

F.No. 5/1/(iii)/QRs/MMG /Trg/BSF/13/MHA-Prov-I -20  
Bharat Sarkar/Government of India  
Griha Mantralaya/Ministry of Home Affairs  
PM Division

26, Man Singh Road, Jaisalmer House  
New Delhi, Dated ~~December, 2014~~

01 JAN 2015

To,

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

**Subject: QRs and Trial Directive for Medium Machine Gun Fire Simulator.**

The QRs and Trial Directives in respect of Medium Machine Gun Fire Simulator as per Annexure have been accepted by the Competent Authority in MHA.

2. The CAPFs concerned will be accountable for correctness of the QRs/Trial Directives.
3. Henceforth, all the CAPFs should procure the above item required by them strictly as per the laid down Technical Specifications/QRs.

Yours faithfully,

Encl: As above

*(Signature)*

(P.K. Srivastava)

Under Secretary to the Govt of India

Tel: 23381278

Copy forwarded for necessary action to :-

The Section Officer (IT), MHA: It is requested to host the QRs and Trial Directives (soft copy attached) on the MHA website (under the page of Organizational Set up- Police Modernization Division- Qualitative Requirement under Miscellaneous Equipments.

*(Signature)*

(R.K. Soni)

Section Officer (Prov-I)

Copy to: Director (Procurement), MHA.

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*with signed  
27/01/2015*

**DIRECTOR GENERAL BORDER SECURITY FORCE**  
**(TRAINING DIRECTORATE)**

The Sub-group of Technical Experts on Weaponry Equipment constituted by MHA vide their letter, No.IV-17017/18/2011-Prov-I dated 05 Jul 2002 and UONO.IV-24011/12/2011-Prov-I dated 31 Jan, 2013 held its meeting at BSF Headquarters on 01<sup>st</sup> Aug '2014 to formulate the QRs of " **MEDIUM MACHINE GUN FIRE SIMULATOR**".

After detailed deliberations the referred Sub-group has finalized the draft QRs of " **MEDIUM MACHINE GUN FIRE SIMULATOR**".

**QUALITATIVE REQUIREMENTS – "MEDIUM MACHINE GUN FIRE SIMULATOR"**

S/No.	QRs/Specifications
01.	<p><b><u>GENERAL</u></b></p> <p>7.62mm MMG Simulator should be <u>fully interactive, computer generated, imagery based system designed to replicate real experience</u> for trainees in a <u>single class room</u>. It should be able to impart basic as well as advance training to the trainees in calculation of data and engagement of targets in various modes. The Simulator should provide a <u>structured learning environment</u>, where a trainee can progress as per his capability and can be controlled under the tutelage of an instructor. The Simulator should be able to engage a target at a range between 25 to 2,000 meters, depending upon the task, the weapon range would require to be simulated.</p> <p>Software which provides means to integrate videos shot by end-user into the simulator should be provided along with the system. The software and training to integrate videos must be transferred to the user. The system should also have the ability to add up to a minimum of 50 videos. It should come preloaded with minimum 15 videos ready for practice firing. These should enable firing from 500m to 1800m with at least one video for each 100m of range up to a maximum of 1800m. Should have facility to incorporate computer based tutorials for the trainees prior to firing, so that trainees become acquainted and conversant with medium machine gun and also the simulator.</p> <p>The terrains depicted in the simulator should be calibrated and made on a map scale that accurately calculates distance between the MMG and the target. The terrains should give out distances in meters based on the point where the MMG is deployed and the target. It should also calculate the distance after evaluating the difference in target height and the height of the point where the MMG is deployed.</p>

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	<p>3D Scenario generator software to generate 3D human targets, 3D vehicles (like Gypsy, heavy vehicles etc) are to be provided. The 3D human targets / vehicles are to be reactive i.e. on being shot, they should fall or get damaged or explode. Firing from human targets should also be simulated i.e. sound and flash. User should be able to add the effect of blasts with smoke in the Computer Generated Imagery (CGI) scenarios at predetermined time and specific intervals.</p>
02.	<p><b><u>OPERATIONAL ENVIRONMENT</u></b></p> <p>In order to train realistically, different types of operational environment should be provided including plains, desert, jungle and mountainous terrain etc. These operational environments should be available for integration into the system as and when required. For conventional scenarios, highly realistic terrain should also be included like HAA, J&amp;K, North East, Punjab plains with linear obstacle system, Semi-desert and Deserts and Built up area. In addition, user defined targets should be integrated, if required. Vehicle targets such as Light, Medium &amp; Heavy motor vehicles should be included. This should be available in Computer Generated Imagery.</p>
03.	<p><b><u>ENVIRONMENT EFFECTS</u></b></p> <p>Special effects should be provided on the range to simulate the following:-</p> <ol style="list-style-type: none"> <li>Different modes for sky cover like clear sky, dense clouds, sparse clouds and rain clouds etc.</li> <li>Wind velocity.</li> <li>Configurable time of day, allowing instructor to specify visibility conditions at any point in day (for e.g. night, dusk/dawn with different moonlight conditions).</li> <li>Configurable fog conditions, which once enabled should allow the visibility range, in meters, to be set.</li> </ol>
04.	<p><b><u>STORAGE OF PERFORMANCE DATA</u></b></p> <ol style="list-style-type: none"> <li>The system should also be able to store trainee's details including their rank, name, score etc. The performance of the trainees over a period of time should be able to be stored and displayed as and when required for any analysis of his performance. To accommodate specific needs of the organization, the format should allow for customization by the end user.</li> <li>Reports should be generated for detailed performance of trainees. Facility be provided to generate print out of reports in different forms.</li> <li>Print out of the results of the exercise should include the targets used in the exercise.</li> <li>Software should be able to develop the Fire Control Chart after feeding basic inputs such as Angle of Sight, Angle of Switch, width &amp; depth of target etc.</li> </ol>
05.	<p><b><u>SPECIAL HARDWARE REQUIREMENTS</u></b></p> <ol style="list-style-type: none"> <li>The system should have special arrangement for earthing. A lightning conductor kit should be provided if the building where installation is being done does not have earthing facility.</li> </ol>

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	<p>b) The projection system used in the system must have the facility to install on ground for easy installation and maintenance. Projection system should be ceiling as well as floor mounted.</p> <p>c) The system should be semi- portable and should be able to be installed and dismantled with-in two hours.</p>
06.	<p><b><u>ENDURANCE</u></b></p> <p>It should be able to operate for minimum 8 hours without a break and a maximum of 14 hours of operation in a day should be possible.</p>
07.	<p><b><u>NUMBER OF MMGs AND LANES</u></b></p> <p>The simulator should have facility to use four MMGs simultaneously. Two MMGs should be able to fire on respective targets independently as part of a Section. If required, both MMGs should be able to fire on one target as indicated. The fire should be distinguishable in the second case for each MMG. The software should have the facility to incorporate additional four MMGs (thus making eight MMGs in total) for any future requirement. The future integration should entail only modifying the number of lanes.</p>
08.	<p><b><u>RANGE COURSE</u></b></p> <p>Software should be provided to facilitate the end user to develop and incorporate range courses. Annual range course once designed should appear as integrated menu item in the software. It should be possible to incorporate modifications if required at a later date. The simulator should be able to give a feel of range course at ranges varying from 25 Mtrs to 1800 Mtrs and be able to engage the following type of natural targets with beaten zone effect and height of bullet hit chart. Each target must indicate bullet hit when a burst is fired and the target is hit:-</p> <ol style="list-style-type: none"> <li>Point target.</li> <li>Traverse target.</li> <li>Depth target.</li> <li>Moving target with lead calculation.</li> <li>Hide target as per the trajectory of bullet.</li> <li>Controlled Correction Direct Fire.</li> <li>Engagement of target using Aiming Mark.</li> <li>Rapid Engagement of Target.</li> <li>Night firing with and without sight unit 102B.</li> </ol> <p><b><u>Note :-</u></b> System should have provision to add on the new target based on users requirement in future.</p>
09.	<p><b><u>GROUPING</u></b></p> <p>MMGs should be able to undertake zeroing and grouping exercises at 25m and also able to check the group size at 100m and 200m.</p>

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10.	<p><b><u>EXERCISES - MOVING ADVANCED</u></b></p> <p>Exercises should be provided in Computer Generated Imagery. It should be possible to create own tactical exercises and save.</p>
11.	<p><b><u>EFFECT OF FIRE</u></b></p> <p>Every MMG should have a left and right of arc emanating from the MMG position. This arc should be five and half degrees to the left and right, and two and half degrees up and down from the same target on which it has fired in that session. The software should not permit firing outside this cone. The center point will be taken as the target on which the first round has been fired. When the session 'ends', a fresh target can be selected. The range, deflection in meters, degrees and mils should be displayed on demand.</p> <p>The dispersion of the bullets on the target end should be displayed as per range tables. All the bullets fired should have marks on the target end. The dispersion should be visible at an angle of 45 degrees as also from vertically above the target. It should be possible to zoom in and out. The number of rounds should be dispersed in the pattern as given out ballistic ally.</p>
12.	<p><b><u>TACTICAL COMPUTER GENERATED IMAGERY</u></b></p> <p>It should be possible to create tactical exercises in different types of terrains and at least 10 different types of buildings, natural features /scenes. These should be preloaded. Tactical Role Field Fire as per details below should be available :-</p> <p>a) <b><u>ATTACK:-</u></b> Should enable deployment in a fire base and fire on 8 to 10 pre- selected targets.</p> <p>b) <b><u>DEFENCE:-</u></b> Should enable firing along an approach with 5-6 pre-selected reference points commencing fire from the farthest target and coming closer up to a target at a range of 500m.</p> <p>This should be part of the Computer Generated Imagery package and training should be imparted to use it without assistance from the manufacturer.</p>
13.	<p><b><u>OBSCURED TARGET EXERCISE</u></b></p> <p>Drills for obscured targets should be made for practice purposes. An obscured target is a target which is not visible after some time. The target may visible after particular interval.</p>
14.	<p><b><u>TACTICAL VIDEOS</u></b></p> <p>It should have Video Authoring Software enabling the user to integrate video films for firing practice. It should be possible to shoot a simple situation of one minute duration as one video and integrate in the simulator within 30 Minutes by the instructor.</p>

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15.	<p><b><u>ANTI-AIRCRAFT ROLE</u></b></p> <p>The simulator must have aerial targets to use MMG in anti -aircraft role. The target aircraft's speed, height and directions should be changeable. This should be possible in Computer Generated Imagery mode.</p>
16.	<p><b><u>FIRE PLANNING TABLE</u></b></p> <p>Should be able to list out basic details of fire planning as a data base only. Fire Plan should take inputs and after feeding all information for the fire plan (Fire control chart), calculate and display output for use by the MMG Section. The inputs for the Fire Planning Table will be provided to the vendor for desired configuration.</p>
17.	<p><b><u>RATE OF FIRE</u></b></p> <p>The following rates of fire should be provided :-</p> <ol style="list-style-type: none"> <li>1 Sec - 10 rds burst.</li> <li>2 Secs - 20 rds burst.</li> <li>Rapid fire - 50-60 rds in 5-6 secs.</li> <li>Cyclic Fire- 600-1000 rds per minute.</li> </ol>
18.	<p><b><u>AMMUNITION</u></b></p> <p>The Simulator should be capable of showing visual effect of firing various cartridges like:-</p> <ol style="list-style-type: none"> <li>Incendiary.</li> <li>Armoured piercing.</li> <li>Tracer</li> <li>Ball</li> </ol>
19.	<p><b><u>TARGETS</u></b></p> <p>Should have all types of targets in use. It should have facility to plant three targets close to each other and then group these three targets as one. It should be possible to plant at least four groups laterally at 500m to 1800 m range making the total of 12 targets. Should have a method to indicate point targets, wide targets and targets with depth.</p>
20.	<p><b><u>FIXED LINE SETTING AND FIRING</u></b></p> <p>As in vogue with the MMG. Synchronization of Sight Unit, Deflection &amp; Elevation drum of Tripod with Gun should be provided in the Simulator system.</p>
21.	<p><b><u>WEAPON CHARACTERISTIC DATA</u></b></p> <p>Must include all the data of 7.62 mm MMG which should be seen on the monitor as well as on the screen.</p>

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22.	<p><b><u>RANGE TABLE</u></b></p> <p>Range table of 7.62 mm x 51 mm ammunition should be available so that conversion of mils into meter &amp; degree/min and vise-versa. Also, as per range table, actual time of flight should be indicated.</p>
23.	<p><b><u>CUSTOMIZED COURSES</u></b></p> <p>System should have the provision to create, save and retrieve the customized courses as per users' requirement.</p>
24.	<p><b><u>TUTORIALS</u></b></p> <p>Should have facility to incorporate computer based tutorials for the trainees prior to firing so that trainees become acquainted and conversant with medium machine gun and also the simulator. It should be possible to incorporate videos, power point presentation and a "Multiple choice answers test of MMG". It should be possible to insert questions, print result, change marking parameters etc. by the instructor without any assistance from the manufacturer. It should be able to incorporate various aspects of theory of automatic fire, basic angles, Danger Area Template up to 2900 mtrs, paralleling of Gun, operation of MMG trigger mechanism in 3D format, trajectory of bullets and ricochet of bullet up to 2900 mtrs and certain other aspects such as gas regulator setting, safety angle, effect on target etc.</p>
25.	<p><b><u>FEEDBACK AND ANALYSIS OF THE EXERCISE</u></b></p> <p>The simulator should be able to provide detailed feedback on the performance of the trainee (s) and the data should be retrievable for each trainee for a period of three months. The feedback should be audio-visual and it should be able to replay the same. If required, the print out of the score sheet should be obtainable.</p>
26.	<p><b><u>INSTRUCTOR CONSOLE</u></b></p> <p>Through the Instructor Console, the instructor should be able to select, start, control, monitor and stop the exercise at any time. He should be able to incorporate any problems/difficulty and depict desired situations by selecting the object from library.</p>
27.	<p><b><u>TRAINING</u></b></p> <p>The firm will arrange and conduct training of 25 personnel for the duration of 2 weeks in operation and maintenance at respective consignee location free of cost.</p>
28.	<p><b><u>MISC</u></b></p> <p>(i) The software with Devnagri Script shall also be supplied.</p> <p>(ii) The firm shall provide Proof/certificate/undertaking of after sale service of the eqpt.</p>

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- (iii) The firm must have service Centre in India.
- (iv) The system shall be portable.
- (v) The Computer and accessories with the latest configuration be provided as specified by the user at the time of procurement.
- (vi) The software should have the facility for timely upgradation.

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 (Gulshan Kr. Sharma)  
 DIO (Tg)  
 BSIFHCE

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 (SP Sharma PSO)  
 BPRID

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 Rajesh Singh  
 Dy Dir, DCPW

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 Surman Sahas, DC  
 TCS BSF, HZB

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 (Rajesh Kumar, AC)  
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 Rishipal Singh, DC, BSF

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 Aloik Awasthi, DC CRPF

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 RAJEEV DANIYA  
 INSPEER  
 CISF

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 (Y K Sharma, DSP)  
 BPRID

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 (Jackson Jose, Maj)  
 NSG

**APPROVED / NOT APPROVED**

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 (D K PATHAK) IPS  
 DIRECTOR GENERAL  
 BORDER SECURITY FORCE



RESTRICTEDINTRODUCTION :-

Keeping in view of the changing operational environment the training provided to border man has to be dynamic, so that trained border man could be able to perform duties vis-à-vis changing operational scenario. Medium Machine Gun Fire Simulator has proven to be effective training aid for border man at simulated firing in close environment. Medium Machine Gun Fire Simulator should be fully interactive, computer operated imaginary based system designed to replicate real experience for trainees in a single class room. It should be able to impart advance firing training to the trainees in various modes. The simulator should provide a structured learning environment, where a trainee can progress as per his capability and can be controlled under the tutelage of an instructor.

AIM :-

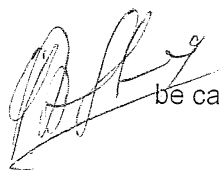
To frame Trial Directives to facilitate Board of Officers to carry out physical / technical evaluation of Tender sample of Medium Machine Gun Fire Simulator at the time of procurement.

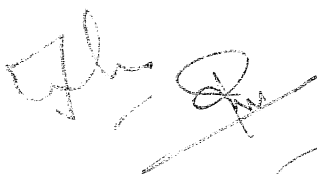
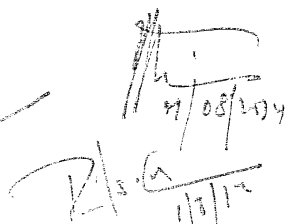
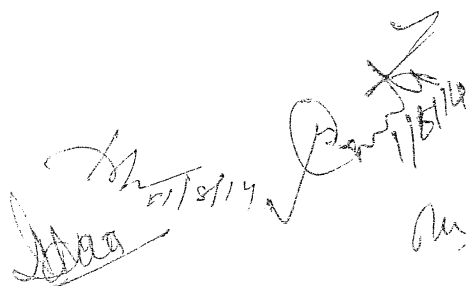
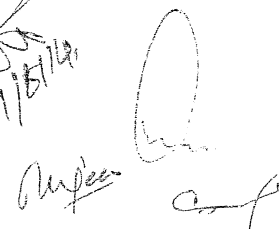
GENERAL INSTRUCTIONS:-

1. This Trial Directive is issued to assist and guide the evaluation committee. Nothing in this Trial Directive absolves the BOOs from their responsibility to ensure that the evaluation is carried out strictly as per the specifications in every respect.
2. The Evaluation Committee may carry out additional test which they consider necessary after seeking approval of Competent Authority, to verify the quality of the tender sample with the specifications.
3. The Evaluation Committee should ensure proper safety of men and equipment during evaluation to avoid any damage.
4. Trial / evaluation will be conducted in presence of firm representative only.

COMPOSITION OF THE BOARD:-

The physical evaluation of the tender samples of Medium Machine Gun Fire Simulator will be carried out by the Board of Officers detailed by the Competent Authority.



**GENERAL REQUIREMENT:-**

Following test instruments should be available during the trial / evaluation:-

1. One room for installation Medium Machine Gun Fire Simulator.
2. Complete system of Medium Machine Gun Fire Simulator including computer, projector, and compressor etc.
3. Stop watch.
4. Medium Machine Gun.
5. Annual Range Course.

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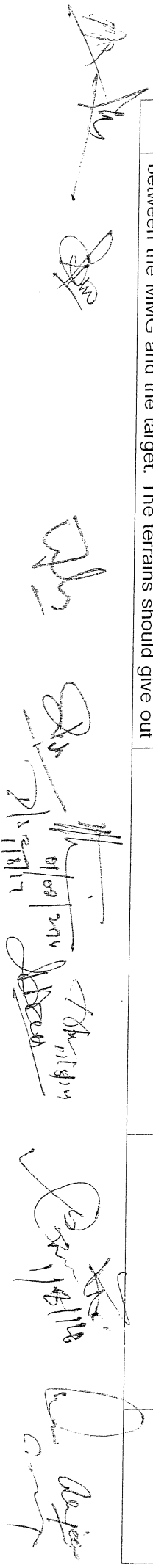
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**TRIAL DIRECTIVE FOR MEDIUM MACHINE GUN FIRE SIMULATOR**

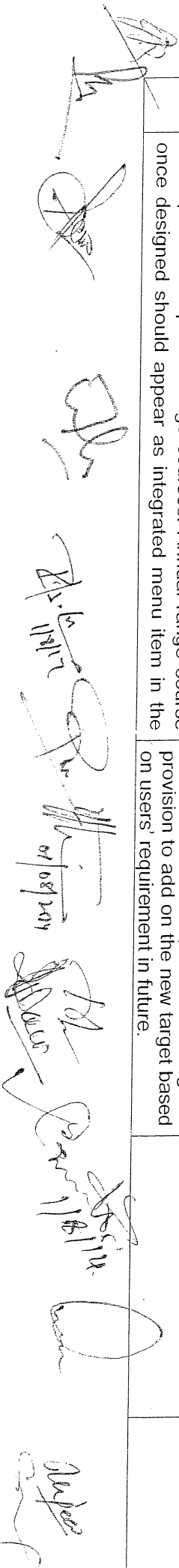
S/ No.	QRs/Specification.	Procedure suggested for Trial for Board of Officers	Result expected / desired	Completed / Not completed
01.	<p><b>GENERAL</b></p> <p>7.62mm MMG Simulator should be fully interactive, computer generated, imagery based system designed to replicate real experience for trainees in a single class room. It should be able to impart basic as well as advance training to the trainees in calculation of data and engagement of targets in various modes. The Simulator should provide a structured learning environment, where a trainee can progress as per his capability and can be controlled under the tutelage of an instructor. The Simulator should be able to engage a target at a range between 25 to 2,000 meters, depending upon the task, the weapon range would require to be simulated.</p> <p>Software which provides means to integrate videos shot by end-user into the simulator should be provided along with the system. The software and training to integrate videos must be transferred to the user. The system should also have the ability to add up to a minimum of 50 videos. It should come preloaded with minimum 15 videos ready for practice firing. These should enable firing from 500m to 1800m with at least one video for each 100m of range up to a maximum of 1800m. Should have facility to incorporate computer based tutorials for the trainees prior to firing, so that trainees become acquainted and conversant with medium machine gun and also the simulator.</p> <p>The terrains depicted in the simulator should be calibrated and made on a map scale that accurately calculates distance between the MMG and the target. The terrains should give out</p>	<p>The BOOs will check the availability of all the features in the system as specified in QRs after complete installation of the system in the presence of rep of the concerned firm.</p>	<p>All the features should be available in the system. The rep of the firm should be able to demonstrate different features/facilities to the Board.</p>	


  
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	<p>b) The projection system used in the system must have the facility to install on ground for easy installation and maintenance. Projection system should be ceiling as well as floor mounted.</p> <p>c) The system should be semi- portable and should be able to be installed and dismantled with-in two hours.</p>			
06.	<p><b>ENDURANCE</b></p> <p>It should be able to operate for minimum 8 hours without a break and a maximum of 14 hours of operation in a day should be possible.</p>	<p>The Board will conduct the endurance test of the system for the specified duration and obtain a certificate from the firm in this regard.</p>	<p>The features should be available in the system as specified in the QRS</p>	
07.	<p><b>NUMBER OF MIMGs AND LANES</b></p> <p>The simulator should have facility to use four MIMGs simultaneously. Two MIMGs should be able to fire on respective targets independently as part of a Section. If required, both MIMGs should be able to fire on one target as indicated. The fire should be distinguishable in the second case for each MIMG. The software should have the facility to incorporate additional four MIMGs (thus making eight MIMGs in total) for any future requirement. The future integration should entail only modifying the number of lanes.</p>	<p>The Board must ensure the following:-</p> <p>i) Four MIMGs can be used simultaneously.</p> <p>ii) Two MIMGs should fire on respective targets independently as part of a Section. Both MIMGs should be able to fire on one target and the fire should be distinguishable for each MIMG.</p> <p>ii) The software should have the facility to incorporate additional four MIMGs (thus making eight MIMGs in total) for any future requirement. The board will obtain a certificate from the firm that system as got the provision for future integration to modify the number of lanes as specified in the QRS.</p>	<p>The features should be available in the system as specified in the QRS</p>	
08.	<p><b>RANGE COURSE</b></p> <p>Software should be provided to facilitate the end user to develop and incorporate range courses. Annual range course once designed should appear as integrated menu item in the</p>	<p>The Board will check the availability of features in the system as specified in the QRS. Board will also obtain a certificate from the firm that system is having the provision to add on the new target based on users' requirement in future.</p>	<p>The features should be available in the system as specified in the QRS</p>	





the same target on which it has fired in that session. The software should not permit firing outside this cone. The centre point will be taken as the target on which the first round has been fired. When the session 'ends', a fresh target can be selected. The range, deflection in meters, degrees and mils should be displayed on demand.

The dispersion of the bullets on the target end should be displayed as per range tables. All the bullets fired should have marks on the target end. The dispersion should be visible at an angle of 45 degrees as also from vertically above the target. It should be possible to zoom in and out. The number of rounds should be dispersed in the pattern as given out ballistically.

**TACTICAL COMPUTER GENERATED IMAGERY**

It should be possible to create tactical exercises in different types of terrains and at least 10 different types of buildings, natural features /scenes. These should be preloaded. Tactical Role Field Fire as per details below should be available :-

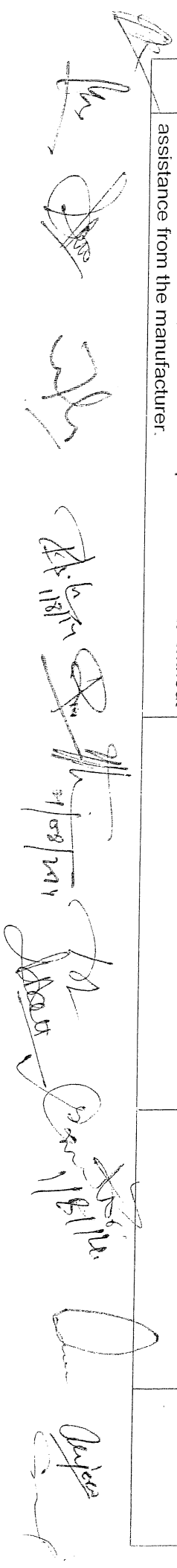
- a) **ATTACK:-** Should enable deployment in a fire base and fire on 8 to 10 pre-selected targets.
- b) **DEFENCE:-** Should enable firing along an approach with 5-6 pre-selected reference points commencing fire from the farthest target and coming closer up to a target at a range of 500m.

This should be part of the Computer Generated Imagery package and training should be imparted to use it without assistance from the manufacturer.

The Board will check that the system should have the facility to create tactical exercise in different types of terrain as specified in the QRS.

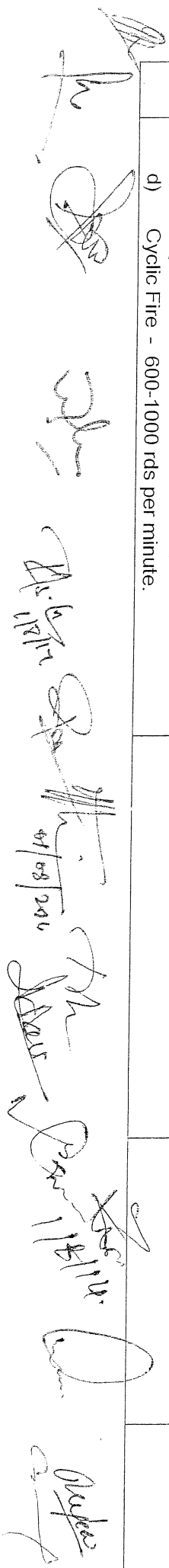
The features should be available in the system as specified in the QRS

12.			
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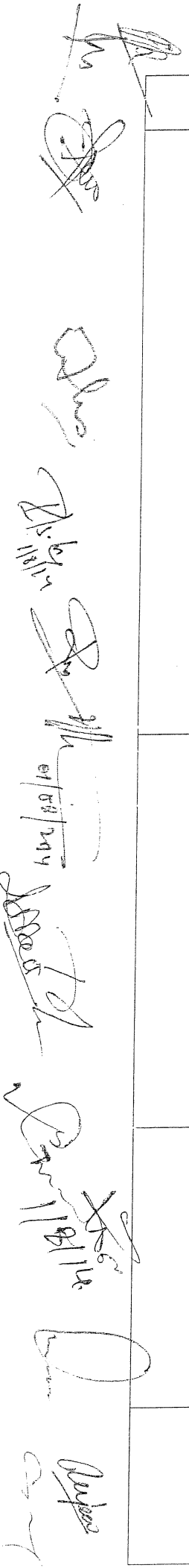

  
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<p>13. <b><u>OBSCURED TARGET EXERCISE</u></b></p> <p>Drills for obscured targets should be made for practice purposes. An obscured target is a target which is not visible after some time. The target may visible after particular interval.</p>	<p>The Board will check that the simulator should be pre loaded with drills for obscured targets.</p>	<p>The features should be available in the system as specified in the QRS</p>	
<p>14. <b><u>TACTICAL VIDEOS</u></b></p> <p>It should have Video Authoring Software enabling the user to integrate video films for firing practice. It should be possible to shoot a simple situation of one minute duration as one video and integrate in the simulator within 30 Minutes by the instructor.</p>	<p>The Board will check the availability of features in the system as specified in the QRS.</p>	<p>The features should be available in the system as specified in the QRS</p>	
<p>15. <b><u>ANTI-AIRCRAFT ROLE</u></b></p> <p>The simulator must have aerial targets to use MMG in anti - aircraft role. The target aircraft's speed, height and directions should be changeable. This should be possible in Computer Generated Imagery mode.</p>	<p>The Board will check the availability of features in the system as specified in the QRS.</p>	<p>The features should be available in the system as specified in the QRS</p>	
<p>16. <b><u>FIRE PLANNING TABLE</u></b></p> <p>Should be able to list out basic details of fire planning as a data base only. Fire Plan should take inputs and after feeding all information for the fire plan (Fire control chart), calculate and display output for use by the MMG Section. The inputs for the Fire Planning Table will be provided to the vendor for desired configuration.</p>	<p>The Board will check that the system should have fire planning data base and information for FCC as specified in the QRS.</p>	<p>The features should be available in the system as specified in the QRS</p>	
<p>17. <b><u>RATE OF FIRE</u></b></p> <p>The following rates of fire should be provided :-</p> <ul style="list-style-type: none"> <li>a) 1 Sec - 10 rds burst.</li> <li>b) 2 Secs - 20 rds burst.</li> <li>c) Rapid fire - 50-60 rds in 5-6 secs.</li> <li>d) Cyclic Fire - 600-1000 rds per minute.</li> </ul>	<p>The Board will check different rate of fire as specified in the QRS.</p>	<p>The features should be available in the system as specified in the QRS</p>	

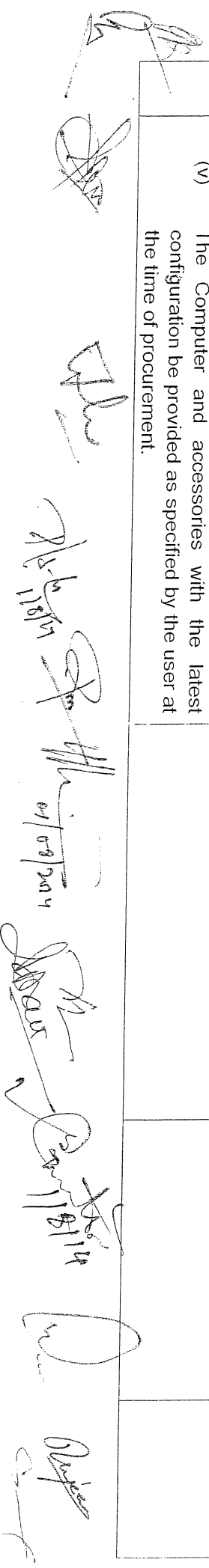

  
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18.	<p><b>AMMUNITION</b></p> <p>The Simulator should be capable of showing visual effect of firing various cartridges like:-</p> <ul style="list-style-type: none"> <li>a) Incendiary.</li> <li>b) Armoured piercing.</li> <li>c) Tracer</li> <li>d) Ball</li> </ul>	<p>The Board will ensure that the simulator should be capable of showing visual effect of various cartridges like:-</p> <ul style="list-style-type: none"> <li>a) Incendiary.</li> <li>b) Armoured piercing.</li> <li>c) Tracer</li> <li>d) Ball</li> </ul>	<p>The features should be available in the system as specified in the QRS</p>	
19.	<p><b>TARGETS</b></p> <p>Should have all types of targets in use. It should have facility to plant three targets close to each other and then group these three targets as one. It should be possible to plant at least four groups laterally at 500m to 1800 m range making the total of 12 targets. Should have a method to indicate point targets, wide targets and targets with depth.</p>	<p>The Board will check the availability of different targets and their placing in different groups as specified in the QRS.</p>	<p>The features should be available in the system as specified in the QRS</p>	
20.	<p><b>FIXED LINE SETTING AND FIRING</b></p> <p>As in vogue with the MMG. Synchronization of Sight Unit, Deflection &amp; Elevation drum of Tripod with Gun should be provided in the Simulator system.</p>	<p>The Board will check the availability of features in the system as specified in the QRS.</p>	<p>The features should be available in the system as specified in the QRS</p>	
21.	<p><b>WEAPON CHARACTERISTIC DATA</b></p> <p>Must include all the data of 7.62 mm MMG which should be seen on the monitor as well as on the screen.</p>	<p>The Board will check (in the monitor and screen) all the data of 7.62mm MMG in the system.</p>	<p>The features should be available in the system as specified in the QRS</p>	


  
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<p>26. retrievable for each trainee for a period of three months. The feedback should be audio-visual and it should be able to replay the same. If required, the print out of the score sheet should be obtainable.</p> <p><b>INSTRUCTOR CONSOLE</b></p> <p>Through the Instructor Console, the instructor should be able to select, start, control, monitor and stop the exercise at any time. He should be able to incorporate any problems/difficulty and depict desired situations by selecting the object from library.</p>	<p>certificate from the concern firm to the effect that the system is having the provision for retrieval of data for a period of three months.</p>	<p>The features should be available in the system as specified in the QRS</p>	
<p>27. <b>TRAINING</b></p> <p>The firm will arrange and conduct training of 25 personnel for the duration of 2 weeks in operation and maintenance at respective consignee location free of cost.</p>	<p>The Board will ensure that, Through the Instructor Console, the instructor should be able to select, start, control, monitor and stop the exercise at any time. He should be able to incorporate any problems/difficulty and depict desired situations by selecting the object from library.</p>		
<p>28. <b>MISC</b></p> <p>(i) The software with Devnagri Script shall also be supplied.</p> <p>(ii) The firm shall provide Proof/certificate/undertaking of after sale service of the eqpt.</p> <p>(iii) The firm must have service Centre in India.</p> <p>(iv) The system shall be portable.</p> <p>(v) The Computer and accessories with the latest configuration be provided as specified by the user at the time of procurement.</p>			


  
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(vi) The software should have the facility for timely upgradation.			
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 G. Srinivas Reddy  
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APPROVED / NOT APPROVED

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 (D. K. Pathak) IPS  
 Director General  
 Border Security Force