fax, Email & Website)	Details to be mentioned.	
10.	Color	Metallic Bronze (MB) Green.	
PART-2: TECHNICAL SPECIFICATION.			
11.	System Capacity		
a	Initial Capacity (with license)		
	(1) Subscriber Line	Minimum 20 lines (CB/CBS and LB).	
	(2) Trunk/CO Line	Minimum 04 lines (Any DTMF or digital line/ FXO).	
b	Expanded Capacity (with license)		
	(1) Subscriber Line	Minimum 32 lines (CB/CBS and LB).	
	(2) Trunk/CO Line	Minimum 08 lines (Any DTMF or digital line/ FXO).	
12.	Communication Distance	Minimum 15 Km with standard field telephone cable (WD-1/TT or equivalent) used in BD Army.	
13.	Operating System	Automatic/Manual.	
14.	ISDN PRI (E1) Services	To be available as standard.	
15.	IP (Ethernet) Services	To be available as standard.	
16.	Fax Services	To be available as standard.	
17.	Combat Net Radio Connectivity	To be available as standard both for HF and VHF Radio (Available models used by BD Army).	
18.	Power Supply System		
	Should be operated by AC and DC Power Source as mentioned below:		
a	AC Power Supply	220 Volt AC $\pm$ 10%, 50 Hz (Standard AC power of BD).	
b	DC Power Supply	24 Volt DC Secondary Battery.	
c	DC Power Source (Battery Pack)	To be available as standard and details to be mentioned. (Minimum 4 hours backup with full load)	
19.	Surge Protection System	To be available as standard.	
20.	Earthing System	To be available as standard.	



Ser No	Description	Technical Specification/Requirement	To be filled up by the Manufacturer/Principal
21.	Environmental System		
	a Humidity	Minimum 95%.	
	b Temperature	-5°C to +55°C.	
22.	Casing	Field type, IP-68 as standard.	
23.	Weight	To be mentioned.	
24.	Other Mandatory Features/Facilities to be available.		
	a Head Gear/Hands free operation	To be available as standard.	
	b Operator's assistance facilities	To be available as standard and details to be mentioned	
	c Monitoring facilities	To be available as standard and details to be mentioned	
	d Conference call	Minimum five (05) parties and other modern facilities	
	e Alarm System	Night alarm facilities and alarm for fault and troubleshooting	
	f Shock Proof	Must be shock proof to provide continuous services without repair or modification after cross country move on vehicle	
25.	List of Standard Items for each Exchange.		
	Tactical Digital Switchboard configured with built-in mandatory modules for interfacing:		
	a Analog Telephone Interface	20 (CB/CBS-minimum 14 and LB- minimum 6).	
	b IP Telephone Connectivity	40 (minimum).	
	c CO/FXO Interface	04 (minimum).	
	d ISDN PRI (E1) Interface	01 (minimum).	
	e IP Trunking (SIP and H.323)	10 (minimum).	
	f FAX Interface	01 (minimum).	
	g Interface for Data Services (Ethernet):		
	(1) WAN 10/100/1000 BASE-T	01 (minimum).	
	(2) LAN 10/100/1000 BASE-TX	02 (minimum).	
	h Interface for Combat Net Radio:		
	(1) HF Radio	01 (minimum).	
	(2) VHF Radio	01 (minimum).	
	Including following mandatory accessories:		
	j Operator Handset and Headset	01 each (minimum).	
	k AC Power Cable	01 (minimum).	
	l DC Power Cable	01 (minimum).	
	m Rechargeable Battery Pack	01 (minimum).	
	n ISDN PRI (E1) cable with minimum two RJ-45 socket.	01 (minimum).	
	p Cable for connecting each following models of Combat Net Radio:		
	(1) HF Radio Models	Barrett-940/2040/2090, TR-2400 (Reutech), TRC-3730 (Thales) and RF-7800H (L3Harris).	
	(2) VHF Radio Models	QMAC-90M, XV-3088 (R and D), RF-13 (Mesit), TR-6000 (Reutech), TRC-9210 (Thales) and RF-7800V (L3Harris).	
	q MDF / Distribution Box	As per requirement.	
	r MDF Cable	As per requirement.	
	s Fuse Set	As per requirement.	
	t Canvas Transport Bag	As per requirement.	



Ser No	Description	Technical Specification/Requirement	To be filled up by the Manufacturer/ Principal
26.	Optional Requirement.		
a	Wireless Local Loop connectivity	To be available and details to be mentioned.	
b	Gateway for Cellular Network (Dual network, 4G or above)	To be available and details to be mentioned.	
27.	List of Optional Items for each Exchange.		
a	Gateway Interface for Cellular Network (Dual network, 4G or above)	01 (minimum).	
b	Field Telephone Set (Operable in both CB/CBS and LB mode)	20 (minimum).	
c	IP Telephone Set	10 (minimum).	
28.	Warranty	2 (Two) Years.	
29.	After Sales Service	5 (Five) Years.	
30.	Model Validity	Minimum 8 (Eight) years from signing of contract.	
31.	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.			
32.	User Training	To be provided (As per requirement of Signals and EME Directorate).	
33.	Operations, Repair and Maintenance Training	To be provided (As per requirement of Signals and EME Directorate).	
34.	Inventory Management Training	To be provided (As per requirement of Ordnance Directorate)	
35.	Publication on Training	To be provided	
PART-4: REPAIR AND MAINTENANCE REQUIREMENT LESS LIST OF SPARES.			
36.	Books & Publications		
a.	Owners/Operations manual in English (Book Type) including CD/DVD)	To be provided (As per requirement of Signals and EME Directorate).	
b.	Workshop/Repair manual in English (Book Type) including CD/DVD)	To be provided (As per requirement of Signals and EME Directorate).	
c.	100% Updated master spare parts catalogue in English (Book Type) including CD/DVD)	To be provided (As per requirement of Signals and 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 and EME Directorate).	
PART-5: LIST OF SPARES.			
37.	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.			
38.	a. Analyzer, Measuring, Testing/ Fault finding and Diagnostic set (Level III and IV)	To be provided (As per requirement of Signals and EME Directorate).	
	b. Special Service Tools (SST)	To be provided (As per requirement of Signals and EME Directorate).	
	c. Special Service Materials (SSM)	To be provided (As per requirement of Signals and EME Directorate).	

