

(39)

No. IV-17018/3/2007-Prov-I
Government of India
Ministry of Home Affairs

26, Man Singh Road, Jaisalmer House,
New Delhi, 23.9.2008

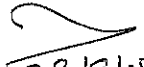
To

The DGs: Assam Rifles/BSF/CISF/CRPF/ITBP/NSG/SSB/BPR&D - 7/08
By Hand - 4/08
31/08

Subject:- Technical Specifications/QRs of the Driving Training Simulator(DTS)

The Technical Specifications/QRs of the Driving Training Simulator(DTS) has been accepted by the Competent Authority in MHA.

2. Henceforth, all the CPMFs should procure the above items required by them strictly as per the laid down Technical Specifications/QRs.


23/9/08

(R.S.Sharma)
Director (Prov)

Copy to:-

DD(Procurement),MHA

Copy for information to:-

PS to JS(PM),MHA

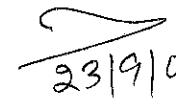
90

QRs OF DRIVING TRAINING SIMULATOR(DTS)

1	PHYSICAL FIDELITY	<p>While sitting in driving seat of DTS, the driver should be in the vehicle cabin with real instrument panel board and perception of :-</p> <ul style="list-style-type: none">(a) Road and its width, markings, signs(b) Side view mirror(c) Traffic control devices(d) Bridge(e) Traffic in both directions(f) Cabin and road background(g) Width and length of the vehicle(h) Street lights(i) Tree Falling, if required(j) People Movement
2	ENVIRONMENTAL FIDELITY	<p>The DTS should give real simulation of the following effects:-</p> <ul style="list-style-type: none">(a) Rain, Fog, Snowfall & Sand(b) Hill & cross-country terrain(c) All the above during day and night(d) Sun Glare(e) Sand Storm(f) Smoke.
3	LARGE SCREEN DISPLAY	<p>The screen (size 10.5' x 6.5') should be provided with realistic picture with following parameters :-</p> <ul style="list-style-type: none">(a) Depth(b) Magnification(c) 3 D
4	SOUND EFFECTS	<p>DTC should be capable of synchronizing real simulation of sound with action of following :-</p> <ul style="list-style-type: none">(a) Engine start(b) Engine idle condition(c) Different gears(d) Accelerator(e) Crash(f) Brake operation(g) Tyre burst(h) Horn(i) Blinker(j) Realistic environment effect sounds(k) Engine start failure sound
5	MOVING PLATFORM FOR DRIVER CABIN	<p>For realistic feel of driving in different situations and terrain the cabin to have the moving capabilities such as :-</p> <ul style="list-style-type: none">(a) Pitch(b) Roll(c) Forward and backward motion(d) Slope and dangerous deep valleys(e) Ascent & descent(f) Abrupt braking(g) Crushing movement
6.	CABIN FACILITY	<p>Cabin should be provided as per requirement of user.</p>

7	INSTRUCTOR STATION	<p>The instructor station should provide the following facilities :-</p> <ul style="list-style-type: none"> (a) System diagnostics (b) Individual driver records (c) Individual performance analysis (d) Introduction of events. Emergency situations & Malfunctions like tyre burst, vehicular malfunction, etc. (e) Error recording and illustration of actions frequently committed by drivers such as :- <ul style="list-style-type: none"> (i) Time taken to take foot of from accelerator to brake (ii) Right gear v/s right speed (iii) Analysis of clutch riding (iv) Analysis of accidents (v) Analysis of over speeding (vi) Lane violation and wrong parking (vii) Traffic signal violation (viii) Analysis of vehicle crash (ix) Stall, Accelerator, break. Gear Error (x) speed breaker error (xi) Stop Sign, Wrong lane, Blinker, Horn Error (xii) Round about, speed limit and Head light Error (xiii) Analysis of reversing and garaging. (xiv) Instructor should be able to create spontaneous obstacles. (xv) The software should enable the instructor to restart the simulation at any point in-between. (f) Report can be generated date wise and trainee wise. (g) Graphical Representation of trainee performance
8	INSTRUCTOR PANEL	<p>Instructor console should consist of high and Processor configurations :-</p> <ul style="list-style-type: none"> (a) Clock speed = Quad core or more (b) RAM = 4 GB or more (c) Video card = 512 MB or more (d) DVD Combo (e) Monitor -17" LCD – 3 Nos (f) Compatible Key board and Optical Mouse (g) Integrated communication & sound system for communication between instructor and trainees. (h) Ethernet 1 Gbps (i) 64 bit Windows Operating System and Instructor Station software.
9	<p>Training in following situations/conditions should be provided:-</p> <ul style="list-style-type: none"> (a) Offensive driving (b) Defensive driving (c) Hill driving (d) Desert driving (e) Driving in Rain/snow/fog/storm conditions. (f) Driving in Metropolis (g) Cross country driving (h) Convoy driving (i) Highway driving (j) Over taking (k) Parking 	
10	<p>The system should be supplied alongwith facility to measure and evaluate the driver's reflexes for:-</p> <ul style="list-style-type: none"> (a) Side vision (b) Depth perception (c) Reaction on simple & complex situation. (d) Night vision (e) Glare recovery 	

11	I/O CONTROL The I/O control station should consist of :- (a) Clock speed = Quad core or more (b)RAM = 4 GB or more (c)Video card = 512 MB or more (d)DVD Combo (e)Monitor -17" LCD – 3 Nos (f)Compatible Key board and Optical Mouse (g)Integrated communication & sound system for communication between instructor and trainees. (h)Ethernet 1 Gbps (i) 64 bit Windows Operating System and Instructor Station software.	
12	INSTRUCTOR' STATION	The basic instructor station should be able to control one visual station. However the instructor station should be scalable to control upto 5 trainees for convoy driving (a) instructor should be able to communicate with trainees individually or all at a time
13	VISUAL STATION	The visual station should consist of the following subsystems and modules (Minimum configuration):- (a) Vehicle cabin of user choice (b) Screen-10.5'x6.5' (c) Motion platform with a pay load of 1000 Kg or more (d) Projection System- XGA 3000 Ansilumens (e) Pentium Quad Pro based computer with 80GB V2, 1 Gbps Ethernet, 64 bit windows Operating System Graphic Card 1 GB
14	SOFTWARE	Should be windows based and user-friendly software
15	POWER REQUIREMENT	220v 50 Hz on mains. Complete system should have integrated UPS backup with 50% over load safety with one hour backup.
16	FAULT FINDING CABABILITY	The DTS should be capable of identifying committed errors, which should be recorded and replayed.
17	FAULT CORRECTING SYSTEM	By system and through trainers intervention online.
18	DRIVING TRAINING CURRICULUM	From basic training to advanced for skilled drivers on user Selectable terrains
19	TRAINING	Vendor should provide training for a minimum 10 working days. Operating manual/user's handbook should be provided.
20	VALIDATION	Software validation from third party.


 23/9/08
 (R.S.Sharma)
 Director (Prov)