

**Annexure to Tender no. 50.11.5022 due on 18/01/2012**

**General Specification of Tran receivers VHF Hand Held 5W Synthesized**

**General:**

- Model/Make : 1. Motorola, 2. Kenwood, 3. I Com or similar  
Which are presently being used for Driver-Guard Communication on JBP division.
1. Frequency Range : 136-174 MHz (Split band or Full band).
2. No of channels : 16 channels or more  
Channels 1&3 should be programmed to cover end frequencies and channel 2 for the mid frequency of the quoted frequency spared. Remaining channels should also be programmed to cover the quoted frequency spread.
3. Channel Spacing : 12.5 KHz.
4. Frequency spared : 5 MHz or more without degradation in Tx/Rx specification.
5. Frequency Stability : 5PPM or better.
6. Type of Emission : 11 KOF3
7. Type of Operation : Simplex, press to talk with built in condenser mic and speaker.
8. Type of Antenna : Helical Antennas suitable for the frequency Spot specified in supply order.
9. Speaker Impedance : To be specified by the firms both at internal And external speaker point.
10. Output Impedance/Termination: 50 Ohms and the aerial terminal should have BNC female socket or appropriate adapter Should be provided with the sets for DCPW For testing/evaluation.
11. Protection (i) Reverse polarity protection should be provided.  
(ii) The final transistor should be protected against high VSWR
12. Weight : 600 g Max with battery.
13. Power Source : 2200 mA/7.2V/7.4V, Ni-Mh
14. Voltage : Test voltage to be indicated by the tenderers.

**Transmitter:**

1. RF Power Output : 1W/5W +/-0.5 dB switch able/programmable.
2. Frequency Deviation : +/- 2.5 KHz Max (For 100% at 1 KHz) for 12.5 KHz channel spacing.

3. Modulation Sensitivity : 1 to 10 mV at 1 KHz at mic. Input for +/- 1.5 KHz (for 12.5 KHz channel spacing) standard deviation.
4. Modulation Distortion : Less than 5% at 1 KHz reference for +/- 1.5 KHz(for 12.5 KHz channel spacing) standard deviation.
5. Modulation Fidelity : +1,-3 dB of 6dB/Octave pre-emphasis Characteristics from 350 Hz to 2700 Hz With 1 KHz as reference.
6. Spurious & Harmonics Suppression : Better than 60 dB.
7. VSWR : Better than 1.5

**Receiver:**

1. Sensitivity : 0.30 micro V for 12 dB SINAD.
2. Squelch Sensitivity : 0.25 micro V or better at threshold.
3. Selectivity : Better than 60 dB
4. Image Rejection : Better than 65 dB
5. Audio Output : 250mW/500mW with less than 5% distortion at 1KHz reference measured at specified AF output.
6. Audio Response : +1,-3 dB of 6 dB/Octave de-emphasis characteristics from 350 Hz to 2700 Hz with 1 KHz as reference.

**Rapid Battery Charger:** :

- a) Input Voltage : 230V+/- 10%,50Hz
- b) Output Voltage : As per the set battery pack for which charger is submitted.
- c) Charging Capability : Capable of charging 1 batteries at a time.
- d) Battery Charging Rate : The charging current 400 mA shall be within 1 Amp. The charging time shall be 1 to 3 hrs (for charging batteries up to 1800 mAH) or 2 to 4 hrs ( for charging batteries from 2000 to 3000 Mah) respectively.
- e) Reverse polarity protection (DC input) should be provided.
- f) Reverse polarity protection (Battery Terminal) should be provided.
- g) Short circuit protection should be provided.
- h) Visual indication for all modes of charging status.
- i) DC input cable with battery eyelet to be provided with DC operated charger.