

Ref: 19010131

 Dated: 19-11-2019  
 Tender Fees PKR-500

**M/s**

Kindly send your sealed Envelope on "Single Stage Single Envelope basis, quotation must be drop in the tender box marked "**Commercial Purchases**" placed in the main entrance of SC Building, Karachi for the following item(s) latest by at 1030 which will be opened at 1100 hrs. Envelope containing tender, must mention **PIA Ref No.** and **Date of Opening, DT: 25-11-2019** PIA will not be responsible for any postal delay.

S#	Qty Unit	DESCRIPTION	U. Rate	GST (if applicable)	Total
01	08 EA	<b>WALKIE TALKIE</b> Motorola OR Equivalent (Detail Specification Below)			

**Tender Terms & Conditions: →**
**A. All participants are required to affirm that:**

- They have quoted the rates *inclusive of all GOVT Taxes*; but; *GST Separately* in absolute terms (Not as a % or + GST)
- Required / tendered quantity may increase or decrease by **15%**.
- SCM Department (PIA) will not be held responsible for any postal delay.
- **Validity of Quote:** Quote must be valid for **120 Days** countable from date of opening of Technical Bid.
- **Registration of Firm:** Participated must be registered with FBR (active Tax Payer in GST) as *the participant should be manufacturer or authorized distributor of manufacturer for particular product in Pakistan.*
- **Delivery:** Delivery must be made as per Schedule given in Purchase Order.
- **Rejection:** Item found below PIA standard shall be rejected / returned at the cost to the vendor.
  - **Guarantee / Warranty:** Two years replacement warranty of equipment and Battery.
  - **Payment Terms:** Payment terms **NTD** (Net Thirty Days). Advance Payment shall not be made for Commercial items. Hence payment term will be NTD after submission of invoices.
  - **Deduction of Tax:** Income Tax will be deducted at source.

**B. Declaration by Bidder:** We/ I hereby affirm that all terms and conditions of the said tender are read and understood and we/ I expressly confirm and agreed that our bid is in consonant to the terms and conditions of the tenders.

**C. Specifications**

SNo	Description	Specifications
01	Frequency Range	146 To 174Mhz
02	RE/TX power	5 Watts @ < 5% Distortion
03	RX sensitivity	.25uV Analog 0.19uV Digital @ 12 db SINAD
04	Battery Capacity	Hi-Capacity Li-Ion, 2250mA. 16 Hrs Backup (Digital) Minimum
05	Battery Charger	AC 220 Volts Multi Unit / Single
06	Channel Capacity	Minimum 16 Channel
07	Adjacent channel selectivity	50db 12.5Khz to 80 db 25Khz
08	Channel Spacing	12.5 Khz/25 Khz
09	Frequency Stability	0.5 PPM @ 60°C
10	Spurious rejection (TIA 603D)	70db
11	Inter Modulation (TIA 603C)	70 db
12	Spurious Emission Harmonics	- 57 dbm (TIA 603D)
13	Compliance with MIL STD 810F	All specified standards

14	OEM Software	PC based Original , Analog/Digital with programming Equipment & cable
15	Technical Manual	Original(photo copied manual is not acceptable)
16	Operation Manual	Operations / Programming
17	PTT /Voice operated	VOX activated PTT
18	Radio Standards	TIA, RoHS, ETSI, DMR Tier III Complies
19	Digital Mode	DMR standards

**Receiver**

**Selectivity** (TIA603) 25 kHz / 12.5 kHz 80 dB (90 dB typical) / 75 dB (82 dB typical) Selectivity (TIA603D) 25 kHz / 12.5 kHz 80 dB (90 dB typical) / 50 dB (60 dB typical)

**Analog Sensitivity** 12dB SINAD 0.30 uV (0.22 uV typical) **Digital Sensitivity** 5% BER 0.30 uV (0.20 uV typical) **Signal Displacement Bandwidth** 25 kHz / 12.5 kHz 2 kHz / 1 kHz

**Inter-modulation Rejection** 25 kHz and 12.5 kHz 85 dB **Spurious and Image Response Rejection** 85 dB

**Audio Response** +1,-3 dB from 6 dB per octave de-emphasis; 300-3000 Hz referenced to 1000 Hz at line output **Audio Distortion** Less than 3% (1% typical) at 1000 Hz; 60% RSD Line Output 330 mV (RMS) @ 60% RSD FM Hum and Noise (750 µs de-emphasis) 25 kHz / 12.5 kHz 50 dB (56 dB typical) / 45 dB (52 dB typical)

**RF Input Impedance:** 50 Ohms.

### **Transmitter**

**Inter-modulation Attenuation:** 55 dB 40 dB for 40W and 100W stations; 70 dB for 30W station **Maximum Deviation (RSD)** 25 kHz / 12.5 kHz ±5 kHz / ±2.5 kHz **Audio Sensitivity** 60% RSD @ 80 mV RMS.

**Spurious and Harmonic Emissions Attenuation:** 90 dB 85 dB FM Hum and Noise (750 µs de-emphasis) 25 kHz / 12.5 kHz 50 dB (55 dB typical) / 45 dB (52 dB typical).

**Frequency Stability:** (for temperature and aging variation) 1.5 PPM/External Ref (optional) **Audio Response** +1,-3 dB from 6 dB per octave pre-emphasis; 300-3000 Hz referenced to 1000 Hz at line output.

**Audio Distortion:** Less than 3% (1% typical) at 1000 Hz; 60% RSD **Emission Designators** FM Modulation: 12.5 kHz: 11K0F3E; 25 kHz: 16K0F3E 4FSK Modulation: 12.5 kHz - Data Only: 7K60FXD; 12.5 kHz - Data & Voice: 7K60FXE.

**Emission Designators:** 11K0F3E, 16K0F3E, 7K60FXD, 7K60F7D, 7K60FXE, 7K60F7E, 7K60F7W.

### **Must be Comprise of following feature:**

- Supports two simultaneous voice paths in digital 12.5 kHz TDMA 6.25e compliant FM & 4FSK Frequency Generation Synthesized Channel Spacing Analog / Digital 12.5 kHz, 25 kHz / 12.5 kHz (6.25e compliant) Mode of Operation Simplex / Semi-Duplex / Duplex.
- VHF/FM DMR.
- Divides existing channel into two timeslots, delivering twice the capacity through a single repeater.
- Analog and digital conventions are all standard in one base station without the cost of additional software or hardware
- RoHS (Restriction of Hazardous Substances) compliant
- Operates in analog or digital mode with LED indicating mode of operation.
- Fully-featured portables Radio unrivalled voice and data communication.
- Temperature Range -30°C to +60°C
- Background Noise Suppression.
- VHF 146 to 174 MHz.

### **Terms of Reference**

1. *Equipment should be 100% compatible with all features of DMR Standards*
2. *Supplier must send the technical team for initial installation of software and equipment as per requirement*
3. *Clearance certificate for the final payment will be issued after completion and satisfactory installation of the system.*
4. *The evaluating committee from PIA will be evaluate the acceptance of equipment.*
5. *All PIA procurement policies, PPRA, and Government procedure will be followed.*
6. *Equipment should be latest model*
7. *Two years replacement warranty of equipment and battery will be preferred.*
8. *Spares parts should be available for the next 10 years after the expiry of warranty period.*
9. *Supplier guarantees that the delivered equipment will remain in production for at least next three years after it is purchased.*
10. *Type of approval for equipment Model from PTA Islamabad is compulsory.*
11. *Vendor would be asked to provide two units for demonstration purpose free of charge.*
12. *Certificate of Import / Bill of Entry should be provided by the supplier.*
13. *The participants should be manufacturer or authorized distributor of manufacturer for particular product in Pakistan.*
14. *Training of software and hardware for at least three staff members at company expenditure for newly introduced models.*

Yours truly,  
For Pakistan International Airline

**Manager Purchases Commercial**

Authorized Signature of  
Supplier with seal and Designation with contact Number: \_\_\_\_\_