To

The DGs Assam Rifles/BSF/CISF/CRPF/ITBP/NSG/NSB/BR&D

Subject: Finalization of QRs/Specifications Communication Equipments

The Sub-Group constituted by MHA vide Memorandum No. IV.IV.1703/18/2002-Prov.I dated 5-7-2002 for laying down QRs/specifications of various items/equipments has since submitted its recommendations in respect of following communication equipments:

1. High Power Communication Jammer
2. Sweep/Barrier Jammer
3. Portable Jammer for Bomb disposal

2. These recommendations have been accepted by MHA. The QRs finalized by the Sub-Group and accepted by MHA in respect of the equipments are enclosed herewith.

3. Henceforth all the CPMFs should procure the above items required by them to meet their operational needs strictly as per the said QRs/specifications.

Yours faithfully,

Alok Mohopadhyay
Under Secretary(Prov.I)
Vehicle Mounted Mobile Jammer

1. Freq Range
   - 20 - 1000 MHz in the following 3 bands:
     - Band 1: 20 to 100 MHz
     - Band 2: 100 to 500 MHz
     - Band 3: 500 to 1000 MHz

2. Jamming Range
   - Not less than 200 m.

3. Power Output
   - 250 W distributed as follows:
     (a) Band 1: 100 W
     (b) Band 2: 100 W
     (c) Band 3: 50 W

4. Muting Ratio
   - (a) 1:1 for Analog Devices
   - (b) 1:0.5 for Digital Devices

5. Modulation
   - (a) Pure white noise to cater for all types of
     transmissions like AM, FM, PCM.
   - (b) Double Digital Sweep

6. Communication Windows
   - Software configurable window facility for providing
     a slot of four such windows, in any frequency, within
     a slot as specified by the user for a particular period.

7. Power Source
   - (a) Both AC and DC
     - AC: 220 V, 50 Hz
     - DC: 24 V DC nominal
   - (b) Requirement of providing jamming support for a mix of 4
     - (c) Vehicle engine driven invertor to support the full
       system

8. Mode of deployment
   - Vehicle mounted.

9. Antenna
   - (a) Type: Omni directional and Log Periodic
   - (b) Retractable/flexible antenna to avoid any damage
     due to overhead obstructions during the travel

10. Weight
    - Should be such that it does not affect the mobility of
     the vehicle adversely.
11. Size

- Should be easily accommodated in a light vehicle e.g., Sumo, Ambassador or Mahindra (Amaze) class. The vehicle should also accommodate two operators and a driver, besides the jammer with all its elements.

12. Cooling

- Forced Air.

13. Deployment Time

- Max 15 mins.

14. Vehicle Platform

- Tata Sumo/Amaze (with hard top)/Ambulance (t.).

15. Operational Temperature

- -10 to +55 degree celsius

Desirable OR

16. Protection to Humans

- Facility for protection of health of personnel working for prolonged periods, within the radiation zone of the Jammer.

Main Portable Jammer

17. Freq Range

- 20 to 1000 MHz in the following 3 bands:
  - Band 1: 20 to 100 MHz
  - Band 2: 100 to 500 MHz
  - Band 3: 500 to 1000 MHz

18. Jamming Range

- Not less than 75 m.

19. Power Output

- 80 W, distributed as follows:
  - Band 1: 30W
  - Band 2: 20W
  - Band 3: 30W

20. Modulation Ratio

- (a) 1:1 for Analog Devices
- (b) 1:0.5 for Digital Devices

21. Modulation

- (a) Pure white noise to cater for all types of transmissions incl AM, FM, PCM
- (b) Double Digital Sweep

22. Communication Windows

- Software configurable window facility for providing
  - Upto 4 slots of 3 such windows, in any frequency within a slot as specified by the user for a particular period.
23. Power Source
   - Both AC and DC
     AC - 220 V, 50 Hz
     DC - 24 V DC nominal
   - Capable of providing jamming support for a minimum
     Requirement of additional 50% power.

24. Mode of deployment
   - Man Portable, should be capable of being deployed
     Unassisted.

25. Antenna
   - The antenna could be built in, or detached with the
     following characteristics:
     (a) Type - Omnidirectional (Whip)
     (b) Stand alone mode.

26. Weight
27. Size
   - Max 20 kgs including accessories
   - Should be easily accommodated in one man portable
     suitcase.

28. Cooling
29. Deployment Time
30. Operational Temperature
   - Forced Air.
   - Max 10 mins.
   - -10 to +35 degree celsius

31. Protection to Humans
   - Facility for protection of health of personnel
     working for prolonged periods, within the
     radiation zone of the jammer.

Cellular Jammer

32. Frequency
   - To jam all presently known cell phones in all working
     frequencies including the following:
     (a) GSM - 900 and 1800
     (b) CDMA
     (c) MEX

33. Jamming Range
   - (a) Not less than 200 m in direct line of sight.
   - (b) Not less than 70 m in built up areas.

34. Power Output
35. Power Source
   - Switchable, Normal x 10
   - (a) 12 V DC, 700 mA
   - (b) AC Mains, 220 V, 50 Hz
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<th>Description</th>
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<tr>
<td>36</td>
<td>Mode of deployment</td>
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<td>- Man Portable, should be capable of being deployed on move.</td>
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<td>37</td>
<td>Size</td>
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<td>- Should be easily accommodated in one man portable suitcase.</td>
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<td>38</td>
<td>Deployment Time</td>
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<td>- Max 10 mins.</td>
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<td>39</td>
<td>Operational Temperature</td>
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<td>- -10 to +55 degree celsius</td>
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<tr>
<td>40</td>
<td>Weight</td>
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<td>- Not more than 61 Kgs</td>
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