

TENDER SPECIFICATION FOR MULTIPULSE SIDE SCAN SONAR

1.	Name of Equipment.	Multipulse Side Scan Sonar.
2.	Purpose.	The Multipulse Side Scan Sonar (MP-SSS) system will be used for hydrographic survey, wreck investigation, underwater object search and recovery operation, channel clearance surveys in the coastal and riverine waters of Bangladesh.
3.	Quantity.	<p>a. 02 (Two) complete sets of MP-SSS.</p> <p>b. Detail description of frequencies is appended in clause 13.a.</p>
4.	Brand/Model.	To be mentioned.
5.	Country of Origin.	UK, USA, Canada, Norway, EU countries (Name of the country to be mentioned).
6.	Country of Manufacturer.	UK, USA, Canada, Norway, EU countries (Name of the country to be mentioned).
7.	Name and Address of the Manufacturer.	To be mentioned (address, telephone, facsimile number, email address are to be mentioned).
8.	Date of First Introduction in the Market.	To be mentioned.
9.	Year of Manufacture.	2024 or later.
10.	Qualification of Bidder.	Only genuine manufacturer or authorized dealer (Foreign principal) can submit quotation through authorized agents/dealer enlisted in the Directorate General of Defense Purchase (DGDP). For participation by agents/dealer, authenticity certificate is required.
11.	Scope of Supply.	The MP-SSS will be supplied along with all accessories as per the specification mentioned in this document.
12.	Basic composition.	The MP-SSS should comprise of the following basic units:
	a.	Topside master control unit with accessories.
	b.	Tow fish with accessories.
	c.	Tow cable (Length of cable mentioned in serial 13.d)
	d.	Display unit (Ruggedized Laptop) with accessories and necessary software installed.
	e.	Acquisition and processing software
	f.	Cable reel
	g.	Other related Accessories.

13.	Technical Specifications.		
a.	General Specification.		
Ser	Description	Requirement	
(1)	Data output system	Digital	
(2)	Frequency	Dual (Simultaneous) frequency with CHIRP technology.	
(1)		(1) Low frequency (LF): 200-300 kHz.	
(2)		(2) High frequency (HF): 800-1000 kHz.	
(3)	Pulse length (µs)	To be mentioned with selectable option.	
(4)	Range (m)	To be mentioned against each offered frequency.	
(5)	Horizontal beam width (deg)	To be mentioned.	
(6)	Vertical beam width (deg)	To be mentioned.	
(7)	Depression Angle (deg)	To be mentioned.	
(8)	Max. Horizontal Resolution (cm)	To be mentioned.	
(9)	Towing Speed	10 kts or higher.	
(10)	Multi Pulse	2 or more.	
(11)	Motion Tolerant	The system should have Motion Tolerant capability.	
b.	Transceiver and Recorder Specifications.		
Ser	Description	Requirement	
(1)	Recording	Data recording should be on hard drive. Detail specification of the hard drive is to be given in the offer. Any other option for data recording (if available) in addition to the hard drive is to be mentioned. Hard Drive capacity should be 2 TB or more.	
(2)	Data processing and imaging capabilities	Full data processing and imaging capabilities should be available.	
(3)	Standard system interfacing capabilities	To be mentioned.	
(4)	File format	To be mentioned.	
c.	Tow fish Specifications.		
Ser	Description	Requirement	



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	(1)	Length x Diameter/Height (cm)	To be mentioned.
	(2)	Weight in air	To be mentioned.
	(3)	Depth rating (m)	300m or more.
	(4)	Transducer type and material	To be mentioned.
	(5)	Material used for tow fish	Stainless Steel.
	(6)	Standard Sensors	Heading, pitch, roll and pressure (depth) sensors to be available. Detail specification to be mentioned.
	(7)	Deployment methods	Should have the provision for manual deployment with portable winch/frame.
	(8)	Depressor	To be offered. Detail to be mentioned.
d.	<u>Cable and Winch/Frame Specifications.</u>		
	Ser	Description	Requirement
	(1)	Type of tow cable	Co-axial.
	(2)	Length of tow cable to be supplied	Two sets of cables with necessary accessories. Length & type is as follows (against each set): a. 300 meters. b. 100 meters.
	(3)	Data cable	Sufficient length of data cable (Minimum Length: 5 m) is to be supplied. Details to be mentioned in the offer.
	(4)	Electric Winch (For each set)	It should be portable. Detail specification is to be submitted with the offer. Preferably, made of Stainless steels, drum capacity minimum 300m, 24V DC- 740 W or more. The offered winch pully must be compatible to supplied cable.
e.	Acoustic Pinger (For each set) with receiver		To be offered. Detail specification is to be submitted with the offer. The acoustic pinger must be compatible with offered MP-SSS.
f.	Pressure Sensor		To be offered (At least 300m depth rating).
g.	SBG (AHRS) (Optional Item)		To be offered (if available). Price to be quoted separately.



	<p>h. Software Specifications</p>	<p>Necessary software for data acquisition and processing is to be supplied. Name, version and detail specification of the software to be provided with the offer.</p>
<p>14.</p>	<p>Power Requirements. The equipment should have following power supply option:</p> <p>a. 10-28V DC b. 210-240V AC</p> <p>Detail of power supply requirement and consumption rate is to be mentioned in the offer.</p>	
<p>15.</p>	<p>Performance in Environmental Condition. Standard system performance and accuracy should be mentioned in the coastal water of Bangladesh which is heavily laden with sediment and there also exist turbulence due to the melange of fresh water coming from upstream big rivers. Any degradation of system performance due to environmental condition is to be mentioned in the offer.</p>	
<p>16.</p>	<p>Lifetime of the MP-SSS. Durability/Life time of the equipment should be at least 10 years.</p>	
<p>17.</p>	<p>Condition of Equipment while Supplying. The offered equipment must be brand new and in operational condition.</p>	
<p>18.</p>	<p>Quality Management System. To assess the quality management system (QMS) of the manufacturer, ISO or equivalent certificate has to be provided with the offer.</p>	
<p>19.</p>	<p>Certificate/Document of Authentication. The local supplier must provide following original certificate/document with the offer/quotation to ascertain the ingenuity of source and items in order to establish chain of links from the original source to supply items.</p>	
	<p>a.</p>	<p>One certificate/document by the manufacturer in favour of the supplier (In case of manufacturer as direct source).</p>
	<p>b.</p>	<p>Two certificates/documents, one by the manufacturer in favour of the authorized agent and other by the authorized agent in favour of the supplier (In case of authorized agent as immediate source).</p>
<p>20.</p>	<p>Manuals/drawings. Following manuals are to be supplied free of cost with the equipment at the time of delivery:</p>	
	<p>a.</p>	<p>Two sets of operating manual in English.</p>
	<p>b.</p>	<p>Two sets of technical manual in English (If any).</p>
	<p>c.</p>	<p>Two sets of maintenance manual.</p>
<p>21.</p>	<p>Pre Shipment Inspection (PSI) and Factory Acceptance Test (FAT).</p> <p>a. Pre Shipment Inspection (PSI) and Factory Acceptance Test (FAT) will be carried out by a team of 02 (Two) BN officers for a duration of 03 (three) working days excluding journey period, at the buyer's expense (including return air ticket, food and accommodation). The supplier should inform the buyer about the date and schedule of PSI and FAT at least 08 (eight) weeks prior to the date of commencement of the said PSI and FAT. After inspection, a joint inspection report will be prepared and signed by both the seller and buyer's representatives.</p> <p>b. All types of movement/transportation of the PSI/ FAT team within the manufacture/supplier' scountry, reception and arrangement for entry into country/concerned area for the PSI and FAT are to be arranged by the supplier. The PSI and FAT will be carried out at manufacturer's factory premises.</p>	

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c.	On return from the country of manufacturer, the PSI and FAT team will submit report to the concerned directorate of Naval Headquarters (NHQ). NHQ will, in turn, forward final decision along with PSI and FAT report at the earliest, basing on which DGDP will render clearance for shipment of stores to the supplier concerned. The supplier will not make shipment of any item of the contract without clearance from the DGDP.
d.	During PSI/FAT, tests will be carried out to fulfill the required conditions mentioned in the technical specification of the WECDIS. Various tests for checking performance are to be carried out and recorded.
22.	Test and Trial. Manufacturer representative will carry out test and trial of the MP- SSS on board suitable Bangladesh Navy Ship at Chattogram. Initial test and trial will be done at Harbour. Final trial will be conducted at sea with manufacturer representative on board. Cost of test and trial to be quoted separately.
23.	<p>Training. 03 (Three) working days training for BN personnel on the operation and maintenance of the equipment. Its troubleshooting must be conducted by manufacturer's authorized engineer/ trainer at BNHOC, Chattogram (price to be quoted separately). Tentative training contents against each day should be mentioned in the offer. The outcome of the training should encompass following:</p> <p>a. Trainees should gain sufficient knowledge to use the equipment and related software efficiently and effectively to deploy and operate the equipment.</p> <p>b. Have general trouble shooting knowledge on equipment and software.</p>
24.	Acceptance. On completion of satisfactory test and trial final acceptance certificate will be signed jointly by the representative of manufacturer and the buyer.
25.	<p>Warranty.</p> <p>a. At least two years warranty after satisfactory acceptance by BN is to be provided.</p> <p>b. For warranty repair/replacement, the supplier will collect the defective item from NSD Chattogram and re-supply the same to collecting place after warranty repair or replacement within 90 (ninety) days from the date of defect. Cost of the replaced unit/component including air freight is to be borne by the supplier.</p> <p>c. Warranty period will be extended for the duration of non-operational time for the equipment.</p>
26.	Tools. Tools required for servicing and maintenance are to be supplied with the MP- SSS system at the time of delivery. List of tools are to be provided with the offer.
27.	Standard Accessories. All standard accessories to be provided by the supplier. It must include every item and accessories, which are essential to install and operate the MP-SSS in standard level, whether those are mentioned in this specification or not.
28.	<p>Spares. Following are to be given with the offer:</p> <p>a. One set of spare battery for each set is to be provided at the time of delivery of MP-SSS.</p> <p>b. Spares require for 05 years trouble free operation are to be quoted separately.</p> <p>c. Supply of spares for minimum 10 years is to be ensured and in this regard a certificate is to be submitted in original pad of the manufacturing company.</p> <p>d. List & price of consumable/spares are to be submitted separately.</p> <p>e. If the item is of one time use/not reparable that is to be mentioned clearly.</p>
Note: Quoted price of spares will influence the evaluation of final acceptance.	

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29.	Optional Items. Any optional items which may be provide are to be quoted, indicating item wise price. However, 100% performance guarantee of the main equipment is to be given without such optional items.																		
30.	<p>Documents. Following documents are to be submitted with the offer:</p> <table border="1" style="width: 100%;"> <tr> <td style="text-align: center;">a.</td> <td>Two sets of original catalogue/brochure in English.</td> </tr> <tr> <td style="text-align: center;">b.</td> <td>List of standard accessories with pattern number and other specification.</td> </tr> <tr> <td style="text-align: center;">c.</td> <td>List of optional accessories.</td> </tr> <tr> <td style="text-align: center;">d.</td> <td>List of 10 years spares parts.</td> </tr> <tr> <td style="text-align: center;">e.</td> <td>List of Tools.</td> </tr> <tr> <td style="text-align: center;">f.</td> <td>User list.</td> </tr> <tr> <td style="text-align: center;">g.</td> <td>Manufacture's authenticity certificate.</td> </tr> <tr> <td style="text-align: center;">h.</td> <td>Quality assurance certificate.</td> </tr> <tr> <td style="text-align: center;">j.</td> <td>Design/drawing of portable installation method and associated fittings (if not included in original catalogue).</td> </tr> </table>	a.	Two sets of original catalogue/brochure in English.	b.	List of standard accessories with pattern number and other specification.	c.	List of optional accessories.	d.	List of 10 years spares parts.	e.	List of Tools.	f.	User list.	g.	Manufacture's authenticity certificate.	h.	Quality assurance certificate.	j.	Design/drawing of portable installation method and associated fittings (if not included in original catalogue).
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31.	Record of Sale. The offered MP-SSS must be used by any of the reputed government Hydrographic Offices like SHOM (France), NOAA (USA), UKHO (UK), JHD (Japan), AHS (Australia), IIDM (Italy), KHOA (Korea) etc. Record of sale for last five years indicating year and name of the user to be provided in the offer.																		
32.	Validity. Up to 30 June 2025.																		
33.	<p>Shipments and Delivery.</p> <table border="1" style="width: 100%;"> <tr> <td style="text-align: center;">a.</td> <td>The supplier will arrange shipment of all items by sea/air to Chattogram sea/air port, Bangladesh within 180 days from the date of contract signed.</td> </tr> <tr> <td style="text-align: center;">b.</td> <td>All items are to be delivered in proper packing to ensure safe transit by sea/air.</td> </tr> <tr> <td style="text-align: center;">c.</td> <td>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.</td> </tr> <tr> <td style="text-align: center;">d.</td> <td>The supplier will supply the item at NSD Chattogram. While delivering, the supplier will carry the items from Chattogram sea/air port (as applicable) to NSD Chattogram at the cost and risk of supplier.</td> </tr> </table>	a.	The supplier will arrange shipment of all items by sea/air to Chattogram sea/air port, Bangladesh within 180 days from the date of contract signed.	b.	All items are to be delivered in proper packing to ensure safe transit by sea/air.	c.	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.	d.	The supplier will supply the item at NSD Chattogram. While delivering, the supplier will carry the items from Chattogram sea/air port (as applicable) to NSD Chattogram at the cost and risk of supplier.										
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34.	Source of Supply. The bidder is to mention the name, address and contact detail of original source (Country of Origin/Country of Manufacturer) from where the MP-SSS will be imported.																		
35.	Port of Shipment. Any port of the manufacturing country (to be mentioned).																		
36.	Consignee. The Commanding Officer, Naval Store Depot, New Mooring, Chattogram, Bangladesh.																		
37.	Price without Import Duties. Quoted price is to exclude all import duties as those will be consigned against BN.																		
38.	<p>Terms of Payment. Necessary letter of credit will be opened for full purchase amount in favor of the principal with the following terms of payment.</p> <table border="1" style="width: 100%;"> <tr> <td style="text-align: center;">a.</td> <td>80% of CFR value will be paid on delivery of the items described under the scope of supply on production of necessary shipping document.</td> </tr> <tr> <td style="text-align: center;">b.</td> <td>Remaining 20% CFR value and 100% cost of test/trial amount will be paid after satisfactory acceptance by BN.</td> </tr> </table>	a.	80% of CFR value will be paid on delivery of the items described under the scope of supply on production of necessary shipping document.	b.	Remaining 20% CFR value and 100% cost of test/trial amount will be paid after satisfactory acceptance by BN.														
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39.	Condition for Acceptance of Quotation. Quotation may not be considered if detailed information/specification, original maker's books and catalogue about the same model of the offered item, accessories, scope of supply etc are not provided.				
40.	Compliance Statement. A complete statement fulfilling all the requirements of the tender is to be submitted for evaluation as required: <table border="1" data-bbox="220 376 1511 575"><tr><td data-bbox="220 376 300 481">a.</td><td data-bbox="300 376 1511 481">Article wise compliance report must be given. An incomplete compliance statement may attribute to cancellation of the offer.</td></tr><tr><td data-bbox="220 481 300 575">b.</td><td data-bbox="300 481 1511 575">If any clause of this specification does not commensurate with offered item, the deviation has to be spelt out clearly.</td></tr></table>	a.	Article wise compliance report must be given. An incomplete compliance statement may attribute to cancellation of the offer.	b.	If any clause of this specification does not commensurate with offered item, the deviation has to be spelt out clearly.
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