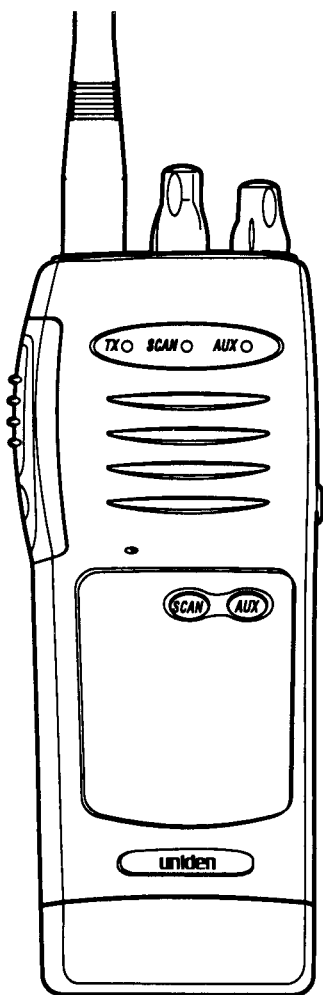


uniden®

SPH 51DT
SPU 51KT

Two-Way FM Transceiver



Operating Guide

uniden®

UNIDEN PRIVATE RADIO COMMUNICATIONS
4700 Amon Carter Blvd.
Fort Worth, TX 76155
OMSPH51DT

Safety Information

Through the provisions of the Occupational Safety and Health Act (OSHA) of 1970, the United States Department of Labor has established an electromagnetic safety standard which applies to the use of two-way radio equipment. The proper use of this transceiver will result in exposure below the OSHA limit.

The following precautions shall be observed:

- **DO NOT** operate the transceiver of any radio equipment with the antenna touching, or close to, the eyes, faces, or exposed body parts.
- **DO NOT** operate the transmitter of any radio equipment unless all the Radio Frequency (RF) connectors are secure and any open connectors are properly terminated.
- **DO NOT** operate the transmitter of any radio equipment near electrical blasting caps or in an explosive environment.
- **DO NOT** let children operate any transmitter-equipped radio equipment.

Have your radio equipment installed and serviced by a qualified technician.

Rechargeable Nickel-Cadmium Battery Pack Warning

This radio contains a Rechargeable Nickel-Cadmium Battery Pack. Cadmium is a chemical known to the State of California to cause cancer. The Nickel-Cadmium Battery Pack contained in this radio may explode if disposed of in a fire.

Do not short circuit this Nickel-Cadmium Battery Pack.

Do not charge the Rechargeable Nickel-Cadmium Battery Pack except with the recommended chargers.

Rechargeable Nickel-Cadmium Battery Packs Must Be Recycled or Disposed of Properly!

Residents of Minnesota should contact 1-800-225-PRBA for information concerning reclamation and disposal of Rechargeable Nickel-Cadmium Battery Packs. Residents outside of Minnesota should contact their local authorities for information concerning reclamation and disposal of Rechargeable Nickel-Cadmium Battery Packs.

Caution: Uniden does not represent this radio to be waterproof. Do not use the radio in damp or high-moisture environments.

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Congratulations

You now own the best value in portable radios, a Uniden professional communications radio. The **SPH 51DT** and **SPU 51KT** give you consistent, outstanding performance in virtually all conditions and situations.

Your **SPH 51DT** or **SPU 51KT** Two-Way FM Transceiver offers many special features. Read this Operating Guide completely to be sure you are getting the most from the radio.

Description

The **SPH 51DT** and **SPU 51KT** are 16-Channel portable Two-Way FM Transceivers. They are microprocessor-controlled, frequency-synthesized, and programmable. They are lightweight, rugged, and fit easily in your hand.

The **SPH 51DT** operates in the 146 to 174 MHz range with a maximum RF power output rating of 5 watts

The **SPU 51KT** operates in the 450 to 480 MHz ranges with a maximum RF power output rating of 4 watts

Service

If your radio does not work properly, take it to a Uniden dealer for servicing. These radios contain no user serviceable parts. Unauthorized adjustments will void the warranty and may cause illegal radio operation. Make sure that a qualified technician services your radio equipment. When servicing these radios, use only factory authorized replacement parts.

Unpacking

The following should be included with your two-way radio:

Transceiver Unit

Antenna

Belt Clip

Operating Guide (OMSPH51DT)

Nickel-Cadmium Rechargeable Battery Pack

Wall Adapter Charger

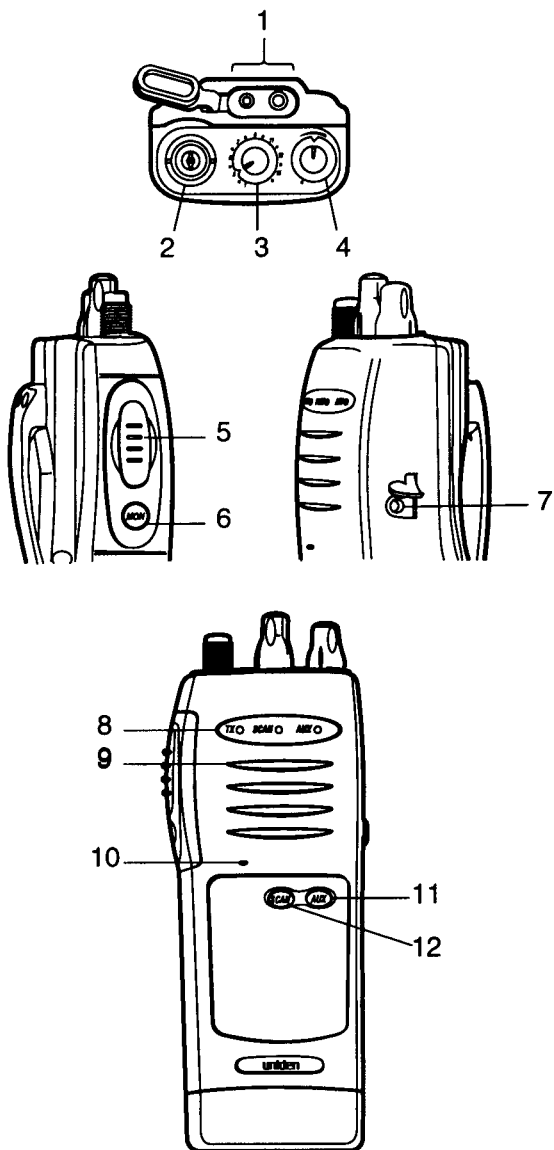
If any of these items are missing from the box, contact your Uniden Dealer for help.

FCC Licensing

Before you transmit with your radio, you must have the proper license issued by the Federal Communications Commission (FCC). Your Uniden Dealer can tell you what is required, and can help you with all your future communication needs.

Features, specifications, and availability of optional accessories are all subject to change without notice.

Controls and Functions



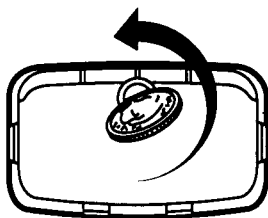
-
1. External Microphone/Speaker jacks
 2. Antenna Connector
 3. Channel Selector
 4. On/Off/Volume Control
 5. Push-to-talk (PTT) Button
 6. Monitor Button
 7. AC Adapter Jack
 8. LED Indicators
 9. Speaker
 10. Microphone
 11. Auxiliary Button
 12. Scan Button

Getting Started

Before you can use your radio, you must install and charge the battery and install the antenna as follows.

Installing the Battery

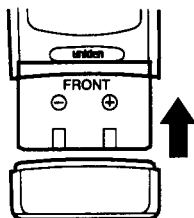
1. Using a coin, loosen the screw on the bottom of the radio.



2. Then use the coin in the slot in the back of the battery compartment cover to snap the cover loose.

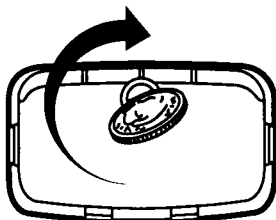


3. Slide the battery pack into the radio with the battery labeling facing the front of the radio.



4. Position the cover back onto the bottom of the radio and press until the back portion snaps into place.

5. Then tighten the screw with a coin until it is snug.



Charging the Battery

Your radio is powered by a specially-designed, nickel-cadmium battery. The battery must be fully charged before operating the radio.

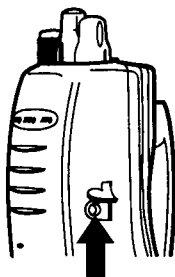
Only use one of the following chargers:

Model AD-137 Wall Adapter charger
(included with radio)

Model APX-142 Desktop Rapid Charger

Model APX-143 Desktop Standard Rate Charger

When charging with the AD-137 Wall Adapter Charger, open the CHG cover on the right side of the radio and insert the adapter charge plug.



When the adapter is connected to a source of power, the SCAN LED will illuminate Red immediately.



Note: *If the battery is completely discharged, the SCAN LED may take about 20 minutes to illuminate.*

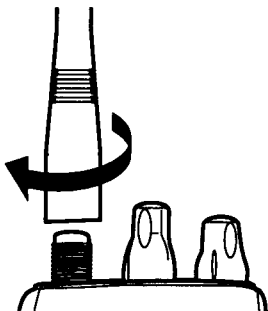
Allow to charge for at least 12 hours for the initial charge. Subsequent charge times will depend on battery usage, but allow at least 10 hours if the battery is completely discharged.

NOTE: *Do not leave the AD-137 charge adapter connected to the radio for extended periods beyond 10-12 hours, as reduced battery life will result.*

Also, be sure to observe the warning/safety information for nickel-cadmium batteries on the inside front cover of this Operating Guide.

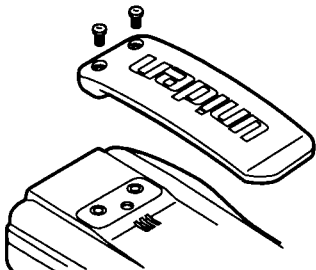
Installing the Antenna

To install the antenna, align it with the antenna connector on the top of the radio. Turn it clockwise until it seats snugly against the radio.



Attaching the Belt Clip

Attach the supplied belt clip with the screws provided.



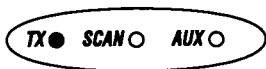
Indicators

LED Indicators

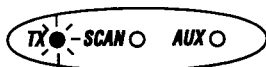
LED indicators light to confirm radio functions or key operations as follows.

TX/BUSY LED

▷ Steady RED:
Transmit



▷ Flashing RED:
Time-out Timer limit
reached



OR

Low battery limit reached
during transmit

OR

Transmit lockout has
occurred due to
busy channel

OR

Transmit activated on
unprogrammed channel.

▷ Steady GREEN
(2 seconds):
Indicates the Monitor
mode has been activated.



▷ Flashing GREEN:
Indicates the selected
channel is busy.



SCAN LED

▷ Flashing GREEN:
Indicates Scan mode is
active




AUX LED

▷ Flashing YELLOW:
Low power, tight squelch
or VOX modes have
been activated.



TONE INDICATORS

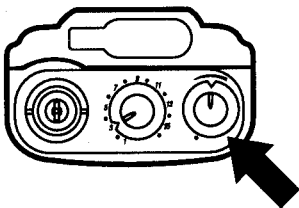
Tone indicators sound to confirm key functions or error conditions as described below.

Long High Beep	⌚ Radio has been turned on.
Short High Beep	⌚ Monitor mode activated OR ⌚ Scan mode activated OR ⌚ Low Power, Tight Squelch or VOX modes activated by  key.
Two Short High Beeps	⌚ Scan channel deleted.
3 High Beeps, then continuous low tone	⌚ Time-out Timer limit reached during transmit.
3 Short High Beeps	⌚ Priority Scan channel has become active.
Long Low Beep	⌚ Scan channel delete not possible.
Short Low Beep	⌚ Monitor mode turned off OR ⌚ Scan mode turned off OR ⌚ High Power, Loose Squelch modes activated, VOX mode de-activated.
Continuous Low Beeps	⌚ Low battery alert OR ⌚ Transmit BCLO lockout OR ⌚ Unprogrammed channel selected (transmit or receive).

Operation

Applying Power and Setting the Volume

1. Turn the radio on by rotating the Power/Volume knob clockwise.



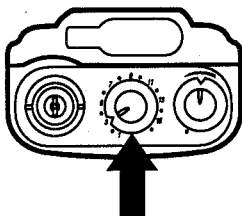
2. Press and hold the Monitor button. Adjust the speaker volume to a comfortable level by rotating the Power/Volume knob.



Note: While Monitor is ON, your radio may detect (on the selected channel) transmissions from stations outside your own system, as well as transmissions within your system.

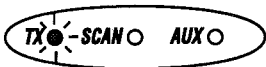
Changing Channels

Rotate the channel selector knob to select any of the 16 channels that may be programmed.




Receive

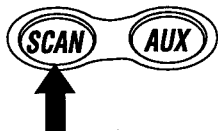
When a call is received, the TX/BUSY Indicator blinks GREEN, regardless of the squelch coding of the signal. If the signal is coded for your system, you will hear the audio message.




Channel Scan

In the scan mode, the radio alternately monitors each channel until it receives a call. You can scan all channels in the programmed scan list, or you delete unwanted channels as they become active.

1. Press  to begin scanning. The SCAN LED will blink once every five seconds to indicate scan is active.



2. The radio stops on any channel that receives a call and you will hear the caller. When the transmission stops, the radio resumes scanning after a brief delay.
3. To disable scanning, press  again.

Priority Scan

If your radio has been programmed for Priority Channel operation, the radio will sample the Priority Channel between any other receiving channel during Scan Mode. This is usually the channel you use for most of your communications. The Priority Channel is also the transmit channel during Priority Scan and is always the channel indicated by the channel selector. It may be changed at any time during scan. If programmed, a triple beep priority alert will sound when the Priority Channel becomes active.

Talk Back Scan

If your radio has been programmed for Talk Back Scan, all channels are scanned without priority. The transmit channel will be the last received channel, allowing you to reply to a call by just pressing the PTT. Transmit will occur on the last received channel even if scan has resumed before the PTT is pressed.

NOTE: *Changing the channel during Talk Back Scan will turn the Scan Mode off.*

Home Revert Scan

If your radio is programmed for Home Revert Scan, all channels are scanned without priority. The radio will always transmit on the channel indicated by the channel selection knob.

NOTE: *If a locked-out channel is selected and PTT is pressed, signals on that channel will be received during the period before scan resumes.*

Deleting Unwanted Scan Channels

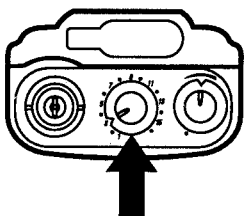
Nuisance channels may be deleted while scan is active, by pressing and holding **SCAN** for 2 seconds while receiving the channel or during the delay after the signal is gone but before scan resumes (Drop Out Delay). A double beep indicates the channel was deleted, a long low-pitched beep indicates channel delete was not possible. When scan is exited and re-started, all deleted channels are returned to the active scan list.

Drop Out Delay

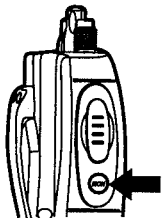
While scanning, the radio stops at a busy channel and receives a transmission. When the received call is over, it resumes scanning after a short delay.

Transmit

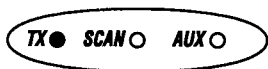
1. Use the rotary channel selector to select the desired channel.



2. Before you transmit, press and hold the Monitor button and listen for activity on the channel.



3. When the channel is clear, press the PTT switch to transmit. The TX LED lights RED when you transmit.



Hold the radio with the microphone approximately two inches in front of your mouth with the antenna at approximately a 45-degree angle away from your head. Speak in a clear, normal, conversational voice.

4. When you are through speaking, release the PTT switch and listen for an answer.

Transmit During Scan

Depending on how your radio is programmed, you will transmit on a particular channel during scan operation.

Talk Back Scan - If programmed for Talk Back operation, transmit will occur on the last received channel, even if scan has resumed when the PTT button is pressed.

Home Revert or PRIORITY Scan - If programmed for either of these scan types, the current selected channel will be the transmit channel, which may be changed at any time during scan operation.

Transmit Time Out Timer

Continuous transmission time may be limited by programming selection. When the Time Out limit has been reached, transmission will stop, a triple beep alert tone will sound and the TX/BUSY LED will flash RED as long as the PTT is held. When you release the PTT button, the Time Out Timer is reset. (If the re-key timer is also programmed, you will have to wait for 6 seconds before you can transmit again.)

Busy Channel Lockout (BCLO)

The radio may be programmed to inhibit transmit while a signal is being received. If so, an error tone will sound if PTT is pressed while the channel is busy. BCLO may also be programmed to allow transmit to occur if you are receiving a signal from someone in your system, allowing you to maintain control of a repeater during your conversation.

AUX Key Functions

The AUX key can be programmed for one of three functions as described below. Check with your dealer or equipment provider to determine the programmed function of this key.

TX HI/LO Power - causes all channels programmed for high power to be switched to low power. When the AUX key is pressed (receive mode only), a high pitch beep will sound and the AUX LED will begin blinking YELLOW every 5 seconds, indicating the low power mode. To restore high power operation, press the AUX key again. When radio power is turned off, programmed power levels on all channels are restored.

NOTE: If **AUX** is programmed for HI/LO Power control, the AUX LED will blink every 5 seconds during receive if the selected channel is programmed for low power operation. The **AUX** key will have no function on such channels. Regardless of the programming of the **AUX** key, the AUX LED will be illuminated YELLOW constantly during transmit on low power channels.

Tight/Normal Squelch - allows control of the squelch level of all channels, useful when operating in area with high RF noise levels.

- If the radio is pre-programmed for normal squelch level, pressing **AUX** will cause a high pitch beep to sound and the AUX LED to begin blinking YELLOW every 5 seconds, indicating the tight squelch mode. To restore the normal squelch level, press **AUX** again.

- If the tight squelch level is pre-programmed, the AUX LED will begin blinking at turn-on to indicate this mode. Press **AUX** to return to the normal squelch mode.

- When radio power is turned off, the programmed squelch level is restored.

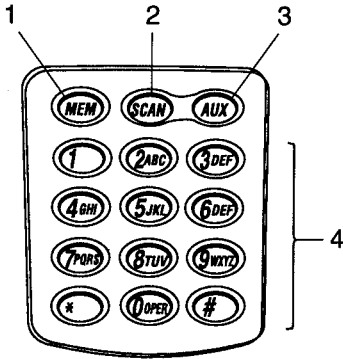
VOX Disable/Enable - when using the optional VOX headset, allows enabling/disabling of the VOX mode. The VOX mode applies to all channels.


- If the VOX mode is pre-programmed OFF, pressing **AUX** will cause a high pitch beep to sound and the AUX LED to begin blinking YELLOW every 5 seconds, indicating the VOX is active. To turn the VOX mode off, press **AUX** again.

- If the VOX mode is pre-programmed ON, the AUX LED will begin blinking at turn-on to indicate this mode. Press **AUX** to turn the VOX mode OFF.

- When radio power is turned off, the programmed VOX mode is restored.

Optional DTMF Keypad (Model APX 130)



1. Memory Key —  2. Scan key — 
3. Auxiliary key —  4. Numeric keypad

The APX 130 DTMF keypad allows access to the telephone network by transmitting manually entered or pre-stored memory numbers. Up to nine 16-digit numbers can be stored as memory numbers by the user. Memory number may also be pre-programmed, in which case they cannot be altered by the user. A redial function is also included. DTMF operation is only possible on channels pre-programmed for DTMF.

Manual Dialing

1. Press and hold the PTT button while entering the first digits of the number. DTMF tones will be heard from the speaker and the TX LED will glow RED until the transmit hang time expires.
2. After the first digit has been entered, PTT can be released and the transmission will continue uninterrupted as long as additional digits are pressed within the programmed hang time.

Memory Dialing

1. Press and hold the PTT button, then consecutively press the MEM key and the 0-9 key corresponding to the desired memory number.
2. The pre-stored number will be transmitted automatically and heard from the radio speaker. The PTT may be released as soon as **MEM** is pressed if the digit key is pressed before the hang time expires.

Automatic Redial

To automatically redial the last transmitted number, press and hold PTT, then press **MEM** and the "0" keys consecutively. PTT can be released immediately after **MEM** is pressed.

Storing A Memory Number

1. Press and hold **MEM** for 2 seconds. When three short beeps sound and the SCAN LED flashes on and off, release **MEM**. The unit is now in the memory mode.
2. Press in sequence the digits of the memory number you want to store. A tone will be heard when each digit is entered.
3. Press **MEM** and release.
4. Press and release the 0-9 digit where you want to store the memory number. A successful operation will be indicated by a long high-pitched tone. An unsuccessful or illegal operation will be indicated by a long low-pitched tone.
5. If there is no key entry for 30 seconds after entering the memory mode, a long low-pitched tone sounds and the radio returns to the normal operating mode. Other actions which will cause the memory mode to be terminated are entering more than 16 digits, pressing other keys such as **SCAN** or **AUX**, or pressing and holding **MEM** again. Pressing the PTT button during the memory mode will initiate normal transmit operation, terminating the memory mode.

Memory Storage Example:

To store number 555-1234 in memory location 7:

1. Press and hold **MEM** until the 3 beeps sound and the SCAN LED flashes.
2. Press **5JKL** **5JKL** **5JKL** **1** **2ABC** **3DEF** **4GHI** **MEM** **7PQRS**.

A long high-pitched tone indicates you have successfully stored the number in memory location 7.

Deleting a stored memory number

1. Press and hold **MEM** for 2 seconds to enter the memory mode as described above.
2. Press and release **MEM** again. A single low-pitched beep will sound.
3. Press and release the digit of the memory location you want to delete. A long high-pitched beep will sound, indicating the memory location has been cleared.

Special Features

Using VOX

The VOX feature automatically switches the radio between the transmit and receive modes when you speak into the microphone. This feature may be programmed into your radio by your Dealer. You must also have the optional headset plugged into the radio.

When you talk, the radio switches to the transmit (talk) mode. When you stop talking, it switches back to the receive mode. The sensitivity of the VOX activation and the length of the transmit "Hang Time" may be pre-programmed.

Optional Accessories & Replacement Parts

The following Optional Accessories and Replacement Parts are available from your Uniden Dealer.

Rechargeable Battery Pack (APX 1120)

External Microphone with Speaker (APX 330)

Headset (necessary for VOX operation)

Operating Guide (OMSPH51DT)

SPH 51DT Antenna (AT-280)

SPU 51KT Antenna (AT-281)

Technical Support and Service

Your Uniden dealer can provide you with technical assistance and information. If your radio does not perform properly, take it to a Uniden dealer for servicing. The radio contains no user-serviceable parts. Unauthorized adjustment will void the warranty and may cause illegal radio operation. Be sure that a qualified technician services your radio equipment. When servicing the radio, use only factory-authorized replacement parts.

Specifications

Power Rechargeable Battery Pack (APX1120)

Temperature Range - 30°C to +60°C

Operating Frequencies

SPH 51DT 146 MHz to 174 MHz

SPU 51KT 450 MHz to 480 MHz

Nominal Dimensions

(with Battery) 2.6" (W) x 1.6" (D) x 6.9" (H)

Weight (with Battery) 1.12 lb.

Duty Cycle 5, 5, 90 (TX, RX, STDBY)—8Hr Typical)

Two-year Limited Warranty

WARRANTOR: Uniden America Corporation (“Uniden” or “Warrantor”).

ELEMENTS OF WARRANTY: Uniden America Corporation warrants to the purchaser that all new Radio equipment of Uniden’s manufacture shall be free of defects in material and workmanship. Equipment and accessory items not manufactured by Uniden carry the standard warranty of the manufacturer thereof.

WARRANTY DURATION: The warranty period for all parts is two (2) years. The warranty period shall commence upon installation of the equipment or two (2) months from the date of shipment from the factory, whichever comes first.

The warranty shall terminate and be of no further effect two (2) years from its origin or at the time the Product is (a) damaged or not maintained as reasonable, (b) modified, (c) improperly installed, (d) is repaired by someone other than Warrantor or Authorized Warranty Repair Station for a defect or malfunction covered by this Warranty, or (e) used in a manner or purpose for which the Product was not intended or in an environmental condition for which the Product was not intended.

STATEMENT OF REMEDY: Where permitted by law, this Warranty is in lieu of all other Warranties expressed or implied, including warranties of merchantability or fitness for a particular purpose, and no representative or person is authorized to assume for us any other liability. This warranty shall not extend to incidental or consequential damages arising from operation of Product(s) which are subject of this Warranty. Some States do not allow limitation of implied warranties so the above limitations may not be applicable. You may have rights as defined by individual State law.

WARRANTY REGISTRATION CARD: In order to facilitate the service under this Warranty, Purchaser should return the Warranty Registration Card to Warrantor. However, return of the Warranty Registration Card is not a precondition of this Warranty. This Warranty will be observed by the Warrantor whether or not the Warranty Registration Card is returned, on the condition that other evidence, satisfactory to Uniden, of the date of the original installation or purchase is provided to the Warrantor.

PROCEDURE FOR OBTAINING PERFORMANCE OF WARRANTY: To obtain warranty service, the Customer must return the radio properly packed, freight prepaid, to Warrantor or any Authorized Warrantor Repair Station. It will be returned freight prepaid.