No. IV.21011/43/2009-Prov.I
भारत सरकार/Government of India
गृह मंत्रालय/Ministry of Home Affairs
पुलिस आधुनिकीकरण प्रभाग /Police Modernization Division
संभरण-I डेस्क /Prov.I Desk
*****

26, Man Singh Road, Jaisalmer House
New Delhi, Dated 12th March, 2014

To,

DsG : AR (through LOAR), BSF, CISF, CRPF, ITBP, SSB, NSG & BPR&D.

Subject : Trial Directives for Body Worn Video Camera System/Wireless Video Worn System.

The Trial Directives in respect of Body Worn Video Camera System/ Wireless Video Worn System as per the Annexure have been accepted by the Competent Authority in MHA.

2. The Technical Specifications/QRs for these items have been issued vide letter of even number dated 11-03-2010. Henceforth, all the CAPFs should trial evaluate the above items strictly as per the laid down Trial Directives.

Yours faithfully,

(Smt. S B Nanda)
Under Secretary(Prov.I)
Tel : 23381278

Encl.: As above.

Copy to :-

SO(IT), MHA : with the request to host the Trial Directives (soft copy being sent through email) on the MHA website (under the page of Organizational Set up-Police Modernization Division- Qualitative Requirements) alongwith QRs for Non Magnetic Tool Kit.

(R K Soni)
Section Offcier (Prov.I)

Copy to : DDG(Procurement), MHA.

TRIAL DIRECTIVES OF BODY WORN VIDEO CAMERA SYSTEM / WIRELESS BODY WORN VIDEO SYSTEM

Ser No	Qualitative Requirements (Refer MHA UO No IV-21011/43/ 2009-Prov-1 dated 11 Mar 2010)		Trial Methodology
1	The system to comprise of the transmission system and the receiving system		To be physically checked by Board of Officers (BOO).
2.	Transmit Package to comprise of the following:		
	(a)	**Transmitter** The transmitter to be of power 100 mW to be light weight not weighing more than 500 gms. It should be provided with additional compact rechargeable battery pack, capable of minimum two hours continuous transmission. Battery charger to be operable on AC mains as well as DC 12 V. Also operate on range rechargeable and non –rechargeable batteries (optional 1 W amplifier).	(a) The power of the transmitter to be verified from original specification sheet and undertaking submitted by the OEM. (b) Weight to be physically checked by the BOO. (c) The additional rechargeable battery pack will be checked by connecting and powering on unit for 2 Hours continuous operation. (d) The Battery Charger will be physically checked for charging with AC as well as 12 V DC battery (rechargeable and non rechargeable). (e) Optional - 1 Watt amplifier will be checked for working with the transmitter.
	(b)	**Camera** Small compact colour camera, high resolution, best available low-light capability and working on PAL system.	To be physically checked by the BOO.

DNLAL GC (PTN)
NSG.

KIPAN JAIN
MAJ
SC(RD), HQ NSG

Ser No		Qualitative Requirements (Refer MHA UO No IV-21011/43/2009-Prov-1 dated 11 Mar 2010)	Trial Methodology
	(c)	**Transmitting Antenna** The antenna to be omni and directional high gain antennas specific for body - worn applications. The antenna not to weight more than 250 gms.	(a) The Omni antenna will be physically checked by placing the receiver in all the directions around the transmitter. (b) Directional high gain antennas for Body worn application will be physically checked for directional nature. (c) The weight of the antennas to be physically measured by using a weighing machine.
3		**Receiver Pack to comprise of the following:**	
	(a)	**Portable Receiver** It should have a viewing screen and built in receiving antennas. It should have compatible recorder for recording the activities of minimum capacity of 300 GB. It should work on rechargeable battery and should be provided with connectors for external DC power, mains power, video and audio out. Total weight approx 5 to 6 Kg. Optional higher gain external antenna.	(a) Viewing screen to be physically checked by BOO. (b) Built in receiving antennas to be physically checked by BOO. (c) Recorder capacity in GB to be physically checked by BOO. (d) Working on rechargeable battery to be physically checked by BOO. (e) Working on external mains power and DC power to be physically checked by BOO. (f) Video & Audio Out ports should be operationally checked by BOO. (g) Weight of the unit will be physically checked by BOO using weighing machine. (h) Optional higher gain antenna will be physically checked by BOO.

Ser No	Qualitative Requirements	Trial Methodology
4	System must offer Non-Line-Of-Sight transmit and receive capability, with minimum RF latency of less than 45 milliseconds.	(a) BOO to physically check for video transmission on receiver, when the transmitter is placed in non line of sight environment for eg. Inside room. (b) Check for latency by clapping in front of the camera & checking the delay in image reproduction on the receiver monitor.
5	COFDM modulation, utilizing maximal ratio combining, with bi-diversity for multi path RF reflections, with user selectable for FEC settings, video and audio system (Optional four-way diversity).	(a) Signal from 2 antennas (Diversity) to be physically checked by BOO. (b) Reception in multi path environment (e.g galleries and corridors) to be physically checked by BOO. (c) FEC settings to be physically checked by BOO.
6.	The equipment to be robust and spectrum efficient digital transmission, in narrow band of 2.5 MHz, with user option for ultra-narrow band of 1.25 MHz, or DVB-T at 6/7/8 MHz.	(a) OEM to submit a certificate from national/international accredited lab regarding robustness of the equipment. The certificate to be checked by BOO. (b) Setting for narrow band of 2.5 MHz and ultra-narrow band of 1.25 MHz, or DVB-T at 6/7/8 MHz to be physically checked by BOO.
7.	Transmitter and Receiver units to offer minimum 8 user programmable and user selectable setting profiles (Optional 16 channels).	Eight user programmable and selectable settings to be checked operationally by BOO by changing the frequencies.

Ser No	Qualitative Requirements	Trial Methodology
8.	Both transmitter and receiver units to operate under efficient power requirements, lower power consumption and able to operate at 12V DC.	BOO to physically check operation of Transmitter and Receiver on 12V DC.
9.	User selectable, and user programmable encryption, minimum 32 bit AES, with option for 128 AES or 256 AES.	User programmable encryption settings in transmitter to be physically checked by BOO.
10.	The system should confirm to IP 66 (Certificate should be provided by firm).	OEM to submit a certificate from national/international accredited lab regarding robustness of the equipment. The certificate to be checked by BOO.

DG (COMN/EQPT)

(Maj Girish Datt)
Trg Cen, NSG

(SI/Tech Vinod Kumar
SIW BSF)

Insp/E Rajeev Dahiya
CISF

(Asstt. Comdt. Lalit Mohan Singh)
ITBP

RS Bhadauria
Maj
TC(WE), HQ NSG

(Lt Col A. Balakrishna
OC BD Unit, NSG)

(Col A Chaturvedi)
GC TSG NSG.

Ripan Jain
Maj
SC(Ops), HQ NSG

D.N Lal GC(Prov)
NSG.

Approved / Not approved

18-8-'13

(Arvind Ranjan)
DG NSG