



Fixed Mount VHF Marine Radio with DSC

Owner's Manual

www.midlandradio.com



2

Table of Contents

Welcome to the World of Midland Electronics	3
Major REGATTA 1 Features	3 4
FCC Licensing Information	-
- Station License	4
- International Station License	4
- Radio Call Sign	4
- Canadian Ship Station License	4
Warnings	5
Included with your REGATTA 1	6
Controls and Indicators	7
-Front Panel	7
-Back Panel	8
-LCD Indicators	8
Installation	9-10
Operation	11-13
Distress	14
Digital Selective Calling	15
GPS Input Connection Specification	16
USA Channel and Function Chart	17
International Channel and Function Chart	18
Canada Channel and Function Chart	19
Technical Specifications	20
Trouble Shooting	21
Care and Maintenance	22
Limited Warranty	23
Service and Technical Support	24
Other Midland Products	25



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 useaccording 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.





<u>Warnings</u>

<u>General</u>

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

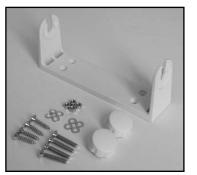
- Pay attention to ambient conditions although REGATTA 1 is designed to operate under the most severe conditions, it is important to avoid exposure to environments that are excessively humid or dusty, or to temperatures outside the 5°F to +55°F range. Also avoid exposure to direct sunlight.
- Avoid jarring 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



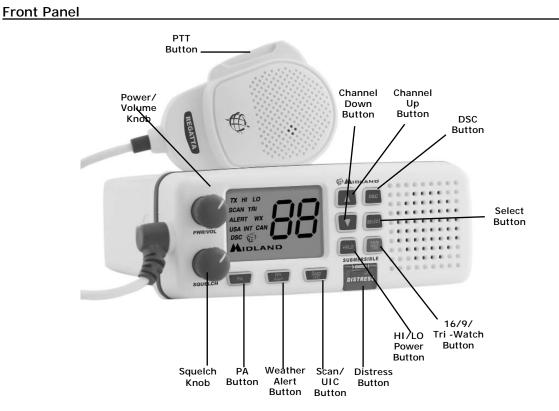
Microphone Mounting Kit



GPS Interface Cable



Controls and Indicators



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.

<u>PA Button</u>: Press this key to enable the PA (Public Address) feature.

<u>Weather Alert Button</u>: 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.

<u>Scan/UIC Button</u>: 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.

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

<u>16/9/Tri-Watch Button</u>: 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.

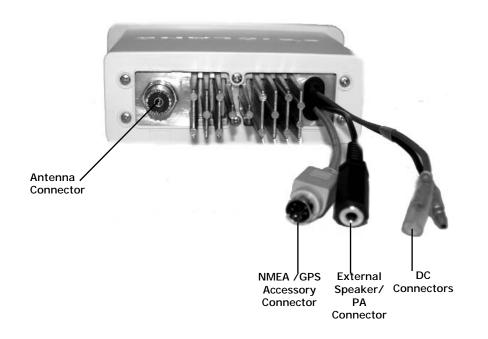
DSC Button: Press this button to enter DSC mode.

<u>Channel Up/Down Buttons:</u> 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.

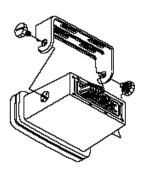
Installing the REGATTA 1

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

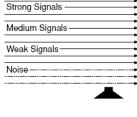
Power On/Off: Turn the unit On by rotating the PWR/VOL control clockwise. Adjust the volume to a comfortable level. When you turn the unit On, you will hear a beep, and the channel number will display on the LCD. Note: When you turn On the radio for the first time after purchase, the channel 16 will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

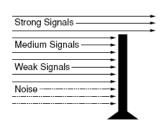
Last Channel Memory: The REGATTA 1 memorizes the last channel selected before you turn Off the radio. For example, if you turn Off the radio on CH 8, it will be on that channel when turned back On.

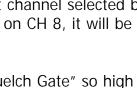
Squelch: Turn SQUELCH fully clockwise. This raises the "Squelch Gate" so high that only very strong signals can get through. Strong Signals

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.







Medium Signals Weak Signals Noise





Operation Cont...

<u>Coast Guard Channel 16/9</u>: 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 communications. The display will indicate the selected channel.

<u>**Tri-Watch:**</u> 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.

<u>Manual Tuning</u>: 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.

<u>Weather Channels</u>: 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.

<u>Weather Alert:</u> 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.

<u>Channel Scan:</u> 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.

<u>Channel Band Selection</u>: Press the SCAN/UIC button for 6 seconds to switch 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.

<u>Setting the MMSI</u>: 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.



<u>Distress</u>

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.
- 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

- Make sure your radio is on.
- Tune to channel 16.
- Press the microphone button and, speaking slowly clearly calmly, say:
 - MAYDAY MAYDAY MAYDAY" for situations involving Immediate Danger to Life and Property: or
 - PAN PAN PAN' for urgent situations where there in No Immediate Danger to Life or Property.
- Say: "THIS IS (INSERT VESSEL'S NAME), (INSERT VESSEL'S NAME), (INSERT VESSEL'S NAME), (INSERT VESSEL'S CALL SIGN), OVER¹.
- Release the microphone button briefly and listen for acknowledgement. If no one answers, repeat steps 3 & 4.
- If there is no acknowledgement, or if the Coast Guard or another vessel responds, say: "MAYDAY" or "PAN" (INSERT VESSEL'S NAME)".
- 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.
- GIVE NUMBER OF PERSONS ABOARD AND THE NATURE OF ANY INJURIES.
- 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".
- End message by saying: "THIS IS (INSERT VESSEL'S NAME & CALL SIGN)".
- 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 FREQUENCY (MHz) TYPE OF SHIP SHIP DESIG TRANSMIT RECEIVE TRAFFIC TO SHIP TO SHOP WX1 1162.255 HOAA Weather RX Only RX Only WX2 1162.460 HOAA Weather RX Only RX Only WX3 1162.450 HOAA Weather RX Only RX Only WX3 1162.551 HOAA Weather RX Only RX Only WX3 1162.551 HOAA Weather RX Only RX Only WX3 1162.552 HOAA Weather RX Only RX Only WX3 1162.550 HOAA Weather RX Only RX Only HOA HOAA HOAA WEATHER RX ONLY RX ONLY WX3 1162.550 HOAA HOAA WEATHER RX ONLY RX ONLY WX3 1162.550 HOAA HOAA WEATHER RX ONLY RX ONLY WX3 1162.550 HOAA HOAA HOAA HOAA HOAA HOAA HOAA HOA						
WX0 163.275 NOAA Weather RX Only RX Only RX Only WX1 162.400 NOAA Weather RX Only RX Only RX Only WX2 162.425 NOAA Weather RX Only RX Only RX Only WX3 162.425 NOAA Weather RX Only RX Only RX Only WX3 162.425 NOAA Weather RX Only RX Only RX Only WX3 116.500 ISS.500 NTS RX Only RX Only RX Only WX9 161.775 Can. Weather RX Only RX Only RX Only 01 156.50 156.50 YTS Yes Yes Yes 02 - 163.450 YTS Yes Yes Yes 03 156.50 156.50 YES Yes Yes Yes 04 156.50 156.50 Con'l Yes Yes Yes	CHANNEL	FREQUEN	CY (MHZ)		SHIP	SHIP
WX1 192.840 NOAA Weather RX Only RX Only RX Only WX2 192.475 NOAA Weather RX Only RX Only RX Only WX3 192.425 NOAA Weather RX Only RX Only RX Only WX3 192.450 NOAA Weather RX Only RX Only RX Only WX3 192.450 NOAA Weather RX Only RX Only RX Only WX3 192.450 NOAA Weather RX Only RX Only RX Only WX4 192.450 NOAA Weather RX Only RX Only RX Only WX4 192.450 NOA Weather RX Only RX Only RX Only W30 192.450 NOA Yea Yea Yea 03 195.450 194.520 Yea Yea Yea 04 Yea Yea Yea 05 195.450		TRANSMIT	RECEIVE		TO SHIP	TO SHORE
WX2 162.405 NOAA Weather PK Only PK Only WX3 162.425 NOAA Weather PK Only PK Only WX3 162.426 NOAA Weather PK Only PK Only WX3 162.426 NOAA Weather PK Only PK Only WX3 162.526 NOAA Weather RX Only PK Only WX3 161.650 Can. Weather RX Only RX Only WX3 161.650 Port Opa Yes Yes 01 156.050 175 Can. Weather RX Only RX Only 02 156.150 156.250 175 Yes Yes 03 156.150 156.350 156.350 Second Yes Yes 04 156.450 156.450 Con'1 Yes Yes Yes 10 156.500 156.500 Con'1 Yes Yes Yes 11 156.500		-				
WX2 — 192.475 NOAA Weather FX Only FX Only FX Only WX5 — 152.455 NOAA Weather FX Only FX Only FX Only WX5 — 152.509 NOAA Weather FX Only FX Only FX Only WX6 — 162.529 NOAA Weather FX Only FX Only FX Only WX8 — 161.650 Can. Weather FX Only FX Only FX Only WX8 — 161.758 Can. Weather FX Only FX Only FX Only WX8 — 165.500 156.500 Com Yea Yea Yea 01 156.501 156.502 Com'1 Yea Yea Yea 03 156.400 156.400 Com'1 Yea Yea Yea 04 156.501 Com'1 Yea Yea Yea Yea 10 156.500 Com'1 Yea Yea Yea Yea 11		-				
VXX6 152.450 NOAA Weather FX Only FX Only VX56 152.500 NOAA Weather FX Only FX Only VX67 161.550 NOAA Weather FX Only FX Only VX70 161.550 Can. Weather FX Only FX Only VX90 161.550 Can. Weather FX Only FX Only 01 156.050 156.050 VTS Yes Yes 02 161.550 FX Only FX Only FX Only 03 156.150 Port Ops Yes Yes Yes 04 156.500 156.900 Steley Yes Yes Yes 05 156.500 156.500 Coml'it Non Coml'it Yes Yes Yes 06 156.500 FX Only FX Only Yes Yes Yes 10 156.500 FX Only Yes Yes Yes Yes 11		-				
WX6 — 162.450 HOAA Weather RX Only RX Only RX Only WX7 — 162.520 HOAA Weather RX Only RX Only RX Only WX8 — 161.650 Can. Weather RX Only RX Only RX Only WX8 — 161.755 Can. Weather RX Only RX Only 01 156.050 VTS Ves Yes 02 — 156.150 Port Ope Yes Yes 03 156.250 156.250 Gram Yes Yes 04 — Yes Yes Yes 05 156.250 Gram Yes Yes 04 166.400 156.450 Gram Yes Yes 05 156.500 Com'l Yes Yes Yes 11 156.500 156.500 Com'l A No Only Yes Yes 12 156.500 State Control Yes Yes Yes <tr< td=""><td></td><td>-</td><td></td><td></td><td><i>,</i></td><td></td></tr<>		-			<i>,</i>	
WX6 — 192.503 NOAA Weather FX Only FX Only FX Only WX8 — 161.550 Can. Weather FX Only FX Only FX Only WX8 — 161.775 Can. Weather FX Only FX Only FX Only 01 156.050 156.050 VTS Yes Yes Yes 03 156.150 156.250 VTS Yes Yes Yes 04 — 156.250 VTS Yes Yes Yes 05 156.250 156.250 Ord Yes Yes Yes 06 156.200 Satety Yes Yes Yes Yes 01 156.350 Corn'I Yes Yes Yes Yes 11 166.600 Sh.600 Corn'I Yes Yes Yes 12 156.600 Corn'I Ann Corn'I Yes Yes Yes 13 156.600 Corn'I Ann Corn'I Yes						
WX8 162.525 NOAA Weather FIX Only FIX Only FIX Only WX8 161.755 Can. Weather FIX Only FIX Only 01 156.050 VTS Yes Yes 02 Image: Solid S						
WX8 161.650 Can. Weather PX Only PX Only PX Only 01 156.050 156.050 VTS Yes Yes 03 156.150 156.050 VTS Yes Yes 03 156.150 156.150 Port Ops Yes Yes 04 05 156.250 156.250 VTS Yes Yes No 06 156.260 156.260 Satety Yes No 07 156.360 156.400 Corn! 1 Yes Yes Yes 10 156.400 Corn! 1 Yes Yes Yes Yes 11 166.600 156.400 Corn! 1 Yes Yes Yes 12 156.600 Corn! Angatonal, TX !W only Yes Yes Yes 13 156.600 Fort Ops, RX Calling Yes Yes Yes 14 156		-				
WX8 - 161.75 Can. Wesher FX Only FX Only 01 156.050 VTS Yes Yes 02 156.150 156.150 YTS Yes Yes 03 156.150 156.250 VTS Yes Yes 04 155.250 156.250 Safety Yes No 05 155.250 156.350 Com'i & Mon Com'i Yes Ne 06 155.450 156.450 Com'i & Mon Com'i Yes Ne 09 155.450 156.550 Com'i & Mon Com'i Yes Yes 10 155.550 156.650 Navigational, X1 Wonly Yes Yes 11 156.650 Navigational, X1 Wonly Yes Yes Yes 12 156.650 Navigational, X1 Wonly Yes Yes Yes 13 156.650 Safety Calling Yes Yes Yes 14 156.500 Com'i Yes Yes Yes <td></td> <td>-</td> <td></td> <td></td> <td></td> <td></td>		-				
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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 85 157.325 161.925 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 87 157.375 161.975 Public Corresp,Duplex No Yes			156.775			
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 81 157.075 157.025 Com'l 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 86 157.375 161.925 Public Corresp,Duplex No Yes 87 157.375 161.975 Public Corresp,Duplex No Yes	76	156.825	156.825			
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 85 157.275 161.925 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	77	156.875	156.875	Port Ops	Yes	No
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 85 157.275 161.925 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	78	156.925	156.925	Non 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 85 157.275 161.925 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			156.975	Com'l	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 85 157.325 161.925 Public Corresp.Duplex No Yes 86 157.325 161.925 Public Corresp.Duplex No Yes 87 157.375 161.975 Public Corresp.Duplex Yes Yes		157.025				
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					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						
95 157.275 161.875 Public Corresp, Duplex No Yes 96 157.325 161.925 Public Corresp, Duplex No Yes 87 157.375 161.975 Public Corresp, Duplex No Yes						
96 157.325 161.925 Public Corresp.Duplex No Yes 87 157.375 161.975 Public Corresp.Duplex — o Yes						
87 157.375 161.975 Public Corresp.Duplexo Yes						
88 157.425 157.425 Com'l Yes No						
	88	157.425	157.425	Com'l 7	Yes	No



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

CUANNEL	EDEOUEN	CV (MUS)	TYPE OF	CLUD	CHIP
CHANNEL DESIG	FREQUEN TRANSMIT		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 WX6		162.450 162.500	NOAA Weather NOAA Weather	RX Only RX Only	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	156.150 156.200	160.750 160.900	Port Ops, Duplex	Yes Yes	Yes Yes
04	156.250	160.850	Port Ops, Duplex VTS, Duplex	Yes	Yes
06	156,300	156.300	Safety	Yes	No
07	156.350	160.950	Com',Duplexi	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	156.650 156.700	156.650 156.700	Navigational Port Ops	Yes Yes	Yes Yes
14	156.750	156.750	Environmental	Yes	Yes
16	156.800	156.900	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 23	157.100 157.150	161.700 161.750	Coast Guard, Duplex Coast Guard, Duplex	Yes Yes	Yes Yes
23	157.200	161.900	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 64	156.175 156.225	160.775 160.825	Duplex 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'i	Yes	Yes
69	156.475	156.475	Non Com'l	Yes	Yes
70	150 575	156.525	Non Com'l	RX Only	RX Only
71 72	156.575 156.625	156.575 156.625	Non Com'l Non Com'l	Yes Yes	Yes No
72	156.625	156.625	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'I,Duplex	Yes	Yes
79	156.975	161.575	Com'I,Duplex	Yes	Yes
80	157.025	161.625	Com'I,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 84	157.175	161.775	Coast Guard, Duplex Public Corresp, Duplex	Yes No	Yes
84	157.225 157.275	161.825 161.875	Public Corresp, Duplex Public Corresp, Duplex	NO	Yes 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'I,Duplex	Yes	No



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

			THE OF		0.000
CHANNEL	FREQUEN		TYPE OF	SHIP	SHIP
DESIG WX0	TRANSMIT		TRAFFIC NOAA Weather	TO SHIP	TO SHORE
WX0 WX1		163.275 162.550	NOAA Weather	RX Only RX Only	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	156.150 156.200	160.750 156.200	Duplex	Yes Yes	Yes
04	156.250	156.250		Yes	Yes
06	156.300	156.200		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 23	157.100	157.100 161.750	Dupley	Yes	Yes
23	157.200	161.800	Duplex Duplex	No	Yes 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 70	156.475	156.475 156.525		Yes RX Only	Yes RX Only
70	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
98	157.425	162.025	Duplex	Yes	No



Technical Specifications

GeneralImage: ChannelsChannelsAll 48 USA, 55 Canadian & 57 international marine channelsFrequency generationPLL synthesizerFrequency rangeTX from 156.025 to 157.425 MHzRX from 156.050 to 162.550 MHzAntenna Impedance50 OhmPower supply12V DCOperating temperaturefrom -20°C to +55°CSize (HxLxW)70×160×170 mmWeight (device only)1.305 Kg

Transmitter

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

Receiver

Sensitivity @ 20 dB Sinad	<0.5 V
	0,8 V
	threshold -12dB V (EMF)
	>2W su 8 Ohm
Audio distortion	
Note: these values are average.	Actual values may be subject to variation.



Troubleshooting

Problem	Possible causes	Solution
Device doesn't turn	Power supply is not correctly connected	Verify that power supply is properly connected
on	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	Antenna is not correctly connected	Verify that antenna is properly connected
signals	Volume level is too low Squelch level is too high	Adjust volume level 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 Signal is too weak (other party is too far away and/or antenna is blocked by obstacles) Other users are using the same radio channel	Adjust squelch level Try to completely open the squelch and/or move closer to the other party 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 ne 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	Squeich has not been correctly adjusted	Adjust squeich 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





www.midlandradio.com

MIDLAND RADIO CORPORATION

5900 Parretta Drive Kansas City, MO 64120 Call 816.241.8500

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

Note: Features & Specifications are subject to change without notice. MIDLAND is not responsible for unintentional errors or omissions on its packaging.