

TENDER SPECIFICATION OF ECHO SOUNDER - BNS SANGRAM AND BNS PADMA

1. **Name of the Equipment** : Echo Sounder.
2. **Purpose**. The Echo Sounders shall be used onboard naval ships to measure the depth of the sea/ river bed for safe navigation.
3. **Quantity**. 02 (Two) Complete Sets.
4. **Type**. Marine Type.
5. **Brand**. To be mentioned.
6. **Model**. To be mentioned.
7. **Country of Origin**. USA, UK, EU Countries, Switzerland, Norway, Japan and Australia (country to be mentioned).
8. **Manufacturing Country**. USA, UK, EU Countries, Switzerland, Norway, Japan and Australia (country to be mentioned).
9. **Original Equipment Manufacturer (OEM)**. Name & full address with telephone number and e-mail of OEM to be mentioned.
10. **Supplier**. Name & full Address with telephone number and e-mail of Supplier is to be mentioned.
11. **Year of Manufacturing**. 2026 or later.
12. **Qualification for Bidder**. Manufacturers of the Echo Sounder or their authorized distributor/ agent can submit quotations through their authorized local agent enlisted in NSSD. In case of offer from foreign trading company/ distributor/ agent, certificate of dealership/ agency-ship 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.
13. **Equipment Manufacturer and Reliability/ Requirement**. The newly installed items shall 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. **Certification is to be attached with the offer.**
14. **User List**. List of users of the offered Echo Sounder is to be mentioned with full address. The list shall provide the name of various navies/ coast guards/ merchant marines with respective model and brand of offered Echo Sounder. The Echo Sounder shall be widely used. The user list will be evaluated for the assessment of the offer.
15. **Condition for Acceptance of Quotation**. The quotation is to have supporting documents (booklets, catalogues, brochures etc) and active weblink demonstrating the details about offered equipment/ item.
16. **Acceptance/ Rejection of Bid**. 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).
17. **Classification/ Standard**. The offered item is to fulfill the requirements of /IEEE/ IEC/ IMO or other equivalent Military Standard. The applicable classification standard(s) of offered items are to be mentioned and shall be well supported by the certificates/ OEM brochures.
18. **Additional Features Offered by Bidder**. The bidders may suggest and offer additional features for the Echo Sounder. In this case, Bidders have to explain the detailed advantages of that/ those features of the Echo Sounder.



19. **Scope of Supply.** The scope of supply (but not limited to) is mentioned below:

- a. 02 x complete sets of Echo Sounder which consists of transducer, Main Unit with display and all other items necessary for immediate operation.
- b. 05 x Digital Repeater (03 x BNS SANGRAM and 02 x BNS PADMA).
- c. Cables.
- d. Certification and Reports.
- e. Drawing and Manual/ Documentations.
- f. Local Training.
- g. Installation, Supervision and Setting to Work (STW).
- h. Test/ Trial and Acceptance.

20. **Environmental Condition.**

- a. Ambient Operating Temperature : 0° C to + 55° C.
- b. Storage Temperature : To be mentioned.
- c. Relative Humidity : Up to 95 % (Non-condensing).

21. **General Features.** The offered item shall have following features (but not limited to):

- a. Auto mode for all settings.
- b. Manual control for SNR, Gain, Power, TVG and Frequency.
- c. Transducer positioning.
- d. Diagnostic screens/ Built in Test.
- e. Dimming (Remote or Local).

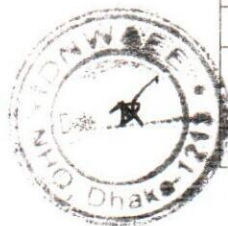
22. **System Composition.** The **each** Echo Sounder shall include following (but not limited to):

- a. 01 x Transceiver (Tx/Rx) Unit with LCD/TFT Display.
- b. 01 x Transducer with watertight accessories.
- c. Digital Repeater (03 - BNS SANGRAM and 02- BNS PADMA).

23. **Technical Specification.**

a. **General Characteristics.**

Ser	Description	Remarks
1.	Measuring Depth	Selectable from 0-5 m to 0-5000 m or better
2.	Depth Range Steps	Selectable 0 to 5 m and 0 to 5000 m or better
3.	Minimum Detectable Depth	1 m (for high frequency) and 1.5 m (for low frequency) or better
4.	Frequencies	7 Set detectable frequencies 24KHz, 30 KHz, 33KHz, 38 KHz, 50 KHz, 100 KHz and 200 KHz or more
5.	Channels	Dual Channel or better
6.	Measuring Accuracy	2-20 m: <0.5 m Resolution = 0.1 m or better 20-200 m: <5 m Resolution = 1 m or better
7.	Resolution	2-20 m: <0.5 m Resolution = 0.1 m or better



Ser	Description	Remarks
		20-200 m: <5 m Resolution = 1 m or better
8.	Power Supply	To be mentioned
9.	Power Consumption	To be mentioned
10.	Insulation Resistance	To be mentioned
11.	Compass Safe Distance	To be mentioned
12.	Ingress Protection	IP 56 or better
13.	Data Storage	24 Hour storage or more (More than 1 month or more shall be available on SD card, SD card shall be provided)
14.	Output Signal	3x LAN (IEC61192-450), 5x NMEA 0183, 2x AUX, Relay or more

b. **Main Unit with Display.**

Ser	Description	Remarks
1.	Type	Marine
2.	Brand	To be mentioned
3.	Model	To be mentioned
4.	Display Type (Touch)	Touch Screen
5.	Year of Manufacturing	2026 or later
6.	Dimension	To be mentioned
7.	Weight	To be mentioned
8.	Power Supply	220V AC, 50Hz or 24V DC
9.	Display Size	To be mentioned
10.	Other Major Features	Detail to be mentioned

c. **Transducer.**

Ser	Description	Remarks
1.	Type	Hull Mounted
2.	Brand	To be mentioned
3.	Model	To be mentioned
4.	Low Frequency (kHz)	To be mentioned
	High Frequency (kHz)	To be mentioned
5.	Transmit Power	To be mentioned
6.	Year of Manufacturing	2026 or later
7.	Cables	Length and Type of the Transducer Cable to be mentioned (Length is to be determined by site survey)

d. **Digital Repeater**

Ser	Description	Remarks
1.	Type	Marine Type
2.	Brand	To be mentioned
3.	Model	To be mentioned
4.	Year of Manufacturing	2026 or later
5.	Dimension	To be mentioned
6.	Weight	To be mentioned
7.	Power Supply	To be mentioned
8.	Display Size	To be mentioned
9.	Cables	Length and Type of the Cable for the repeaters to be mentioned (Length is to be determined by site survey)
10.	Other Major Features	Details to be mentioned



24. **Cables.** All necessary Power and Signal/ Control cable of marine type, screened or protected (Fire proof and rodent bite resistance with metallic cover/ skin) of appropriate capacity and length shall be provided by the supplier. **The actual requirement of cable is to be assessed by the bidder** through Pre-bid site Survey. Details of cable specification, unit price (per meter) and length are to be mentioned.

25. **Power Supply Available at Ship.** The power supply available at ship is 400V (SANGRAM)/ 390V (PADMA), 50Hz, 3 Phase and 230V (SANGRAM)/ 220V (PADMA), 50Hz and 24V DC. Any other power supply unit (if necessary) is to be provided by the Supplier. However, the supplier shall confirm the details power output and requirement during pre-bid site survey.

26. **Standard Accessories.** Standard accessories must include every item and accessories, which are essential to make the offered Echo Sounder operational with full functionality. ~~Such standard accessories and special tools~~ are to be supplied by the bidder within the scope of the supply, but the item-wise prices are to be shown separately for reference.

27. **Spares (Optional).** Original Equipment Manufacturer (OEM) recommended list of spares for 05 (Five) years of trouble free operation is to be submitted with the offer showing item wise price. The buyer may select any of the suggested items from the proposed list.

28. **Certificate and Reports.**

a. The following certificates and reports are to be provided in English for each item, including associated equipment/ accessories **with the offer**: *

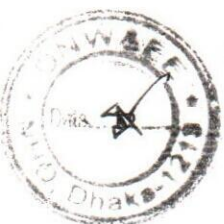
- (1) Authorization Certificate (as per para 12.a).
- (2) Supply Assurance certificate (as per para 12.b).
- (3) All necessary standard/classification certificates mentioned in the offer (as per para 17).
- (4) Guarantee (as per para 37.c) and warranty certificates (as per para 37.a & 37.b).
- (5) After-sales and Online service support certificate (as per para 37.d).

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

- (1) All necessary standard/classification certificates mentioned in the offer (as per para 17).
- (2) 'Quality assurance certificates' for each item and their associated equipment and instruments from OEM is to be provided.
- (3) Certificate of genuine product and brand-new item.
- (4) Supply Assurance certificate (as per para 12.b).
- (5) Guarantee (as per para 37.c) and warranty certificates (as per para 37.a & 37.b).
- (6) After-sales service support certificate (as per para 37.d).

29. **Manual/ Documentation.** The manuals and documents are to be provided as per defence standard. The manual/ document shall contain the operation procedure, maintenance procedure in details description with necessary diagram/ layouts. The following 02 (two) sets of documents and manuals in English are to be provided at the time of delivery at free of cost:

- a. Category 1 - Operating Manual.
- b. Category 2 - Technical Manual with Circuit Diagram (At least up to component level).
- c. Category 3 - Maintenance Manual.
- d. Category 4 - Parts Catalogue with parts Identification List (PIL).



- d. Parts Catalogue with parts Identification List (PIL).

30. **Local Training.** The Manufacturer's/ Supplier is to send required number of competent engineers to provide operation and maintenance training at BN premises. The training will be provided to a group of BN personnel for 05 working days after necessary test/ trial and Commissioning. The bidder is to provide relevant training documents 04 (Four) weeks prior to the said training to BN. The training shall include (but not limited to) the following:

- a. System composition, configuration and principle of operation.
- b. Operation and configuration for smooth conducting of all the tests.
- c. Procedure of tests (practical).
- d. Repair, maintenance and troubleshooting.

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

- a. **Installation Site.** Onboard **BNS SANGRAM** and **BNS PADMA** in Chattogram.
- b. **Installation Material and Accessories.** All installation materials, test equipment/ instrument, tools, cables, cable gland, Junction box, selling materials and other necessary accessories required for the installation, STW and supervision are to be provided by the supplier.
- c. **Bidder/ Supplier Responsibility.**
 - (1) Installation of Echo Sounder with standard accessories are to be done by supplier. As such, any accessories required for the operation and maintenance shall be provided by the supplier.
 - (2) The offered Echo Sounder and other accessories are to be installed by replacing the existing Echo Sounder of the ship's and to be commissioned by the qualified Engineers.
 - (3) The Supplier at no additional cost shall do any modification/ alteration (if required) to install the offered Echo Sounder as per scope of supply.
 - (4) Any damage during replacement/ installation of offered Echo Sounder, 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 the supplier.
 - (5) Qualified Engineers are to be employed for the installation and STW, HAT and SAT and commissioning. All types of expenses related with food, accommodation and internal travel of the Supplier's engineer during installation are to be borne by the supplier.
- d. **Purchaser Responsibility.** Purchaser shall provide available assistance (if required) for installation under the direct supervision of Supplier's Engineer. BN Dockyard shall provide available work/ facility (if required) for installation. The Bidder shall coordinate with the Ship for requesting from the BN Dockyard. Support equipment may be provided (if available) from the user side upon request prior installation.

32. **Test, Trial and Acceptance.** On completion of installation, STW, HAT and SAT are to be conducted in the presence of supplier/ manufacturer's representative. All expenses of supplier's representative are to be borne by the supplier. Final acceptance will be given by BN after satisfactory Test and Trial of the equipment. The final acceptance will be given by CINS/ACINS.

33. **Technical Support.** Technical support is to be provided to solve any maintenance and operational problem arising with the item during and after installation. An assurance by the bidder stating agreement in this respect is to be submitted with the offer.

34. **Delivery.**

- a. **Delivery Time.** The items shall be delivered to the 'Place of Delivery' within **03 (Three)** months after issuing the purchase order.

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 Chattogram at the cost and responsibility of supplier.

35. **Shipment.**

a. **Source of Supply.** The source of supply of the offered systems is to be mentioned. It shall be from the country of manufacturer or country of origin.

b. **Port of Shipment.** Port of shipment is to be from country of manufacturer or country of origin. However, if OEM has authorized business and distribution centre in other countries/ regions then Port of shipment may be accepted from such authorized countries/ regions. In this case, necessary documentation with proper evidences is to be submitted with offer.

c. **Consignee.**

The Commanding Officer
Naval Stores Depot
New Mooring, Chattogram,
Bangladesh
BIN-002349278-0503

or

Officer In Charge
Naval Stores Sub Depot Dhaka
Naval Unit Khilkhet
Namapara, Dhaka-1229, Bangladesh

d. All items shall be brand new and to be delivered by Sea/ Air. Certificates in this regard are to be provided during delivery.

e. All packages shall 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. **Brochures/ Booklet.** 02 (Two) set of original Brochures/ Booklets in English and authentic weblinks with detailed technical information about the quoted model of **Echo Sounder, Min Unit with Display, Transducer and Digital Repeater Unit** are to be provided with the quotation for evaluation/ assessment.

37. **Warranty, Guarantee and Service Support.**

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

b. For warranty repair/ replacement, the supplier shall collect the defective **item from the Ships** and re-supply the same to the collecting place after warranty repair or for replacement within 90 (ninety) days from the date of defect at no cost to the purchaser. If the defect can be repaired on-site, the supplier shall repair the Echo Sounder on-site.

c. **Guarantee.** The supplier is to give a 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 sales service shall be available with the local agent of the supplier and is to be provided at least 10 years after the installation. If any system, equipment, etc. becomes obsolete or out of production during or after the installation period (at least up to 15 years), the supplier is to submit an alternative of the same/ improved version for selecting a suitable replacement.

38. **Validity.** The offer will remain valid till 30 June 2027.

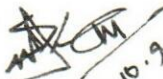
39. **Price.** If the item is imported against this tender, price to be quoted without import duties.

40. **Terms of Payment.** 100% Payment will be made in local currency after final acceptance by BN.

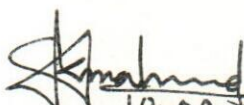


RESTRICTED

41. **Compliance Statement.** A clear and complete compliance statement of the tender supported by the product catalogue and Brochure with necessary specification and drawing/ diagram is to be submitted for evaluation of the quotation. Incomplete compliance statement will attribute to cancellation of the offer. If any clause of this specification does not commensurate with offered item practically, the deviation has to be spelt out clearly.


10.09.26
SYED ASHRAFUZZAMAN
Commodore BN
Staff Officer (Electrical)
Directorate of Naval Weapons
and Electrical Engineering
NHQ, Banani, Dhaka-1213

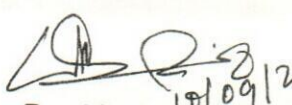

10.09.26
A B M HASIB RAHMAN
Lt Commander BN
Staff Officer (NS-1)
Naval Headquarters
Banani, Dhaka-1213


10.09.26
KAISER MAHMUD
Commodore BN
Staff Officer (Plans-II)
Naval Headquarters
Banani, Dhaka-1213


10/09/26
MD SHAHRIAR ALAM
Captain
Member
Director of Naval Armament
Inspection and Supply
NHQ, Banani, Dhaka-1213


10/09/26
A K M BODRUL QADIR
Captain
Member
Director of Naval Info & Tech
Naval Headquarters
Banani, Dhaka-1213


10/09/26
S M MANIRUZZAMAN
Commodore BN
Member
Director of Naval Weapons
and Electrical Engineering
NHQ, Banani, Dhaka-1213


10/09/26
President
MD. SHAHIDULLAH AL FARUQ
Commodore BN
Director of Naval Engineering
Naval Headquarters
Banani, Dhaka-1213