



No.IV-17017/13/06-Prov.I
Ministry of Home Affairs

20

New Delhi , Dated 27.03.2006

To

The DGs: Assam Rifles/BSF/CISF/CRPF/ITBP/NSG/SSB/BPR&D.

Subject: Finalization of QRs/Specifications for Weaponry/Security Equipments

The Sub-Group constituted by MHA vide Office Memorandum No. IV.17017/18/2001-Prov.I dated 5-7-2002 for laying down QRs/specifications of various items/equipments has since submitted QRs in respect of the following items:-

- SSo(E)
- (a) Wide Band Video UHF Link
 - (b) Laser Listening Device
 - (c) Video Bugs in Spectacle
 - (d) Video Bug in Tie Pin
 - (e) Digital Audio Miniature Bugs
 - (f) Cell Phone Camera
 - (g) Video Bug in Button

2. These recommendations have been accepted by MHA. The QRs finalized by the Sub-Group and accepted by MHA in respect of the above 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 laid down QRs/specifications.

Dr. N. S. 327

Yours faithfully,

Alok

(Alok Mukhopadhyay)
Under Secretary(Prov.I)

Copy to : DD(Procurement), MHA

Copy for information to:

- 1. PS to JS(PM), MHA
- 2. Dir(Prov), MHA

Di. K. L.
31/3/06
1065/2006
3/4
1000/2006
3/4

QRs : WIDE BAND VIDEO UHF LINK

A wireless video transmission link capable of transmitting and receiving composite video and audio signals supplied from a computer, video camera/recorder.

2. Specifications

(i) Transmitter

- | | | | |
|-----|------------------------------|---|--|
| (a) | Transmission range | - | Minimum 2 kilo meter |
| (b) | Frequency Range | - | 0.3 to 4 GHz. |
| (c) | Power output | - | 100 milli watt or more. |
| (d) | Power supply | - | Rechargeable Li-ion or equivalent battery. |
| (e) | Battery discharge time- | | Min 3 hours. |
| (f) | Operating Temperature- | | 0 ⁰ C to +50 ⁰ C |
| (g) | Electromagnetic Interference | - | EMI/EMC compliant for use at airport. |

(ii) Receiver

- | | | | |
|-----|------------------------|---|--|
| (a) | Frequency Range | - | 0.3 to 4 GHz. |
| (b) | Power supply | - | Rechargeable Li-ion or equivalent battery. |
| (c) | Operating Temperature- | | 0 ⁰ C to +50 ⁰ C |
| (d) | Antenna | - | Omni directional whip antenna with min 5 dB gain and length less than 15 inches. |
| (e) | Interface | - | PC / Laptop.
Video recorder.
Plasma/ LCD TFT monitor. |

- | | | | |
|----|--|---|---------------------|
| 3. | Deployment/Installation time for the complete system | - | Maximum 15 minutes. |
|----|--|---|---------------------|

.....2/-

4. **Scale of Equipments**

- (i) A video link to contain a transmitter and a compatible receiver.
- (ii) 2 sets of additional battery with each equipment.
- (iii) A suitable battery charger with each equipment.
- (iv) Carrying case for each equipment.

5. **Miscellaneous aspects**

- (i) **Literature.** Operating and Technical literature for each discrete component of system, in English language.
- (ii) **Demonstration and Training.** Demonstration of the complete system with one set of equipment to be given in Delhi on no cost no commitment basis during evaluation. In situ training of users for one week on operation, maintenance, fault finding and user level repairs.
- (iii) **Repair/Maint Cover.** Repair cover up to ~~10~~ yrs after eqpt has been provided to ☒ with or without AMC.
User organisation
- (iv) **Warranty.** Comprehensive warranty for 1 year.

QR: LASER LISTENING DEVICE

1. A laser based audio monitoring system which facilitates surveillance operation from stand off distance of atleast 400 meters.

2. **Specifications**

- | | | | |
|-------|-------------------------|---|--|
| (i) | Pick up range | - | Minimum 400 meter. |
| (ii) | Technology | - | Laser based |
| (iii) | Power supply | - | Rechargeable Li-ion or equivalent battery. |
| (iv) | Battery discharge time- | | Min 6 hours |
| (v) | Weight | - | Less than 12 Kg. |

.....3/-

- | | | |
|-------|------------------------------|--|
| (vi) | Operating temperature- | 0 ⁰ C to +50 ⁰ C |
| (vii) | Electromagnetic Interference | - Should be EMI/EMC complied for use at airport. |

Scale of Equipments

- (i) A recording unit and head phone with each equipment
- (ii) 2 sets of additional battery with each equipment.
- (iii) A suitable battery charger with each equipment.
- (iv) Tripod - Should be supplied with a light weight adjustable tripod which can extend from 26" to min 64" height with provision for 30 degree pan and tilt feature. It should be Super Husky model or equivalent with separate carrying case.
- (v) Carrying case for each equipment.

4. Miscellaneous aspects

- (i) **Literature.** Operating and Technical literature for each discrete component of system, in English language.
- (ii) **Demonstration and Training.** Demonstration of the complete system with one set of equipment to be given in Delhi on no cost no commitment basis during evaluation. In situ training of users for one week on operation, maintenance, fault finding and user level repairs.
- (iii) **Repair/ Maint Cover.** Repair cover up to 10 yrs after eqpt has been provided to ^{user organisation} with or without AMC.
- (iv) **Warranty.** Comprehensive warranty for 1 year.

.....4/-

QR: VIDEO BUGS IN SPECTACLE

1. A body worn colour camera with transmitter designed to look like a standard spectacle.

2. **Specifications**

(i) **Camera and Transmitter**

- | | | | |
|-----|------------------------------|---|--|
| (a) | Pick up range | - | Minimum 10 feet |
| (b) | Transmission Range | - | Minimum 200 meter |
| (c) | Frequency Range | - | 1 to 6 GHz |
| (d) | Power output | - | 250 milli watt or more. |
| (e) | Power supply | - | Rechargeable Li-ion or equivalent battery. |
| (f) | Battery discharge time- | | Min 1 hour. |
| (g) | Size | - | size of an ordinary spectacle. |
| (h) | Operating Temperature- | | 0 ⁰ C to +40 ⁰ C |
| (j) | Electromagnetic Interference | - | EMI/EMC compliant for use at airport. |

(ii) **Receiver**

- | | | | |
|-----|------------------------|---|--|
| (a) | Frequency Range | - | 1 to 6 GHz |
| (b) | Power supply | - | Rechargeable Li-ion or equivalent battery. |
| (c) | Operating Temperature- | | 0 ⁰ C to +40 ⁰ C |
| (d) | Antenna | - | Omni directional whip antenna with length less than 15 inches. |

.....5/-

(iii) **Digital video recorder.**

- (a) PC compatibility - USB or equivalent
- (b) Memory capacity - Min 60 GB.
- (c) Folder and file options
- (d) Power supply - Rechargeable Li-ion or equivalent battery with option to work on 220-230V, 50Hz AC also.
- (e) Play back with built in LCD display and speaker.

3. **Scale of Equipments**

- (i) One receiver per camera.
- (ii) A digital video recorder per 2 cameras.
- (iii) 2 sets of additional battery with each equipment.
- (iv) A suitable battery charger with each equipment.
- (v) Carrying case for each equipment.

4. **Miscellaneous aspects**

- (i) **Literature.** Operating and Technical literature for each discrete component of system, in English language.
- (ii) **Demonstration and Training.** Demonstration of the complete system with one set of equipment to be given in Delhi on no cost no commitment basis during evaluation. In situ training of users for one week on operation, maintenance, fault finding and user level repairs.
- (iii) **Repair/ Maint Cover.** Repair cover up to ~~10~~ yrs after eqpt has been provided to ☒ with or without AMC.
user organisation
- (iv) **Warranty.** Comprehensive warranty for 1 year.

.....6/-

QR: VIDEO BUG IN TIE PIN

1. A body worn colour camera with transmitter designed to look like a standard tie pin.

2. **Specifications**

- (i) **Camera and Transmitter**

- | | | | |
|-----|------------------------------|---|--|
| (a) | Pick up range | - | Minimum 10 feet |
| (b) | Transmission Range | - | Minimum 200 meter |
| (c) | Frequency Range | - | 1 to 6 GHz |
| (d) | Power output | - | 250 milli watt or more. |
| (e) | Power supply | - | Rechargeable Li-ion or equivalent battery. |
| (f) | Battery discharge time- | | Min 1 hour. |
| (g) | Size | - | size of an ordinary tie pin. |
| (h) | Operating Temperature- | | 0 ⁰ C to +40 ⁰ C |
| (j) | Electromagnetic Interference | - | EMI/EMC compliant for use at airport. |

- (ii) **Receiver**

- | | | | |
|-----|------------------------|---|--|
| (a) | Frequency range | - | 1 to 6 GHz |
| (b) | Power supply | - | Rechargeable Li-ion or equivalent battery. |
| (c) | Operating Temperature- | | 0 ⁰ C to +40 ⁰ C |
| (d) | Antenna | - | Omni directional whip antenna with length less than 15 inches. |

.....7/-

(iii) **Digital video recorder.**

- (a) PC compatibility - USB or equivalent
- (b) Memory capacity - Min 60 GB.
- (c) Folder and file options
- (d) Power supply - Rechargeable Li-ion or equivalent battery with option to work on 220-230V, 50 Hz AC also.
- (e) Play back with built in LCD display and speaker.

3. **Scale of Equipments**

- (i) One receiver per camera.
- (ii) A digital video recorder per 2 cameras.
- (iii) 2 sets of additional battery with each equipment.
- (iv) A suitable battery charger with each equipment.
- (v) Carrying case for each equipment.

4. **Miscellaneous aspects**

- (i) **Literature.** Operating and Technical literature for each discrete component of system, in English language.
- (ii) **Demonstration and Training.** Demonstration of the complete system with one set of equipment to be given in Delhi on no cost no commitment basis during evaluation. In situ training of users for one week on operation, maintenance, fault finding and user level repairs.
- (iii) **Repair/ Maint Cover.** Repair cover up to 10 yrs after eqpt has been provided to ~~with or without AMC.~~
User organisation
- (iv) **Warranty.** Comprehensive warranty for 1 year.

.....8/-

OR :DIGITAL AUDIO MINIATURE BUGS

1. Should be a miniature digital audio transmitter with a built in microphone and antenna.

2. **Specifications**

(i) **Transmitter**

- | | | | |
|-----|------------------------------|---|--|
| (a) | Pick up Range | - | Minimum 10 feet |
| (b) | Transmission range | - | Minimum 300 meter |
| (c) | Frequency Range | - | 500 MHz to 1 GHz |
| (d) | Power output | - | 100 milli watt or more. |
| (e) | Power supply | - | Rechargeable Li-ion or equivalent battery. |
| (f) | Battery discharge time- | | Min 8 hours. |
| (g) | Size | - | Less than 3 x 2 x 1.75 inches. |
| (h) | Operating Temperature- | | 0 ⁰ C to +40 ⁰ C |
| (j) | Electromagnetic Interference | - | EMI/EMC compliant for use at airport. |

(ii) **Receiver**

- | | | | |
|-----|------------------------|---|--|
| (a) | Frequency Range | - | 500 MHz to 1 GHz. |
| (b) | RF sensitivity | - | Better than 94 dBm. |
| (c) | Power supply | - | Rechargeable Li-ion or equivalent battery. |
| (d) | Operating Temperature- | | 0 ⁰ C to +50 ⁰ C |
| (e) | Antenna | - | Omni directional whip antenna with length less than 15 inches. |

(iii) **Digital voice recorder.**

- (a) PC compatibility - USB or equivalent (Windows XP)
- (b) Memory capacity - Min 164 Mb.
- (c) Down load speed - Min 1x.
- (d) Folder and file options- Minimum of four folders.
- (e) Power supply - Rechargeable Li-ion or equivalent battery with option to work on 220 -230 V, 50Hz AC also.
- (f) LCD display, Line IN/OUT jack, Head phone jack.
- (g) Play back with built in speaker.

3. **Scale of Equipments**

- (i) One digital receiver per transmitter (bug)
- (ii) A digital voice recorder per 4 transmitters (bugs)
- (iii) 2 sets of additional battery with each equipment.
- (iv) A suitable battery charger with each equipment.
- (v) Carrying case for each equipment.

4. **Miscellaneous aspects**

- (i) **Literature.** Operating and Technical literature for each discrete component of system, in English language.
- (ii) **Demonstration and Training.** Demonstration of the complete system with one set of equipment to be given in Delhi on no cost no commitment basis during evaluation. In situ training of users for one week on operation, maintenance, fault finding and user level repairs.

.....10/-

- (iii) **Repair/ Maint Cover.** Repair cover up to 10 yrs after eqpt has been provided to ^{user organisation} ~~MSI~~ with or without AMC.
- (iv) **Warranty.** Comprehensive warranty for 1 year.

QR: CELL PHONE CAMERA

1. A colour camera with built in microphone and transmitter into a cell phone.

2. **Specifications**

(i) **Camera and Transmitter**

- | | | | |
|-----|------------------------------|---|--|
| (a) | Pick up range | - | Minimum 10 feet |
| (b) | Transmission range | - | Minimum 250 meter |
| (c) | Frequency Range | - | 1.5 to 6 GHz |
| (d) | Power output | - | 250 milli watt or more. |
| (e) | Power supply | - | Rechargeable Li-ion or equivalent battery. |
| (f) | Battery discharge time- | | Min 1 hour. |
| (g) | Size | - | size of an ordinary cellphone. |
| (h) | Operating Temperature- | | 0 ⁰ C to +40 ⁰ C |
| (j) | Electromagnetic Interference | - | EMI/EMC compliant for use at airport. |

(ii) **Receiver**

- | | | | |
|-----|-----------------|---|--|
| (a) | Frequency Range | - | 1.5 to 6 GHz |
| (b) | Power supply | - | Rechargeable Li-ion or equivalent battery. |

.....11/-

- (c) Operating Temperature- 0°C to +40°C
- (d) Antenna - Omni directional antenna with length less than 15 inches.

(iii) **Digital video recorder.**

- (a) PC compatibility - USB or equivalent
- (b) Memory capacity - Min 40 GB.
- (c) Folder and file options
- (d) Power supply - Rechargeable Li-ion or equivalent battery with option to work on 220-230V, 50 Hz AC also.
- (e) Play back with built in LCD display and speaker.

3. **Scale of Equipments**

- (i) One receiver per camera.
- (ii) A digital video recorder per 2 cameras.
- (iii) 2 sets of additional battery with each equipment.
- (iv) A suitable battery charger with each equipment.
- (v) Carrying case for each equipment.

4. **Miscellaneous aspects**

- (i) **Literature.** Operating and Technical literature for each discrete component of system, in English language.
- (ii) **Demonstration and Training.** Demonstration of the complete system with one set of equipment to be given in Delhi on no cost no commitment basis during evaluation. In situ training of users for one week on operation, maintenance, fault finding and user level repairs.

.....12/-

(iii) **Repair/ Maint Cover.** Repair cover up to 10 yrs after eqpt has been provided to ✓ with or without AMC.
user organisation

(iv) **Warranty.** Comprehensive warranty for 1 year.

QR: VIDEO BUG IN BUTTON

1. A body worn colour camera with transmitter designed to look like a standard shirt button.

2. **Specifications**

(i) **Camera and Transmitter**

(a)	Pick up range	-	Minimum 10 feet
(b)	Transmission range	-	Minimum 200 meter
(c)	Frequency Range	-	1 to 6 GHz
(d)	Power output	-	200 milli watt or more.
(e)	Power supply	-	Rechargeable Li-ion or equivalent battery.
(f)	Battery discharge time-		Min 1 hour.
(g)	Size	-	Size of an ordinary shirt button.
(h)	Operating Temperature-		0 ⁰ C to + 40 ⁰ C
(j)	Electromagnetic Interference	-	EMI/EMC compliant for use at airport.

(ii) **Receiver**

(a)	Frequency Range	-	1 to 6 GHz
(b)	Power supply	-	Rechargeable Li-ion or equivalent battery.
(c)	Operating Environment-		0 ⁰ C to +40 ⁰ C

.....13/-

- (d) Antenna - Omni directional whip antenna with length less than 15 inches.

(iii) **Digital video recorder.**

- (a) PC compatibility - USB or equivalent
(b) Memory capacity - Min 60 GB.
(c) Folder and file options
(d) Power supply - Rechargeable Li-ion or equivalent battery with option to work on 220-230V, 50 Hz AC also.
(e) Play back with built in LCD display and speaker.

3. **Scale of Equipments**

- (i) One receiver per camera.
(ii) A digital video recorder per 2 cameras.
(iii) 10 similar looking buttons for concealment.
(iv) 2 sets of additional battery with each equipment.
(v) A suitable battery charger with each equipment.
(vi) Carrying case for each equipment.

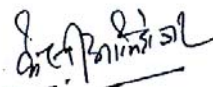
4. **Miscellaneous aspects**

- (i) **Literature.** Operating and Technical literature for each discrete component of system, in English language.
(ii) **Demonstration and Training.** Demonstration of the complete system with one set of equipment to be given in Delhi on no cost no commitment basis during evaluation. In situ training of users for one week on operation, maintenance, fault finding and user level repairs.

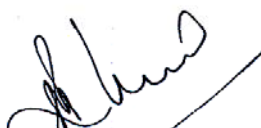
(iii) Repair/ Maint Cover. Repair cover up to **10** yrs after eqpt has been provided to ☒ with or without AMC.
user organisation

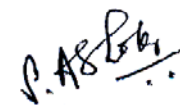
(iv) Warranty. Comprehensive warranty for 1 year.

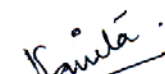

(Dr K S Dharmasakti)
Dy Director, DRDO


(K C Agnithotri)
Dy Director, DCPW

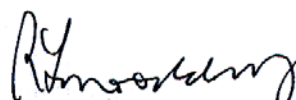

(Sabu A Joseph)
Commandant (Ord), BSF


(Col M N Bhurke)
Gp Comdr, TSG, NSG


(S Ashok)
Asstt Director, DGQA


(Vanita Yadav)
SSO (E), BPR&D

Approved/~~Not approved~~


(R S Mooshahary) IPS
Director General, BSF 39/106