

TENDER SPECIFICATION - AIR BAND VHF TRANSCEIVER

1. **Name of Equipment** : Air Band VHF Transceiver.
2. **Purpose** : To establish Ground to Air Communication.
3. **Quantity** : 05 (Five) complete sets with all standard accessories.
4. **Type** : Marine Type or to be mentioned.
5. **Brand** : ICOM/ ROHDE & SCHWARZ.
6. **Model** : IC-A120/M3TR/Latest production model/ Version/ Series.
7. **Country of Origin** : Japan/ Germany.
8. **Country of Manufacturer** : Japan/ Germany.
9. **Original Equipment Manufacturer (OEM)** : Name & Full address with e-mail of OEM is to be mentioned.
10. **Supplier** : Name & Full Address is to be mentioned.
11. **Year of Manufacture** : 2025 or later.
12. **Classification/ Standard** : The offered items/ equipment under the scope of supply are to fulfill the requirement of MIL-STD-810 Ingress Protection IP, MIL-STD-810 and other internationally recognized standards. The applicable classification standard(s) of offered items are to be mentioned and should be well supported by the certificates/ OEM brochures.
13. **Environmental condition.**
 - a. Temperature : -20° to +50° C or to be mentioned.
 - b. Humidity : Non-condensing.
 - c. Storage Temperature : To be mentioned.
14. **Qualification of Bidders.** Only the genuine manufacturers or their authorized dealer (principal) can submit quotation through their authorized agents enlisted at DGDP. In case of dealer (principal), manufacturers certificate of authorization has to be submitted with the offer.
15. **Scope of Supply.** The equipment for each VHF Transceiver (Air Band) is to be supplied fulfilling the technical specifications and complete in all respect with all required standard accessories and attachment which are required to obtain 100% performance of the sets weather it is mentioned in the specification or not. A list of offered standard accessories to be attached with the quotation. In this regards the Bangladesh Navy (BN) reserve the right to reduce/ increase the quantity of item mentioned in the tender.
16. **Technical Specification.** The offered VHF Transceiver (Air Band) sets must have following features:

Ser	Name	Description
GENERAL		
a.	Range Coverage	Maximum range coverage to be mentioned
b.	Frequency Range	118.000 MHz - 136.992 MHz
c.	Channel Spacing	8.33 kHz /25 kHz
d.	Type of emission	To be mentioned
e.	Number of memory Channels	Minimum 100
f.	Power supply requirement (negative ground)	To be mentioned



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Ser	Name	Description
GENERAL		
g.	Operating temperature range	Minimum -20° to +50° C.
h.	Dimensions (W x H x D)	To be Mentioned
j.	Weight	To be mentioned
k.	Environmental Compatibility	IP and MIL-STD to be mentioned
TRANSCEIVER UNIT		
l.	Frequency stability	To be mentioned
m.	RF power output	(20-36) PEP Watt
n.	Spurious emissions	Less than -60 dBc
p.	Receiving system	Super Heterodyne or better.
q.	Intermediate frequency	To be Mentioned
r.	Sensitivity (at 6dB S/N)	Less than +1μV
s.	Selectivity	To be Mentioned
t.	Spurious response	74 dBμ or better
u.	Audio power output	To be mentioned
Others		
v.	Supporting Documents	All supporting documents (ICD, booklets, leaflet, catalogue, brochure, drawing etc) and detailed particulars of the offered item

17. **Coaxial Cable.** 50 mtrs High quality coaxial feeder cable with minimum attenuation (approx 1 watt per 10 mtr) is to be supplied with each set.

18. **Programming Kits/ Software.** 02 sets of Programming Kit and Software are to be provided for programming/cloning the VHF Transceiver (Air Band) and peripherals units. Within the warranty period the updated version of the programming software is to be provided (if necessary) by the bidder free of cost.

19. **Programming.** Upon receipt of the consignment at Naval Stores Depot Chattogram, the supplier's engineer is to assist BN reps to programme all sets at BN Dockyard with given frequencies. The supplier's engineer is to show BN personnel, the procedure of programming the sets so that BN personnel can reconfigure/ reprogramme the sets any time later if required. Thereafter "Bench Test" is to be conducted at BN Dockyard in presence of supplier's engineer.

20. **Installation, Test/ Trial & Acceptance.**

a. The supplier will install the set with proper earthing in presence of BN personnel at respective BN Units/ Ships as soon as possible and carryout necessary test and trials. The Supplier's Engineer will show BN personnel about routine operation and maintenance procedure of the set. For the test trial and operation of the set, supplier shall provide all required items (equipment, accessories and other associated supporting materials including consultancy fee (if applicable)) at free of cost whether mentioned in contract or not. Supplier's Engineer will ensure the competency of BN personnel in operation and maintenance of the set.

b. If any equipment is found defective during installation, test and trial they are to be replaced immediately by new ones free of cost (Including freight, insurance and all other cost). BN is to return the defective equipment after receiving the replaced item.

c. Cost for installation is to be quoted and borne by the supplier.

d. On satisfactory completion of installation, test and trial, BN will issue Final Acceptance Certificate.

e. Any damage to on board existing equipment, items, machineries are to be compensated by bidder during installation and make the damage items operational with its full functionality.



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21. **Installation Materials.** Standard installation materials are to be provided for all equipment. List to be provided by the bidder.
22. **Tools/ Test Equipment.** Special tools, test equipment and kits necessary for maintenance/repair are to be quoted, indicating itemised price.
23. **Standard Accessories.** Standard accessories and assemblies will include all items and accessories, which are essential to operate the equipment whether those are mentioned in the specification or not. A list of such items/ accessories/ assemblies with item wise price is to be included in the quotation as follows. However, if there is one or more equipment which are not in the list but essential to operate the main equipment is to be added in the following list:

Ser	Part Number/ Model	Description	Brand	Country of Origin	Country of Manufacturer	Qty (EA)	Unit Price	Total Amount	Rmks
a.		Hand Microphone							
b.		DC Power Cable							
c.		Mounting Bracket Kit							
d.		Microphone Hanger Kit							
e.		Power Supply Unit Complete with AC Power Cord							
f.		VHF Base Station Omni-directional Antenna complete with Mounting Kit							
g.		50 mtrs High quality co-axial feeder cable with minimum attenuation (approx 1 watt per 10 mtr)							
h.		Surge Protector							
j.		Programming Kit and Software							
k.		i. Operator's manual ii. Technical manuals iii. Workshop level repair manual							
l.		If any (which are required to obtain 100% performance of the sets)							

Without the list concerned bidder will be considered disqualified supplier.

24. **Price of Optional Accessories.** Unite prices for optional accessories are to be quoted separately as follows:

Ser	Part Number/ Model	Description	Brand	Country of Origin	Country of Manufacturer	Qty (EA)	Unit Price	Total Amount	Rmks

25. **Quality Assurance Certificate.** The Quality assurance certificate (QAC) in respect of the associated equipment in regard to its manufacturing and performance is to be provided by the manufacturer at the time of delivery.



26. **Documents.** The following documents are to be submitted with the offer:
- Certificate of assurance for minimum 10 years supply of spares with reasonable price.
 - Prices list of all replaceable spare parts that would be required for 05 years repair/maintenance with item wise price.
 - Original Brochure/ Catalogue of the offered model of VHF Transceiver (Air Band).
 - Manufacturer's certificate mentioning that the supplier (enlisted bidder) is being authorised for this quotation/offer and will be liable to fulfil all contractual obligation if the firm is awarded with the contract.
 - Interface Control Documents (ICD) of the VHF Transceiver (Air Band) including all necessary interface equipment; software etc.
 - Radio Equipment Importer and Vendor Enlistment Certificate from BTRC (For Local Agent only).
27. **Manual.** Following documents in English are to be provided free of cost at the time of delivery:
- Operators Manual.** One set of operator's manual (covering major system units) to be provided with each VHF Transceiver (Air Band).
 - Technical Manual.** One set of technical manuals (covering principle of design and operations, detail circuit diagram, trouble shooting flowchart, parts catalogue) for each supplied VHF Transceiver (Air Band)/ accessories to be provided.
 - Workshop Repair Manual.** Two sets of workshop level repair manual.
28. **Warranty.**
- Warranty for 02 (two) years or manufacturer standard whichever is higher by the principal/manufacturer for trouble free operation of VHF Transceiver (Air Band) and its accessories wef the date of Final Acceptance by BN. If any component of the supplied item becomes defective during the warranty period, the warranty (for defective component) shall be extended automatically for the period of the subject component remains defective. Moreover, in case of any defective item(s) or component if the whole set defective or non-operational then the whole warranty of the said set shall be extended automatically for the period of subject component remains defective.
 - For warranty repair/ replacement, the supplier will collect the defective item from NSD, Chittagong/ 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.
29. **Extension of Warranty.** During the warranty period, if the item/equipment remains non-operational for any action pending by the supplier, the warranty period will be extended for the same period. The warranty covers all parts and labour (including service engineer's cost) throughout the warranty period.
30. **After Sales Service.** After sales service is to be provided by the local agent within warranty period and thereafter as and when required (at least 10 years). Extension of warranty will be considered as warranty period.
31. **Delivery Schedule.** Within 180 days after signing of contract.
32. **Delivery Destination.** The supplier will arrange delivery of all items to the NSD Chattogram. All sea/ air port formalities, customs clearance, transportation etc to be completed/ arranged by supplier. BN may be asked for necessary certificates/ documents.
33. **Consignee.** The Commanding Officer, Naval Stores Depot, Chattogram, New Mooring, Chattogram, Bangladesh/ Officer In-Charge, Naval Stores Sub Depot Dhaka, Namapara, Khilkhet, Dhaka-1229.
34. **Port of Shipment.** The port of country of origin/ manufacturer. To be mentioned in the offer.
35. **Source of supply.** The source of supply is to be from the country of manufacturer or country of origin/ principal (To be mentioned).
36. **Validity of Offer.** Offer should remain valid up to 30 June 2026.



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37. **Terms of Payment.** 80% of total CPT value will be paid on completion of shipment of the contracted goods. Remaining 20% payment and 100% installation cost will be made on production of "Acceptance Certificate" rendered by BN following successful test and trial upon delivery of items as per contract.

38. **Price Quotation.** Price is to be quoted in FC without VAT/ Tax etc as follows:

- a. FOB price.
- b. Air Freight.

39. **Compliance Matrix.** Bidder will submit a Compliance Matrix with the offer stating "COMPLIANT" or "NON COMPLIANT" against every Clause and Sub-Clause of this Specification. All "COMPLIANT" statements are to be explained adequately and should be supported by technical brochures/documentation. Insufficient documentation shall be considered as disqualification. (If required, a set of Technical /Operator Manual may be included with the offer).

40. **Certificate and Document of Authentication.** The concerned supplier must provide following original certificate(s)/document(s) as applicable with the quotation and during delivery of items as regard to the genuinity of source and item(s) in order to establish chain of links from the original source to supply of items:

- a. One certificate by the Original Equipment Manufacturer (OEM) in favour of the supplier/local agent (in case of OEM as principal).
- b. Two certificates, one by the OEM to authorized agent and other by the authorized agent to supplier/local agent (in case of authorized agent as principal).
- c. Three certificates, first one by OEM to authorized agent, second one by authorized agent to sub-agent and third one by sub-agent to local agent (in case of sub-agent as principal). If the supplier/ local agent is unable to obtain the first certificate (by OEM to authorized agent), then it has to produce relevant document to prove agency-ship of its claimed agent of the recognized manufacturer.
- d. Quality Assurance Certificate (QAC) by the Original Equipment Manufacturer (OEM).

41. **Compliance Statement.** A compliance statement fulfilling all the requirement of the tender is to be submitted for evaluation of the quotations. 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 has to be spelt out clearly.

