MIDLAND®

Fixed Mount VHF Marine Radio with DSC

Owner's Manual

www.midlandradio.com

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Welcome to the World of Midland Electronics

Congratulations on your purchase of the Midland REGATTA 1 VHF Marine Radio. This fixed mount radio gives you 2- way vessel to vessel and vessel to shore communication- for both safety and navigational purposes. With the REGATTA 1, you can call for help, get information from other boaters and talk to lock or bridge tenders. In addition, in the USA you can access the NOAA weather broadcast with the 10 weather channels and be alerted to severe weather emergencies with the weather alert feature. The REGATTA 1 is a quality piece of electronic equipment, skillfully constructed with the finest components. This radio is designed for reliable and trouble-free performance for years to come. Enjoy!

Major REGATTA 1 Features:

- Submersible- meets JIS7 specifications
- All Marine Channels-US, International and Canada
- 10 NOAA Weather Channels
- NOAA Weather Alert
- DSC Digital Selective Calling – for security on the water and the ability to make quick calls automatically.
- Channel Scan
- HI/LO Power Settings
- Last Channel Memory
- Tri-Watch
- Large, High Visibility Display
- PA Function
- Distress Button
- Instant Emergency Channel 16/9-for instant access to channel 16 (the universal marine channel for emergency contact).
- Front Firing Speaker
- NMEA connection – use the interface cable supplied for easy connection from transceiver to optional GPS system. Once connected, the display will show the automatically updated coordinates (latitude and longitude) and time data.
- Connection to an external speaker (optional) – for listening to communications further away from the transceiver.

In an effort to constantly improve product quality, product characteristics are subject to change without notice.

FCC Licensing Information

This transmitter will operate on channels/frequencies that have restricted use in the United States. The channel assignments include frequencies assigned for exclusive use of the U.S. Coast Guard, use in Canada, and use in international waters. Operation in these frequencies without proper authorization is strictly forbidden. For frequencies/channels that are currently for use in the U.S. without an individual license, please contact the FCC Call Center at 1-888-CALL-FCC.

The REGATTA 1 radio complies with the FCC (Federal Communication Commission) requirements that regulate the Maritime Radio Service. This radio incorporates a VHF FM transceiver designed for use in the frequency range of 156.025 to 163.275 MHz. It requires 13.8 volts DC and has a switchable RF output power of one (1) or 25 watts. The transceiver is capable of DSC (Digital Selective Calling) operation. The radio operates on all currently allocated marine channels and is switchable for use-according to U.S.A., International, or Canadian regulations.

Station License

An FCC ship station license is no longer required for any vessel traveling in U.S.A. waters which uses a VHF marine radio, RADAR, or EPIRB (Emergency Position Indicating Radio Beacon), and which is not required to carry radio equipment.
However, any vessel required to carry a marine radio on an international voyage, carrying a HF single side band radiotelephone, or carrying a marine satellite terminal must obtain a station license. FCC license forms and applications for ship and land stations can be downloaded through the Internet at www.fcc.gov/forms. Forms can also be obtained by calling the FCC at 888-225-5322.

International Station License

If your vessel will be entering the sovereign waters of a country other than the U.S.A. or Canada, you should contact that country's communications regulatory authority for licensing information.

Radio Call Sign

Currently, the FCC does not require recreational boaters to have a license. The United States Coast Guard recommends that the boat's registration number and state of registry (e.g., Illinois 1234 AB) be used as a call sign and be clearly visible on the vessel.

Canadian Ship Station License

You need a Radio Operator's Certificate if your vessel is operated in Canadian waters. Radio Operator training and certification is available from the Canadian Power Squadron. Visit their website (http://www.cps-ecp.ca/english/newradiocard.html), contact the nearest field office or write: Industry of Canada, Radio Regulatory Branch, Attn: DOSP, 300 Slater Street, Ottawa, Ontario, Canada K1A 0C8.

Registration of your Marine Transceiver

For using GMDSS and DSC functions, the operator must have a GMDSS radio operator's certificate (SRC or LRC) and apply for a ships MMSI number at the local radio authority. Without MMSI number the radio can only be used as conventional VHF marine radio without DSC. Your distributor may program your radio according to your needs.

Warnings

General

This device has been tested for compliance with Class D digital marine device limits. These limits were created to allow for reasonable protection against damaging interference. This device is to be used solely as an aid to navigation. Its settings may be influenced by diverse factors, such as defects or malfunction of the device, environmental conditions or improper use. It is the user's responsibility to observe reasonable prudence and judgement in navigation, and as such this device should not be considered a substitute for this reasonable prudence and judgement. Do not open the radio for any reason! REGATTA 1's precision mechanics and electronics require expertise and specialized equipment; for the same reason, the radio should under no circumstances be realigned as it has already been calibrated for maximum performance. Unauthorized opening of the transceiver will nullify the warranty.

Radio Frequency / Installation

Midland recommends following the requirements for prevention of radio frequency exposure. Unauthorized changes or modifications to this device may invalidate conformity to the FCC Regulations. All changes or modifications must be approved in writing by MIDLAND RADIO CORPORATION.

This VHF DSC transceiver generates and irradiates electromagnetic energy (EME) at radio frequency (RF), and as such must be installed and placed in operating conditions that are in conformity with the instructions contained in this manual and with current regulations. Not following these instructions can cause personal injury and/or malfunction of the device.

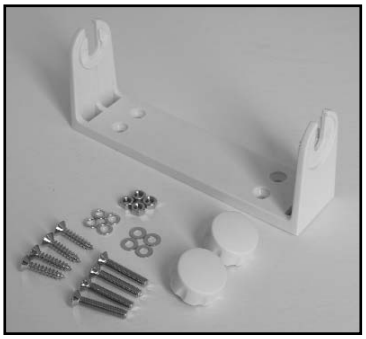
- Do not use REGATTA 1 before connecting a suitable antenna that is in perfect working condition - although REGATTA 1 is protected, this may seriously damage the stages of transmission power.
- Do not use transmit before ensuring proper connection of the antenna. During transmission, remain at a minimum distance of 3 feet from the antenna.

Environmental

- Pay attention to ambient conditions - although REGATTA 1 is designed to operate under the most severe conditions, it is important to avoid exposure to environments that are excessively humid or dusty, or to temperatures outside the -5°F to +55°F range. Also avoid exposure to direct sunlight.
- Avoid jarring and excessive vibration - REGATTA 1 is built to resist mechanical shock and vibration as long as these are within the norm for any electrical device.
- Do not use this device in potentially explosive environments. A single spark may cause an explosion.

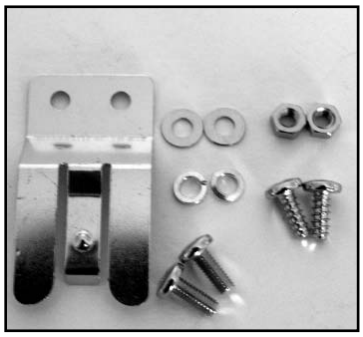
Included with your REGATTA 1

Transciever and Microphone

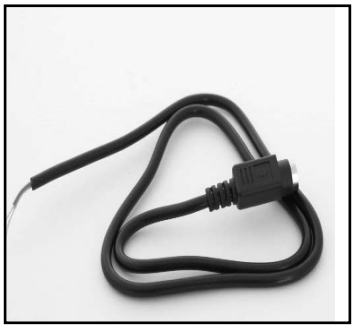


Surface Mount Kit

DC Power Cord



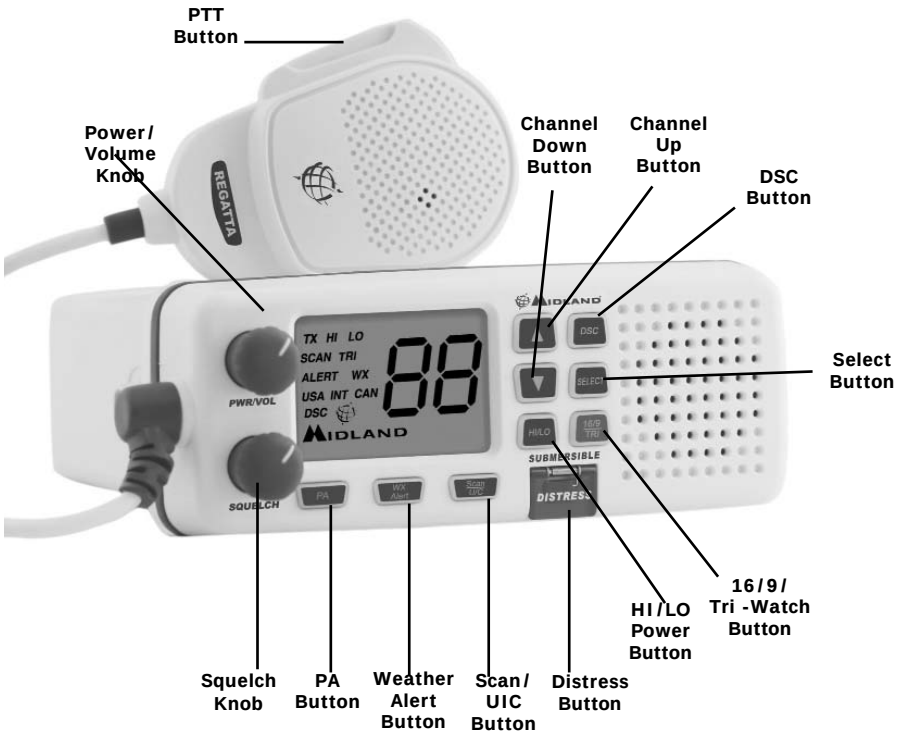
Microphone Mounting Kit



GPS Interface Cable

Controls and Indicators

Front Panel



Power/Volume Knob: (On/Off/Volume) - Turns the unit On or Off and adjusts the speaker volume.

Squelch Knob: Rotate this knob to eliminate background noise when a signal is not being received.

PA Button: Press this key to enable the PA (Public Address) feature.

Weather Alert Button: Press this key to listen to active NOAA Weather channels. Press and hold this key for 2 seconds to place the radio into the Weather Alert mode.

Scan/UIC Button: Press this key once to activate channel scan mode. Press and hold for 2 seconds to change channel modes from USA to CANADIAN to INTERNATIONAL.

Distress Button: Press this key to send a signal of distress in case of emergency.

HI/LO Power Button: Press this key to change the transmit power to either High or Low. Default mode is high power.

16/9/Tri-Watch Button: Press this key instantly to change to Channel 16, Channel 9 or current channel. Pressing and holding this key for 2 seconds will activate the Triple Watch Feature.

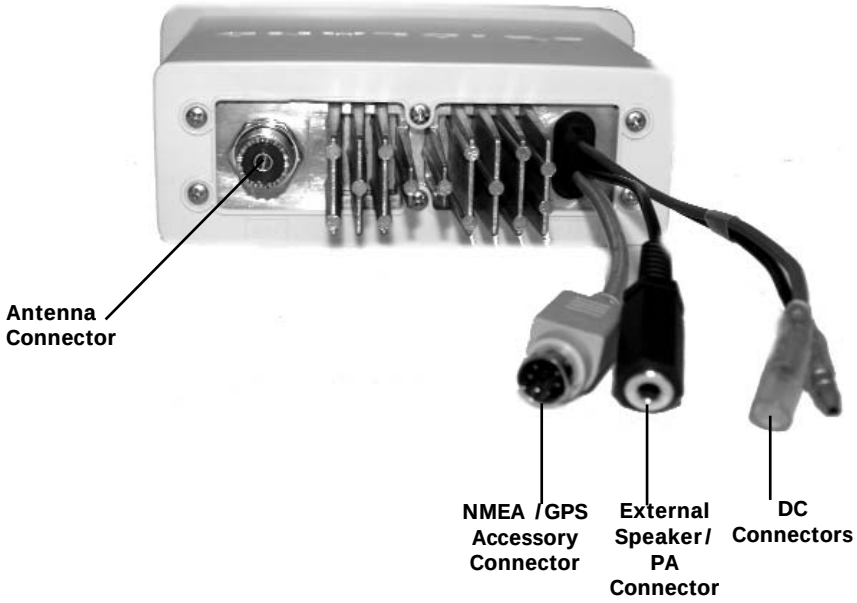
Select Button: In DSC mode, this key is used to makes selections.

DSC Button: Press this button to enter DSC mode.

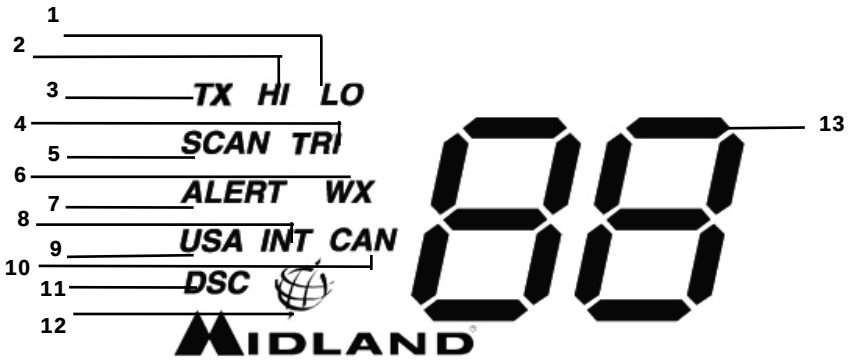
Channel Up/Down Buttons: These keys are used to arrow through the channels.

Controls and Indicators cont...

Back Panel



LCD Indicators



1. **LO (Low)**- Indicates transmit output is 1 Watt.
2. **HI (High)**- Indicates transmit output is 25 Watts.
3. **TX (Transmit)**- Indicates radio is transmitting.
4. **TRI** (Triple Watch)- Indicates Triple Watch Mode is in effect.
5. **SCAN**- Indicates channel scan mode is in effect.
6. **WX**- Indicate Weather Channel Mode has been activated.
7. **Alert-** Indicates the weather alert mode is activated.
8. **INT**- Indicates International Channel Mode.
9. **USA**- Indicates US Channel Mode.
10. **CAN -** Indicates Canada Channel Mode.
11. **DSC**- Indicates the radio is in the DSC mode.
12. **Globe**- Indicates a GPS data receiver is receiving a signal.
13. **Channel Display**- Indicates Channel Number in use.

Installation

The REGATTA 1 will only operate with a nominal 12 volt negative ground battery system. It is important to carefully determine the most suitable location for your radio on your vessel. Electrical, mechanical, and environmental considerations must all be taken into account. You should select the optimum relationship among these considerations.

Features which should be considered are:

1. The universal mounting bracket may be installed on either the top or bottom of a shelf, on a bulkhead, or for overhead mounting.
2. The accessory speaker wires can be used with an external speaker.
3. All connections are "plug-in" type for easy removal of the radio.
4. Front fire built-in speaker allows for convenient in-dash mounting.

Choosing a Location

Some important factors to consider in selecting the location for your REGATTA 1.

1. Select a location that is free from spray and splash.
2. Keep the battery leads as short as possible. Direct connection to the battery is most desirable. If direct connection can not be made with the supplied power lead, any extension should be made with #10 AWG wire. Long extensions should use larger gauge wire.
3. Keep the antenna lead as short as possible. Long antenna leads can cause substantial loss of performance for both receiving and transmitting.
4. Locate your antenna as high as possible and clear from metal objects. The reliable range of coverage is a direct function of the antenna height.
5. Select a location that allows free air flow around the heat sink on the rear of the radio.
6. Select a location well away from the ship's compass.

Engine Noise Suppression

Interference from the noise generated by the electrical systems of engines is sometimes a problem with radios. The REGATTA 1 has been designed to be essentially impervious to ignition noise and alternator noise. However, in some installations it may be necessary to take measures to further reduce the effect of noise interference. All DC battery wires, antenna lead, and accessory cables should be routed away from the engine and engine compartment, and from power cabling carrying high currents.

Installation cont...

Antenna Considerations

A variety of antennas are available from a number of quality suppliers. It is recommended you draw upon the advice of your Midland dealer in determining a suitable antenna for your vessel and range requirements.

In general, communication range is increased by using a high-gain antenna placed as high as possible above the water line. Antennas should be located away from metal objects. Antennas should not have excessively long coaxial feed cables.

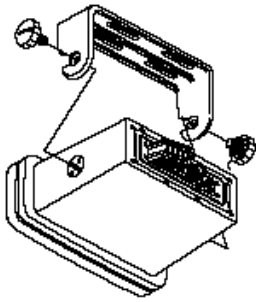
Antenna Selection and Installation

REGATTA 1 has been designed to accommodate all of the popular marine VHF antennas. However, the selection and the installation of the antenna is the responsibility of the user or installer. The FCC has determined that excessive radiation poses a health risk to people near radio transmitting antennas. Therefore, the antenna used with this radio should be installed using the following guidelines to insure a suitable distance between the antenna and persons close by. Small whip antennas (3 dB) or smaller should be installed keeping at least three feet separation distance between the radiating element and people. Larger antennas (6 dB or 9 dB) should be installed keeping at least a six foot separation distance. No person should touch the antenna or come into the separation distance when the radio is transmitting.

Installing the REGATTA 1

After you have carefully considered the various factors affecting your choice of location, position the radio (with the bracket, microphone, power cord, antenna and any auxiliary cables installed) into the selected location to assure there is no interference with the surrounding items.

Mark the location of the mounting bracket. Remove the bracket from the radio and use it as a template to mark the holes to be drilled for the mounting hardware. Drill the holes and mount the bracket with hardware compatible with the material of the mounting surface. Then attach the radio to the mounting bracket using the included knobs.



Note: Do not use any other mounting knobs than the ones enclosed. Do not insert the knobs without attaching the bracket.

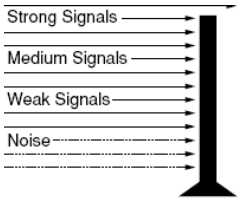
Connect the red wire of the supplied power cord to the positive (+) battery supply. Connect the black wire of the power cord to the negative (–) battery supply. The power cord is equipped with a fuse to protect the radio. Use only a six (7) ampere fast blow fuse for replacement. Connect the power cord to the keyed connector on the power "pigtail". Connect the antenna and all other auxiliary cables and accessories. Install the radio in the mounting bracket and connect all cables and accessories to the appropriate jacks and connectors.

Operation

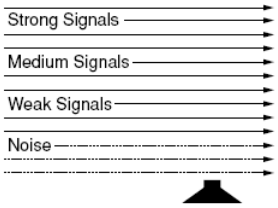
Power On/Off: Turn the unit On by rotating the PWR/VOL control clockwise. Adjust the volume to a comfortable level. When you turn the unit On, you will hear a beep, and the channel number will display on the LCD. ***Note:*** When you turn On the radio for the first time after purchase, the channel 16 will appear on the LCD.

Last Channel Memory: The REGATTA 1 memorizes the last channel selected before you turn Off the radio. For example, if you turn Off the radio on CH 8, it will be on that channel when turned back On.

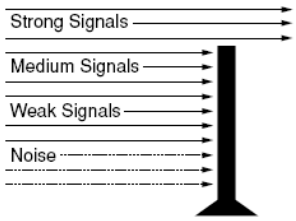
Squelch: Turn SQUELCH fully clockwise. This raises the "Squelch Gate" so high that only very strong signals can get through.



Turn SQUELCH fully counterclockwise until you hear a hiss. This lowers the "Squelch Gate" so that everything gets through - noise, weak signals, and strong signals.



Turn SQUELCH back clockwise until the hiss stops. Now the "Squelch Gate" allows only strong signals through.



Operation Cont...

Coast Guard Channel 16/9 : To access Coast Guard Channel 16 or Channel 9 communications, press 16/9/TRI. You can access Coast Guard Channel 16 instantly while tuned to another channel. Press 16/9/TRI again for Channel 9 Calling communications. Press 16/9/TRI a third time to return to the channel selected prior to accessing Coast Guard Channel 16/Channel 9 commnunications. The display will indicate the selected channel.

Tri-Watch: Tri-Watch monitors Channel 16, Channel 9, and the current Marine Channel. To activate Tri-Watch, press and hold 16/9/TRI for 2 seconds. TRI appears on the LCD, indicating Tri- Watch mode is in effect. If a signal is received on either Channel 16 or Channel 9, the radio remains on that channel until the signal ends. Press and hold 16/9/TRI for 2 seconds to cancel the Triple Watch mode.

Manual Tuning: To manually select a channel, press the channel up or down button. Communication channels are located on channel 01-28 and 60-88. Weather channels are located on channels WX 0-9.

Weather Channels: To select Weather Channels 0-9, press WX/ALERT. The radio will go to the last selected Weather Channel. Press the channel up/down buttons to select a different Weather Channel. To exit from Weather Channel press WX/ALERT. The radio returns to the previously selected Marine channel.

Weather Alert: To activate Weather Alert mode, press the WX/ALERT button for 2 seconds. ALERT will display on the LCD. When the radio is in Alert mode, it scans weather every 7 seconds. When an alert is received, the unit will switch to the current weather channel and emit a loud siren noise. To turn off the siren, press the WX/ALERT button.

Transmitting: The REGATTA 1 transmits on fifty-four marine frequencies and receives on eighty marine frequencies. Channel 70 of the USA, International, and Canadian frequencies, and channel 15 of the USA frequencies, and WX CH – are for receiving only. The radio transmits on channel 70 when sending DSC information. Your radio will not transmit on these channels.

PA Function: Press the PA button once to enter PA function. The LCD will display PA instead of channel. You must have an external PA speaker connected in order for this to work. To exit PA mode, press the PA button again.

Operation Cont...

Setting Transmit (TX) Power

***NOTE*: It is important to remember to use the LO position in port or for short range communications.**

1. When you turn the radio On for the first time, the unit is automatically set to transmit at 25 watts (HI).
2. Press HI/LO to change the transmitter output to 1 watt (LO).
3. Press HI/LO again to change back to 25 watts (HI).

Note: Each time the HI/LO is pressed a short tone sounds. CH13 is set as 1 watt (LO) channel. On the LO power channels, you cannot set the transmit power to HI. LO power channels are 13 and 67 for USA, and 13, 15, 17, and 20 for CAN.

Channel Scan: Press the SCAN/UIC button to begin rapidly scanning channels for an active channel. If a channel is active, the unit will lock on that channel. To begin scanning again, press the SCAN/UIC button again. If no active channel is found, press the SCAN/UIC button to end scan mode.

Channel Band Selection: Press the SCAN/UIC button for 6 seconds to swicth the unit to international band. Repeat again to switch to Canada band. Repeat a 3rd time to return to US band.

User MMSI

Federal MMSI's are issued by the National Telecommunications and Information Administration. Non-Federal MMSI's are issued by the Federal Communications Commission (FCC). You will need to obtain a nine digit MMSI number and program it into the REGATTA 1. The information obtained from the application is useful to the U.S. Coast Guard to help in search and rescue operations. To obtain an MMSI number, visit one of the following websites: http://wireless.fcc.gov/marine/fctsht14.html or www.boatus.com/mmsi/

This portion of the SETUP menu will allow you to program an MMSI, (Maritime Mobile Service Identity) for sending and receiving DSC calls.

Setting the MMSI: When you first turn the unit on after purchasing, press the DSC button and it will enter MMSI setting mode. Using the up and down arrow, enter the nine digit number. *Note: Only 2 digits at a time can display on the LCD while programming the MMSI into the radio.* Press the SELECT button to confirm settings. After setting the MMSI number, turn off the unit.

Please note: You can only program your radio twice with an MMSI number. After that, send your radio to Midland for factory service.

Distress

Note: You must set the user MMSI in order to send a Distress call. This feature will allow you to transmit a Distress call.

1. In order to transmit a Distress call, press and hold DISTRESS for 5 seconds.
2. The Distress call is transmitted and it waits for about 210 - 270 seconds. This is continued internally. After the Distress call has been sent, the Distress alert will sound every other second, and it also "watches" for a transmission between CH16 and CH70 until an acknowledgment signal is received from the Coast Guard shore station. To cancel the Distress call, press 16/9/TRI.
3. If an acknowledgment is not received, the Distress call is repeated until an acknowledgment is received from theCoast Guard shore station.

Note: If the radio receives a Distress call, it will be displayed on the LCD display. An emergency alert will sound. The name will be displayed if it is the name registered in the directory. Otherwise, sender's MMSI is displayed. Latitude, longitude, and time information will also be displayed if the GPS module is carried in the vessel that transmitted a DSC Distress call.

RECOMMENDED EMERGENCY BROADCAST INSTRUCTIONS

1. Make sure your radio is on.
2. Tune to channel 16.
3. Press the microphone button and, speaking slowly – clearly – calmly, say:
   a. "MAYDAY – MAYDAY – MAYDAY" for situations involving Immediate Danger to Life and Property: or
   b. "PAN – PAN – PAN" for urgent situations where there in No Immediate Danger to Life or Property.
4. Say: "THIS IS (INSERT VESSEL'S NAME), (INSERT VESSEL'S NAME), (INSERT VESSEL'S NAME), (INSERT VESSEL'S CALL SIGN), OVER".
5. Release the microphone button briefly and listen for acknowledgement. If no one answers, repeat steps 3 & 4.
6. If there is no acknowledgement, or if the Coast Guard or another vessel responds, say: "MAYDAY" or "PAN" (INSERT VESSEL'S NAME)".
7. DESCRIBE YOUR POSITION using latitude and Longitude coordinates, LORAN coordinates, or range and bearing from a known point.
8. STATE THE NATURE OF THE DISTRESS.
9. GIVE NUMBER OF PERSONS ABOARD AND THE NATURE OF ANY INJURIES.
10. ESTIMATE THE PRESENT SEA-WORTHINESS OF YOUR VESSEL.
11. BRIEFLY DESCRIBE YOUR VESSEL: (INSERT LENGTH, COLOR, HULL TYPE, TRIM, MASTS, POWER, AND ANY ADDITIONAL DISTINGUISHING FEATURES).
12. Say: "I WILL BE LISTENING ON CHANNEL 16/21/82".
13. End message by saying: "THIS IS (INSERT VESSEL'S NAME & CALL SIGN)".
14. If your situation permits, standby the radio to await further communications with the Coast Guard or another vessel. If no answer, repeat, then try another channel.

DIGITAL SELECTIVE CALLING

Digital Selective Calling is a process of establishing a radio call, it has been chosen by the International Maritime Organization (IMO) as an international standard for establishing VHF, MF and HF radio calls. Digital Selective Calling has also been selected as part of the Global Maritime Distress and Safety System (GMDSS).
This service will let you instantly send a Distress call with GPS position (when optional GPS receiver is connected to the REGATTA 1) to the US Coast Guard and other vessels within range of the transmission. DSC will also let you initiate or receive distress, urgency, safety, position information and routine calls to or from another vessel outfitted with a DSC transceiver.

Press the DSC Button to enter DSC Call Mode. DSC has 2 options as follows:

1. INDIVIDUAL
   - Press the DSC button once. IN will be displayed on the LCD.
   - Press Select to choose INDIVIDUAL MODE.
   - You will then need to enter the MMSI number for the individual you would like to call. Use the up/down arrows to choose the 1st digit. Press select to move to the next digit. It will be blinking. Repeat this procedure until all 9 digits have been programmed. When finished the unit will return to channel 16.

   Note: Only 2 digits at a time can display on the LCD while programming the MMSI into the radio.

2. ALL SHIPS
   - Press the DSC button once. Use the CH up/down buttons to toggle to ALL SHIPS MODE. AL will be displayed on the LCD.
   - Press Select to choose ALL SHIPS MODE. The radio will then have you choose which type of ALL SHIPS message you would like to send: **URGENCY (UR)**, **SAFETY (SA)**, or **ROUTINE(RO)**.

     Note: ROUTINE calls tune to the previously selected channel.
   - Use the CH up/down buttons to toggle to URGENCY or SAFETY. When chosen, press select to transmit the ALL SHIPS DSC call.
     When sending either an URGENCY or SAFETY message, all radios will automatically move to channel 70 until all of the data is received. After your selected URGENCY or SAFETY ALL SHIPS call is transmitted, the radio will switch to Channel 16. You should wait a few minutes before transmitting the ALL SHIPS call information again.

REGATTA1 GPS Input Connection Specification

This section is useful when attaching an external GPS to the REGATTA 1 DSC radio. Many GPS units have a setup menu to be able to configure the NMEA0183 serial data output. This output can be used to supply information to other devices on the vessel including auto pilots, chart plotters, etc.
To setup the GPS to be used with the REGATTA 1 DSC radio, the following items need to be considered for proper operation:

1. Baud Rate – Set the Baud rate to 4800.
2. Data Bits – Set the Data Bits to 8.
3. Parity – Set the Parity to None.
4. Stop Bits – Set the Stop Bits to 1.
5. RMC, GLL, GGA, GNS, and ZDA Command – These commands are used by the REGATTA 1 and includes the UTC Time, Latitude, and Longitude.The data amplitude : Over 3.0V Drive capability : Over 10mA

VHF FM Marine Radio Telephone
Channel and Functions
(USA Channels)

CHANNEL DESIG	FREQUENCY (MHz) TRANSMIT	RECEIVE	TYPE OF TRAFFIC	SHIP TO SHIP	SHIP TO SHORE
WX0	—	163.275	NOAA Weather	RX Only	RX Only
WX1	—	162.550	NOAA Weather	RX Only	RX Only
WX2	—	162.400	NOAA Weather	RX Only	RX Only
WX3	—	162.475	NOAA Weather	RX Only	RX Only
WX4	—	162.425	NOAA Weather	RX Only	RX Only
WX5	—	162.450	NOAA Weather	RX Only	RX Only
WX6	—	162.500	NOAA Weather	RX Only	RX Only
WX7	—	162.525	NOAA Weather	RX Only	RX Only
WX8	—	161.650	Can. Weather	RX Only	RX Only
WX9	—	161.775	Can. Weather	RX Only	RX Only
01	156.050	156.050	VTS	Yes	Yes
02					
03	156.150	156.150	Port Ops	Yes	Yes
04					
05	156.250	156.250	VTS	Yes	Yes
06	156.300	156.300	Safety	Yes	No
07	156.350	156.350	Com'l	Yes	Yes
08	156.400	156.400	Com'l	Yes	No
09	156.450	156.450	Com'l & Non Com'l	Yes	Yes
10	156.500	156.500	Com'l	Yes	Yes
11	156.550	156.550	Com'l	Yes	Yes
12	156.600	156.600	Port Ops	Yes	Yes
13	156.650	156.650	Navigational, TX 1W only	Yes	Yes
14	156.700	156.700	Port Ops	Yes	Yes
15	—	156.750	Environmental	RX Only	RX Only
16	156.800	156.800	Safety Calling	Yes	Yes
17	156.850	156.850	State Control	Yes	Yes
18	156.900	156.900	Com'l	Yes	Yes
19	156.950	156.950	Com'l	Yes	Yes
20	157.000	157.000	Port Ops, RX Duplex	Yes	Yes
21	157.050	157.050	Coast Guard	Yes	Yes
22	157.100	157.100	Coast Guard	Yes	Yes
23	157.150	157.150	Coast Guard	Yes	Yes
24	157.200	161.800	Public Corresp,Duplex	No	Yes
25	157.250	161.850	Public Corresp,Duplex	No	Yes
26	157.300	161.900	Public Corresp,Duplex	No	Yes
27	157.350	161.950	Public Corresp,Duplex	No	Yes
28	157.400	162.000	Public Corresp,Duplex	No	Yes
60					
61	156.075	156.075			
62					
63	156.175	156.175			
64	156.225	156.225			
65	156.275	156.275	Port Ops	Yes	Yes
66	156.325	156.325	Port Ops	Yes	Yes
67	156.375	156.375	Com'l, TX 1W only	Yes	No
68	156.425	156.425	Non Com'l	Yes	Yes
69	156.475	156.475	Non Com'l	Yes	Yes
70	—	156.525		RX Only	RX Only
71	156.575	156.575	Non Com'l	Yes	Yes
72	156.625	156.625	Non Com'l	Yes	No
73	156.675	156.675	Port Ops	Yes	Yes
74	156.725	156.725	Port Ops	Yes	Yes
75	156.775	156.775			
76	156.825	156.825			
77	156.875	156.875	Port Ops	Yes	No
78	156.925	156.925	Non Com'l	Yes	Yes
79	156.975	156.975	Com'l	Yes	Yes
80	157.025	157.025	Com'l	Yes	Yes
81	157.075	157.075	Coast Guard	Yes	Yes
82	157.125	157.125	US Govt Only	Yes	Yes
83	157.175	157.175	Coast Guard	Yes	Yes
84	157.225	161.825	Public Corresp,Duplex	No	Yes
85	157.275	161.875	Public Corresp,Duplex	No	Yes
86	157.325	161.925	Public Corresp,Duplex	No	Yes
87	157.375	161.975	Public Corresp,Duplex	No	Yes
88	157.425	157.425	Com'l	Yes	No

VHF FM Marine Radio Telephone
Channel and Functions
(International Channels)

CHANNEL DESIG	FREQUENCY (MHz) TRANSMIT	RECEIVE	TYPE OF TRAFFIC	SHIP TO SHIP	SHIP TO SHORE
WX0	—	163.275	NOAA Weather	RX Only	RX Only
WX1	—	162.550	NOAA Weather	RX Only	RX Only
WX2	—	162.400	NOAA Weather	RX Only	RX Only
WX3	—	162.475	NOAA Weather	RX Only	RX Only
WX4	—	162.425	NOAA Weather	RX Only	RX Only
WX5	—	162.450	NOAA Weather	RX Only	RX Only
WX6	—	162.500	NOAA Weather	RX Only	RX Only
WX7	—	162.525	NOAA Weather	RX Only	RX Only
WX8	—	161.650	Can. Weather	RX Only	RX Only
WX9	—	161.775	Can. Weather	RX Only	RX Only
01	156.050	160.650	VTS,Duplex	Yes	Yes
02	156.100	160.700	Port Ops,Duplex	Yes	Yes
03	156.150	160.750	Port Ops,Duplex	Yes	Yes
04	156.200	160.800	Port Ops,Duplex	Yes	Yes
05	156.250	160.850	VTS,Duplex	Yes	Yes
06	156.300	156.300	Safety	Yes	No
07	156.350	160.950	Com',Duplexl	Yes	Yes
08	156.400	156.400	Com'l	Yes	No
09	156.450	156.450	Com'l & Non Com'l	Yes	Yes
10	156.500	156.500	Com'l	Yes	Yes
11	156.550	156.550	Com'l	Yes	Yes
12	156.600	156.600	Port Ops	Yes	Yes
13	156.650	156.650	Navigational	Yes	Yes
14	156.700	156.700	Port Ops	Yes	Yes
15	156.750	156.750	Environmental	Yes	Yes
16	156.800	156.800	Safety Calling	Yes	Yes
17	156.850	156.850	State Control	Yes	Yes
18	156.900	161.500	Com'l,Duplex	Yes	Yes
19	156.950	161.550	Com'l,Duplex	Yes	Yes
20	157.000	161.600	Port Ops,Duplex	Yes	Yes
21	157.050	161.650	Coast Guard,Duplex	Yes	Yes
22	157.100	161.700	Coast Guard,Duplex	Yes	Yes
23	157.150	161.750	Coast Guard,Duplex	Yes	Yes
24	157.200	161.800	Public Corresp,Duplex	No	Yes
25	157.250	161.850	Public Corresp,Duplex	No	Yes
26	157.300	161.900	Public Corresp,Duplex	No	Yes
27	157.350	161.950	Public Corresp,Duplex	No	Yes
28	157.400	162.000	Public Corresp,Duplex	No	Yes
60	156.025	160.625	Duplex		
61	156.075	160.675	Duplex		
62	156.125	160.725	Duplex		
63	156.175	160.775	Duplex		
64	156.225	160.825	Duplex		
65	156.275	160.875	Port Ops,Duplex	Yes	
66	156.325	160.925	Port Ops,Duplex	Yes	Yes
67	156.375	156.375	Com'l	Yes	No
68	156.425	156.425	Non Com'l	Yes	Yes
69	156.475	156.475	Non Com'l	Yes	Yes
70	—	156.525		RX Only	RX Only
71	156.575	156.575	Non Com'l	Yes	Yes
72	156.625	156.625	Non Com'l	Yes	No
73	156.675	156.675	Port Ops	Yes	Yes
74	156.725	156.725	Port Ops	Yes	Yes
77	156.875	156.875	Port Ops	Yes	No
78	156.925	161.525	Non Com'l,Duplex	Yes	Yes
79	156.975	161.575	Com'l,Duplex	Yes	Yes
80	157.025	161.625	Com'l,Duplex	Yes	Yes
81	157.075	161.675	Coast Guard,Duplex	Yes	Yes
82	157.125	161.725	US Govt Only,Duplex	Yes	Yes
83	157.175	161.775	Coast Guard,Duplex	Yes	Yes
84	157.225	161.825	Public Corresp,Duplex	No	Yes
85	157.275	161.875	Public Corresp,Duplex	No	Yes
86	157.325	161.925	Public Corresp,Duplex	No	Yes
87	157.375	161.975	Public Corresp,Duplex	No	Yes
88	157.425	162.025	Com'l,Duplex	Yes	No

VHF FM Marine Radio Telephone
Channel and Functions
(Canadian Channels)

CHANNEL DESIG	FREQUENCY (MHz) TRANSMIT	RECEIVE	TYPE OF TRAFFIC	SHIP TO SHIP	SHIP TO SHORE
WX0	—	163.275	NOAA Weather	RX Only	RX Only
WX1	—	162.550	NOAA Weather	RX Only	RX Only
WX2	—	162.400	NOAA Weather	RX Only	RX Only
WX3	—	162.475	NOAA Weather	RX Only	RX Only
WX4	—	162.425	NOAA Weather	RX Only	RX Only
WX5	—	162.450	NOAA Weather	RX Only	RX Only
WX6	—	162.500	NOAA Weather	RX Only	RX Only
WX7	—	162.525	NOAA Weather	RX Only	RX Only
WX8	—	161.650	Can. Weather	RX Only	RX Only
WX9	—	161.775	Can. Weather	RX Only	RX Only
01	156.050	160.650	Duplex	Yes	Yes
02	156.100	160.700	Duplex	Yes	Yes
03	156.150	160.750	Duplex	Yes	Yes
04	156.200	156.200		Yes	Yes
05	156.250	156.250		Yes	Yes
06	156.300	156.300		Yes	No
07	156.350	156.350		Yes	Yes
08	156.400	156.400		Yes	No
09	156.450	156.450		Yes	Yes
10	156.500	156.500		Yes	Yes
11	156.550	156.550		Yes	Yes
12	156.600	156.600		Yes	Yes
13	156.650	156.650	1W	Yes	Yes
14	156.700	156.700		Yes	Yes
15	156.750	156.750	1W	Yes	Yes
16	156.800	156.800		Yes	Yes
17	156.850	156.850	1W	Yes	Yes
18	156.900	156.900		Yes	Yes
19	156.950	156.950		Yes	Yes
20	157.000	161.600	Duplex, 1W	Yes	Yes
21	157.050	157.050		Yes	Yes
22	157.100	157.100		Yes	Yes
23	157.150	161.750	Duplex	Yes	Yes
24	157.200	161.800	Duplex	No	Yes
25	157.250	161.850	Duplex	No	Yes
26	157.300	161.900	Duplex	No	Yes
27	157.350	161.950	Duplex	No	Yes
28	157.400	162.000	Duplex	No	Yes
60	156.025	160.625	Duplex		
61	156.075	156.075			
62	156.125	156.125			
63	—	—			
64	156.225	156.225			
65	156.275	156.275		Yes	Yes
66	156.325	156.325		Yes	Yes
67	156.375	156.375		Yes	No
68	156.425	156.425		Yes	Yes
69	156.475	156.475		Yes	Yes
70	—	156.525		RX Only	RX Only
71	156.575	156.575		Yes	Yes
72	156.625	156.625		Yes	No
73	156.675	156.675		Yes	Ye
74	156.725	156.725		Yes	Ye
77	156.875	156.875		Yes	No
78	156.925	156.925		Yes	Yes
79	156.975	156.975		Yes	Yes
80	157.025	157.025		Yes	Yes
81	157.075	157.075		Yes	Yes
82	157.125	157.125		Yes	Yes
83	157.175	157.175		Yes	Yes
84	157.225	161.825	Duplex	No	Yes
85	157.275	161.875	Duplex	No	Yes
86	157.325	161.925	Duplex	No	Yes
87	157.375	161.975	Duplex	No	Yes
88	157.425	162.025	Duplex	Yes	No

Technical Specifications

General

Channels.....All 48 USA, 55 Canadian & 57 international marine channels
Frequency generation..... PLL synthesizer
Frequency range.....TX from 156.025 to 157.425 MHz
RX from 156.050 to 162.550 MHz
Antenna Impedance.....50 Ohm
Power supply.....12V DC
Operating temperature.....from -20°C to +55°C
Size (HxLxW).....70×160×170 mm
Weight (device only).....1.305 Kg

Transmitter

Output power.....High (HI): 25W/Low (LO):1W
Modulation Type.....FM
Microphone.....condenser type
Hum and noise attenuation.....34dB
Audio distortion.....5%
Harmonics reduction.....HI: 80dB/LO:60dB

Receiver

Sensitivity @ 20 dB Sinad.....<0.5 V
S/N ratio (20dB).....0,8 V
Squelch sensitivity.....threshold -12dB V (EMF)
Adjacent channel rejection.....70dB
Audio output power .....>2W su 8 Ohm
Audio distortion.....10%

Note: these values are average. Actual values may be subject to variation.

Troubleshooting

Problem	Possible causes	Solution
Device doesn't turn on	Power supply is not correctly connected	Verify that power supply is properly connected
	The protection fuse has shorted (located on the power cable)	Verify the cause of the problem and substitute the fuse
Device turns on, but doesn't receive signals	Antenna is not correctly connected	Verify that antenna is properly connected
	Volume level is too low	Adjust volume level
	Squelch level is too high	Adjust squelch level
Unable to contact another party	Incorrect marine channel selected	Verify channel and, if necessary, change channel
Other party has difficulty in hearing you	Distance is too far and low transmission power (LO) was accidentally selected	Select high transmission power (HI)
Reception is broken and/or disturbed	Squelch level is too high	Adjust squelch level
	Signal is too weak (other party is too far away and/or antenna is blocked by obstacles)	Try to completely open the squelch and/or move closer to the other party
	Other users are using the same radio channel	Verify radio traffic on desired channel and, if necessary, change channel
	Other interference devices (televisions, computers, transceivers, etc.) too close to **REGATTA 1**	Move other interference devices further from **REGATTA 1**
Impossible to transmit or use high transmission power	Some channels operate only on low power or are only for reception	Tune to another channel
DSC, MMSI or ATIS functions unusable	Individual MMIS codes have n been programmed	Program the codes
Vessel battery runs down sooner than expected	Excessive use of transmission	Try to reduce transmission times and/or use low transmission power
Scanning and Triple Watch malfunctioning	Squelch has not been correctly adjusted	Adjust squelch level

Care and Maintenance

Your REGATTA 1 is a precision crafted piece of electronic equipment and you should treat it accordingly. Due to the rugged design, very little maintenance is required. However, a few precautions should be observed:

- If the antenna has been damaged, you should not transmit except in the case of an emergency. A defective antenna may cause damage to your radio.
- You are responsible for continued FCC technical compliance of your radio.
- Never open the device (transceiver or microphone) as this may compromise the water seal.
- If the device becomes dirty or dusty, do not use alcohol, solvents or abrasives to clean it. Use only a soft cloth, slightly dampened with water. For more persistent cases, use a mild detergent.

Limited Warranty

Midland Radio will repair or replace, at its option without charge, your MODEL REGATTA 1 VHF Marine transceiver which fails due to a defect in material or workmanship within FIVE years following the initial consumer purchase.

This warranty does not include the cost of labor for removal or re-installation of the product in a vehicle or other mounting.

Performance of any obligation under this warranty may be obtained by returning the warranted product, freight prepaid, along with a readable copy of the original dated sales receipt, to:

Midland Radio Corporation
Warranty Service Department
5900 Parretta Drive
Kansas City, MO 64120

Note: The above warranty applies only to merchandise purchased in the United States of America or any of the territories or possessions or from U.S. military exchange.

This warranty gives you specific legal rights, and you may also have other rights, which vary from state to state.

Midland Radio Corporation
5900 Parretta Drive
Kansas City, MO 64120
Tel: (816) 241-8500
E-mail: mail@midlandradio.com
URL: www.midlandradio.com
Model REGATTA 1

Service and Technical Support

*** If you have a problem which you believe requires service, please call first and speak with a service technician. Many problems can be remedied over the phone without returning the unit for service.**

For Technical Support Contact:
Midland Radio Corporation
5900 Parretta Drive
Kansas City, Missouri 64120
Phone: (816) 241-8500
Fax: (816) 241-5713
E-mail: mail@midlandradio.com
Website: www.midlandradio.com

If after talking with technical support you still feel your unit needs to be returned for service, follow the below instructions:

1. Pack the unit in its original box and packing. Then pack the original box in a suitable shipping carton. Caution: Improper packing may result in damage during shipment.
2. Include the following:
    a. full description of any problems
    b. money order for $7.50 to cover shipping and handling (this may not be required in some states)
    c. daytime telephone number, name & address
3. For warranty service include a photocopy of the bill of sale from an authorized dealer or other proof of purchase showing the date of sale.
4. You do not need to return accessory items (Fused DC power cord, mounting hardware, Owners Guide) unless they might be directly related to the problem.
5. A flat rate of $45.00 will apply to repairs not covered by warranty or units that are over five years old. Send only cashier's check, money order or Master Card or Visa card number.

Send to:
Midland Radio Corporation
5900 Parretta Drive
Kansas City, Missouri 64120

MIDLAND RADIO CORPORATION

5900 Parretta Drive
Kansas City, MO 64120
Call 816.241.8500

visit us at http://www.midlandradio.com