

DRAFT QRS/TDS OF SNIPER RIFLE FIRE CONTROL SYSTEM

1. LRF			TDs	Complied or Not
S.No	Parameters	QRs		
(a)	Laser Pulse	Class 1 eye safe, wavelength, 905 to 1100mm	The firm should provide National / International accredited lab certificate. Board to check the veracity of certificate.	
(b)	Range	Up to 2000M	Variety of targets like building, vehicle, picket etc at already measured recorded distances up-to 2000 m may be cross checked by the Board based on measurement recorded by the range finder.	
(c)	FOV	Not less than 6'	Board may verify it using the acceptance test station (ATS)	
(d)	Magnification	Not less than 6x		
(e)	Measuring frequency	1 shot every 6 seconds	Board to measure range of minimum 06 target within 30 seconds at different ranges and record the findings. Time calculation will start with range measurement of first target.	
(f)	Accuracy	± 1 meter	Certificate from the firm to be cross checked by comparing the range displayed with actual range already recorded.	
(g)	False Alarm	Less than 1%	Firm has to provide the certificate.	
(h)	Battery	CR 2/3V	Board to see the specification of Battery in term of Volt output using the multi-meter.	
(j)	Weight	≤ 300gm	Board to physically measure the weight of entire system and confirm the correctness.	
(k)	Misc	Integral with the optical system and Ballistic Calculator	Board to check that LRF unit is customized to other two components viz optical system and Ballistic calculator and form one integral package upon assembly.	

2. Ballistic Calculator			TDs	Complied or Not
S.No	Parameters	QRs		
(a)	Automated Ballistic Calculation	Integrated with system and has ballistic data base for variety of Amn like 7.62 x 51mm, .338 magna 50 (12.7x99mm) etc and the different weapon system using above ammunition	Board to check the veracity of Ballistic calculation made by analyzing Group size/Figure of merit (FOM) at different ranges and in varying ambient conditions governed by factors like wind, humidity, temp etc. Compatibility of ballistic calculator with respect to various Sniper rifles available in Force like PSG IAI, Barret etc which use different caliber ammunition has to be checked by the Board	

(b)	Retical correction	Automatic vertical retical correction and Windage adjustment option as per the calculation made based on ambient conditions (wind speed, direction, temp, humidity etc).	Upon calculation of ambient factor, Range and height of target, BOO to ascertain changes in vertical and windage adjustment automatically affected up-to the range of 1500m	
(c)	Leveling indicator	Clearly indicate elevation and title angles so as ballistic trajectory is not affected.	To be checked by the Board.	
(d)	Range	Should support ballistic calculation and automatic retical adjustment up to 1500Mtr		

**3 Thermal Imaging Sight**

S.No	Parameters	QRs	TDs	Complied or Not
(a)	Interface	Clip on compatibility and mounted on picatinny rail (MIL, SRD-1913) in line configuration with optical scope.	Compatibility of T I Sight with optical scope assembled in line configuration be checked by Board. Both TI Sight and optical scope should be well collimated for the purpose of observation, aiming and adjustment during the course of firing.	
(b)	Range	Detection Range $\geq 1000$ Mtrs, Recognition $\leq 600$ Mtrs	A Jawan in camouflage/black uniform with personal weapon may be placed at a distance of 600 M. Human target should be recognized at 600m. If not, then note down the correct recognizable range. For the purpose of detection, moving target viz light vehicle should be detected at a range of 1000 M.	
(c)	Spectral band	8-12 (micron)	The firm should provide the accredited lab certificate. Board may check the veracity of certificate from concerned lab.	
(d)	Resolution	640x480	Firm to provide the the relevant certificate from accredited lab.	
(e)	Field of view	Min 9.5' (H) x 7.5' (v)	To be checked using the Acceptance test station(ATS)	
(f)	Electronic zoom	Upto 4 times	Board to physically check the performance of zoom option by using the equipment in open terrain.	
(g)	Power	3AA (Lithium) Batteries or external power	Board to measure the Battery output using the multimeter at various stages during the course of trial. Functioning of T I Sight on external AC source of power using the suitable adaptor provided by firm be checked.	
(h)	Boresight retention	Hold boresight even after extensive firing of Rounds	Board to periodically check the retention of Bore sight after firing a lot of 50 Rds. The process may be repeated 2 times.	