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**TENDER SPECIFICATION OF TECHNICAL SUPPORT FOR REPAIR/ MODIFICATION/
REPLACEMENT OF SONAR ASO 94-2**

INTRODUCTION

1. For better understanding and to evaluate all the prospective BIDDERS on same platform, the tender specification has been divided into three parts:
 - a. **Part-1:** General Information and BIDDER'S Responsibility.
 - b. **Part-2:** Operational and Technical Specification.
 - c. **Part-3:** General Terms and Conditions.
2. Prospective BIDDERS are to comply with the requirements and terms & conditions mentioned in Part-1, Part-2, and Part-3 of the tender specification. BIDDERS are also to provide performance/ technical data, brochure, specific figures and information as asked against each condition.
3. Prospective BIDDERS are to submit their offer in two envelopes:
 - a. Technical Offer.
 - b. Financial Offer.
4. BIDDER shall comply all the terms and conditions of the tender documents as compliance statement by the Bidder under the following tabular format:

Tender Article No	Description of Terms and Conditions (as mentioned in Part-1, Part-2 and Part-3 of the Tender)	Compliance/ Remarks by Principal/ manufacturer (To be agreed/ To be mentioned with detail explanations)

The financial quote is to be submitted separately in foreign currency on FOB basis, but compliance/ remarks are to be indicated in the technical offer.

PART-1: GENERAL INFORMATION AND BIDDER'S RESPONSIBILITY

5. Bangladesh Navy (BN) plans to procure the **Technical Support for Repair/ Modification/ Replacement of SONAR ASO 94-2**.
6. **Installation Site.** Onboard BNS BANGABANDHU at Chattogram Naval Area.
7. **Site Visit Prior Tender Submission.** Supplier may visit the installation site to estimate installation materials and works involved in installation before submission of tender. Moreover, bidder shall have to send application for relevant personnel selected for site visit to BN for security clearance 04 (Four) weeks prior to site visit.
8. **Qualification of Bidder.** Manufacturers of SONAR ASO 94-2 or their authorized distributor/ agent can submit quotations through their authorized local agent enlisted in DGDP. In case of offer from foreign trading company/ distributor/ agent, certificate of dealership/ agencyship from Original Equipment Manufacturer (OEM) is to be submitted with the offer. In this regard the following certificates are to be submitted with the offer (if not OEM):
 - a. Authorization Certificate from OEM.
 - b. Supply Assurance Certificate from OEM.

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9. **Compliance Statement.** A compliance statement fulfilling all the requirement of the tender is to be submitted for evaluation of the quotations. Stating mere 'Yes or No' shall not suffice and detailed evidence with description/ information, brochures/ booklet, drawing and diagram as required is to be given. An incomplete compliance statement may attribute to cancellation of the offer. If any clause of this specification does not commensurate with offered item, the deviation is to be spelt out clearly.

10. **Equipment Manufacturer and Reliability/ Requirement.** The newly installed items should be brand new, unused and of recent model, proven reliability in the field of operation. The supplier shall ensure the continuity of the operation and availability of necessary spares for at least 15 years each in case of obsolete model over time.

11. **Condition for Acceptance of Quotation.** The quotation has to have supporting documents (booklets, Catalogues, Brochures etc) with details about offered equipment/ item. If detailed information regarding specifications, manufacturer's manuals and catalogue for the quoted equipment/ items PCBs and modules, etc are not provided the quotation may not be accepted.

12. **Acceptance/ Rejection of Bid.** DGDP/ BN reserves the right to accept or reject any bid or to terminate the bidding process and reject all bids at any time prior to the contract award (without thereby incurring any liability to the BIDDER).

13. **Validity.** The offer is to remain valid till 30 June 2025.

PART-2: OPERATIONAL AND TECHNICAL SPECIFICATION

14. **Name of the Main Equipment.** Technical Support for Repair/ Modification/ Replacement of SONAR ASO 94-2.

15. **Purpose.** The purpose of this procurement is to ensure the operational readiness and effectiveness of the SONAR ASO 94-2 system onboard.

16. **Quantity.** 01 Complete Package.

17. **Principal Supplier.** Name & Full address with e-mail of manufacturer is to be mentioned.

18. **Local agent.** Name & Full address with e-mail of supplier/ local agent is to be mentioned.

19. **Year of Manufacturing.** 2024 or later.

20. **Classification Standard.** The offered system/ equipment/ Items shall conform to military standard, rugged and suitable to use in marine environment. In this regard necessary relevant document shall be submitted with offer by the bidder.

21. **Environmental Condition and Other Standard.**

Ser	Description	Remarks
a.	Temperature	(1) +5°C to +55°C (Onboard items). (2) +5°C to +35°C (Underwater items)
b.	Relative Humidity	Up to 95% (non-condensing).
c.	For Shock	MIL-STD-810F or equivalent (To be mentioned).
d.	For Vibration	MIL-STD-810F or equivalent (To be mentioned).
e.	Sea Keeping	To comply with the ships movement as follows: (1) Roll : ± 30°.

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		(2) Pitch : $\pm 10^{\circ}$.
		(3) Yaw : $\pm 6^{\circ}$.
f.	EMI/ EMC/ Underwater Acoustic	MIL-STD-461 or equivalent (To be mentioned).
g.	Operation Sea State	(1) Normal operation in sea state 5 ; (2) No damage in sea state 9.

22. **Information of Existing SONAR.** Information of Existing SONAR is as follows:

- a. Type : Hull Mounted SONAR.
- b. Model/ Brand : ATLAS ASO 94-2.
- c. Country of Origin : Germany.
- d. Manufacturing Country : Germany.
- e. Original Equipment Manufacturer (OEM) : Atlas Elektronik GmbH, Germany

23. **General Features.** After completing required repair/ up-gradation/ replacement of SONAR ASO 94-2, the following features are to be available in SONAR (but not limited to):

- a. Detection of underwater targets in parallel active and passive operation.
- b. Measurement of bearing, range, Doppler and echo amplitude.
- c. Analysis and classification of the target data.
- d. Automatic target tracking.
- e. Detection of moored mines.
- f. Transfer acquired data to the Combat System (Both existing and planned replacement).
- g. Display of the sound ray trace and sound intensity distribution.
- h. Functionality of Underwater Telephony and Telegraphy.
- j. Transfer of bathy data to SONAR.

24. **Scope of Supply & Services and Repair Work.** Scope of supply & services and repair work are as follows:

- a. 01 x Main Equipment with essential and standard accessories are as follows:
 - (1) Cylindrical Transducer Array (SW 4088 A 001) with Spider Cable (As per Para 26a(1)).
 - (2) Ethernet Switch Board DF-04-REPS (As per Para 26a(2)).
 - (3) SHARC Processor Board with ATM (Interface to Recording/ Replay unit) (As per Para 26a(3))
 - (4) 01 x Bathy Thermograph Data Acquisition System (DAS) Recorder with associate accessories (As per Para 26a(4)).
- b. Repairing works (As per Para 26b)
- c. Cables (As per Para 26c).
- d. Software & Backup Software (as per article-26d).

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- e. Certificate and Reports (as per article 26e).
- f. Drawing and Manuals/ Documents (as per article 26f).
- g. ICD & IRS (**Optional**) (as per article-27).
- h. Spares (Optional) (As per Para 28).
- j. Factory Acceptance Test (FAT) (**Optional**) (As per Para 29).
- k. Foreign Training (**Optional**) (as per article 30).
- l. Local Training (as per article 31).
- m. Installation, Supervision and Setting to Work (STW) (as per article 32).
- n. Test/ Trial and Acceptance (as per article 33).

25. **Additional Feature Offered by Bidder.** The bidder may suggest and offer additional features for the offered system. In this case, Bidder is to explain the detailed advantage of that/ those features of the offered system.

26. **Technical Specification.** The technical specifications of equipment/ spares and services are as follows:

a. **Main Equipment with Essential and Standard Accessories.**

(1) **Cylindrical Transducer Array (SW 4088 A 001) with Spider Cable.**

Ser	Subject	Remarks
1.	Quantity	01 (One)
2.	Brand	ATN ATLAS Elektronik
3.	Model	ASO 94-2
4.	Country of Origin	Germany.
5.	Country of Manufacturer	Germany
6.	Purpose	To convert electrical energy into sound energy or sound energy into electrical energy using piezoelectric transducers.
7.	Number of Transducer Array	96
8.	Part no	SW 4088 A 001
9.	Dimension	To be mentioned.
10.	Weight	To be mentioned.
11.	Spider Cable	Details to be mentioned

(2) **Ethernet Switch Board DF-04-REPS.**

Ser	Subject	Remarks
1.	Quantity	01 (One)
2.	Brand	ATN ATLAS Elektronik
3.	Model	ASO 94-2
4.	Type	To be mentioned
5.	Country of Origin	Germany.
6.	Country of Manufacturer	Germany
7.	Purpose	For Signal processing.
8.	Part no	PA 4242 G320

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9.	Dimension	To be mentioned.
10.	Weight	To be mentioned.

(3) **SHARC Processor Board with ATM (Interface to Recording/ Replay unit).**

Ser	Subject	Remarks
1.	Quantity	01 (One)
2.	Brand	ATN ATLAS Elektronik
3.	Model	ASO 94-2
4.	Type	To be mentioned
5.	Country of Origin	Germany.
6.	Country of Manufacturer	Germany
7.	Purpose	For Signal processing
8.	Part no	PA 4101 G737
9.	Dimension	To be mentioned.
10.	Weight	To be mentioned.

(4) **Bathy Thermograph Data Acquisition System (DAS) Recorder.**

Ser	Subject	Remarks
1.	Quantity	01 (One)
2.	Brand	To be mentioned
3.	Model	To be mentioned
4.	Type	To be mentioned
5.	Manufacturer (If any preference)	To be mentioned.
6.	Country of Origin	USA, EU Countries (Country to be mentioned).
7.	Manufacturing Country	USA, EU Countries (Country to be mentioned).
8.	Purpose	To measure and display ocean temperature, conductivity salinity and sound velocity versus depth and to record for later study and evaluation.
9.	Composition	The DAS Recorder will comprise of DAS system in a compatible computer (CPU, Monitor, DB-9 Ports for RS-232 serial communication required for interfacing with ship's fitted Sonar ASO 94-2 and XBT/ XSV launching system), USB ports for data transfer and printer and other. standard accessories.
10.	Hardware Configuration	The hardware configuration of the computer is to be mentioned. A compatible monitor/display is to be provided with the system for display of plots of depth vs. temperature, vs. sound velocity and/or depth vs. temperature and conductivity. The computer will be pre-loaded with Operating System (OS) and associated DAS software for operation.

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Ser	Subject	Remarks
11.	Software	Details to be mentioned
12.	Weight	To be mentioned
13.	Dimension	To be mentioned
14.	Operating Temperature	+5°C to +55°C
15.	MTBF	>55,000 Hrs
16.	Power Requirement	100-240 VAC, 50 Hz
17.	Ports	DB-9 Ports for RS-232 serial Communication required for interfacing with Sonar ASO 94-2 and LM4A Launcher. USB ports for data transfer, Printer and other standard accessories.
18.	Audio in Connector	3.5 mm
19.	Connector Box Connector	EN3C8FX Circular Connector
20.	Chassis	18 gauge galvanized steel black powder code
21.	Power Supply Requirement	115V, 50Hz, 3Ph
22.	Interfacing Requirement	The Bathy thermograph Data Acquisition System (DAS) is to be interfaced with the followings: a. XBT/ XSV Launcher LM-4A through a connector box. b. SONAR ASO 94-2. Necessary connector box, connectors and other accessories required for interfacing are to be provided by supplier. Any third party's involvement for the above activities, need to be managed/ensured by supplier.
23.	Dimension of Modules/ Equipment (LxWxH)	To be mentioned.

(5) **Essential and Standard Accessories.**

(a) **Special Tools and Test Equipment (BLINKIS) as Essential Accessories.** 01 (One) complete set of Special Tools and Test Equipment (BLINKIS) required for routine, periodic maintenance and troubleshooting of the systems are to be supplied. List and item wise price of such tools/ test equipment are to be provided with the offer.

(b) **Standard Accessories.** Standard accessories must include every item which are essential to make the offered system operational with full functionality, whether those are mentioned in the specification or not are to be supplied by the supplier within the scope of the supply. Any such accessories, kit and items associated to operate the said equipment are to be mentioned clearly with purpose and submit with offer mentioning item wise price.

b. **Repair Works.** Supplier shall repair SONAR systems of the ship and following may be considered in terms of repair and preparing the ships:

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(1) **Removal of defective items.**

(a) List of defective spare/ units/ boards of the ships are as follows:

Ser	Name of Item	Qty	Remarks
1.	SHARC processor board with ATM DF04-VME-SCSI-ATM	02	
2.	SHARC processor board DF04-VME-Express 400	02	
3.	REPS PCB	01	
4.	Monitor Upgradation of SONAR operator console (TFT Display) (Optional).	01	
5.	Cylindrical Intercept Array (CIA) (Optional).	01	

(b) The supplier shall ensure the removal of the existing systems along with required accessories (as required) from the ship, without damaging any equipment or existing design factors of the ship at his own cost. The cost of this service is to be quoted separately.

(2) Defective Items of the ships shall be repaired and sent back to BN for operations of the SONAR system. Upon completion of the installation of repaired items, the state of the SONAR system shall be assessed by the Original Equipment Manufacturer (OEM).

c. **Cables.**

(1) **Reuse of Old Cables.** Supplier/OEM needs to evaluate the actual requirement of cable to install offered Technical Support for Repair/ Modification/ Replacement of SONAR. In this regard, the present cables installed onboard the ship may be considered for reuse only if these can sustain for longer duration (at least for 10 years). However Re-use of existing old cables is not preferred.

(2) **New Cables.** All new cables necessary to install the offered items of Technical Support for Repair/ Modification/ Replacement of SONAR system should be provided by supplier.

(3) **Cables Installation.** Existing cable path and route is to be used for installation of the offered items of Technical Support for Repair/ Modification/ Replacement of SONAR system without hampering the ship's watertight integrity. The supplier will meet additional requirement of cables during installation if it is necessary. If existing cables are found in poor conditions during the installation of systems, these cables will have to be replaced by the supplier. In this regard, all required cable with anti-rat bite protection (metallic cover/ skin) is to be provided by the supplier. In case of laying out cable, watertight integrity of the ship is to be ensured by the supplier.

d. **Software & Backup Software.**

(1) The supplier shall provide backup copy of all operating and application software, troubleshooting software and fault-finding software to be used in the system in rugged portable Hard Drive (HDD) along with instruction for installation (step by step procedure) and related password if needed for the system.

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(2) In case of software crash, BN personnel should be able to install the back-up software to restore the whole system using step by step procedure.

(3) Updated version of software (if necessary) will be provided for at least 10 (Ten) years. A certificate in this regard is to be submitted with the offer. Special portable input output device for troubleshooting along with necessary cord/ cable/ adapter are to be included in the offer.

e. **Certificate and Reports.**

(1) Following certificates and reports are to be provided in English for each item including associated equipment/ accessories **with the offer**:

- (a) 'Type Approval Certificates' of classification society.
- (b) Supply Assurance Certificate.
- (c) Guarantee and warranty certificates.
- (d) After sales service support certificate.

(2) Following certificates and reports are to be provided in English for each item including associated equipment/ accessories **during delivery**:

- (a) 'Type Approval Certificates' of classification society.
- (b) 'Quality Assurance Certificates' for each item and their associated equipment and instruments from OEM is to be provided.
- (c) 'FAT Certificates'.
- (d) Certificate of genuine product and brand-new item.
- (e) Supply Assurance Certificate.
- (f) Guarantee and warranty certificates.
- (g) After sales service support certificate.

f. **Manuals/ Documents.** As the system will undergo an Repair/ Modification/ Replacement of SONAR system, existing manual/ documents are to be corrected or modified as required. As such, new 01 (One) set of following documents and manuals in English are to be provided at free of cost at the time of delivery:

- (a) Operating Manual.
- (b) Technical Manual with Circuit Diagram.
- (c) Maintenance Manual.
- (d) Parts Catalogue with Parts Identification List (PIL).

27. **ICD & IRS (Optional).** The Supplier shall provide necessary Interface Control Document (ICD), Interface Requirement Specifications (IRS) and interface protocol during delivery/ installation of the items. The ICD, IRS and interface protocol will be utilized by BN to integrate any systems in future (if needed). The supplied ICD and IRS will be tested and demonstrated in the presence of buyer's representative during installation by qualified OEM Engineer. The cost of ICD and IRS is to be quoted separately in the offer.

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28. **Spares (Optional).** The following spares (optional) are to be quoted separately. Buyer may select the optional spares as required from the list for procurement:

Ser	Name of Item	Part No	Qty	Price
1.	REPS PCB	-	01	To be mentioned

29. **Factory Acceptance Test (FAT) (Optional).** Following FAT is to be carryout in OEM premises for the offered System Repair/ Modification/ Replacement:

a. FAT will be carried out by a team of 02 (Two) BN members for duration of 03 (Three) working days for to check the transmission and reception capability of Transducer Array and functionality of Bathy Thermograph Data Acquisition System (DAS) recorder in OEM premises at the buyer's expense. Both way air fare, accommodation and food for the FAT team will be borne by BN. All types of movement/ transportation (air/sea/road) of the team within the manufacturer's country, reception and arrangement for entry into the country/ concerned area for the FAT are to be arranged by the supplier. The supplier should inform the buyer about the date of FAT (schedule), FAT procedure and FAT criteria at least 08 (Eight) weeks prior to the date of FAT. If the FAT is unsuccessful, FAT is to be re-conducted and all the expenditure is to be borne by the OEM/Supplier.

b. On return from the country of manufacturer, the FAT team will submit the report to Naval Headquarters, who will in turn, forward final clearance for shipment of stores to the OEM/supplier.

c. The prime objective of FAT will be to check the capability of the system as the technical specification mentioned in the offer. Therefore, the capabilities of the quoted system which will be tested during FAT are to be separately mentioned in the offer. The FAT will be carried out at manufacture's factory premises. In this regard, the FAT protocol is to be submitted for approval by BN well in advance.

d. During FAT, tests will be carried out to fulfill the required condition mentioned in technical specification of the offered system. Various tests for checking performance are to be carried out and recorded. After test, a joint test report will be prepared and signed by both the seller and buyer's representative.

e. **Place of FAT:** Place of FAT is to be mentioned.

30. **Foreign Training (Optional).**

a. The purpose of foreign training at OEM premises is to develop compatible operator and maintainer of the whole SONAR system. The supplier shall provide operators and maintainers training to the nominated BN personnel at manufacturer's premises. Cost of both way air fare (Dhaka to manufacturer's premises and back) shall be borne by the purchaser. Food, accommodation, training material and internal travel cost are to be arranged by the Supplier and the same is to quoted separately. Training shall be provided in English Language as per the duration below:

Ser	Training	Remarks
1.	<p>Operator's and Maintainer's Training.</p> <p>a. 04 (Four) BN personnel regarding basic operation, maintenance, troubleshooting and 1st/ 2nd level repair of offered SONAR system.</p> <p>b. Duration. 02 (Two) weeks excluding journey time.</p>	The training should include 1 st and 2 nd level maintenance in details. It should also cover the 3 rd level maintenance. The details of training syllabus/ contents are to be provided with the offer.

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b. **Training Objective.** To acquire in depth knowledge of the SONAR including its operation, maintenance, installation, interfacing, common failures, diagnosis of the faults and troubleshooting. The training will be combination of theoretical training, practical training and on-job training (OJT). However, practical training on installation, interface and integration of SONAR might be conducted as OJT in Bangladesh.

c. **Training Contents.** Lectures and training should focus on the following contents (but not limited to):

- (1) System overview and system configuration.
- (2) System operation covering all functions.
- (3) Details about system architecture.
- (4) Lessons on ICDs (consisting communication type, NMEA standard, message format, data structure etc).
- (5) Hardware and software and their function, troubleshooting, backup software, system restoration (if crashed) etc.
- (6) BN maintainer group will be able to un-install, install, set to work, configure, and interface the whole system including all software used in the system.
- (7) Repair and maintenance.
- (8) Fault finding and understanding error message.

31. **Local Training.** A group of operators and technicians has to be trained locally in Bangladesh by the Manufacturer's Engineer during installation. Cost of air fare (to and from Bangladesh (installation site)), accommodation, food and internal transportation (to and from work site and hotel) of the Manufacturer's engineer shall be borne by the supplier. The cost of local training is to be quoted separately. The supplier is to provide relevant training documents 02 (Two) weeks prior the said training to BN. The training objective and training contents are as follows:

a. **Training Objective.** Objective of training is to learn about the functionality and maintenance of newly installed items and PCBs.

b. **Training Contents.** Lectures and training should focus on the following contents (but not limited to):

- (1) System composition, configuration, principle of operation and troubleshooting.
- (2) Signal processing sequence & function of each item/ PCB.
- (3) Training manual with repair and maintenance procedure.

32. **Installation, Supervision and Setting To Work (STW).** Installation, Supervision, and Setting to Work (STW) shall be done as following:

a. **Installation Material and Accessories.** Installation includes STW, Integration/ Interfacing with associated sub systems/ equipment and supervision. All installation materials, test equipment/ instrument, tools, cables, cable gland and other necessary accessories required for the installation, STW, integration/ interfacing works and supervision are to be provided by the supplier.

b. **Bidder/ Supplier Responsibility.**

(1) Installation of new items/ PCBs including standard accessories and software up gradation (if required/necessary) are to be done by supplier. As such, any accessories required for the operation and maintenance shall be provided by the supplier.

(2) Supplier should ensure the compatibility/ interface with the other subsystems (presently existing) after the Repair/ Modification/ Replacement of SONAR ASO 94-2.

(3) The offered items/ PCBs and other accessories are to be installed by replacing the existing defective items/ PCBs of the ship's and to be commissioned by the qualified OEM Engineers.

(4) The Supplier at no additional cost shall do any modification/ alteration (if required) to install the offered items as per scope of supply.

(5) Any damage during installation of offered items/ PCBs, existing onboard equipment, machineries and items/ systems shall be compensated by supplier. Damaged equipment, machineries and items/ systems are to be made operational with its full functionality by supplier.

(6) Qualified OEM Engineers are to be employed for the installation and STW, HAT and SAT and commissioning. All types of expenses related with both-way airfare (to and from Bangladesh (installation site)), food, accommodation and internal travel of the OEM engineer during installation are to be borne by the supplier.

(7) Supplier shall provide List of works (facility work/ support those are needed during docking, at harbour and at sea from BN) during submission of offer for approval of BN.

c. **Purchaser Responsibility.** Purchaser (BN) shall provide available assistance (if required) for installation under the direct supervision of OEM Engineer. BN Dockyard shall provide available work/ facility (if required) for installation. Support equipment may be provided (if available) from the user side upon request prior installation.

33. **Test/ Trial and Acceptance.** Test, Trial and Acceptance requirements are as follows:

a. **General.** The OEM Engineer shall ensure satisfactory tests, trial and functioning/ commissioning of the equipment at purchaser's premises after all necessary repair/ replacement/ modification and integration/ interfacing with other systems. Necessary software up-gradation shall be done before test/trial. All instruments and consumables for HAT, SAT and Acceptance are to be provided by the bidder.

b. **HAT and SAT Protocol.** The HAT and SAT protocol/ procedures including schedule are to be submitted to BN 04 (four) weeks prior HAT and SAT.

c. **HAT.** Harbour Acceptance Test (HAT) shall be carried out at harbour on completion of Setting to Work (STW).

d. **SAT.** Sea Acceptance Test (SAT) shall be carried out at sea on completion of satisfactory HAT.

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e. **Acceptance.** On completion of satisfactory Test/ Trial (HAT and SAT), Final acceptance certificate shall be signed by purchaser and supplier.

PART III: TERMS AND CONDITIONS

34. **Delivery.**

a. **Delivery and Installation Time.** Item delivery and installation shall be completed within 24 (Twenty Four) months and breakdown of said time line is appended below:

(1) **Delivery Time.** The items shall be delivered to the 'Place of Delivery' within 18 (Eighteen) months after signing the contract.

(2) **Installation Time.** The Gengets shall be installed onboard ships within 06 (Six) months after delivery of the items.

b. **Place of Delivery:** NSD, Chattogram.

c. In case of CFR/CPT, the supplier shall carry the items from any sea port/ air port (as applicable) to NSD Khulna at the cost and risk of supplier.

35. **Shipment.**

a. **Source of Raw Material.** To be mentioned.

b. **Source of Supply.** The source of supply of the offered items/ systems are to be mentioned. It should be from the country of manufacturer or country of origin.

c. **Port of Shipment:** To be mentioned. The port of shipment is to be from the country of manufacturer or country of origin.

d. **Part Shipment.**

(1) Repaired items.

(2) Other items.

e. **Consignee.** The supplied item shall be the following consignee:

The Commanding Officer	or	Officer In Charge
Naval Stores Depot		Naval Stores Sub Depot Dhaka
New Mooring, Chattogram,		Naval Unit Khilkhet
Bangladesh		Namapara, Dhaka-1229,
BIN-002349278-0503		Bangladesh

f. All items are to be brand new and to be delivered in seaworthy packing to ensure safe transit by sea. Certificates in this regard are to be provided during delivery.

g. All packages are to have packing notes showing their contents in detail and all packages shall be marked with the name and address of the consignee and gross weight.

36. **Project Timeline.** A forecasted project timeline indication month-wise event is to be provided with the offer and another reviewed project time line with project implementation plan is to be submitted after 15 days of signing the contract. The project timeline and implementation plan shall have clear indication of docking requirement and duration of docking with details of support/ facility work required from BN.

37. **Warranty, Guarantee and After Sales Service.**

a. **Warranty.**

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(1) 12 (Twelve) months manufacturer's warranty for trouble free operation is to be provided for the item from the date of acceptance by the purchaser. If any component and submit of the supplied items becomes defective during the warranty period, the overall warranty shall be extended automatically for the period of subject component remains defective.

(2) For warranty repair/ replacement, the supplier shall collect the defective item from NSD, Chittagong/ NSD Khulna/ NSSD, Dhaka (as applicable) and re-supply the same to collecting place after warranty repair or for replacement within 90 (ninety) days from the date of defect at no cost to the purchaser.

b. **Bank Guarantee (BG) for Warranty.** The BIDDER shall issue a Bank Guarantee (BG) during submission of last 40% payment for a value of @.05% (Five percent) of the total CFR/CPT value from any scheduled bank in Bangladesh in favour of The Senior Finance Controller (Navy), Sailors Colony, Lalasarai, Mirpur-14, Dhaka-1206, representing Bangladesh Navy, Peoples Republic of Bangladesh, information to The Directorate General Defence Purchase, Ministry of Defence, Peoples Republic of Bangladesh. This BG shall remain valid until the warranty period of the Technical Support for Repair/ Modification/ Replacement and other items (notwithstanding minor deficiencies which would be mutually settled and agreed between PURCHASER and BIDDER) in Bangladesh, and it shall expire on receipt of **Warranty Completion Certificate**. If the contractual obligation warrants the extension of the validity of the BG, the BIDDER shall remain liable to do so at its own cost. In case of material failure of the BIDDER to fulfill its contractual obligation as per the terms and conditions of the contract, the BG in full or part thereof may be forfeited at the discretion of the PURCHASER.

c. **Guarantee.** The supplier is to give guarantee of continued supply of spares for at least 10 (Ten) years at a reasonable price (not exceeding 3% per year). Certificate is to be submitted with the offer.

d. **After Sales Service.** After sale service should be available with the local agent of supplier and is to be provided as and when required for indefinite period or at least 15 years after the installation. If any system, equipment etc becomes obsolete or out of production during or after the installation period (at least upto 15 years), the supplier is to submit alternative of same/ improved version for selecting the suitable replacement.

38. **Terms of Payment.** Payment shall be made through an Irrevocable Letter of Credit (LC). LC shall be opened at the expense of the PURCHASER and **100% LC** value shall be made operative in favour of Supplier. CFR/ CPT value being the value of the supplied goods, payment shall be made as under:

a. **1st Installment.** 60% of CFR/ CPT value shall be paid **after shipment of hardware and software** and on submission of the following documents to the bank:

(1) Original Airway Bill (AWL)/ Bill of Landing (BL) must be issued by air lines/ shipping lines or authorized agent of shipping lines/ air lines against DGDP contract reference (after signing the contract). LC number, and Bangladesh bank registration number are to be mentioned in AWL/ BL. Freight amount must be shown separately otherwise only FCA value shall be paid. All documents to be submitted (01) original with at least (05) five copies other than bill of lading shall be (03) three original with (03) three copies. In addition to this, following shall also be considered:

(a) Name of the carrier must be indicated in AWL/ BL.

(b) Must be signed by carrier or a named agent for/ on behalf of the carrier.

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- (2) 'Supplier's Signed Commercial Invoice' for (freight/ services amount to be shown separately (if applicable)) representing 60% of CFR/CPT value as stated in the contract.
- (3) "Packing List" signed by the authorized representative of the shipping company or exporter.
- (4) "Certificate of Origin" signed by the Manufacturer's Authorized Person/Authorized Official of the exported country.
- (5) 'Manufacturer's Certificate' Signed by the MANUFACTURER/ SUPPLIER. Certifying that product has been produced as per technical data/ analytical data and specification as per contract.
- (6) "Manufacturer's Warranty Certificate" Signed by the MANUFACTURER/ SUPPLIER.
- (7) "Factory Acceptance Test (FAT) Completion Certificate" (if held) signed by the SUPPLIER.
- (8) 'Quality Assurance Certificate' (QAC) signed by the SUPPLIER.
- (9) 'Shipment Clearance Letter' Signed by DGDP (Directorate General Defense Purchase, Dhaka, Bangladesh) as PURCHASER.

b. **2nd Installment.** 40% of CFR/CPT value shall be paid **after successfully commissioning** and on submission of the following documents to the bank:

- (1) 'Supplier's Signed Commercial Invoice' for representing 40% of CFR/CPT value as stated in the contract.
- (2) 'Final Acceptance Certificate' issued by the PURCHASER after successful completion of installation, integration with related ship borne equipment, HAT, SAT and commissioning of system.
- (3) The bidder shall submit the relevant document of 5% BG of CFR value, which shall be released on submission of warranty completion certificate.

c. **Installment of Factory Acceptance Test (FAT), Training and Services.**

(1) **Factory Acceptance Test (FAT) (Optional).** 100% cost of FAT (Optional) shall be paid **after successful completion of FAT** and on submission of the following documents to the bank:

- (a) 'FAT report' signed by the PURCHASER for the successful completion of the FAT in OEM premises.
- (b) 'Supplier's Signed Commercial Invoice' for representing 100% of FAT value as stated in the contract.

(2) **Foreign Training (Optional).** 100% cost of Foreign Training (Optional) shall be paid **after successful completion of foreign training** and on submission of the following documents to the bank:

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(a) Certificate signed by the PURCHASER for the successful completion of the Foreign Training in OEM premises.

(b) 'Supplier's Signed Commercial Invoice' for representing 100% of Foreign Training value as stated in the contract.

(3) **Local Training.** 100% cost of Local Training shall be paid **after successful completion of local training** and on submission of the following documents to the bank:

(a) Certificate Signed by the PURCHASER for the successful completion of the Local Training in Bangladesh.

(b) 'Supplier's Signed Commercial Invoice' for 100% of Local Training value as stated in the contract.

(4) **Installation and Final Acceptance.** 100% cost of 'Installation shall be paid after successful completion of Installation and Final Acceptance on submission of the following documents to the bank:

(a) Certificate Signed by the PURCHASER for the successful completion of the 'Installation and Final Acceptance' in Bangladesh.

(b) 'Supplier's Signed Commercial Invoice' for 100% of Installation and Final Acceptance value as stated in the contract.

39. **Import Duties.** These are the Defence stores and shall be used by the Defence Forces only and hence are exempted from payment of Custom Duties and Sale Taxes as per ministry of finance (NBR) memo no 9(41) NBR/CUS-IV/27/246 dated 10 April 1981. Therefore, if the item is imported against this tender, price to be quoted without import duties.

40. **Terms and Conditions (DGDP).** Following terms and conditions shall governed by the tender schedule/ existing rules of Directorate General Defence Purchase (DGDP):

- a. Agency Commission.
- b. LC Amendment Charges.
- c. Insurance Charges.
- d. Liquidated Damages (LD).
- e. Arbitration.
- f. Force Majure and War Risk.
- g. Termination of Contract.
- h. Letter of Credit.
- j. End User Certificate (EUC).
- k. Recoveries.
- l. Performance Guarantee (PG).
- m. Other Conditions.

41. **Price and Financial Offer.** Price of each item (for each point of scope of supply) of the total offer is to be shown separately and then grand total of the foreign currency to be shown on the original offer submitted by the bidder. The BIDDER shall comply as asked in the tender specification. The BIDDER may mention the price of additional items and services in the financial

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offer. Item-wise price for additional item are to be mentioned for each item and services. The BIDDER may also explain the financial terms and conditions in the financial offer as appropriate. To evaluate the financial competitiveness, BIDDER has to submit the summary of financial offer as per following format:

Ser	Description	Qty	Unit Price	Currency (USD, EURO, GBP etc)	Total Value
1.	Main Equipment with essential and standard accessories:				
	a. Cylindrical Transducer Array with Spider Cable	01	To be mentioned	To be mentioned	To be mentioned
	b. Cylindrical Intercept Array (Optional)	01	To be mentioned	To be mentioned	To be mentioned
	c. Ethernet Switchboard (DF 04-REPS)	01	To be mentioned	To be mentioned	To be mentioned
	d. SHARC Processor board with ATM (Interface to recording/replay unit)	01	To be mentioned	To be mentioned	To be mentioned
	e. Bathy Thermograph Data Acquisition System (DAS) Recorder with associate accessories	01	To be mentioned	To be mentioned	To be mentioned
2.	Cost of repair of items:				
	a. SHARCH Board with ATM (DF04-VME-SCSI-ATM)	02	To be mentioned	To be mentioned	To be mentioned
	b. SHARC Processor Board (DF04-VME-Express 400)	02	To be mentioned	To be mentioned	To be mentioned
	c. REPS PCB	01	To be mentioned	To be mentioned	To be mentioned
	d. Monitor Upgradation of SONAR operator console (TFT Display) (Optional)	01	To be mentioned	To be mentioned	To be mentioned
	e. Cylindrical Intercept Array (CIA) (Optional)	01	To be mentioned	To be mentioned	To be mentioned
3.	Essential and Standard accessories	01 Lot	To be mentioned	To be mentioned	To be mentioned
4.	Cables	-			
5.	Spares (Optional)	01 Lot	To be mentioned	To be mentioned	To be mentioned
6.	Certificate and Reports	-	To be mentioned	To be mentioned	To be mentioned
7.	Drawing and Manuals/ Documents	-	To be mentioned	To be mentioned	To be mentioned
8.	ICD & IRS (Optional)	-	To be mentioned	To be mentioned	To be mentioned
9.	Software & Backup Software	-	To be mentioned	To be mentioned	To be mentioned
10.	Total Freight on Board (FOB)	-	-	-	To be mentioned
11.	(-) Agency Commission (0.375%)	-	-	-	To be mentioned
12.	Net FOB Value after Agency Commission	-	-	-	To be mentioned
13.	(+) Freight Charge	-	To be mentioned	To be mentioned	To be mentioned

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Ser	Description	Qty	Unit Price	Currency (USD, EURO, GBP etc)	Total Value
14.	Total CFR/ CPT Value in foreign Currency (7+8)	-	-	-	To be mentioned
15.	CFR/ CPT Value Equivalent to Bangladeshi Taka (BDT)	-	-	-	Buyer will be fill-up
16.	Factory Acceptance Test (FAT) (Optional)	-	To be mentioned	To be mentioned	To be mentioned
17.	Foreign Training (Optional)	-	To be mentioned	To be mentioned	To be mentioned
18.	Local Training	-	To be mentioned	To be mentioned	To be mentioned
19.	Installation, Test/ Trial and Acceptance	-	To be mentioned	To be mentioned	To be mentioned
20.	Total Quoted Price	-	To be mentioned	To be mentioned	To be mentioned