

**NOTICE INVITING BUDGETORY OFFERS**

Name of Work	<b>NAME OF WORK:</b> "Supply, Programming, Installation, Testing and Commissioning of VHF Radios"
Date of submission of budgetary quotation	On or Before <b>12.11.2024.</b>
Address for communication:	Dy. Conservator, Marine Department, "SAARASI" Administrative Office, Mormugao Port Authority, Headland sada Goa - 403804
Contact Details	Phone : (0832) 2594808 Email : chanda.naik@mptgoa.gov.in
Website	<a href="http://www.mptgoa.gov.in">www.mptgoa.gov.in</a>



**Asst. Engg (E)  
MORMUGAO PORT AUTHORITY**

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**MARINE DEPARTMENT**

Sub: "Budgetary quotation for "Supply, Programming, installation, Testing and Commissioning of VHF Radios."

Mormugao Port Authority is in process of replacing the defective / out dated VHF Radio provided under Ports Wireless operating Licenses".

As such, kindly furnish the budgetary quotation for the same. Scope of work enclosed as Schedule - 'A1', Technical specifications Schedule - 'A2' and Price Schedule enclosed as Schedule - 'A3').

The budgetary quotation should reach to this office on or before 12.11.2024.

Thanking you,

Yours faithfully



Asst. Engg. (E)  
MORMUGAO PORT AUTHORITY

**1.0 SCOPE OF WORK:**

**Supply of VHF Radio and Amendment on the Operating License**

1. Contractor has to collect all the necessary documents required for replacement of 29 nos VHF Radio and amendment on the existing wireless operating Licenses and apply through saralsanchar online portal within 15 day from placement of Order or Letter of Acceptance.
2. Supply, Programming, installation, Testing and Commissioning of all the VHF Radios.
3. Before installation contractor has to physically verify the RF Power and other parameters of all the supplied VHF Radio and submit report to the MPA.
4. Program the VHF Radios as per the frequency and Channel provided by the MPA/ WPC.
5. Software of the supplied VHF radio should work with existing VHF Radio.
6. Frequency coding should be done in all the existing and supplied VHF radio, so that there is no interference with other units despite being tuned to same frequency.
7. Checking the communication at different location in the port area (with & without VHF Repeater).
8. All the supplied VHF Radios shall be tested along with existing VHF equipment's VHF radio for proper performance in presence of the Engineer in Charge.
9. Contractor shall supply the Software and programming kit along with supplied VHF Radio.
10. Obtain the amendment on the existing WOL license from the WPC.

**2.0 Terms and conditions:**

1. The Contractor should have valid Dealer Possession License (DPL) and copy of the same should be submitted along with tender documents.
2. The bidder should have local support office in Goa for both hardware & software support and have trained staff on their rolls directly. In case of any failure on the supplied sets during the Guarantee/warranty period, the same should be attended immediately without any financial implication to the Port. Enclose the local office registration detail along with the tender document.
3. The contractor should give a guarantee/warranty wherever applicable, for a period of at least two year for VHF Radio and one year for accessories from the date of commissioning of the equipment.
4. Contractor shall submit the broacher of the VHF radio along with tender documents.
5. Contractor shall submit Test Reports from Central Govt. NABL/ILAC accredited lab to prove conformity to the Specifications.
6. Contractor shall give the demonstration of the VHF Radio, which he will supply to the MPA.
7. Breakdown must be attended within 24 hrs.



8. In case equipment requires repairs outside Port premises then contractor has to take all responsibility for transportation, charges shall be borne by the Contractor itself and handover the equipment within 15 days.
9. Port will bear the License fees / modification fees / royalty charges as per stipulated rates given by the WPC.
10. Work must be completed within 180 days including Amendment of existing Operating License.
11. If any delay occurs due to WPC clearance, contractor has to produce written evidence of the same.

## 2) TECHNICAL SPECIFICATION FOR VHF FULL BAND DIGITAL HANDHELD TRANSCEIVER

Description	Requirements
Frequency Range (MHz)	136-174
Types of Bandwidth	VHF Full Band
Channel Capacity	32 or better
RF Power output Range	1 to 5 Watts (VHF)
Warranty	2 years
<b>PERFORMANCE FEATURES</b>	
Frequency Range (MHz)	136-174
Types of Bandwidth	VHF Full Band
Display	No
Channel Spacing	12.5 kiloHertz
Frequency Stability (± )	0.5 parts per million
Technology	Digital TDMA (2-slot)
Air Interface Standard	Standard DMR
Antenna Impedance	50 Ohm
<b>TRANSMITTER</b>	
RF Power output	Programmable
RF Power output Range	1 to 5 Watts (VHF)
Digital Modulation	4FSK
Transmitter FM Hum/Noise	≤ 40db
Transmitter Modulation Limiting	+/- 2.5 KHz @12.5KHz
Transmitter Adjacent Channel Power	60db @ 12.5 KHz, 70db @ 20/25KHz or better
Audio Distortion	3 %
Digital Vocoder	AMBE+2
<b>RECEIVERS</b>	
Analog Receivers Sensitivity	0.22 microVolt for 12dbSINAD or better
Digital Receiver Sensitivity at 5% BER	0.16 - 0.22 microVolt
Spurious Response Rejection	TIA603 or equivalent or better
Receiver Adjacent Channel Selectivity	>70db@25 KHz
Inter Modulation	70db
Receiver Audio Output	0.5W - 1W
Receiver Rated Audio Distortion	3 percent
<b>ACCESSORIES</b>	
Antenna for Handheld Transceiver Rugged flexible Helical, Non-DTMF Leather Carry Case with belt clip & shoulder strap, Battery Charger.	Yes
Operating and service manual with each radio sets provided free of cost in soft as well as hard copy.	Yes
Software and programming kit	Yes
<b>Battery Charger</b>	
Input voltage	230 V ± 10%,50 Hz
Output voltage	12V



Battery charger suitable for	Lithium-ion
Charging time for rapid mode	1 to 3 hrs
Number of charging pockets	1
Indicator	charging status
<b>VARIOUS FEATURES</b>	
Simple Press to talk	YES
Low Battery Alert	Yes
Mixed Mode Operation (analog & digital)	Yes
Keypad	No
Availability of Inbuilt GPS system	No
<b>GENERIC</b>	
Weight of hand held Transceiver with Battery	240 – 370 gram
Other features	Instant and Clear voice
<b>POWER SOURCE/BATTERY</b>	
Chemistry of Battery	Lithium-ion
Voltage rating of the Battery	7.4± 10%
Capacity of Battery (mAH)	2200 – 2500
<b>CERTIFICATION</b>	
BIS registration under CRS of Meity for the battery	Yes
BIS registration number and date for the battery	Yes
<b>SAFETY</b>	
Protections	Short circuit protection

<b>SERVICE</b>	
Warranty	2 years for radios and 12 months for accessories
<b>OPERATING CONDITION</b>	
Minimum Operating temperature	30 degree Celsius
Maximum Operating temperature	55 degree Celsius
Minimum Storage temperature	-40 degree Celsius
Maximum Storage temperature	70 degree Celsius
Operating Humidity @40 °C	MIL-STD-810 F
<b>TEST REPORT DETAILS</b>	
Dust test as per	IP55 or better
Vibration test as per	MIL-STD-810 F
Shock test as per	MIL-STD-810 F
Water Intrusion test as per	IP55 or better
Salt test as per	MIL-STD-810 F
Rain test as per	MIL-STD-810 F
Availability of Test Reports from Central Govt. NABL/ILAC accredited lab to prove conformity to the Specifications.	Yes
Test Report Number and Date	Yes
Name and Address of the Lab	Yes

**PRICE SCHEDULE (BILL OF QUANTITIES – BOQ)**

"Supply, Programming, installation, Testing and Commissioning of VHF Radios."

Sr. No.	Description	Quantity	Unit Rate (₹)	Amount (₹)	GST (%)	Total Amount (₹)
1	Digital Base/Mobile station as per specification, Technical Specification	28 nos				
2	i)VHF Full Band Digital Handheld Transceiver with Battery, Battery Charger and Antenna as per Technical Specification.	01no.				
	ii) Spare Battery for Handheld Transceiver as per Technical Specification.	01 no.				
3	Programming, installation, testing and commissioning charges for all VHF Radio	LS.				
4	Liaisoning charges for amendment of existing Wireless Operating Licenses	2 nos				
Total Amount (₹)						

(Rupees: \_\_\_\_\_)

Date:

Signature:

Place:

Name:

Address:

Office Seal of firm: