

FAX MESSAGE

FROM : APF PAC KAMRA
FAX NO.051-9225514

TO : PUBLIC PROCUREMENT
REGULATORY AUTHORITY
FAX NO. 051-9219149

REF : APF/1920/42/LP/PC-29 DATED NOVEMBER, 2017

UPLOADING OF TENDER ON PPRA WEB SITE

KINDLY UPLOAD THE UNDERMENTIONED TENDER NOTICE ON PPRA WEB SITE AND FORWARD BILL ALONGWITH TS NO FOR OUR FURTHER NECESSARY ACTION.

OPEN TENDER NOTICE

1. TECHNICAL AND COMMERCIAL OFFERS FOR PROCUREMENT OF UNDERMENTIONED ITEM MAY BE SUBMITTED IN **SEPARATE SEALED ENVELOPES** TO THE FOLLOWING FACTORY ADDRESS.

AVIONICS PRODUCTION FACTORY PAC BOARD KAMRA DISTT ATTOCK

| S NO | PART NO | NOUN | QTY | U/I | SPECIFICATION |
|------|----------|---------------------------|-----|-----|---------------|
| 1 | MMD2505G | BASE STATION (BASE RADIO) | 02 | EA | ATTACHED |
| 2 | MRD2505 | REPEATER | 1 | EA | |

TERMS AND CONDITIONS:-

2. GENERAL TERMS AND CONDITIONS ARE MENTIONED IN TENDER FORM (APF/ LG-7). TENDER FORM AND COMPLETE DETAILS / SPECIFICATIONS OF ITEMS, IF REQUIRED CAN BE OBTAINED FROM CONTACT NO **051-90996465 AND 6256** ON ANY WORKING DAY BEFORE OPENING OF TENDER.

3. THE FIRM MUST BE GST AND PROFESSIONAL TAX REGISTERED HAVING NTN. **INTERESTED FIRMS ARE TO DEPOSIT 5% BID SECURITY (IN THE NAME OF MD APF) ALONG WITH QUOTATION.**

4. TECHNICAL AND COMMERCIAL OFFERS OF ABOVE MENTIONED ITEM MAY BE SUBMITTED IN SEALED SEPERATE ENVELOPES IN **TENDER BOX NO. 01** PLACED AT MAIN GUARD ROOM APF.

5. LAST DATE FOR SUBMISSION OF TENDERS IS **05 DECEMBER, 2017** BEFORE **1100 HRS.**

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6. THE TENDERS WILL BE OPENED ON THE SAME DAY AT **1130 HRS** IN THE OFFICE OF DIRECTOR LOGISTICS (S&A), APF, PAC, KAMRA.
7. PAYMENT WILL BE SUBJECT TO THE ACCEPTANCE OF ITEMS BY THE USER AND QUALITY DIRECTORATE.
8. FIRMS HAVING THE CAPABILITY TO PROVIDE ABOVE MENTIONED ITEMS AS PER GIVEN SPECIFICATIONS ARE TO QUOTE.
9. INTERESTED FIRMS ARE TO PROVIDE SAMPLES / TECHNICAL DATA ALONG WITH TECHNICAL QUOTATION.
10. ONLY REGISTERED SUPPLIERS, WHO ARE ON ACTIVE TAXPAYERS LIST ARE TO PROVIDE DOCUMENTARY PROOF AND QUOTE ABOVE MENTIONED ITEMS.
11. THIS FACTORY RESERVES THE RIGHT TO REJECT ANY QUOTATION ON TECHNICAL GROUNDS.
12. QUOTATION MUST BE VALID FOR MINIMUM **120 DAYS**.
13. SALES TAX AS APPLICABLE MUST BE MENTIONED SEPARATELY.
14. GUARANTEE/ WARRANTY TERMS AND DELIVERY PERIOD SHOULD BE MENTIONED SEPARATELY.

(TILAL MAZHAR)
Flight Lieutenant
For Managing Director
APF PAC Kamra
Tel Ext: 051-9099-6292

FAX MESSAGE

**WALKIE TALKIE (DIGITAL) SPECIFICATIONS : BASE STATION
(HYTERA MD 788G)**

| S NO | FEATURES | RANGE |
|-------------|--|---|
| 1 | OPERATING VOLTAGES | 220 VAC OR COMPATIBLE DC ADAPTOR |
| 2 | POWER SUPPLY (EXTERNAL) | TO PROVIDE BACKUP FOR ATLEAST 10 MINS IN CASE OF MAIN FAILURE.(MUST BE HYTERA PS22002 OR DIMOND SD1732EW2). |
| 3 | FREQUENCY RANGE | VHF |
| 4 | NO OF CHANNELS | >99 |
| 5 | CHANNEL SPACING | 12.5/20/25 KHZ |
| 6 | OPEARTING TEMPERATURE | -20 °C TO +55 °C |
| 7 | STORAGE TEMPERATURE | -40 °C TO +85 °C |
| 8 | CURRENT DRAIN | STANDBY < 0.8 A RECEIVE < 2.0 A TRANSMIT < 11 A (25 WATTS) < 14.5 A (45 WATTS) |
| 9 | RF POWER OUTPUT | 25-45 W |
| 10 | FREQUENCY STABILITY (-20 °C TO +55 °C) | ± 1.5 PPM |
| 11 | HUM AND NOISE | 40 DB @ 12.5 KHZ 45 DB @ 20 / 25 KHZ |
| 12 | MODULATION LIMITING | ± 2.5 KHZ @ 12.5 KHZ ± 4.0 KHZ @ 20 KHZ ± 5.0 KHZ @ 25 KHZ |
| 13 | CONDUCTED / RADIATED EMISSION | -36 DBM < 1 GHZ -30 DBM > 1 GHZ |
| 14 | ADJACENT CHANNEL POWER | 60 DB @ 12.5 KHZ 70 DB @ 20/25 KHZ |
| 15 | DIGITAL VOCODER TYPE | AMBE++ OR SELP |
| 16 | DIGITAL PROTOCOL | ETSI-TS 102 361-1, 2 & 3 |
| 17 | SENSITIVITY ANALOGUE | 3.5 µV (12 DB SINAD), 0.22 µV (TYPICAL) (12 DB SINAD) 0.4 µV (20 DB SINAD) |
| | DIGITAL | 5% BER : 0.3 µV |
| 18 | INTERMODULATION | 65-70 DB |
| 19 | ADJACENT CHANNEL SELECTIVITY | 60DB @ 12.5 KHZ 70 DB @ 20 / 25 KHZ |
| 20 | SPURIOUS REJECTION | 70 DB |
| 21 | AUDIO POWER OUTPUT | 3 W |
| 22 | AUDIO DISTORTION | @ RATED AUDIO 3% (TYPICAL) |
| 23 | AUDIO RESPONSE | +1 ~ -3 DB |

FAX MESSAGE

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| 24 | CONDUCTED SPURIOUS EMISSION | < -57 DBM |
| 25 | MODE | DUAL MODE (ANALOGUE + DIGITAL), SHOULD BE COMPATIBLE WITH MOTOROLA GP2000 & MD788G AS DIGITAL. |
| 26 | SCAN | ALLOWS TO MONITOR MULTIPLE CHANNELS AND RECEIVE CALLS. |
| 27 | ENCRYPTION | ENHANCE BUILT-IN VOICE AND DATA ENCRYPTION WITH KEY MANAGEMENT. ATLEAST RC41 AND PREFERABLY USER CUSTOMIZABLE 256 BITS AES |
| 28 | DATA COMMUNICATION | INTEGRATED DATA PORT COMPATIBLE WITH PC ALONG WITH REQUISITE SOFTWARE / DRIVERS |
| 29 | INTERFACE | FLEXIBLE, MENU-DRIVEN INTERFACE WITH USER-FRIENDLY ICONS AND AT LEAST TWO LINES OF TEXT FOR EASE OF READING TEXT MESSAGES. |
| 30 | INDICATOR | TRI-COLOUR LED INDICATOR FOR CLEAR, VISIBLE FEEDBACK OF CALLING, SCANNING AND MONITORING. |
| 31 | DISPLAY (MOBILE RADIO) | LARGE SIZE TFT COLOUR LCD DISPLAY STANDARD PACKAGE COMPRISING:- (A) RADIO WITH DISPLAY CONTROL HEAD (B) TRUNNION (C) CABLING (D) COMPACT MICROPHONE |
| 32 | BUTTONS | * LARGE, EASY TO USE NAVIGATION BUTTONS ALLOWS EASY ACCESS TO INITIATIVE MENU-DRIVEN INTERFACES. * PROGRAMMABLE BUTTONS FOR EASY ACCESS TO REQUIRED FEATURES SUCH AS ONE-TOUCH CALLING. * LARGE, TEXTURED PUSH-TO-TALK BUTTON. PROVIDES GOOD TACTILE RESPONSE AND EASY ACCESS, EVEN WHEN WEARING GLOVES. |
| 33 | SPEAKER | POWERFUL, FRONT PROJECTING SPEAKER |
| 34 | ANTENNA | COMPATIBLE BROADBAND ANTENNA ALONGWITH ATLEAST 100 |

FAX MESSAGE

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| | | FEET CABLE (LOW LOSS) WITH INTIGRATED GPS FACILITY. |
| 35 | SEALING | RATED IP54. PROTECTED AGAINST HARM FROM DUST OR WATER SPRAY. |
| OPTIONAL FEATURES | | |
| 36 | GPS | INTEGRATED GPS (WITH GPS LOCATION TRACKING) GPS PERFORMANCE : -TTFF (TIME TO FIRST FIX) COLD START < 1 MINUTE -TTFF (TIME TO FIRST FIX) HOT START < 10 SECONDS - HORIZONTAL ACCURACY < 10 METERS |
| 37 | IP | MULTI SITE IP CONNECTION |
| 38 | SMS | ATLEAST 256 CHARACTERS |
| 39 | EMERGENCY BUTTON | TO ALERT SUPERVISOR OR DISPATCHER IN AN EMERGENCY SITUATION. |

ACCESSORIES / MANUAL

| | | |
|----|--------------------------------|-----------------------------------|
| 40 | OPERATING MANUAL | |
| 41 | SERVICE MANUAL | |
| 42 | FRONT CASE | PC + ABS |
| 43 | MICROPHONE | PALM MICROPHONE (OPTIONAL KEYPAD) |
| 44 | DESKTOP MICROPHONE | OPTIONAL |
| 45 | SPEAKER (EXTERNAL) | OPTIONAL |
| 46 | MOUNTING BRACKET | OPTIONAL |
| 47 | SOFTWARE & CABLE (PC TO RADIO) | OPTIONAL |
| 48 | CLONE CABLE | OPTIONAL |

MISC

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| 49 | WARRANTY MINIMUM 02 YEARS | |
| 50 | SPARE & MAINTENANCE SUPPORT ATLEAST FOR 10 YEARS | |
| 51 | MILITARY STANDARDS : MIL-STD-810 C, D, E, F AND G STANDARDS FOR TEMPERATURE, SHOCK, VIBRATION, RAIN SALT FOG, DUST AND SAND, HUMIDITY AND SOLAR | |
| 52 | FIRMWARE CAPABLE TO SUPPORT "SERVER FUNCTIONALLY" FOR GPS TRACKING AND VOICE RECORDING FEATURES. | |

WALKIE TALKIE (DIGITAL) SPECIFICATIONS : REPEATER

FAX MESSAGE

(HYTERA RD 988)

| S NO | FEATURES | RANGE |
|------|--|---|
| 1 | OPERATING VOLTAGES | 220 VAC, 13.6 VDC |
| 2 | POWER SUPPLY (EXTERNAL) | TO PROVIDE BACKUP FOR ATLEAST 10 MINS IN CASE OF MAIN FAILURE.(MUST BE HYTERA PS22002 OR DIMOND SD1732EW2). |
| 3 | FREQUENCY RANGE | VHF |
| 4 | NO OF CHANNELS | >16 |
| 5 | CHANNEL SPACING | 12.5/20/25 KHZ |
| 6 | OPEARTING TEMPERATURE | -20 °C TO +55 °C |
| 7 | STORAGE TEMPERATURE | -40 °C TO +85 °C |
| 8 | CURRENT DRAIN | STANDBY < 1.2 A TRANSMIT < 12 A |
| 9 | RF POWER OUTPUT | 5-45 W (100% CONTINUOUS FULL DUTY CYCLE OPERATION) |
| 10 | FREQUENCY STABILITY (-20 °C TO +55 °C) | ± 1.5 PPM |
| 11 | HUM AND NOISE | 40 DB @ 12.5 KHZ 45 DB @ 20 / 25 KHZ |
| 12 | MODULATION LIMITING | ± 2.5 KHZ @12.5 KHZ ± 4.0 KHZ @ 20 KHZ ± 5.0 KHZ @ 25 KHZ |
| 13 | CONDUCTED / RADIATED EMISSION | -36 DBM < 1 GHZ -30 DBM > 1 GHZ |
| 14 | ADJACENT CHANNEL POWER | 60 DB @ 12.5 KHZ 70 DB @ 20/25 KHZ |
| 15 | DIGITAL VOCODER TYPE | AMBE++ OR SELP |
| 16 | BLOCKING | 100DB |
| 17 | SENSITIVITY ANALOGUE | 3.0 µV (12 DB SINAD), 0.22 µV (TYPICAL) (12 DB SINAD) 0.4 µV (20 DB SINAD) |
| | DIGITAL | 5% BER : 0.3 µV |
| 18 | INTERMODULATION | 65-70 DB |
| 19 | ADJACENT CHANNEL SELECTIVITY | 60DB @ 12.5 KHZ 70 DB @ 20 / 25 KHZ |
| 20 | SPURIOUS REJECTION | 70 DB |
| 21 | AUDIO POWER OUTPUT | 0.5 W RATED |
| 22 | AUDIO DISTORTION | @ RATED AUDIO 3% (TYPICAL) |
| 23 | AUDIO RESPONSE | +1 ~ -3 DB |
| 24 | CONDUCTED SPURIOUS EMISSION | < -57 DBM |
| 25 | MODE | DUAL MODE (ANALOGUE + DIGITAL), SHOULD BE |

FAX MESSAGE

| | | |
|--------------------------|--------------------|--|
| | | COMPATIBLE WITH MOTOROLA GP2000 AND PD788G & MD788G AS DIGITAL. |
| | SUPPORT | |
| 26 | ENCRYPTION | ATLEAST RC41 AND PREFERABLY USER CUSTOMIZABLE 256 BITS AES. |
| | MULTICHANNEL | SUPPORT ATLEAST TWO SIMULTANEOUS VOICE OR DATA PATHS IN DIGITAL TDMA MODE. |
| 27 | DATA COMMUNICATION | INTEGRATED DATA PORT COMPATIBLE WITH PC ALONG WITH REQUISITE SOFTWARE / DRIVERS |
| 28 | INTERFACE | FLEXIBLE, MENU-DRIVEN INTERFACE WITH USER-FRIENDLY ICONS AND AT LEAST TWO LINES OF TEXT FOR EASE OF READING TEXT MESSAGES. |
| 29 | INDICATOR | COLOUR LED INDICATORS FOR CLEAR, VISIBLE STATUS INDICATION. |
| 30 | DISPLAY | LARGE SIZE TFT COLOUR LCD DISPLAY AND MENU NAVIGATION KNOB TO FACILITATE SERVICE AND MAINTENANCE. |
| 31 | BUTTONS | * PROGRAMMABLE BUTTONS FOR EASY ACCESS TO REQUIRED FEATURES SUCH AS ONE-TOUCH CALLING. |
| 32 | SEALING | RATED IP54. PROTECTED AGAINST HARM FROM DUST OR WATER SPRAY. |
| 33 | HEAT SINK | ALONGWITH THERMAL-CONTROLLED COOLING FAN |
| 34 | ANTENNA | COMPATIBLE TWO BROADBAND ANTENNAS ALONGWITH ATLEAST 150 FEET CABLE (LOW LOSS) EACH. |
| OPTIONAL FEATURES | | |
| 35 | IP | MULTI SITE IP CONNECTION |
| 36 | RACK | COMPATIBLE WITH DESKTOP HOUSING |
| 37 | HANDLES | ERGONOMICS AND STURDY HANDLES TO MAKE HANDLING COMFORTABLE. |

FAX MESSAGE

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| 38 | MOBILE DUPLEXER | INTERNAL INSTALLATION |
| ACCESSORIES / MANUAL | | |
| 39 | OPERATING MANUAL | |
| 40 | SERVICE MANUAL | |
| 41 | DESKTOP POWER SUPPLY | OPTIONAL |
| 42 | POWER CABLE | |
| 43 | MANAGEMENT SOFTWARE & CABLE (PC TO RADIO) | |
| 44 | MICROPHONE | PALM MICROPHONE (OPTIONAL KEYPAD) |
| 45 | DIRECTIONAL ANTENNA | OPTIONAL |
| 46 | DUPLEXER INSTALLATION KIT | OPTIONAL |
| 47 | MOUNTING BRACKET / KIT | OPTIONAL |
| MISC | | |
| 48 | WARRANTY MINIMUM 02 YEARS | |
| 49 | SPARE & MAINTENANCE SUPPORT ATLEAST FOR 10 YEARS | |
| 50 | MILITARY STANDARDS : MIL-STD-810 C, D, E, F AND G STANDARDS FOR TEMPERATURE, SHOCK, VIBRATION, RAIN SALT FOG, DUST AND SAND, HUMIDITY AND SOLAR | |
| 51 | FIRMWARE CAPABLE TO SUPPORT "SERVER FUNCTIONALLY" FOR GPS TRACKING AND VOICE RECORDING FEATURES. | |