

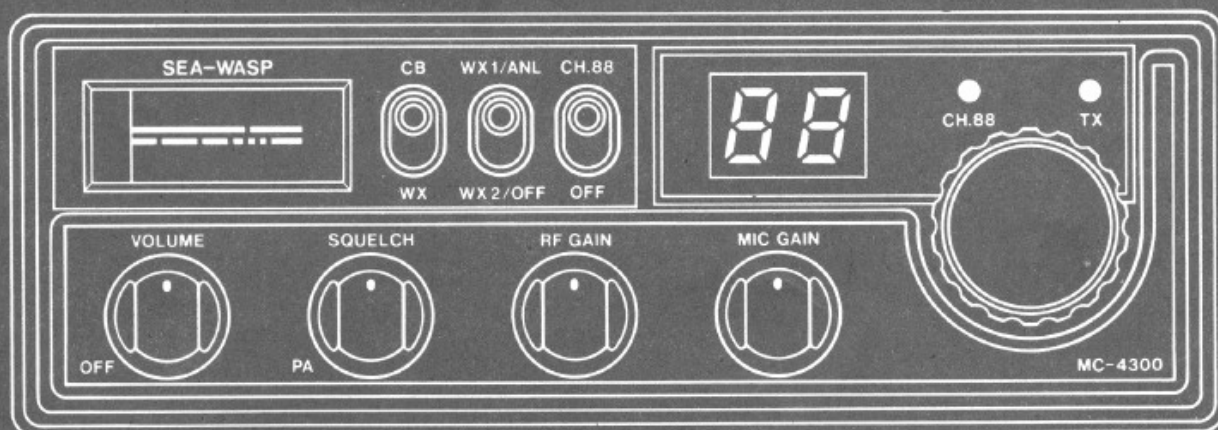
uniden®

MC-4300

10 Channel
Marine Transceiver
with 2 Weather Channels

OWNERS MANUAL

SEA-WASP



DESCRIPTION

Your MC4300 represents the most advanced Mobile Station type radio ever designed for use in the Inshore Boating Radio Communications Service, combined with unique features for use on a boat. It will operate on any of the 10 frequencies designated as citizens band channels by the Department of Communication. Your Model MC4300 features a frequency synthesizing circuit with PHASE LOCK LOOP techniques to assure ultraprecise frequency control. This radio has been Type Accepted approved by the D.O.C.

WARNING

The Inshore Boating Radio Communications Service is under the jurisdiction of the Department of Communication (D.O.C.). Any adjustments or alterations which would alter the performance of the transceiver's original D.O.C. Type Approval or which would change the frequency determining method are strictly prohibited. Replacement or substitution of Crystal, Transistors, IC, Regulator Diodes or any other part of a unique nature, with parts other than those recommended by us, may cause violation of the technical regulations of the D.O.C. Rules.

INSTALLATION

CAUTION: The UNIDEN MC4300 will operate only with nominal 12 volt negative ground battery system.

It is important to carefully determine the most suitable location for your UNIDEN MC4300 on your vessel. Electrical, mechanical, and environmental considerations must all be taken into account. You must select the optimum relationship among these considerations.

Some of the more important external factors to consider in selecting the location of your UNIDEN MC4300 are:

1. Select a location that is free from spray and splash.
2. Keep the battery leads as short as possible. Connection directly to the battery is most desirable. If direct connection cannot be made with the supplied power lead, any extension should be made with #14 AWG wire. Long extensions should use larger 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 antenna height.

5. Select a location that does not allow the radio to be subjected to direct sunlight (including that coming through windows).
6. Select a location well away from the ship's compass. Auxiliary speakers also should be located away from the compass.

ANTENNA

Since the maximum allowable power output of the transmitter is limited by the D.O.C., the antenna is a very important factor affecting transmission distance. It is for this reason that we strongly recommend that you install only a quality antenna in your new citizens band system.

Only a properly matched antenna system will allow maximum power transfer from the 50-ohm transmission line to the radiating element. Your Santronic dealer is qualified to assist you in the selection of the proper antenna to meet your application requirements.

NOTE: A non shunt-fed antenna must be used for good weather channel reception.

The general rules for antennas are: The more gain the greater the range and the higher above the water line the greater the range. Antennas should be located so as not to be in proximity to metal objects. Antenna should not have excessively long coaxial feed cables.

CONNECTING THE POWER CORDS

After you have carefully considered the various factors affecting your choice of location, position the radio (with the bracket, microphone, power plug, antenna plug, and any auxiliary plugs installed) into the selected location to assure there is no interference with 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. Install the power cable (red is +, black is -), antenna and all other auxiliary cables and accessories. Install the radio into the mounting bracket and connect all cables and accessories to the appropriate jacks and connectors.

OPERATING PROCEDURE TO RECEIVE

1. Be sure that the power source, antenna and microphone are connected to the proper connectors before going to the next steps.
2. Turn the unit ON by rotating the Volume Control clockwise.
3. Set the Channel Selector Switch to the desired channel.
4. Set the Volume Control to a comfortable listening level.
5. Listen to the background noise from the speaker. Turn the Squelch Control slowly clockwise until the noise JUST disappears (no signal should be present). Leave the control at this setting. The SQUELCH is now properly adjusted. The receiver will remain quiet until a signal is actually received. Do not advance the control too far, or some of the weaker signals will not be heard.

6. To receive a weather information broadcasting, set CB WX Switch to WX position. Then, select either WX1(156.8 MHz), WX2(156.375 MHz) by setting the switch located next to it to a desired position.

OPERATING PROCEDURE TO TRANSMIT

CAUTION

The transmitter Voltage Standing Wave Ratio (V.S.W.R.) measurement must be performed prior to the use of the transmitter. A V.S.W.R. ratio in excess of 2:1 may damage the transmitter.

1. Be sure the operator has read and understands D.O.C. Rules and Regulations prior to operating the transmitter.
2. Select the desired channel.
3. If the channel is clear, depress the push-to-talk switch on the microphone and speak in a normal voice.

OPERATOR TROUBLESHOOTING

Should the unit malfunction or not perform properly, the operator should perform the procedures indicated below:

1. If the transceiver is completely inoperative.
 - * Check the power cord and fuse.
2. If trouble is experienced with receiving.
 - * Check ON/OFF VOLUME CONTROL setting.
 - * Be sure SQUELCH is adjusted properly. Is the radio over-squelched?
 - * Check to see that the radio is switched to an operational mode.
3. If trouble is experienced with transmitting.
 - * Check to see that the transmission line (coaxial cable) is securely connected to the ANTENNA CONNECTOR.
 - * Be sure that the antenna is fully extended for proper operation.
 - * Be sure that all transmission line (coaxial cable) connections are secure and free of corrosion.

SPECIFICATIONS

GENERAL

Channels
 RADIOTELEPHONY : 10
 WX : 2

Frequency
 RADIOTELEPHONY : 27.680 – 27.980
 WX : CH 16 156.8MHz
 CH 67 156.375MHz

Microphone : 500 ohm, Dynamic Type

Speaker : 3 inches, 16 ohms

Size : 160(W) x 55(H) x 217(D) mm

Weight : 1.2 Kgs

Accessories : DC Power Cable with Built-in Fuse Microphone, Microphone Hanger

TRANSMITTER

Frequency Tolerance : $\pm 0.0005\%$
 25°C 13.8V

RF Power Output : 4W

RECEIVER

Maximum Sensitivity : 0.5 μ V

Threshold Squelch Sensitivity : 1.0 μ V

Tight Squelch Sensitivity : 1000 μ V

Adjacent Channel Selectivity at ± 10 kHz (1 Signal) : 70 dB

Image Rejection Ratio
 a. -910kHz : 70 dB
 b. -21.39MHz : 70 dB

Audio Output Power
 a. Maximum : 5W
 b. 10% THD : 4W

S-Meter Sensitivity at "S-9" : 100 μ V

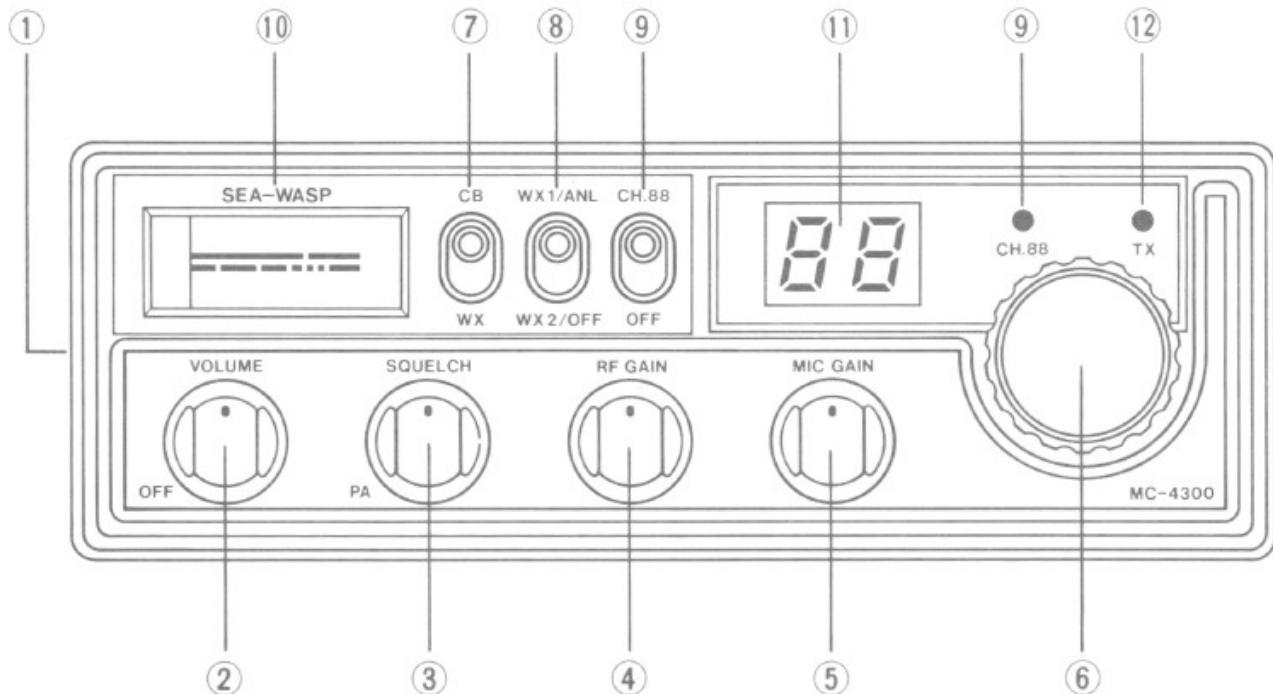
RECEIVER (WX)

Sensitivity for 12 dB SINAD : 0.5 μ V

S/N at 1 mV Input : 60 dB

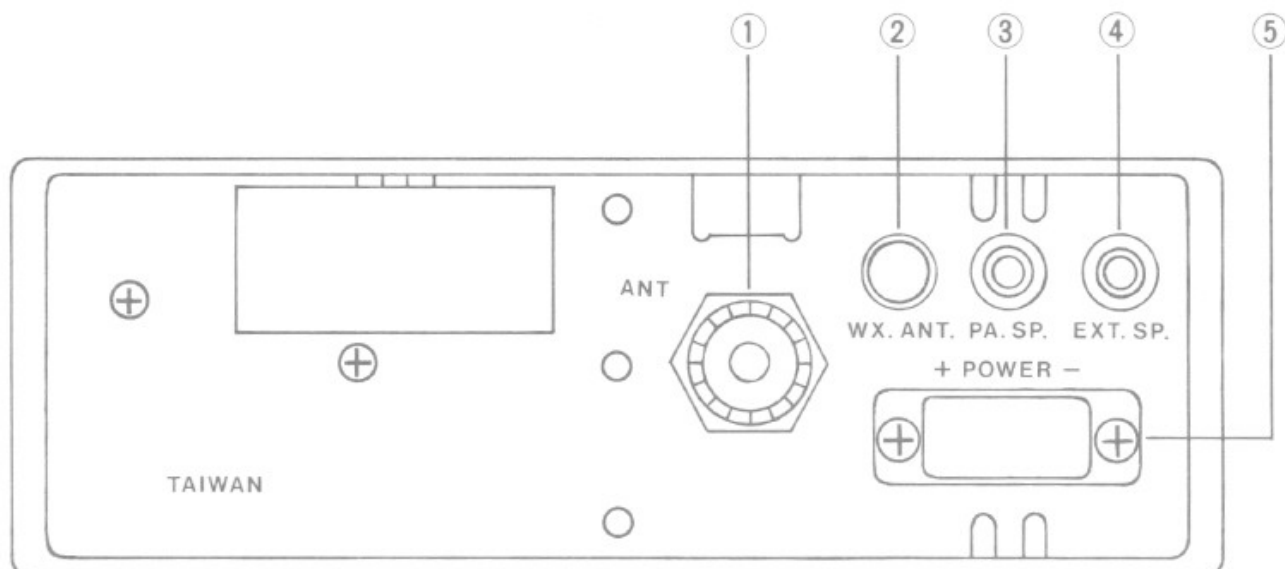
Audio Output Power
 a. Maximum : 5W
 b. 10% THD : 4W

FRONT PANEL CONTROLS AND INDICATOR



1. **MICROPHONE CONNECTOR:** Receptacle for microphone connection.
2. **ON/OFF-VOLUME:** Turn power on to radio and allows adjustment to the desired listening level with clockwise rotation.
3. **SQUELCH/PA SWITCH:** Used to quiet background noise when no signal is being received. Proper adjustment is such that the control is advanced only slightly beyond the point where the background noise is marginally quieted. To make PA (Public Address), rotate the switch fully counter clockwise then, PA function is available.
4. **RF GAIN:** This control is used primarily to optimize reception in strong signal areas. Gain is reduced by counter clockwise rotation of the control.
5. **MIC GAIN:** The control is used to adjust as required, microphone input sensitivity for optimum amount of modulation in transmit. Uniden marine transceivers have been designed to permit the user to attain levels of modulation up to 100% depending on the setting of the microphone gain control, using the microphone provided with the unit. Uniden's automatic compression and peak limiting circuits assure maximum modulation with minimum distortion.
6. **CHANNEL SELECTION CONTROL:** This control selects the desired channel for transmission and reception. All channels except channel 88, may be used for communications between stations. Channel 88 has been reserved by the D.O.C. for emergency communications involving the immediate safety of individuals or immediate protection of property. This is as D.O.C. rule and applies to all operators of citizens band radios.
7. **CB/WX SWITCH:** This switch selects different operating modes. In the CB position, WX receive function is disabled. At the WX position, CB and ANL Functions are disabled.
8. **WX1-WX2/ANL-ON OFF SWITCH:** In the WX position of CB/WX SWITCH, you can select WX1 or WX2 by this switch. And when it is in CB Mode, this switch operates as ANL ON/OFF Switch.
9. **CHANNEL 88 ON OFF SWITCH:** In CB Mode this switch selects channel 88, Channel Indication will disappear and CH 88 LED will be on.
10. **RF POWER/ 'S' METER:** This meter shows the Radio Frequency power when transmitting and the strength of the incoming signal when receiving. A change of one "S" unit indicates a change of 6 dB in signal level. The metering circuit is calibrated so that for 100 microvolts, the "S" meter will read S-9.
11. **CHANNEL INDICATOR:** Light Emitting Diode (LED) indicates the channel number in use.
12. **TX INDICATOR:** Light Emitting Diode (LED) indicates red while transmitting.

REAR PANEL CONNECTORS



1. **ANTENNA CONNECTOR:** This female connector permits connection of the transmission line cable male connector (PL-259) to the transceiver.
2. **WX ANTENNA CONNECTOR:** RCA Type Pin Jack is available.
3. **PUBLIC ADDRESS:** An external 8 ohm 4-watt speaker must be connected to the PA SPKR jack located on the rear panel when the transceiver is used as a public address system. The speaker should be directed away from the microphone to prevent acoustic feedback. Physical separation or isolation of the microphone and speaker is important when operating the PA at high output levels.
4. **EXTERNAL SPEAKER:** The External Speaker Jack is used for remote receiver monitoring. The external speaker should have 8-ohm impedance and be rated to handle at least 4.0 watts. When the external speaker is plugged in, the internal speaker is automatically disconnected.
5. **POWER:** This jack permits connection of the D.C. power to the transceiver. A power cord with polarized plug is supplied with the radio. The polarized plug ensures that the power will always be connected properly.

SERVICING YOUR TRANSCEIVER

The technical information, diagrams and charts will be supplied upon request. It is the user's responsibility to see that this radio is operating at all times in accordance with the D.O.C. Inshore Boating Radio Communications Service regulations. We highly recommend that you consult a qualified radiotelephone technician for the servicing and alignment of this marine radio product.

Please refer to the WARNING information contained in the 1st page of this Owner's Manual.

(NOTE: When ordering parts, it is essential to specify the correct model number and serial number of the unit.)

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12 MONTHS FULL WARRANTY

WARRANTOR. SANTRONIC AGENCIES PTY. LTD. 13 Garema Circuit, Kingsgrove NSW 2208 ("SANTRONIC").

ELEMENTS OF WARRANTY. SANTRONIC warrants, for the duration of this warranty, its UNIDEN CB Product to be free from defects in materials and craftsmanship with only the limitation or exclusions set out below.

WARRANTY DURATION. This Warranty shall terminate and be of no further effect One (1) year after the date of original purchase of the Product or at the time the Product is (a) damaged or not maintained as reasonable and necessary, (b) modified, (c) improperly installed, (d) is repaired by someone other Warrantor for a defect or malfunction covered by this Warranty, or (e) used in a manner or purpose for which the Product was not intended.

PARTS COVERED. This Warranty covers all components of the Products.

STATEMENT OF REMEDY. In the event that the Product does not conform to this Warranty at any time while this Warranty is effective, Warrantor will repair the defect and return it to you prepaid, without charge for parts, service, or any other costs incurred by Warrantor or its representatives in connection with the performance of this Warranty. In addition, if the Product contains a defect or malfunction which is not repaired after a reasonable number of attempts by Warrantor to repair the Product, the Product or defective component will at our discretion, will be replaced without charge, when the defective product is delivered to the warrantor at 13 Garema Circuit Kingsgrove NSW 2208 free and clear of all liens and encumbrances. Please note that while the Product will be remedied under this Warranty without charge. **THIS WARRANTY DOES NOT COVER OR PROVIDE FOR THE REIMBURSEMENT OR PAYMENT OF INCIDENTAL OR CONSEQUENTIAL DAMAGES.**

Some states do not allow this exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

PROCEDURE FOR OBTAINING PERFORMANCE OF WARRANTY. In the event that the Product does not conform to this Warranty, the Product should be shipped prepaid to Warrantor at 13 Garema Circuits Kingsgrove NSW 2208. THE ORIGINAL OR COPY OF THE SALES RECEIPT OR OTHER VALID EVIDENCE OF THE DATE OF THE ORIGINAL PURCHASE MUST ACCOMPANY THIS PRODUCT.

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

Santronic

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