

संख्या. पी-63013/215/01/2020/मोड-1/सीसुबल/ 939-50

भारत सरकार, गृह मंत्रालय
महानिदेशालय सीमा सुरक्षा बल
(रसद निदेशालय: आधुनिकीकरण सैल)
(Email-comdtord@bsf.nic.in)
(Fax: 011-24367683)

ब्लाक संख्या . 10,
सीजीओ काम्पलैक्स,
लोधी रोड, नई दिल्ली-03
दिनांक 21 मार्च 2025

सेवा में,

महानिदेशक:- आसाम राईफलस (through LOAR), केन्द्रीय ओद्योगिक सुरक्षा बल,
केन्द्रीय रिजर्व पुलिस बल, भारतीय तिब्बत बोर्डर पुलिस, सशस्त्र सीमा बल,
राष्ट्रीय सुरक्षा गार्ड एवं पुलिस अनुसन्धान एवं विकास ब्योरो

विषय: अनुमोदित गुणात्मक आवश्यकता / परीक्षण निर्देशों का प्रेषण

तकनीकी विशेषज्ञों के उप समूह द्वारा किए गये पुनः सूत्रीकरण एवं महानिदेशक सीमा सुरक्षा बल द्वारा अनुमोदित "Automated Mortar Fire Direction Controller (AMFDC)"- Revision के गुणात्मक आवश्यकता/परीक्षण निर्देशों को आपकी अग्रिम कार्यवाही हेतु प्रेषित किया जाता है।

संलग्न : उपरोक्तनुसार

आनन्द सिंह 21/3/25
(आनन्द सिंह तक्षक)
उप महानिरीक्षक (रसद)

प्रतिलिपि :-

1. तकनीकी निदेशक
The Technical Director
राष्ट्रीय सूचना-विज्ञान केन्द्र, नोर्थ ब्लाक,
गृह मंत्रालय, नई दिल्ली
NIC, North Block, MHA
New Delhi, (द्वारा ई-मेल)
(ई-मेल पता : mpsugandhi@nic.in)
: आपसे अनुरोध है कि उक्त उपकरण के सूत्रीकरण किये गये गुणात्मक आवश्यकता/परीक्षण निर्देशों को गृह मंत्रालय की वैबसाईट (MHA website Division of MHA+ - Police Modernization Division- Qualitative Requirements-Qualitative Requirements of Machinery & Eqpt Items with Surveillance item) के अर्न्तगत कमांक संख्या-32 पर पहले से अपलोड है को **Delete** किया जाये और उसके स्थान पर इस पत्र के साथ संलग्न **Automated Mortar Fire Direction Controller (AMFDC)** के संशोधित गुणात्मक आवश्यकता/परीक्षण निर्देशों को अपलोड करने का श्रम करे।
2. SO (IT), North Block, MHA
(Through E-mail)
(E-mail address: soit@nic.in)
: कृपया उपरोक्तानुसार कार्यवाही करने का श्रम करें।
3. तकनीकी विंग, सीमा सुरक्षा बल
: कृपया उक्त उपकरण के गुणात्मक आवश्यकता/परीक्षण निर्देशों को सीमा सुरक्षा बल की वैबसाईट पर अपलोड करने का श्रम करें।
4. Sh. Samarth Sharma,
Director Nodal Officer for MHA GeM,
3rd Floor, Jeevan Bharti Building
Conaught Lane, Janpath
Cannaught Place, New Delhi-110001
E-mail:directorcategory13@gem.gov.in
: For info with request to upload the approved Revised QRs & TDs of "Automated Mortar Fire Direction Controller (AMFDC)" on GeM Portal. Copy of QRs & TDs is attached with this letter.
5. आयुद्ध अनुभाग, रसद निदेशालय
वास्ते सूचनार्थ आपके पत्र संख्या-27 दिनांक 03 जनवरी 2025 के संदर्भ में।
6. फाईल।

QRS & TDS OF AUTOMATED MORTAR FIRE DIRECTION CONTROLLER (AMFDC)- Revision

S.No	Qualitative Requirements	Trial Directives	Result expected / desired
1	<p>General</p> <p>(a) Physical:-</p> <p>i) Length - Less than 280mm</p> <p>ii) Width - Less than 195mm</p> <p>iii) Height - up to 40 mm</p> <p>iv) Weight - 1010gms \pm 10% bare unit.</p> <p>v) Display - Touch screen interface.</p> <p>Facility with the following feature:-</p> <p>a) Display:</p> <ul style="list-style-type: none"> • Colour LED display (sufficiently high brightness) • Size of screen should be Min 4.3" max 10.1". • Touch screen with key pad option with back light • Sunlight readable. 	AMFDC shall be subjected to visual inspection and field trial	The AMFDC should be as per the requirement mentioned in the QRs
	(b) It should be able to compute 81mm Mortar fire data as substitute of conventional Mortar plotter.	<p>i) Check the ability of computation of AMFDC</p> <p>ii) Check if AMFDC capable to find all data.</p>	The AMFDC should be as per the requirement mentioned in the QRs
	(c) It can be carried in a military grade pouch.	AMFDC shall be subjected to physical check.	The AMFDC should be as per the requirement mentioned in the QRs
	(d) It should be ruggedised with IP-65 ruggedize for dust and water protection	AMFDC shall be subjected to physical check.	The AMFDC should be as per the requirement mentioned in the QRs
	(e) Operational Temp = -20 ⁰ C to 55 ⁰ C (\pm 10 ⁰ C) Storage = -30 ⁰ C to 55 ⁰ C"	The firm should submit test report/certificate for this aspect.	The AMFDC should be as per the requirement mentioned in the QRs
2	<p>Features:-</p> <p>a) GPS- AMFDC should have a suitable inbuilt GPS system compatible with NAVIC, GLONASS</p>	<p>a) All GPS functions be checked and the same should be compatible with internet, should be able to convert Lat/Long into Indian Grid and vice versa.</p> <p>b) The firm should submit test report/certificate for</p>	The AMFDC should be as per the requirement mentioned in the QRs

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S.No	Qualitative Requirements	Trial Directives	Result expected / desired
	b) Power Source: Rechargeable battery (Lithium- Ion 4000mAh – 5000 mAh) Or Suitable battery for run time of 8 hrs.	this aspect. c) Battery life be physically checked by putting it to continuous use for 8 hrs.	
3	<u>Tech</u> Computation times should be less than 5 seconds.	Check AMFDC, if it computes data in given time.	The computation times should be as per the requirement mentioned in the QRs.
4	<u>Capabilities.</u> (a) Accuracy (Error acceptability limits) (i) Range - Max 5 Mtr (ii) Angle - 5 minute (iii) Coordinates - 10 Mtr	Check the given data with the help of any tgt.	Accuracy should be as per the requirement mentioned in the QRs.
	(b) <u>Capacity</u> (Data Storage) i) Mortar Position :100 Nos ii) Targets : 100 Nos iii)Safe zone : 100 Nos iv) Crest clearance :100 Nos	AMFDC shall be subjected to check physically for inbuilt memory capacity.	The inbuilt memory capacity should be as per the requirement mentioned in the QRs.
	(c) Ammunition (Compatibility with HE, SMK, Illumination and Sabot) (d) Display illuminated Soft Keypad for night	Check if AMFDC is compatible with all type of ammunition.	The AMFDC should be able to compute firing data i.e. Direction, Charge, Elevation, Time of flight of a target in respect to Mortar position and fuze setting for illumination bomb.
5	<u>Facilities provided</u> The following facilities are required :- (a) <u>Types of shoots-</u> able to take (i) Normal (ii) Impromptu (iii) Repeat	AMFDC shall be subject to check if it compute the data for normal shoot and fresh data after applying correction with old OT. For impromptu shoot, it should be able to compute fire data reference to a registered target after applying correction with fresh OT. For repeat shoot, firing data for a registered target.	The firing data for all types of shoots should be as per trial Directive.
	(b) <u>Factors / data considered:-</u> Able to calculate and correct following data required for conducting shoot of 81 mm Mortar- .	Check if AMFDC can make a correction to range in respect of given factors. It should be done automatically while finding data of	AMFDC should be as per the requirement mentioned in the QRs

A collection of handwritten signatures and initials in blue ink, including a large signature on the left, a signature with 'S.3.25' below it in the center, and several other initials and signatures on the right.

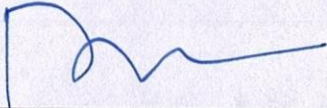
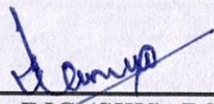
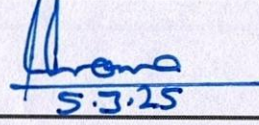

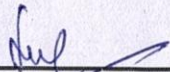
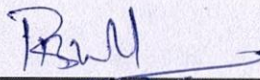

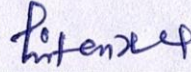

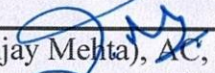
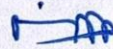



S.No	Qualitative Requirements	Trial Directives	Result expected / desired
	(i) Altitude (ii) Temperature (iii) Height difference of Mortar Position and target (iv) Safe Zone (v) Crest Clearance	target.	
	(c) <u>Shoot data</u> : Able to provide the following data of target for Mortar fire- (i) Disha (Direction) (ii) Charge (iii) Unchai (Elevation) (iv) Time of Flight (v) Fuze Setting	AMFDC shall be visually examined if it can display all data i.e Disha (Direction), charge, Unchai (Elevation), and time of flight in a single display in case of HE and Smoke. Fuze setting of Illumination bomb should also be displayed.	As per trial Directive.
	(d) Able to record registration of target, completion of time of flight, Correction with fresh OT, Correction with old OT, can view the GR after each correction and switching of ammunition.	<ul style="list-style-type: none"> ➤ Check if AMFDC can register the received data. ➤ It should give the data of every correction after entering OT bearing and it should also give GR of target after applying each correction and data on switching of ammunition for same target 	As per trial Directive.
6	<u>Data Entry</u> (a) <u>Entry (ENT)</u> To enter GR & height. (b) <u>View</u> To see the entered GR & HT. (c) <u>Initialize (INIT)</u> To erase the entire data of MP/TGT/SZ/CC (d) <u>Drop</u> To hide (deactivate) data of a particular MP/TGT/SZ/CC (e) <u>Add</u> To reactivate the dropped/ hidden data (f) <u>Peruse (PER)</u> To View entire data of MP/TGT/SZ/CC one after the other. (g) <u>Glance (GLA)</u> To see the identity of active data.	Functional keys of data entry shall be subjected to check physically for processing and display of correct data.	It should be as per the requirement mentioned in the QR's.

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S.No	Qualitative Requirements	Trial Directives	Result expected / desired
7	<p><u>Utilities</u></p> <p>(a) <u>Time</u> Facility for viewing the time.</p> <p>(b) <u>Count</u> It facilitates in using AMFDC for alarm.</p> <p>(c) <u>Crash</u> If there is an imminent threat of AMFDC falling in the hands of enemy it should have facility to erase the entire data in one go by using single key.</p> <p>(d) <u>Diagnostics (DIAG)</u> To check the function of keys of AMFDC</p> <p>(e) <u>Training</u> Pre determined data can be loaded.</p> <p>(f) <u>Audio setting</u> Can help in adjusting the duration and frequency of audio alarm.</p>	Functional keys utilities shall be subjected to check physically for processing and display of correct data.	It should be as per the requirement mentioned in the QR's.
8	<p>a. <u>Low battery</u> – Low battery indication should be provided with visual alert.</p> <p>b. <u>Warning</u> - There should be a provision of visual warning for safe zone and crest clearance.</p>	Subjected to check physically.	The AMFDC should be as per the requirement mentioned in the QR's.
9	<p><u>MISC-</u></p> <p>(a) OEM (Original Equipment Manufacturer) to arrange training on operation and day to day maintenance of the system in India at a place decided by the Force.</p> <p>(b) OEM to provide standard guaranty/warranty of the system for three years at a centralised location to be decided by Indenter at the time of indenting.</p> <p>(c) OEM to certify availability of spares / up gradation of software at least for ten years after delivery of the equipment subject to award of 7 years AMC.</p> <p>(d) OEM to provide AMC after expiry of standard guaranty/warranty period, if so desired by Force.</p>	Commercial terms cannot be checked at time of physical evaluation.	-

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S.No	Qualitative Requirements	Trial Directives	Result expected / desired
	(e) OEM to provide user manual (bilingual) and technical manual with each equipment (f) Turn Around Time (TAT) for repair should be maximum 30 days from consignee location.		

		 S.J.25	
(Puneet Rastogi), IPS, ADG (Log), BSF	(K M Prasad), DIG (SIW), BSF	(Happy Verma), Comdt(Ord), BSF	(Lt Col Nirbhay Singh Rana), Assam Rifle
			
(Mukesh Kumar), 2IC, SIW, BSF	(Rajeev Bhatti), SSO, BPR&D (through VC)	(R S Rana, JAD), DCPW	(Hitesh Dhull), DC, Ops Dte, BSF
			
(Fazan S. Siddiqui), AC, ITBP	(Sanjay Mehta), AC, CISF	(P Kipgen), AC, CRPF	(Ravi Kumar), AC-II, NSG
			
(Inspr(a) Prabhat Kr. Manna), SSB	(Inspr/RM S Chakrabarty), SIW, BSF		

Approved / Not approved


Director General
Border Security Force